

falcon) issued in the original project biological opinion. We believe SpaceX's increase in construction, traffic, personnel levels, closures, lighting, noise and vibration, has exceeded what was evaluated in the biological opinion SUMMARY OF THE FINAL BIOLOGICAL AND CONFERENCE OPINION ON THE EFFECTS TO THE ENDANGERED OCELOT (*Leopardus pardalis*), ENDANGERED GULF COAST JAGUARUNDI (*Herpailurus yagouaroundi cacomitli*), ENDANGERED NORTHERN APLOMADO FALCON (*Falco femoralis septentrionalis*), ENDANGERED KEMP'S RIDLEY SEA TURTLE (*Lepidochelys kempii*), ENDANGERED HAWKSBILL SEA TURTLE (*Eretmochelys imbricata*), ENDANGERED LEATHERBACK SEA TURTLE (*Dermochelys coriacea*), THREATENED GREEN SEA TURTLE (*Chelonia mydas*), THREATENED LOGGERHEAD SEA TURTLE (*Caretta caretta*), THREATENED PIPING PLOVER (*Charadrius melodus*) AND ITS CRITICAL HABITAT, AND PROPOSED TO BE LISTED AS THREATENED RED KNOT (*Calidris canutus rufa*) FROM THE PROPOSED ISSUANCE OF FEDERAL AVIATION ADMINISTRATION LAUNCH LICENSE AUTHORIZING SPACEX TO LAUNCH FALCON 9 AND FALCON HEAVY ORBITAL VERTICAL LAUNCH VEHICLES AND A VARIETY OF REUSABLE SUBORBITAL LAUNCH VEHICLES FROM PRIVATE PROPERTY, BOCA CHICA, CAMERON COUNTY, TEXAS; December 18, 2013; Consultation No. 02ETCC00-2012-F-0186, and the FWS has informed SpaceX and FAA they are not in compliance with the current biological opinion numerous times. The FWS is available to assist SpaceX in reducing its risk by avoiding or minimizing impacts and potential take of threatened or endangered species in future activities. The FWS believes reinitiation of section 7 consultation on the aforementioned biological opinion is warranted. We are aware that the FAA is working on a new Biological Assessment and SpaceX is in favor of reinitiation. To date we have not received the document.

Another option to obtain ESA compliance for SpaceX would be to seek a section 10(a)(1)(B) permit that authorizes take of endangered species that is incidental to "otherwise lawful activities."

The FWS believes that an EIS may be the more appropriate NEPA pathway for this proposed action if significant effects cannot be avoided. The FWS requests that you give adequate consideration to and objective analysis of our NEPA concerns; that you adequately comply with the ESA; and, that you conduct an alternative action analysis per Section 4(f) of the Transportation Act of 1966. We appreciate your consideration of our concerns. You may contact me via email at [REDACTED]

Sincerely,

*Manuel Perez III*

Manuel "Sonny" Perez III  
Complex Refuge Manager  
South Texas Refuges Complex

*Charles Ardizzone*

Charles Ardizzone  
Project Leader  
Texas Coastal Ecological Services Office

Enclosures (2)

cc:

Stacey Zee, Federal Aviation Administration, Washington, DC.

Bryan R. Winton, Refuge Manager, Lower Rio Grande Valley NWR

Kelly McDowell, Refuge Supervisor, TX Gulf Coast Refuges

Dawn Gardiner, Assistant Field Supervisor, Texas Coastal ES Field Office

Stacey Dwyer, EPA Compliance Assurance and Enforcement Division

# Attachment J



Orms, Mary &lt;[REDACTED]&gt;

## Space X - Refuge fire

13 messages

Orms, Mary &lt;[REDACTED]&gt;

Fri, Jul 26, 2019 at 3:43 PM

To: [REDACTED]  
 Cc: Dawn Gardiner <[REDACTED]> Ernesto Reyes <[REDACTED]> Pat Clements  
 <[REDACTED]> Bryan Winton <[REDACTED]> "deLaGarza, Laura" <[REDACTED]>

Stacey,

I sending this email to inform you that last night at 11 pm Space-X was testing their Hopper and it started a fire on the refuge. Brownsville Fire Dept. showed up but did not pursue putting out the fire due to its location and lack of access. Today, the fire has kicked up again, and about 15-20 acres of refuge land burned, still with no vehicle access available. If access was available the refuge would have also been concerned with the damage it may have caused because of the risk of getting stuck. In the original BO, fire was not really assessed because at that time, the project included deluge water poured on the rocket, thus the evaporation cloud. Bryan Winton of the refuge will be putting together a report to document when, where and how the fire started. I think we need to discuss measures to avoid such fires again if possible. Maybe, restricting testing during certain conditions, having fire trucks on hand to put it out on the pad, I am not sure, but we can brainstorm it.

Also, a reporter contacted the refuge. He requested a copy of the FAA's written reevaluation. The Service considers that to be a FAA document and not for us to release. Therefore, I have provided his name and contact information below in the event that you would like to respond.

### Dave Mosher

Senior Correspondent - Space, Science &amp; Technology



Publications of Insider Inc.

**Office & Mobile:** +[REDACTED] / **Mailing address:** Dave Mosher, Insider Inc., One Liberty Plaza, 8th FL, New York, NY 10006, USA / **Stories & Confidential Messages:** [bit.ly/InsiderDave](https://bit.ly/InsiderDave)

--

Mary Orms  
 U.S. Fish and Wildlife Service  
 Ecological Services Field Office  
 P.O. Box 81468  
 Corpus Christi, TX 78468-1468  
 4444 Corona Dr., Suite 215  
 Corpus Christi, Texas 78411-4300  
 Office Phone: (361) [REDACTED]  
 Direct Line: (361) [REDACTED]  
 Fax: (361) [REDACTED]

Zee, Stacey (FAA) &lt;[REDACTED]&gt;

Mon, Jul 29, 2019 at 12:01 AM

To: "Orms, Mary" <[REDACTED]>  
 Cc: Dawn Gardiner <[REDACTED]> Ernesto Reyes <[REDACTED]> Pat Clements  
 <[REDACTED]> Bryan Winton <[REDACTED]> "deLaGarza, Laura" <[REDACTED]> "Grey,  
 Leslie (FAA)" <[REDACTED]>

Hi Mary – Thank you for reaching out. Ma Thompson called out about this on Friday. I asked him to coordinate with Bryan on a way forward. I'll be out of town this week – but let's plan on touching base the week of Aug 5<sup>th</sup>.



Could you all propose a few times for a call next week. Leslie Grey, from my office, is copied on the email and can set up a meeting with a conference call number for whatever time works for you all.

Also – I will pass the reporters contact info onto our external affairs contact.

Thank you

-Stacey

[Quoted text hidden]

---

**Orms, Mary** <[REDACTED]> Mon, Jul 29, 2019 at 9:25 AM  
To: "Zee, Stacey (FAA)" <[REDACTED]>  
Cc: Dawn Gardiner <[REDACTED]> Ernesto Reyes <[REDACTED]> Pat Clements  
<[REDACTED]> Bryan Winton <[REDACTED]> "de la Garza, Laura" <[REDACTED]> "Grey, Leslie (FAA)" <[REDACTED]>

Let us look over our schedules and get back with you on some times.

[Quoted text hidden]

---

**Pat Clements** <[REDACTED]> Mon, Jul 29, 2019 at 9:44 AM  
To: Mary Orms <[REDACTED]>

Mary:

If there will be a JEM meeting, it will be on Tuesday, but nothing scheduled yet. Will let you know. Rest of the week is open.

**Pat Clements**

**Ecological Services Field Office**

**U.S. Fish and Wildlife Service**

P.O. Box 81468

Corpus Christi, TX 78468-1468

4444 Corona Dr., Suite 215

Corpus Christi, Texas 78411-4300

Direct line: [REDACTED]

Cell: [REDACTED]

[Quoted text hidden]

---

**Gardiner, Dawn** <[REDACTED]> Mon, Jul 29, 2019 at 10:04 AM

To: "Orms, Mary" <[REDACTED]>

My schedule is open on 8/5, 8/7, and 8/8 and afternoon of the 6th.

[Quoted text hidden]

--

--



**Dawn Gardiner**

**Assistant Field Supervisor**

**Texas Coastal Ecological Services Field Office**

**U.S. Fish and Wildlife Service**

**4444 Corona Drive, Suite 215**

**Corpus Christi, TX**

**x26310**

**direct line**

*Working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats in South Texas for the continuing benefit of the American people.*



**image003.jpg**

3K

**Orms, Mary** <[REDACTED]>

Mon, Jul 29, 2019 at 10:15 AM

To: "Gardiner, Dawn" <[REDACTED]>

Pat Clements <[REDACTED]>

"delaGarza, Laura"

<[REDACTED]> Ernesto Reyes <[REDACTED]>

Bryan Winton <[REDACTED]>

Laura, Ernesto, Bryan these are the dates we area available for a conference call with FAA and SpaceX. How about you guys.

Pat - 8/5, 8/7, 8/8, 8/9

Dawn - 8/5, 8/7, 8/8

Mary - 8/6-8/9

[Quoted text hidden]

**Winton, Bryan** <[REDACTED]>

Mon, Jul 29, 2019 at 10:34 AM

To: "Orms, Mary" <[REDACTED]>

Can't be done sooner?

[Quoted text hidden]

--

Bryan R. Winton, Wildlife Refuge Manager  
Lower Rio Grande Valley National Wildlife Refuge

[3325 Green Jay Road, Alamo, Texas 78516](#)

office; (956) [REDACTED] cell

**Orms, Mary** <[REDACTED]>

Mon, Jul 29, 2019 at 10:36 AM

To: "Winton, Bryan" &lt;[REDACTED]&gt;

Stacey will be out all this week. That is why she suggested week of 8/5

[Quoted text hidden]

**Grey, Leslie (FAA)** <[REDACTED]>

Mon, Jul 29, 2019 at 10:38 AM

To: "Orms, Mary" &lt;[REDACTED]&gt;

"Zee, Stacey (FAA)" &lt;[REDACTED]&gt;

Cc: Dawn Gardiner &lt;[REDACTED]&gt;

Ernesto Reyes &lt;[REDACTED]&gt;

Pat Clements

&lt;[REDACTED]&gt; Bryan Winton &lt;[REDACTED]&gt;

"deLaGarza, Laura" &lt;[REDACTED]&gt;

Thank you Mary.

**Leslie A. Grey**

Federal Aviation Administration

Office of Commercial Space Transportation

Space Transportation Development, AST-100

**From:** Orms, Mary <[REDACTED]>**Sent:** Monday, July 29, 2019 6:25 AM**To:** Zee, Stacey (FAA) <[REDACTED]>**Cc:** Dawn Gardiner <[REDACTED]>

Ernesto Reyes &lt;[REDACTED]&gt;

Pat Clements

&lt;[REDACTED]&gt; Bryan Winton &lt;[REDACTED]&gt; deLaGarza, Laura

&lt;[REDACTED]&gt; Grey, Leslie (FAA) &lt;[REDACTED]&gt;

[Quoted text hidden]

[Quoted text hidden]

**Reyes, Ernesto** <[REDACTED]>

Mon, Jul 29, 2019 at 10:47 AM

To: "Orms, Mary" &lt;[REDACTED]&gt;

Cc: "Gardiner, Dawn" &lt;[REDACTED]&gt;

Pat Clements &lt;[REDACTED]&gt;

"deLaGarza, Laura"

&lt;[REDACTED]&gt; Bryan Winton &lt;[REDACTED]&gt;

Ernesto - 8/7, 8/8

Ernesto Reyes

U.S. Fish and Wildlife Service

Alamo Ecological Service Sub-Office

3325 Green Jay Rd

Alamo, Texas 78516

Tel: [REDACTED]

Fax: [REDACTED]

[Quoted text hidden]

**Winton, Bryan** <[REDACTED]>

Mon, Jul 29, 2019 at 10:51 AM

To: "Orms, Mary" &lt;[REDACTED]&gt;

I prefer immediately, but given that she is not available, that delays things. I request August 5 or 8. I am already tied up

with something on Aug 7.

bryan

[Quoted text hidden]

---

**Orms, Mary** <[REDACTED]> Mon, Jul 29, 2019 at 11:31 AM  
To: "Zee, Stacey (FAA)" <[REDACTED]>  
Cc: Dawn Gardiner <[REDACTED]> Ernesto Reyes <[REDACTED]> Pat Clements  
<[REDACTED]> Bryan Winton <[REDACTED]> "de la Garza, Laura" <[REDACTED]> "Grey,  
Leslie (FAA)" <[REDACTED]>

Stacey, these are the dates we are available so far.

Pat - 8/5, 8/7, 8/8, 8/9

Dawn - 8/5, 8/7, 8/8

Mary - 8/5 before 10 or 1-3, 8/6-8/9

Ernesto - 8/7 or 8/8

Bryan - 8/5 or 8/8

On Mon, Jul 29, 2019 at 12:01 AM Zee, Stacey (FAA) <[REDACTED]> wrote:

[Quoted text hidden]

[Quoted text hidden]

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**de la Garza, Laura** <[REDACTED]> Mon, Jul 29, 2019 at 12:52 PM  
To: "Orms, Mary" <[REDACTED]>  
Cc: "Gardiner, Dawn" <[REDACTED]> Pat Clements <[REDACTED]> Ernesto Reyes  
<[REDACTED]> Bryan Winton <[REDACTED]>

I'm good with all dates, except Tuesday (8/6/19)

[Quoted text hidden]

--

Laura M. de la Garza

Fish & Wildlife Biologist

U.S. Fish and Wildlife Service

Alamo Ecological Service Sub-Office

3325 Green Jay Rd

Alamo, Texas 78516

Tel: [REDACTED]

Fax: [REDACTED]

*Matthew 6:21 "for where your treasure is there your heart will be also"*

# Attachment K

**From:** [Perez, Chris](#)  
**To:** [Perez, Sonny](#)  
**Cc:** [Winton, Bryan](#); [Gardiner, Dawn](#); [Orms, Mary](#); [deLaGarza, Laura](#)  
**Subject:** Re: FAA 4(f) determination - Assertion of no constructive use for SpaceX project  
**Date:** Wednesday, January 6, 2021 8:53:08 AM  
**Attachments:** [RefugeresponcetoFAA4F\\_14DEC20.pdf](#)  
[FINAL RefugeresponcetoFAA4F\\_10.7.2020.pdf](#)

---

Good morning Sonny:

I will try and work on our part of responding to the FAA's scoping request but I actually think our letters of October 7 and December 14th can simply be re-tooled towards a NEPA perspective...I will try and focus on that. Do you have a Word version of the Dec 14th letter? Of course, I must state this emphatically here that our response MUST be very clear that an EA is inappropriate to comply with the spirit and intent of NEPA, because we can see no path towards a FONSI! We need to recommend preparation of a new EIS to address the vastly different changes in purpose and the magnitude of impacts of the SpaceX activities, not to mention the lack of compliance with Section 4(f). Although the experimental aspects of their program were "causally" mentioned in the 2014 EIS, that document addressed the impacts of launches, not continual experimentation and construction going on out there. We must also address whether we intend to become a cooperating agency or not? Has this been decided from on high? I do not recommend that we do since it infers endorsement of their program that is not in the best interests nor consistent with the purposes of the refuge. Meanwhile, I'm hoping ES is working on this scoping request from their regulatory purview as well. At some point, we should circle back with Dawn and Mary on it. What do you think? Let me know.

Thanks!

Request for comment link:

[https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship](https://www.faa.gov/space/stakeholder_engagement/spacex_starship)

*The FAA is in the beginning stages of conducting an environmental review of SpaceX's Starship/Super Heavy proposal. As part of this environmental review, SpaceX is working with the FAA to prepare a draft Environmental Assessment (EA). The FAA is holding a public scoping period to assist the FAA in determining the scope of issues for analysis in the draft EA. The FAA is considering the preparation of a Programmatic EA for this effort. The FAA requests public comments on potential alternatives and impacts, and identification of any relevant information, studies, or analyses of any kind concerning impacts affecting the quality of the human environment. Please include any comments on the preparation of a Programmatic EA. [Please submit comments by January 21, 2021.](#)*

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Tuesday, January 5, 2021 12:30 PM  
**To:** Perez, Chris <[REDACTED]>  
**Subject:** Re: FAA 4(f) determination - Assertion of no constructive use for SpaceX project

Here you go, Chris.

---

**From:** Perez, Chris <[REDACTED]>  
**Sent:** Tuesday, January 5, 2021 10:01 AM  
**To:** Perez, Sonny <[REDACTED]>  
**Subject:** Re: FAA 4(f) determination - Assertion of no constructive use for SpaceX project

OK. Can you send me a copy of the Dec 14th letter? I don't recall seeing it and I recall the letter Justin reviewed was the October 7th letter?

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Tuesday, January 5, 2021 9:56 AM  
**To:** Perez, Chris <[REDACTED]>  
**Subject:** Re: FAA 4(f) determination - Assertion of no constructive use for SpaceX project

Chris,

I know this is going to get confusing, but I sent a refuge response letter dated December 14 as a follow up to FAA's December 1 response. The December 14 letter includes a request for further consideration and for their appeal process. The December 14 letter is the letter that I coordinated through Justin Tade.

The December 14 letter is the one for which I am waiting to see a response. My thought is that if they once again disregard our concerns, then there is no point in choosing to be a cooperating agency on the "new" project.

Does this make sense?

Sonny

---

**From:** Perez, Chris <[REDACTED]>  
**Sent:** Tuesday, January 5, 2021 9:07 AM  
**To:** Perez, Sonny <[REDACTED]>  
**Subject:** Fw: FAA 4(f) determination - Assertion of no constructive use for SpaceX project

Here's the SpaceX response to our last letter...

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Tuesday, December 8, 2020 9:25 AM  
**To:** Gardiner, Dawn <[REDACTED]> Orms, Mary <[REDACTED]> Winton, Bryan <[REDACTED]> Perez, Chris <[REDACTED]>  
**Subject:** Fw: FAA 4(f) determination - Assertion of no constructive use for SpaceX project

All,

I wanted to share this email that I sent to Justin and Kelly late last week to begin a new dialogue after FAA's assertion of no constructive use. You will see that I have reviewed the issue and established the metrics for impact different than what I have heard discussed. I am setting up a Teams call with Justin for this afternoon if any of you are available to contribute. Main objective is to determine what recourse there is to appeal FAA's assertion.

Thank you,

Sonny

---

**From:** Perez, Sonny  
**Sent:** Thursday, December 3, 2020 11:22 AM  
**To:** Tade, Justin S <[REDACTED]>

Cc: McDowell, Kelly <[REDACTED]>

**Subject:** FAA 4(f) determination - Assertion of no constructive use for SpaceX project

Justin,

Kelly McDowell suggested that I reach out to you regarding this Section 4f determination. Dawn Gardiner indicated that you have previously provided input on SpaceX coordination.

I have provided a few documents and some notes/thoughts that I have after my preliminary review of SpaceX's assertion of no constructive use. I will also make myself available to brief you when your schedule allows.

I hope to continue to work with both FAA and SpaceX in identifying ways to minimize impacts on the Refuge, however, I am still concerned at this time regarding their assertion of no constructive use and would like to discuss with them further after consulting with you.

Below are some definitions from FAA's 1050.1F Desk Reference that I selected based on terms FAA utilized in their exertion of no constructive use. This is the link address to the desk reference.

[https://www.faa.gov/about/office\\_org/headquarters\\_offices/apl/enviro\\_policy\\_guidance/policy/faq\\_nepa\\_order/desk\\_ref/](https://www.faa.gov/about/office_org/headquarters_offices/apl/enviro_policy_guidance/policy/faq_nepa_order/desk_ref/)

I have formulated two preliminary questions (in bold) based on their definitions. I intend to further my review but wanted to get this before you sooner than later.

#### Use

Generally, "use" occurs with a U.S. DOT approved project or program (1) when land from a Section 4(f) site is permanently incorporated into a transportation facility; (2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes, or (3) when the proximity impact of the transportation project on the Section 4(f) site, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially impaired.

#### Temporary Occupancy

During the construction of a highway project, a temporary occupancy of a Section 4(f) property may be necessary for activities such as regrading slopes or to provide staging or access areas. Depending upon conditions, such activities – even though temporary in nature – may be considered adverse in terms of the Section 4(f) statute's preservation purpose, and therefore would be considered a Section 4(f) use. Once the easement is no longer needed, the Section 4(f) property must be restored to the condition in which it was originally found. This may involve re-grading or re-vegetating the area.

#### Unique Problems

Unique problems are present when there are unusual factors, or when the costs or community disruption reach extraordinary magnitude.

**Do the road closures result in a proximity impact?** Each closure requires the temporary occupancy by SpaceX officials only (no public).

*e.g. FAA frames their decision upon total number of closure hours (2.1 percent of a total 8,760 annual hours) which they determine 2.1 percent to be minimal. However, the Refuge has an estimated 110,000 visitors per year with 63 percent being Boca Chica tract visitors which is 69,300 visitors. Under this visitation figure and incorporating FAA's rationale, 69,300 visitor recreational hours (assuming each person only spent one hour at Boca Chica) X 180 closure hours = 12,474,000 recreational hours lost. The increase to 300 closure hours would be 20,790,000 recreational hours lost. That is 1,423 years and 2,373 years of recreational hours lost each calendar year, respectively.*

This is reasonable to suggest that the proximity impact of this transportation project is so great that the purposes of the refuge are substantially impaired even with the estimation of only one hour of visitation.

**Does the project by way of the road closure result in temporary occupancy or a unique problem?**

*e.g. Each closure requires the temporary occupancy by SpaceX officials only (no public). They are the only people allowed access to 8 refuge tracts totaling 22,500 acres which is 56% of the refuge's total public use acres. More importantly, it is 100% of the refuge's acres readily accessible to the City of Brownsville's 183,000 people (2018 data).*

This is reasonable to suggest that road closures albeit temporary in nature are adverse in that 100% of recreational acreage is lost for use by the public.

Thank you for your time to review and assist me further my coordination efforts.



Sonny Perez  
Acting Complex Refuge Manager  
South Texas Refuges Complex

# Attachment L

**From:** [Perez, Sonny](#)  
**To:** [Gardiner, Dawn](#)  
**Cc:** [Perez, Chris](#); [Winton, Bryan](#); [Ardizzone, Chuck CA](#); [Orms, Mary](#); [delaGarza, Laura](#)  
**Subject:** Re: After Action Review Follow up  
**Date:** Thursday, December 17, 2020 9:47:51 PM

---

Let's push for that as soon as we can identify appropriate staffing. In the meantime, an emergency consultation could be issued for this SN8 incident or the next incident. I defer judgement on that to ES leadership.

Sent from my iPhone

On Dec 17, 2020, at 5:51 PM, Gardiner, Dawn <[REDACTED]> wrote:

I am thinking an emergency consultation should be triggered with FAA. We should consider having someone shoulder to shoulder with the FAA staff and SpaceX at the launch.

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Thursday, December 17, 2020 2:51 PM  
**To:** Gardiner, Dawn <[REDACTED]> Perez, Chris <[REDACTED]>  
Winton, Bryan <[REDACTED]> Ardizzone, Chuck CA  
<[REDACTED]> Elizondo, Iriz <[REDACTED]> Garcia, Romeo  
<[REDACTED]> Devriendt, Donald J <[REDACTED]>  
**Cc:** Orms, Mary <[REDACTED]> delaGarza, Laura <[REDACTED]>  
**Subject:** Re: After Action Review Follow up

Dawn,

I could use a good refresher from you on trigger points so that we can work that end of notification stronger. I heard your reference to and Matt's comments regarding endangered species impacts during the after-action review. I believe an anomaly should trigger an agency inquiry to FAA just as it triggers an FAA investigation for SpaceX.

Sonny

---

**From:** Gardiner, Dawn <[REDACTED]>  
**Sent:** Thursday, December 17, 2020 1:59 PM  
**To:** Perez, Sonny <[REDACTED]> Perez, Chris <[REDACTED]>  
Winton, Bryan <[REDACTED]> Ardizzone, Chuck CA  
<[REDACTED]> Elizondo, Iriz <[REDACTED]> Garcia, Romeo  
<[REDACTED]> Devriendt, Donald J <[REDACTED]>

**Cc:** Orms, Mary <[REDACTED]> delaGarza, Laura <[REDACTED]>

**Subject:** Re: After Action Review Follow up

I need to say one more time that neither SpaceX nor FAA have take authorization under the Endangered Species Act for the testing activities they are engaging in, whether there is an anomaly or not. It is good to do the best we all can for listed species and SpaceX/FAA needs either a new/amended biological opinion asap or to stop and get an HCP before we find a carcass or get sued by a third party.

---

**From:** Perez, Sonny <[REDACTED]>

**Sent:** Wednesday, December 16, 2020 1:49 PM

**To:** Perez, Chris <[REDACTED]> Winton, Bryan <[REDACTED]>  
Gardiner, Dawn <[REDACTED]> Ardizzone, Chuck CA

<[REDACTED]> Elizondo, Iriz <[REDACTED]> Garcia, Romeo  
<[REDACTED]> Devriendt, Donald J <[REDACTED]>

**Subject:** After Action Review Follow up

All,

I wanted to thank you all for what I perceived to be good dialogue and progress toward a better understanding and support for incident response scenarios. My perception is that there is more in place to guide our response efforts than I realized, and I'd like to continue to build on that further.

**I'd like for us to follow up by creating a list of action items deliverables, etc. that we gathered from the call (e.g. Refuge maps to SpaceX, dispatch coordination to SpaceX, further coordination with TWPd on response team members, further coordination on sensitive areas). Please send me any additional items that you recorded to me via email even if it is already completed. If you have nothing further, then send me a nothing to report.**

I have asked TPWD and SpaceX to speak with their teams and gather action items, deliverables, etc. to share with me. I will build a comprehensive list and share it among us. I believe a few have already been accomplished since the call ended, but I will capture them anyway.

I will be taking leave after Thursday as will many of you. I understand that this may disrupt some progress. We will have an Acting Refuge Manager for Lower Rio Grande Valley NWR and an Acting Complex Refuge Manager for South Texas Refuge Complex. On certain days, it may be the same person as we are short on staff. They have decision-making authority and are authorized to call me if they reach a level of discomfort with a situation.

The dispatch operations center will be the best way to reach the most appropriate management, Law Enforcement, or Fire representative. The number is [REDACTED] from 0600-2200. There is an after-hours number to the on call dispatcher recorded on the voicemail.

Thank you,

Sonny

# Attachment M

**From:** [Stinebaugh, Jim](#)  
**To:** [Gardiner, Dawn](#)  
**Subject:** Re: Note to Coordinate SpaceX rocket landing failure in Boca Chica, TX  
**Date:** Thursday, December 10, 2020 5:20:05 PM

---

Ok. Thanks Dawn. I plan to get down there soon for a site visit.

Get [Outlook for iOS](#)

---

**From:** Gardiner, Dawn <[REDACTED]>  
**Sent:** Thursday, December 10, 2020 4:23:29 PM  
**To:** Stinebaugh, Jim <[REDACTED]>  
**Subject:** Note to Coordinate SpaceX rocket landing failure in Boca Chica, TX

SpaceX is located down in Cameron County on their private inholding property in the middle of STX Refuge and TPWD and NPS lands. SpaceX blasted off an experimental rocket yesterday and the test flight was to go up a couple of miles and then roll over and come back and land on a landing pad beside the launch area. The vessel did the flip and came back but had an explosive landing. Someone filmed birds in the area reacting to the explosion. Refuge LE walked the site and no bird carcasses today.

The Refuge LE will be coordinating with you I think.

Also I'm having Mary draft a dear SpaceX letter with a copy to you reminding them about section 9 and piping plovers and that they don't have coverage for the activities right now that could look like harm and harass.....Our RD has engaged SpaceX so I will run it up our chain and check it with solicitor. We need FAA/SpaceX to update their current BO asap.

Dawn

# Attachment N





Orms, Mary &lt;[REDACTED]&gt;

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**SpaceX Comments**

5 messages

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**Orms, Mary** <[REDACTED]>

Thu, Apr 4, 2019 at 9:29 AM

To: [REDACTED]

Cc: Matthew Thompson &lt;[REDACTED]&gt; Dawn Gardiner &lt;[REDACTED]&gt;

Stacey,

Attached is our comment letter. Dawn and I can give you a call later to discuss if you would like.

--

Mary Orms  
U.S. Fish and Wildlife Service  
Ecological Services Field Office  
P.O. Box 81468  
Corpus Christi, TX 78468-1468  
4444 Corona Dr., Suite 215  
Corpus Christi, Texas 78411-4300  
Office Phone: (361) [REDACTED]  
Direct Line: (361) [REDACTED]  
Fax: (361) [REDACTED]

**Final SpaceX Comment letter signed.pdf**

1118K

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**Matthew Thompson** <[REDACTED]>

Thu, Apr 4, 2019 at 11:23 AM

To: "Orms, Mary" &lt;[REDACTED]&gt;

Cc: Dawn Gardiner &lt;[REDACTED]&gt; Steve Davis &lt;[REDACTED]&gt; Caryn Schenewerk &lt;[REDACTED]&gt;

Stacey –

SpaceX respectfully disagrees with assertions made by the U.S. Fish and Wildlife Service in the April 3, 2019, letter signed by Field Supervisor Charles Ardizzone to the FAA. With regard to the mitigation proposals referenced in Mr. Ardizzone's email, SpaceX submits that the attached "Reimbursable Funding and Donation Agreement" between USFWS South TX Refuge Complex and SpaceX signed by NWRS Regional Chief Aaron Archibeque on August 11, 2015, as the basis for discussions on that topic.

Sincerely

Ma Thompson

Director, Environmental Health and Safety

Cell: [REDACTED]

Desk: [REDACTED]

This transmission may contain sensitive proprietary and confidential information. Not for further distribution without the express written consent of Space Exploration Technologies.

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604K

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**Orms, Mary** <[REDACTED]>

Thu, Apr 4, 2019 at 11:45 AM

To: Robert Jess <[REDACTED]>

Rob, you are most familiar with this document. What does SpaceX disagree with? Were they not suppose to provide funding for LE and the biologists? Have they provided that funding? Or was the refuge suppose to hire and the 3 employees and then request reimbursement? and was that ever done?

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**Orms, Mary** <[REDACTED]>

Thu, Apr 4, 2019 at 1:33 PM

To: Bryan Winton <[REDACTED]>

FYI, if I could get an answer on this question asap I would appreciate it.

[Quoted text hidden]

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**Winton, Bryan** <[REDACTED]>

Thu, Apr 4, 2019 at 1:45 PM

To: "Orms, Mary" <[REDACTED]>

Space-X never followed through with making funding available for us to hire the 3 employees that are needed to oversee the refuge during Space-X closures, so we can maintain integrity of the refuge when everyone else is closed out of the place except Space X. Space X withdrew a commitment to hire the two biologists relatively soon after the agreement was finalized. The LE person was still a go/need. There was some disagreement on the salary, startup costs, etc. for that hire, but since Steve Davis transitioned out and Alma Santos came in, there has been no commitment to follow through with arrangements made/agreements made during Steve Davis' time down here.

bryan

[Quoted text hidden]

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Bryan R. Winton, Wildlife Refuge Manager  
Lower Rio Grande Valley National Wildlife Refuge  
[3325 Green Jay Road, Alamo, Texas 78516](https://www.fws.gov/press/2017/03/3325-Green-Jay-Road-Alamo-Texas-78516)

[REDACTED] office; (956) [REDACTED] cell  
[REDACTED]



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Texas Coastal Ecological Services Field Office  
4444 Corona Drive Suite 215,  
Corpus Christi, Texas 78411  
361/994-9005 (Fax) 361/994-8262



In Reply Refer To:  
02ETCC00-2012-F-0186

April 3, 2019

Stacey Zee  
Federal Aviation Administration  
800 Independence Avenue SW  
Washington, DC 20591

Dear Ms. Zee:

The U.S. Fish and Wildlife Service (Service) thanks you for the opportunity to provide comments on the written re-evaluation (WR) of the 2014 Final Environmental Impact Statement for the Space Exploration Technologies Corporation (SpaceX) Texas Launch Site. The 2014 action was the issuance of launch licenses and/or experimental permits to authorize SpaceX to launch Falcon 9 and Falcon Heavy orbital vertical launch vehicles and a variety of reusable suborbital launch vehicles. The Service issued a Biological Opinion (BO) on December 18, 2013, to the FAA for the SpaceX license. The Federal Aviation Administration (FAA) Office of Commercial Space Transportation WR evaluates whether the development the Big Falcon Rocket (BFR) and the experimental test program of the Big Falcon Ship (BFS) requires a supplemental environmental analysis to issue launch licenses and/or experimental permits to SpaceX. The license would be to conduct experimental test flights of reusable suborbital launch vehicles from SpaceX's private launch site located at Boca Chica, Cameron County, Texas.

The test program would last 2-3 years and have three phases. The following table details each phase. The total number of events shown in the table are for the entire test program.

Table 1. Phases of the Big Falcon Ship Experimental Test Program

Test	Total # of Events <sup>a</sup>	Description
Wet Dress	5-10	Verify ground systems and spacecraft by fueling the Ship.
Static Fire	5	Verify engine ignition and performance by conducting a brief (few seconds) ignition of the Ship's engines.
Small Hops	3	Verify engine ignition and thrust to lift the Ship a few centimeters off the ground.
Small Hops	3	Engine ignition and thrust to lift the Ship over 30 cm and up to 150 m.

Medium Hops	3	Engine ignition and thrust to lift the Ship over 30 cm and up to 3 km.
Suborbital Space Flight	3	Launch up to 100 km, flip the Ship at high altitude, and conduct a reentry and landing.

The proposed experimental test program involves modifications to the vertical launch area (VLA) and Control Center Area. The construction will be done in two phases within the property boundary and the same project area analyzed in the 2014 EIS. Phase 1 construction in the VLA is ongoing and includes the initial build of the propellant farms and associated ground equipment. Phase 2 construction includes the necessary systems and equipment for higher BFS hop tests.

The FAA did not issue a launch license and/or experimental permit, but opted to waive the need for SpaceX to obtain a launch license and/or permit to conduct the currently proposed actions. The waiver, a federal action, is limited to: 1) loading and unloading fuel test; 2) spin test; and 3) minihops. The total number of events, in Phases 1 and 2 that can occur within that waiver, over the 2-3 years timeframe is listed in Table 1. Phase 3 would require another WR and analysis.

The FAA WR concluded that the issuance of launch licenses and/or experimental permits to SpaceX to conduct BFS tests conformed to the prior environmental documentation, that the data contained in the 2014 EIS remain substantially valid, there were no significant environmental changes, and that all pertinent conditions and requirements of the prior approval have been met or will be met in the current action. Therefore, a supplemental EIS or new environmental document was not necessary.

### **General Comments:**

The 2014 EIS for the Falcon 9 launches described three types of launch licenses and experimental permits to operate reusable orbital and suborbital launch vehicles:

- Launch-Specific License — “authorizes a licensee to conduct one or more launches, having the same launch parameters, of one type of launch vehicle from one launch site” (14 CFR §415.3[a]). A licensee's authorization to launch terminates upon completion of all launches authorized by the license or the expiration date stated in the license, whichever occurs first.
- Launch Operator License — “authorizes a licensee to conduct launches from one launch site, within a range of launch parameters, of launch vehicles from the same family of vehicles transporting specified classes of payloads” (14 CFR §415.3[b]). A launch operator license remains in effect for five years from the date of issuance.
- Experimental Permit — “authorizes launch and reentry of a reusable suborbital rocket” (14 CFR §437.7). An experimental permit lasts for one year from the date issued.

The EIS did not analyze the potential for a waiver to be issued to SpaceX for their Falcon 9 launches, nor is it mentioned in the WR for the Phase 1 and Phase 2 scheduled events. It appears the federal action changed from providing a license or experimental permit for SpaceX to launch Falcon 9 rockets into orbit and/or other various suborbital rockets providing a waiver for BFS

tests. The Service requests an explanation of the use of a waiver instead of a license or experimental permit.

In accordance with Paragraph 9-2.cof FAA Order 1050.1F, the preparation of a new or supplemental EIS is not necessary when the following can be documented:

1. The proposed action conforms to plans or projects for which a prior EA and FONSI have been issued or a prior EIS has been filed and there are no substantial changes in the action that are relevant to environmental concerns;
2. Data and analyses contained in the previous EA and FONSI or EIS are still substantially valid and there are no significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; and
3. Pertinent conditions and requirements of the prior approval have been, or will be, met in the current action.

The FAA contends that the mission has changed, but the proposed action of issuing a license and/or experimental permit has not changed. Additionally FAA states that: all construction and activities will be within the same footprint; pertinent requirements will be met in the current action; there have been no substantial changes to the EIS; and no significant new circumstances or information relative to environmental concerns therefore, the FAA states a new supplemental EIS is not needed.

The Service agrees the mission has changed and construction and activities will occur within the boundaries already analyzed under the 2014 EIS and 2013 BO. However, changes in how construction and closures are being conducted are not being followed as outlined in the BO and may be impacting listed species beyond what was originally analyzed. The Service has contacted FAA and SpaceX, via emails, regarding noncompliance; but resolution has not occurred. Therefore, the Service requests, closures and testing events cease until noncompliance issues are resolved.

The BO is a legally binding document between FAA/SpaceX and the Service. FAA/SpaceX have stated they will follow the BO. Many project aspects have changed and therefore, the BO should be amended to reflect the current proposed action and activities to occur under that waiver. Various measures under the May 13, 2014, amendment have not been completed and should be addressed in the next amendment (enclosed) and annual report.

#### **Specific Comments:**

**Page 4, WR, Table 1, Phase 1, Wet Dress, 5-10 events, verify ground systems and spacecraft by fueling the BFS.**

**Comment:** There have been 13 days of closures or proposed closures between March 20 and April 1, 2019. If the total number of events in Table 1 are for the entire test program (2-3 years) and do not represent a number of monthly or annual operations it would appear that if a test was done each of the 13 days then the 5-10 events on the table, planned over 2-3 years has been exceeded. The EIS and BO analyzed a closure of up to 15 hours. Closures impact federal refuge

and state park attendance, and interfere with daily sea turtle patrols, being conducted by Sea Turtle, Inc. in an effort to locate nesting sea turtles and secure eggs for hatching. Many of the turtles are daytime nesters. It also interferes with monitoring of birds and plants making it difficult to analyze the pre and post effects of the closures and wet dress activities.

Small hops vs medium hops include low-altitude and higher-altitude test that range from 500 meters (1,650 feet) meters to 5,000 meters (16,500 feet) for an overall time length of 1.5 to 6 minutes each and usually run approximately 3 times a week. For clarification, will 3 small hop events occurring 3 times a week, increase the number of events and the length of time a closure will occur?

**Page 5, WR, Phase 1 Construction 2<sup>nd</sup> paragraph “This is the same area that was stabilized for construction via the surcharging project conducted in 2016”**

**Comment:** Does the surcharging project refer to the pilings discussed in the EIS and BO that were to be completed in 2 weeks? That was a one time nighttime construction with associated noise and lighting that was only to occur during the two weeks of concrete pouring.

**Page 7, WR, 1<sup>st</sup> paragraph “The BFS test program would involve use of launch control centers, Falcon support building, emergency services building, ground tracking antenna dishes and solar farm.”**

**Comment:** The antenna dishes have been installed and can be used to communicate between the Control Center and the VLA. Are these dishes currently licensed and functioning or does the Federal Communications Commission require a license?

**Page 8, WR, 1<sup>st</sup> paragraph “The tent would be installed in the location of the proposed support buildings mentioned in the 2014 EIS. The tent would be used to house welding and fabrication activities needed for structures at the VLA....Work activities inside the tent would occur at night and therefore require lighting”**

**Comment:** The EIS and the BO state there would not be any night construction except for the 2-week period when pilings were to be installed. Night construction should cease and there should not be any lighting visible over the dunes during sea turtle season (March 15 to October 1<sup>st</sup>). Inspections should be occurring to ensure lights, security and parking follow the guidelines set in the Conservation Measures of the BO.

**Page 9, Table 3. Phase 2 Commodities**

Quantity	Description
302 cubic feet	Ship purges/pneumatics
2 tanks: 302 cubic feet 450 cubic feet	Ship pneumatics
Two tanks: 16,000 gallons 60,000 gallons	Propellant densification/Gaseous Nitrogen Recharge/Densification
1550 cubic feet	Ship Oxygen Tank Press
1040 cubic feet	Ship Methane Tank Press



**Comment:** The type of fuel has changed from the original EIS and the BO should be amended to reflect that change.

**Page 10, WR, Affected Environment, Paragraph 2 “SpaceX installed a solar farm on Parcel 2.”**

**Comment:** Texas Parks and Wildlife commented that solar arrays can have a “lake effect,” and cause birds and their insect prey to mistake a reflective solar facility for a water body. SpaceX committed to installing non-reflective solar panels and it is important they were installed to limit migratory and/or listed bird species from being potentially impacted.

**Page 11, WR, Re-evaluation of Environmental Consequences “The FAA does not believe the tent would cause effects to species listed under the Endangered Species Act (ESA) in a manner not considered in the Biological Opinion and not increase the amount of take”**

**Comment:** A tent or building is now onsite at the VLA and appears to be a storage area for equipment and materials; however it is open on both ends and emanates light from inside and out in addition to other construction lighting at night. Lighting was not to occur onsite except during one or two nighttime launches, which SpaceX states will no longer occur. It is sea turtle nesting season and nighttime construction could cause additional impacts to sea turtles that were not considered in the EIS or BO.

**Page 12, WR, Biological Resources (including Fish, Wildlife, and Plants) The FAA and SpaceX are committed to implementing the conservation measures and terms and conditions outlined in the BO to minimize potential effects to ESA-listed species and critical habitat. Any license or permit issued by the FAA to SpaceX for operations at the Texas Launch Site will include a term and condition for environmental compliance.”**

**Comment:** FAA and SpaceX have been informed that they are out of compliance with the BO. The FAA and SpaceX have not coordinated with various agencies as outlined in the BO, 14 Days prior to closures. Instead, they continue to have continuous day after day closures, potentially exceeding their 2-3 year total number of events. Nighttime construction is also potentially illuminating the beach during sea turtle season and increasing the risk of “take” not anticipated or covered in the BO.

**Page 18, WR, Visual Effects (including Light Emissions) “The 2014 EIS determined construction activities would impact the visual environment of residents of Boca Chica Village and travelers on State Highway 4, but the impacts would be intermittent, temporary, and minimized through SpaceX’s Lighting Management Plan.... The amount of nighttime lighting at the VLA would be less. Aside from the methane flare, SpaceX is not planning to have nighttime lighting at the VLA.”**

**Comment:** Since the new program began, Boca Chica residents have reported that the lighting is continuous throughout the night. A picture on SPACENEWS30 Texas on December 24, 2018,

by Jeff Foust shows the BFS being built, at night, with bright equipment lights lighting up the night sky.

**The following comments address the BO:**

**Page 2, “Construction Activities,”** Construction of the launch and control center facilities is expected to be complete within 24 months. Most construction will occur during the hours of 8 a.m. to 5 p.m., Monday through Friday. Night construction will occur for approximately 2 weeks during concrete pouring and approximately 2 weeks for pile driving.”

**Comment:** Construction is occurring during the night, which is not in compliance of the BO. This poses a greater risk on listed species.

**Page 2, Launch Area, “The proposed vertical launch area will occupy 20 of the 56.5 acres owned or leased by SpaceX.”**

**Comment:** The BO should be amended to include the current number of acres occupied.

**Page 2, “Pilings will be driven to construct the larger facilities that support heavy loads. Staging areas will occur within proposed project boundaries and no additional areas will be needed. Facilities within the launch area will include the integration and processing hangar (hangar), launch pad, launch stand with flame duct, water tower, deluge water retention basin, propellant storage and handling areas, workshop and office area, parts storage warehouse, roads, parking areas, fencing, security gates, and utilities (Figure 5 and 6).”**

**Comment:** The BO should be amended to reflect current facilities to be constructed and operated.

**Page 2 and 3, “There are four primary areas: liquid oxygen (LOX), rocket propellant-1 (RP-1), helium, and nitrogen. Each area will include storage tanks or vessels, containment area, fluid pumps, gas vaporizers, and other components necessary to control fuel flow to the launch vehicle.”**

**Comment:** An amended BO needs to analyze the change in fuel type and storage location.

**Page 3, Access Roads and Infrastructure, “Roads and utilities will provide access, power, data, and water to the facilities within the vertical launch area. Approximately 2.45 acres will be parking and road area. Parking for the launch area and the control area will accommodate up to 250 personnel. Roads will be constructed of concrete or asphalt. The perimeter access road would be dirt/gravel. The area will also include exterior lighting, security fences, and gates.”**



**Comment:** The BO should be amended to reflect total parking and road area, number of personnel expected, and where lighting will occur if different from what has been described above.

**Page 3, Access Roads and Infrastructure, “Primary power for the vertical launch area would be provided by commercial power from the control center area, located approximately 2 miles west, to the vertical launch area.”**

**Comment:** We understood the area would be powered by the solar array. What changed?

**Page 3, Access Roads and Infrastructure, “Potable water will either be delivered by truck to a holding tank at the vertical launch area or pumped from a well on the property. The septic system would consist of a mobile above ground processing unit and holding tank.”**

**Comment:** Please update information for the BO amendment as to how potable water and the septic system are handled.

**Page 3, Facility Security, “Two 6-foot tall perimeter chain-link fences will be erected around the vertical launch area and will enclose approximately 20 acres. The two fences will be approximately 10 feet apart with a 7-foot wide dirt access road inside the inner fence for security patrols. The outside perimeter fence will include a sensor system to detect unauthorized access. The control center will maintain 24 hour monitoring of all security systems.”**

**Comment:** We understand there will be a security fence, with lights, but will there still be a double fence where security guards will drive around the perimeter? Please update the section.

**Page 3, Facility Security, “Lighting will be positioned to illuminate the perimeter and a zone leading up to the controlled areas in hours of darkness. All building exterior lights will be lit from dusk to dawn.”**

**Comment:** Will there building exterior lights from dusk to dawn?

**Page 4, Control Center Area.**

**Comment:** Please update changed portions of this section for the BO amendment.

**Page 4, Control Center Area, “The Dragon capsule, a satellite, typically uses hydrazine, a different fuel than the launch vehicle.”**

**Comment:** Please let us know if reference to the Dragon capsule should be removed, as it will not be part of the project any longer.

**Page 5, Project Operations, Falcon 9 and Falcon Heavy launches will have commercial payloads, satellites, experimental payloads, or a capsule, such as the SpaceX Dragon capsule. SpaceX may also launch smaller suborbital launch vehicles with all launch**

trajectories to the east and over the Gulf of Mexico. SpaceX proposes up to 12 launch operations per year through 2025, within a few days or weeks of payload arrival at the launch site. Launch operations could include Falcon 9 launches, a maximum of two Falcon Heavy launches, and associated pre-flight activities such as mission rehearsals and static fire engine tests.”

**Comment:** Please update to reflect that there are no launches planned under this waiver, phase 1 and 2, and there are no longer 12 planned launches. Additionally, please update Launch vehicles, Payloads, and Propellant, Gas, Fuel, Oil, and Solvent Storage Areas sections.

**Page 6, Pre-Launch Activities, “Wet dress rehearsals will require restricted access in the immediate vicinity of the vertical launch area and control center area. In addition SpaceX may conduct static fires. Static fires are identical to wet dress rehearsals except engines ignite for approximately 2 seconds then shut down. Static testing may last up to three hours.**

Approximately 2 weeks in advance of a launch operation with restricted public access (i.e., actual launch, wet dress rehearsal, or static fire engine test), FAA/SpaceX will coordinate with the Cameron County Commissioner’s Court, Secretariat of Communications and Transportation – Mexico, U.S. Coast Guard (USCG), Houston Air Route Traffic Control Center (ARTCC), Texas Parks and Wildlife Department (TPWD), National Park Service (NPS), the Service’s Lower Rio Grande Valley NWR and Ecological Services Office, National Marine Fisheries Service, and Customs and Border Patrol regarding launch activities and ensure public safety. This will allow for the issuance of a Notice to Mariners (NOTMARs) and Notice to Airmen (NOTAMs). Approximately 3-6 days prior to a launch operation with restricted public access, the public would be notified of the upcoming launch operation and security closure through local media and through the use of NOTMARs and NOTAMs. The notices will include the proposed date, the expected closure time and a backup closure date and time.”

**Comment:** This coordination has not occurred for any of the closures that were scheduled by SpaceX and Cameron County and does not comply with the BO. The Service and other agencies need sufficient time to prepare for the closures and coordinate ongoing activities and/or monitoring with SpaceX. We request that no further closures be scheduled until this coordination is complete. We have received a list of contacts from SpaceX that is missing many of the agencies listed above. Please update and correct the list. In addition, please add Ernesto Reyes, U.S. Fish and Wildlife Service ES, Texas Parks and Wildlife Game Wardens, and Cameron County Parks and remove Ted Hollingsworth since he is retired. We will forward the notices to our Law Enforcement.

**Page 7, Security Plan Implementation, “Launch operation day activities will include securing the safety zone at least 6 hours prior to a launch operation. Personnel will restrict access to unauthorized persons at the soft checkpoint on SH4, just west of the U.S. Customs and Border Protection checkpoint (approximately 14–16 miles west of the SH 4 terminus at Boca Chica Beach), and the hard checkpoint just west of the control center, approximately 1.5 miles from the coast near Massey Road. Boca Chica beach will be temporarily closed**

**from the Brownsville Ship Channel south to the U.S./Mexico border on the Gulf side for up to 15 hours.”**

**Comment:** Closures were intended to be for launches of Falcon 9s. There were some scheduled dry and wet dress dates; however, there seems to be a disconnect on how many and how often these closures are being handled now. Additionally, the checkpoint was moved during the March 20-21 closure. This checkpoint location was agreed upon by all entities to reduce the potential impact on refuge lands. The checkpoint location should not be moved without consulting the Service and Refuge staff.

**Page 7, Security Plan Implementation, “FAA/SpaceX will develop a plan in coordination with Padre Island National Seashore (PAIS), Sea Turtle Coordinator or Sea Turtle Inc, (STI) to notify and allow sea turtle patrollers to survey the beach for sea turtle and sea turtle nests once the beach is closed to the public and prior to the beach security patrols and also prior to the beach being reopened to the public after a launch.”**

**Comment:** Sea turtle season is March 15 to October 1. This is the time sea turtles come up on the beach and lay their eggs and return to the water. Nest are located and the eggs are removed for secure hatching. Sea turtles nest during the day and a few at night, therefore, it is important that the patrols get out on the beach before and after closures to look for signs of nesting. FAA and SpaceX should be coordinating with PAIS or STI to allow for patrols as described above to occur. PAIS and STI patrol the beaches during peak season, April to June. If activities and closures are to occur in March, July, August or September FAA/SpaceX is responsible contracting with an experienced and certified sea turtle patroller to conduct surveys. Recent closures have delayed STI training of interns. STI now has a tentative date of April 8<sup>th</sup> for training and beginning daily patrols.

**Page 8, Personnel levels, On average, beginning in 2016, it is expected 30 full-time SpaceX employees/contractors will be present at the launch area and control center. They will work a single shift, between the hours of 8:00 a.m. to 5:00 p.m... Average personnel levels are expected to rise from 30 to 130 and the maximum levels during a launch from 130 to 250 employees onsite between 2016 and 2025.**

**Comment:** Is this still accurate? Please provide updates for the BO amendment.

**Page 8, Conservation Measures.**

**Comment:** All plans should be reviewed and updated to fit the current activity and submitted to the Service for review. FAA has submitted annual reports, and addressed some of the measures in those reports. However, FAA and SpaceX should review the conservation measures and revise to reflect the most current activities authorized under this waiver.

**Comments addressing the May 13, 2014, amendment to the BO.**

**Comment:** The BO was issued to FAA December 18, 2013, and amended in 2014 to cover SpaceX proposed changes. SpaceX submitted mitigation proposals that they were willing to

commit to implementing. The agreed upon changes that have not been implemented by FAA/SpaceX are highlighted in yellow. The Service was agreeable to the land acquisition but did not want to set a number of acres to be acquired because of the difficulty SpaceX may have finding sufficient land.

The most important change was SpaceX's commitment to fund three positions. The newly hired biologist were to assume all monitoring bird and vegetation plans developed and currently being undertaken by the University of Texas Rio Grande Valley at Brownsville. The positions have never been funded by SpaceX.

Under the Reasonable and Prudent Measures FAA/SpaceX agreed on additional measures to avoid impacts to listed species and refuge lands. The measures were to be addressed in six separate plans to be prepared later. The Plans were submitted and approved, but need additional review and updating to address the current testing program. Annual reports have been submitted by FAA, as required in the BO, but not all measures have been addressed.

Under the Terms and Conditions, the Lower Rio Grande Valley Refuge and SpaceX reviewed the updated measures in more detail and signed below each measure to commit to the changes. The BO amendment is enclosed for reference. We highlight the proposals not completed.

This concludes the Services comments on the WR and the BO. If you have any questions please contact Mary Orms at (361) 225-7315 or by email [mary\\_orms@fws.gov](mailto:mary_orms@fws.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Charles Ardizzone', with a long horizontal line extending to the right.

Charles Ardizzone  
Field Supervisor

cc:

Bryan Winton, LRGV NWR  
Rob Jess, LRGV NWR  
Sonny Perez, LRGV NWR  
Ernesto Reyes, USFWS  
Kendall Keyes, TPWD  
Mark Spicer, NPS  
Alejandro Rodriguez, USFWS, LE

enclosures



May 13, 2014

A decision of concurrence or non-concurrence is requested in regard to mitigation measures resulting from potential impacts upon the natural resources of STRC from the proposed Space X Launch Pad & Facility, located near Brownsville, Texas. These mitigation measures are a result of possible impacts to 50 acres of direct impact and approximately 1580 acres of indirect impacts to Service lands.

Please reference congressional briefing document "Proposed Space X Port surrounded by South Texas Refuge Complex (STRC)" for key points, background and current status.

## **Mitigation Proposals**

- Space X to fund 2 FTE biologists (in lieu of LEO's) to monitor uplands and species. ( 1 GS -401/486 9/11/12 and 1 GS-401/486 7/9/11)
- Space X will fund 1 Law Enforcement Officer to be utilized as a coordinator between the STRC Project Leader and security representatives of Space X (1 GS 1801 /11)
- Space X will reimburse all time for LEO's of STRC when needed pre/during/post launch times
- Space X will reimburse all time for firefighters of STRC when needed pre/during/ post launch times
- Space X will acquire ~592 parcels(~ 300 acres) surrounding launch site and other lands west of launch facility and donate to FWS; (the preference of Space X is to work with one land owner, i.e. USFWS).
- Minor sections of fence to be installed on Roadway 4 to further control and restrict access from public to FWS sensitive lands as needed
- Soft closure site moved further away from Space X launch site to west of Border Patrol check station. This meets the needs of all parties including FWS and further protects potentially affected lands
- Other potential land acquisitions may be acquired by Space X and donated to FWS

## **Specifics of the Proposed Positions**

Space X agrees to fund three positions (2 biologists & 1 LEO) for the duration of Space X at this site- in essence Space X states the Brownsville, Texas Launch Facility & Pad is expected to have a life span of 30 years or more.

The two Biologists positions will report to the refuge manager of the Lower Rio Grande Valley Refuge but will be located at either the Laguna Atascosa NWR office or at the Space X office space near Boca Chica, Texas. They will be no supervisory oversight of these positions by Space X. The positions are to be used to meet the biological mitigation objectives and protocols as required by FWS for the Boca Chica site.

Any support equipment for the biological positions will be funded through Space X (with exception to vehicle support).

The one Law Enforcement Officer (LEO) will serve as a coordinator between the Project Leader of STRC and the Security Specialists of Space X. This will require periodic times dedicated to the task force, especially prior to rocket launches. The position will serve as the Service representative on the security task force for the refuge complex. The task force will be led by Space X with representatives from all federal, state, local municipal law enforcement agencies represented to ensure all resources of the affected area are protected prior to, during and post, launch events. There will be no supervisory oversight of this position by Space X as it will serve as a point of contact only relative to Service lands. During non-launch events, the LEO will patrol the STRC's Boca Chica and Bahia Grande units only unless authorized by the STRC Project Leader.

All support equipment for the law enforcement position will be funded through FWS.

## **Reasonable and Prudent Measures**

As part of the project description, the FAA/Space X has agreed on voluntary measures to avoid and minimize impacts to the ocelot, jaguarundi, falcon, piping plover, red knot and sea turtles. The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the impact of incidental take on these species and assist the Service in improving methods to minimize impacts of incidental take.

1. Coordinate efforts with the Service's ocelot/jaguarundi lead biologist to protect and preserve ocelot and jaguarundi habitat.
2. Establish a protocol to notify the Service of direct take of an ocelot, jaguarundi, or falcon.
3. Coordinate efforts to increase northern aplomado nest sites.
4. Coordinate efforts with refuge staff to reduce impacts to refuge lands.
5. Submit a detailed Security Plan.
6. Submit a detailed Sea Turtle Monitoring Plan.
7. Submit a detailed Bird Monitoring Plan.
8. Submit a detailed Vegetation Monitoring Plan.
9. Submit a detailed Stormwater Monitoring Plan.
10. Submit a detailed Light Monitoring Plan.
11. Reduce noise related to generator use during construction or operation.
12. Reduce impacts to piping plover habitat during security patrols.
13. Submit annual reports to the Service.
14. Coordinate decommissioning of the site with the Service.

The prohibitions against taking the red knot found in section 9 of the Act do not apply until the species is listed. However, the Service advises the FAA/Space X to consider implementing the following reasonable and prudent measures. If this conference opinion is adopted as a biological opinion following a listing or designation, these measures, with their implementing terms and conditions, will be nondiscretionary.

## **Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, the FAA/Space X must comply with the following terms and conditions, which implement the reasonable and prudent

measures, described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary. (Ecological Services comments in red and concurrence from Space X and STRC)

1. In coordination with the ocelot/jaguarundi biologist, FAA/Space X will identify reasonable measures to protect and/or preserve suitable habitat within the Rio Grande Wildlife Corridor. This is a coordinated effort with Space X and Refuge staff. Refuge staff should identify habitat areas and suggest measures to protect and coordinate those efforts with Space X. (Space X Agrees) (STRC Agrees)
2. In the event that activities result in the direct take (killing, harming, or maiming) of an ocelot, jaguarundi, aplomado falcon, piping plover, red knot, and/or nesting sea turtles, the person(s) responsible for monitoring shall notify the Service at [REDACTED] immediately. A standard methodology for handling dead or injured species found during the project is to be established in coordination with the Service. This methodology shall be directed at determining the cause of death and ensuring that all data is recorded. The finder should ensure that the specimen and related evidence is not disturbed. A protocol should be developed by the Refuge staff and Space X as to who should be called besides the ES office staff and the Refuge staff should outline the methodology for handling dead or injured species and training provided to Space X employees about the importance of not disturbing evidence. (Space X Agrees) (STRC Agrees)
3. In coordination with private organizations (e.g., The Peregrine Fund) or state and federal agencies, assist efforts to increase releases (i.e., hack sites) or nest boxes in suitable northern aplomado falcon habitat. Locations and monitoring efforts can be coordinated between the Peregrine Fund and the refuge staff. however, the costs of the materials for the nest box should be paid for by Sptcc X\_ (Space X agrees but requests to approve of price/quantity before proceeding with purchases) (STRC Agrees)
4. In coordination with refuge staff, identify further options that would assist in protecting refuge lands and species habitats from impacts that may result from the public intrusions prior to closures. For example, vehicle barriers, in the form of short, spaced posts, sufficiently close together to prevent a truck or ATV from entering, but wide enough apart to allow for terrestrial animals to pass. This could be done alongside SH4 or other identified roads where the footprint is already disturbed. Location of vehicle barriers along SH4 and other recommended areas can be identified by refuge staff. If Space X agrees materials should be paid for by Space X. Maintenance of barriers will continue to be carried out by STRC staff. (Space X Agrees) (STRC Agrees)
5. A detailed Security Plan is to be developed to fully describe agreements and plans with local authorities whose support is needed to ensure public safety during launch procedures, locations of checkpoints and roadblocks, who will secure those areas, exact type of unmanned and manned aerial and ground vehicles to be used to perform sweeps and if necessary in the future, a location on private land for

public viewing. STRC stated they are working on a comprehensive list of agencies jurisdiction, boundary of that jurisdiction and who to call in various situations and who will be performing security as needed for launches or test flights. (Space X Agrees) (STRC Agrees)

6. Because FAA/Space X will perform security sweeps on a 7.53-mile stretch of beach prior to launches during the sea turtle season (March 15 to October 1) a detailed Sea Turtle Monitoring plan is to be developed. The Service approved plan will describe how the surveys will be done, when it will be done and by whom. The two STRC biologists will not be able to do bird and vegetation monitoring and further include sea turtle patrols during the entire sea turtle season. Space X should be responsible for this task. Another option would be to fund a third person that would be solely on turtle patrols, monitoring of lights and has a database background to be able to develop a program that will capture the type of information they need for all monitoring. This third person could be a third refuge person or an independent contractor that coordinates with refuge and shares its findings. (Space X agrees to work directly with Sea Turtle Inc.) (STRC Agrees)
7. Develop a bird monitoring plan for pre, during and post construction. Plan should include the piping plover, red knot, and northern aplomado falcon, and describe how where, how, when and who will be performing the surveys. It should also provide similar information for surveys to be performed during launch operations. STRC staff can handle this. (Space X Agrees) (STRC Agrees)
8. Develop a vegetation plan to monitor changes in piping plover critical habitat adjacent to the vertical launch area. Figure 15 depicts the 8.66 acres of piping plover critical habitat that will be impacted by the water vapor ground cloud extending a maximum distance of 600 feet beyond the fence line. Take has been issued for the loss of this habitat. An additional 1 000 foot radius encompasses an additional 23.51 acres that may be subject to additional changes but the Service has not issued take for (Figure 16). The detailed vegetation plan should outline how the 23.51 acres will be monitored and action to be taken if changes begin to occur. STRC staff can handle this. (Space X Agrees) (STRC Agrees)
9. To protect surrounding sensitive habitat and waterways, FAA/Space X should develop a detailed Stormwater monitoring plan that is coordinated with the Service, EPA and TCEQ to ensure compliance with protective surface water and sediment criteria (i.e. TRRP 24 Residential Surface Water and Sediment PCL and EPA Water Quality Criteria for surface water and sediment). The plan should include sampling contingencies for normal site operations, spills or emergency releases due to impending tropical storms or other events. The plan should be scalable, allowing for annual review by FAA/Space X, the Service, EPA and TCEQ. The initial plan should conduct sampling monthly for the first year to establish a baseline. At the end to the first year, sampling would be conducted in conjunction with major site activities (i.e. vehicle launch) where a discharge may occur or at a frequency determined by the concerned agencies and FAA/Space X. Sampling for emergency release or spill events would be conducted as needed and independent of established or routine monitoring. FAA/Space X should consult with the TCEQ and EPA on specific ecological sediment, storm and



surface water criteria. Since the surrounding area is adjacent to NWR lands and has endangered species habitat, residential/ecological standards should be used to determine protective thresholds and sampling protocols for both water and sediment samples. At no time should industrial standards be applied to offsite discharges in ecologically sensitive areas. Sampling of both sediment and surface water is to begin immediately upon discovery of a release of 0.1 gallons or more of any substance classified as a Resource Conservation and Recovery Act (RCRA) hazardous waste or when 25 gallons or more of a substance not meeting the classification of a RCRA hazardous waste. For development of this plan and discussion RCRA hazardous waste includes those substance defined as characteristically hazardous as specified in 40 CFR Part 261 Subpart C. All emergency or spill response samples are to be collected immediately upon discovery and that analysis would be conducted after the event. All samples should be conveyed to an appropriate laboratory for analysis within the samples specified holding time and with all appropriate preservation and chains of custody. This is really a job for Space X employees that are within the facility knees and TCEQ. STRC employees should be notified if there is a storm event and a spill occurs outside the fence into piping plover habitat so that STRC staff can monitor the critical habitat for changes. (Space X Agrees) (STRC Agrees)

10. To minimize impacts to nesting sea turtle from lighting impacts submit a detailed Light Monitoring Plan that describes how FAA/Space X will ensure lighting is not occurring on the beach. The plan should describe how a census of number, type, and locations of lights visible from the beach. Lighting inspections should occur on the beach in front of the vertical launch area. A set of daytime and nighttime lighting inspections should be done before nesting before the nesting season and three to seven additional nighttime inspections during the nesting- hatching season are recommended. STRC staff can handle this. (Space X Agrees) (STRC Agrees)

11. The Draft Closure Plan and all monitoring plans are to be submitted to the Service for review 60 days after issuance of the Final BO. The final plans will be submitted to the Service within 30 days after receipt of Service review comments on the draft plans, and any further coordination between the Service and FAA/ Space X regarding the plans and their implementation. If additional time is needed please coordinate with the Service. This should be coordinated between Space X and STRC to see who is the appropriate person to do this. refuge or Space X. (Space X Agrees) (STRC Agrees)

12. To reduce noise impacts from generators that may be used during construction or operations all generators are to be in baffle boxes ( a sound-resistant box that is placed over or around a generator), have an attached muffler, or use other noise- abatement methods in accordance with industry standards. This is a Space X responsibility since they will be at the job site. (Space X Agrees) (STRC Agrees)

13. To reduce impacts to piping plovers and red knots security patrol vehicles or other necessary equipment on the beach will be driven above the "wet line" to minimize disturbance of birds and protect feeding and roosting areas. Refuge staff and Space X should discuss what equipment will be used and where the patrol vehicles will be used for patrolling. Also, who is to be notified if someone is not adhering to "wet line"

(Space X Agrees) (STRC Agrees)

14. FAA/Space X is to submit an annual summary report to the Service's Coastal Ecological Services Field Office by December 31<sup>st</sup> of each year. The FAA/Space X summary report should include monitoring reports, measures implemented during project activities, success of such measures, incidences, and any recommendations on improvements to those measures. Reports should be sent to:  
U.S. Fish and Wildlife Service, Coastal Ecological Services Field Office, ATTN: Field Supervisor, c/o TAMU-CC, 6300 Ocean Drive, Campus Box 338, Corpus Christi, Texas 78412. STRC staff could do this, with Space X providing a short summary of what they did. (Space X Agrees) (STRC Agrees)
15. Take is not authorized beyond 2025. In the event activities continue beyond 2025, the FAA should consult with the Service 6 months prior to the expiration of this BCO. FAA responsibility. (Space X Agrees) (STRC Agrees)



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## Musk teases new details about redesigned next-generation launch system

by Jeff Foust — December 24, 2018



Portions of SpaceX's first "hopper" test article for its Starship vehicle being assembled at the company's South Texas launch site, seen here in a photo tweeted by SpaceX CEO Elon Musk Dec. 24. Credit: Twitter @elonmusk

SANTA FE, N.M. — SpaceX Chief Executive Elon Musk says a redesigned test vehicle for the company's next-generation reusable launch system could be ready for initial flights early next year.

In a tweet early Dec. 24, Musk posted a photo of two parts of that initial test article, a conical section next to a cylindrical unit with landing legs. "Stainless Steel Starship," he wrote.



**Elon Musk**  
@elonmusk

**Stainless Steel Starship**

108K 2:39 AM - Dec 24, 2018

12.2K people are talking about this

Starship is the new name, announced by Musk last month, of the upper or "spaceship" stage of the next-generation launch system previously officially known as Big Falcon Rocket, or BFR. The lower, booster stage is now called "Super Heavy."

The company has been working on a Starship test article for low-altitude flight tests at the company's South Texas launch site under development. That test article, dubbed a "hopper," would have the same nine-meter diameter as the full-scale version of the vehicle, but would not be as tall.



The company filed an application with the Federal Communications Commission Nov. 19, seeking an experimental license to support communications with the hopper during upcoming flights. SpaceX said it planned a combination of low-altitude flights, going no higher than 500 meters, and high-altitude ones, going as high as 5,000 meters, from the Texas site. The company didn't disclose a schedule for the flights in the application but said it expected to need the license for two years.

Musk and other company officials have said those hopper flights would begin in late 2019. However, Musk tweeted Dec. 22 that he expected those flights to begin as soon as early next year. "I will do a full technical presentation of Starship after the test vehicle we're building in Texas flies, so hopefully March/April," he wrote.

The recent series of tweets from Musk also confirmed a change in materials that will be used to build the vehicle. Original plans, dating back to designs presented in 2016 and 2017, called for the use of carbon composite materials, which are lightweight but have high strength. Earlier this month, though, Musk said SpaceX had shifted to a "fairly heavy metal" for use in the vehicle.

That metal, he said, is stainless steel, in particular a family of alloys called 300 Series known to maintain its strength at high temperatures. Despite being heavier than carbon composites, Musk said that stainless steel offered "slightly better" strength-to-weight performance at cryogenic temperatures, needed for the vehicle's liquid oxygen propellant tanks, and was "vastly better" at high temperatures. He acknowledged that steel was worse than carbon composite at room temperatures.

A stainless steel surface of the vehicle, he added, would require "much less" thermal protection but also would not be painted. "Skin will get too hot for paint," he tweeted. "Stainless mirror finish. Maximum reflectivity."

The test hopper will be powered by three of the company's Raptor methane/liquid oxygen engines under developments. Those engines, which the company has been working on for several years with some financial support from the U.S. Air Force, has undergone design changes as well. "Radically redesigned Raptor ready to fire next month," he tweeted, not elaborating on those changes.

He did note that SpaceX had developed a “superalloy” for Raptor, called SX500, designed to handle hot oxygen-rich gas at pressures of up to 12,000 pounds per square inch. “Almost any metal turns into a flare in those conditions,” he wrote, adding that the company’s foundry for producing that alloy is “almost fully operational.” That foundry “allows rapid iteration on Raptor.”

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**Coastal Ron** • 3 months ago

I am a member of L2 at [NASASpaceFlight.com](https://NASASpaceFlight.com) (a paid member part of the forum) and NSF has a member that lives in the Boca Chica neighborhood near the launch site that SpaceX has been trying to buy out - he actually bought a place there so he could watch what SpaceX was doing. So L2 members have been watching this come together for a couple of weeks, and I think it was because of the L2 speculation that this finally made it into the public.

Just when you think SpaceX can't surprise you any more, they do. And what they are showing off with this test vehicle is their singular focus on testing ideas as quickly as possible - and not caring how ugly it may look.

This is going to continue to be fun to watch!

25 ^ v • Reply • Share

**Nathaniel** → Coastal Ron • 3 months ago

Computer simulations are all fine and dandy, but the bent metal is what really gets me interested. I'm really looking forward to seeing each test flight and whatever SpaceX shares with the public. Let's hope they progress quickly *and* safely.

17 ^ v • Reply • Share

**Coastal Ron** → Nathaniel • 3 months ago

Exactly. SpaceX does great graphics, but they also build and test (and blow up) stuff too - far faster than most.

20 ^ v • Reply • Share

**REIMBURSABLE FUNDING AND DONATION AGREEMENT  
BETWEEN  
U. S. FISH AND WILDLIFE SERVICE, SOUTH TEXAS REFUGE COMPLEX  
AND  
SPACE EXPLORATION TECHNOLOGIES CORP.  
TO  
ACCOMMODATE COMMERCIAL SPACECRAFT LAUNCHES FROM THE SPACEX  
TEXAS LAUNCH SITE**

STRC Agreement Number:

Accounting Code:

Amount Obligated:

This Reimbursable and Donation Agreement ("Agreement") is made and entered into by and between Space Exploration Technologies Corp., a U.S. Corporation incorporated in the state of Delaware ("SpaceX") and the U.S. Fish and Wildlife Service's ("Service") South Texas Refuge Complex ("STRC"), an agency of the U.S. Department of the Interior ("Department"), collectively referred to as, the "Parties," under the authority of the Fish and Wildlife Coordination Act, 16 USC 661 et seq., the Fish and Wildlife Act of 1956, 16 USC 742f et seq., the Partnerships for Wildlife Act, 16 U.S.C. 3741, the National Wildlife Refuge Administration Act, 16 USC 668dd, and Public Law 111-88, Appropriations Act for the Department of the Interior, 123 Stat. 2910, "Donations, Fundraising, and Solicitation" 212 FW 8, Endangered Species Act of 1973 16 USC 1531-1544, "Reimbursable Agreements – Policies and Procedures (and cited authorities found at 267 FW 1.4)," 267 FW 1, and the Department of the Interior's Donations Policy, 374 DM 6 to provide for staffing, resources, and land to mitigate launches of commercial spacecraft from property located adjacent to the STRC lands (Attachment A).

Date: September 10, 2015

STRC Office: Region 2, South Texas Refuge Complex

Project Title: SpaceX Texas Launch Site, Cameron County, Texas

Task Order Term: Earlier of: (a) 30 years; or (b) SpaceX cessation of operations at the Texas Launch Site; or (c) termination in accordance with Article XII.

STRC Point of Contact: Robert Jess, Project Leader, (956)784-7591

SpaceX Point of Contact: Steve Davis, Director of Advanced Projects, (310)363-6253

**Background:**

SpaceX is a private United States based advanced technology company that designs and builds commercial rockets and spacecraft. SpaceX is developing a relatively inexpensive reusable rocket that will go into space multiple times, similar to the turnaround time capabilities that commercial airliners currently exhibit.

SpaceX has applied for permits from the Federal Aviation Administration ("FAA") to launch its spacecraft from a site near Boca Chica beach on the Gulf Coast of Texas. The launch site is bordered on two sides by STRC lands.

The STRC includes the Laguna Atascosa, Lower Rio Grande Valley and Santa Ana National Wildlife Refuges. These three refuges are found on the most southern tip of Texas where the Rio Grande River meets the Gulf of Mexico. Combined, they include approximately 180,000 acres and provide important habitat for the many species that rest, nest, feed and live here. Many of these species can only be found in deep South Texas, including the highly endangered ocelot and several types of birds that draw wildlife watchers from around the world including the Aplomado Falcon. The mission of the Service is working with others to conserve, protect and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

SpaceX intends to provide funds to STRC that will be used to employ up to three personnel. The STRC employees funded by SpaceX will spend as much time as necessary on actions involving the SpaceX Project. When not working on SpaceX actions, these employees will engage in activities to benefit the Service. While engaging in SpaceX related activities, STRC employees are providing a service to SpaceX and thus are acting pursuant to this Agreement. While engaging in activities not related to SpaceX related activities, STRC employees will be operating pursuant to a donation agreement. For purposes of efficiency, those two agreements are combined into this one Agreement.

## **I. Purpose**

- A. Under this Agreement, SpaceX will provide advance payment for the direct costs for up to three full-time employees (FTE) for the Service (STRC). The first FTE will be a law enforcement officer (LEO) (1 GS 1801-5/7/9- salary plus benefits plus management capability, per Attachment D) who will serve as a coordinator between the STRC Project Leader and a security representative of SpaceX. Additionally, the LEO will patrol and monitor activities associated with Boca Chica and surrounding refuge areas. The second FTE, if needed and activated, will be a supervisory biologist (1 GS-0401/0486 9/11/12- salary plus benefits plus management capability, per Attachment D) who will monitor within the onshore portion of the project action area and associated species of Boca Chica and surrounding refuge areas. The third FTE, if needed and activated, will be a biologist (1 GS-0401/0486 5/7/9 - salary plus benefits plus management capability, per Attachment D) who will assist the supervisory biologist in monitoring. The purpose of this Agreement is to define the respective services and resources that will be provided by the Parties, and to establish the responsibilities and procedures of the Parties. This Agreement is intended to:
1. Enable SpaceX to continue a conservation partnership with the STRC to meet monitoring obligations from pre-construction through ongoing operations for the life of the project;
  2. Enable STRC to: continue a conservation partnership with SpaceX; to receive funding for employees to monitor and protect STRC resources; and to receive donations from SpaceX for the term of this Agreement;



3. Ensure that any effects of SpaceX's actions are monitored and mitigated; in essence, ensuring full access to biological information gathered during monitoring by both parties on the lands of the Boca Chica area.
4. Maximize the effective and efficient use of STRC personnel resources by providing a dedicated, increased, and predictable level of STRC personnel resources towards SpaceX activities; and,
5. Avoid conflicts and, where possible, expedite the planning and development of necessary documents through more strategic coordination among STRC and SpaceX while providing procedures for resolving any disputes in this resource partnering effort.
6. Enhance the Service's ability to meet its national mission of working with others to conserve, protect and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

## **II. Regulatory Compliance**

- A. By entering into this Agreement, neither STRC nor SpaceX abrogate or assign their respective obligations or duties to comply with the Endangered Species Act ("ESA"), National Environmental Policy Act ("NEPA") or any other environmental statutes addressed through this Agreement, or with any other applicable law or regulation.
- B. Nothing in this Agreement is to be construed as providing a guarantee that any permits or authorizations will be approved.

## **III. Scope of Work and Services**

- A. STRC Staffing
  1. STRC shall provide the service of one law enforcement officer (LEO) for the purposes of: communication between law enforcement representatives of FWS and SpaceX prior to and during launch events for security of refuge lands involved; and ensure adequate protection of Service resources located at Boca Chica and surrounding areas. This LEO will have a role as representative for STRC on a combined Task Force during SpaceX launches and will be an employee of the Service. This Service employee will not in any way be supervised or directed by SpaceX.
  2. STRC shall provide funding for the services of up to one supervisory biologist and up to one biologist to provide biological monitoring and data collecting of potential impacts to Service trust resources for

2

SpaceX. These individuals will be employees of the Service and will not in any way be supervised or directed by SpaceX. The final number of FTE's will be determined through a subsequent agreement (and can be modified through further subsequent agreements) between SpaceX and STRC based on determined monitoring plans.

3. STRC will provide these services by hiring at least one (1) and no more than three (3) individuals but will not: augment use of existing staff; redirect existing staff to meet the needs of these positions; nor redirect the funds allocated by SpaceX towards other projects.
4. These STRC employees will be managed and supervised by staff at STRC (specifically the STRC project Leader or designee)
5. STRC anticipates the level of work required to monitor the SpaceX Project to be equivalent to between one (1) and three (3) Full-Time Equivalents ("FTEs") annually for the term of this Agreement, using an updated General Schedule (GS) Locality Pay Table plus calculated rate (benefits and management capability) as laid out in the attached schedule (Attachment D).
6. STRC shall notify SpaceX of the qualifications and anticipated roles of qualified personnel proposed to be funded under this Agreement. Hereinafter, these personnel will be referred to as "dedicated staff."
7. STRC shall use the funds provided under this Agreement to defray the costs of salaries and associated benefits of dedicated staff, to reimburse their reasonable travel and other expenses associated with the SpaceX Project (i.e., training, workshops, etc.) and to cover indirect costs incurred by the agency in administration of this Agreement.
8. STRC recognizes the importance of maintaining staff continuity in accomplishing the objectives of this Agreement, and shall use its best efforts to provide for such continuity to the extent practicable in light of the Service's other duties and responsibilities.

**B. STRC Technical Assistance and Review**

Pursuant to this Agreement, STRC will:

1. Perform other related tasks as agreed to by the Parties.
2. Maintain administrative records of STRC activities related to the SpaceX Project.
3. Provide technical assistance to SpaceX in the course of the Special Use Permit (SUP) process for SpaceX activities on refuge lands.

#### IV. SpaceX Responsibilities and Commitments

SpaceX will:

- A. Provide advance payment (on a rolling one-year basis) for direct costs for one law enforcement officer (1 GS 1801-5/7/9- salary plus benefits) beginning twelve months (or such longer period of time as may mutually be agreed in writing between SpaceX and STRC) prior to SpaceX's first launch attempt from the SpaceX Texas Launch Site. If authorized per the terms in III.A.2, provide up to one supervisory biologist (1 GS-0401/0486 9/11/12- salary plus benefits), and up to one biologist (1 GS-0401/0486 5/7/9 - salary plus benefits) for the term of this Agreement.
- B. Adhere to and complete all requirements in the step-down management plan titled "Pre-Construction Species Monitoring Survey"
- C. Adhere to and complete all requirements in the step-down management plan titled "Texas Launch Site Security Plan"
- D. Adhere to and complete all requirements in the step-down management plan titled "Sea Turtle Monitoring Plan"
- E. Adhere to and complete all requirements in the step-down management plan titled "Bird Monitoring Plan"
- F. Adhere to and complete all requirements in the step-down management plan titled "Vegetation Monitoring Plan"
- G. Adhere to and complete all requirements in the step-down management plan titled "Operational Storm Water Pollution Prevention Plan"
- H. Adhere to and complete all requirements in the step-down management plan titled "SpaceX Texas Launch Site Lighting Management Plan"
- I. Reimburse STRC for all time of non-dedicated LEO's of STRC when needed and authorized by STRC and SpaceX during certain pre/during/post launch events
- J. Reimburse STRC for time of firefighters of STRC when needed and authorized by STRC and SpaceX during certain pre/during/post launch events
- K. Install minor sections of fence, if approved by STRC and SpaceX, to be installed along Tx4 east/ Boca Chica Blvd. to further control and restrict access from public to FWS sensitive lands as needed during launch events

- L. Provide funds, not to exceed \$25,000.00 to purchase initial equipment for the biological positions described herein. This equipment includes, but is not necessarily limited to kayaks, wet lab equipment, spotting scopes, binoculars, GPS equipment, and cameras. This clause only applies if a supervisory biologist or biologist is engaged per the terms in III.A.2
- M. Acquire land, when practicable and solely at SpaceX's discretion, within the vicinity of the Launch Control Center and Vertical Launch Area (Attachment B) with an overall goal of land ownership by Space X, General Land Office of Texas (GLO), Service, or Texas Parks & Wildlife Department (TPWD)
- N. Move the soft closure site (launch site closure checkpoint) further west on along Tx4 east/ Boca Chica Blvd. away from SpaceX launch site. Specifically, soft closure site will be located west of Border Patrol check station adjacent to canals along Tx4 east/ Boca Chica Blvd. (Attachment C). This relocation adds an additional layer of security with the water barrier (canal) and meets the needs of SpaceX, State, federal and municipal parties, including the Service.
- O. Notwithstanding any other provisions in this Agreement, in no event shall SpaceX's annual out of pocket expense exceed \$400,000 per year.

## **V. Period of Performance**

Work under this Agreement shall begin on September 10, 2015 and shall terminate at the conclusion of the Task Order term defined above (30 years or SpaceX cessation of operations at the Texas Launch Site or termination of the Agreement by either party) or another time mutually agreed to by the Parties. Both SpaceX and STRC representatives will formally review the terms of this Agreement every 5 years.

## **VI. General Provisions**

### **A. Project Coordination**

- 1. SpaceX has designated its Director of Advanced Projects as its Project Manager, who will serve as the point of contact for coordination with STRC related to this Agreement. The Project Manager shall be responsible for providing information and input to STRC as specified in this Agreement, and will serve as STRC's initial contact for resolution of issues that may arise in the course of the SpaceX Project.
- 2. STRC has designated the South Texas Refuge Complex Project Leader as its Point of Contact ("POC") for coordination with SpaceX related to the management of this Agreement. The POC shall be responsible for providing reports and other information on STRC activities and

expenditures as specified in the Agreement, and will serve as SpaceX's initial contact for resolution of issues that may arise in the course of completing the objectives of this Agreement.

3. Requests by SpaceX for STRC assistance regarding the SpaceX Project shall be submitted in writing to the STRC POC South Texas Refuge Complex, Attn: Project Leader, 3325 Green Jay Road, Alamo, Texas, 78516 or via email to or Robert\_Jess@FWS.Gov.
4. Requests by STRC for information or other assistance from SpaceX with respect to such activities regarding the SpaceX project shall likewise be submitted in writing to either the SpaceX South Texas Project, Director of Advanced Projects, 1030 15<sup>th</sup> St. NW #220E, Washington, DC, 20005 or via email to TexasLaunchSite@spacex.com.

**B. Meetings**

1. All meeting requests will be submitted in writing to the STRC POC and the SpaceX Project Manager, respectively. Requests must provide sufficient time, as mutually agreed upon, in advance, for scheduling and establishing travel authorizations. Such requests will include a brief agenda that characterizes the participation expected, the desired outcome of the meeting, and written or other materials containing sufficient information to enable STRC and SpaceX, respectively, to prepare for and actively participate in the meeting.
2. The STRC POC and other appropriate STRC representatives will meet with the SpaceX Project Manager and appropriate SpaceX representatives on a mutually agreed-upon schedule to review the status of work under this Agreement, assess current priorities, and address other relevant issues.

**VII. Priority Projects and Activities**

- A. SpaceX and the STRC will work together to identify tasks and related activities to be treated as priorities. SpaceX and STRC will update the list as warranted.
- B. If the current and/or projected workload of priorities exceeds STRC's ability to provide the services specified in this Agreement, STRC will consult with the SpaceX Project Manager regarding an adjustment of priorities and or identification of additional funding resources.
- C. If SpaceX fails to identify priorities or related activities, STRC will establish its own priorities in accordance with the objectives of this Agreement and provide a list of priorities to SpaceX.

## **VIII. Performance Measures**

SpaceX and STRC have agreed to establish performance measures as a means to monitor activities under this Agreement. Both Parties understand that performance measures are not intended to be punitive to either Party. Instead, performance measures are intended to provide a means by which the Parties can best manage the workload and schedule of the Project.

## **IX. Reports**

The following requirement pertains to reports associated with the implementation of this Agreement:

STRC shall provide a written annual report (within two weeks of the beginning of the following calendar year) to the SpaceX Project Manager that documents expenditures and activities under this Agreement occurring during the prior calendar year. The report will describe the status of work under the Agreement, and will identify work scheduled to be performed during the then-current calendar year. The report will also identify STRC recommendations for improving coordination among the Parties, as appropriate. The report will specifically include, if applicable:

1. Biological surveys and year end reports of potential impacts.
2. A general update of law enforcement accomplishments and Task Force recommendations.
3. Recommendations for improving conservation measures on trust resources related to SpaceX activities.

SpaceX, with mutual agreement from STRC, may request additional information regarding any items included in the annual report as it deems appropriate.

## **X. Dispute Resolution**

Any issues that are not readily resolved by STRC and SpaceX staff engaged in work on the development of the CCAA will promptly be referred to the STRC POC (LRGV Refuge Manager) and the SpaceX Project Manager for resolution. Should they be unable to reach resolution, issues remaining unresolved will be referred to management for resolution (for STRC, the Project Leader; for SpaceX, Director of Advanced Projects). Issue resolution may be initiated on request of either party. Both SpaceX and STRC are responsible for ensuring timely elevation and resolution of issues. Both parties retain the right to stop work and payment on the Agreement if disputes are not resolved following a notification period of thirty days. The parties will follow the dispute resolution process found in Section XIV (V and W) below.



## **XI. Project Coordinators**

SpaceX and the STRC designate the following individuals as principal contacts for the work outlined in this Reimbursable Agreement:

### **STRC:**

Robert Jess, Project Leader, South Texas Refuge Complex  
Phone number (956) 784-7521

### **SpaceX:**

Steve Davis, Director of Advanced Projects  
Phone number (310) 363-6253

## **XII. Termination**

Either party to this Agreement may terminate the Agreement after 180 days prior written notice to the other party. Neither party shall be liable to the other for any damages, costs or claims in the event of termination. During the intervening 180 days, the Parties agree to actively attempt to resolve any outstanding disputes or disagreements. Upon termination, STRC shall refund to SpaceX any advanced funds not expended or committed as of the date of notice of termination that was tendered by SpaceX.

## **XIII. Amendment**

This Agreement may be amended in writing by agreement of the Parties.

## **XIV. Other Provisions**

- A. By executing this Agreement, neither party waives any administrative or judicial right it might otherwise have.
- B. Non-Discrimination. All activities pursuant to or in association with this Agreement shall be conducted without discrimination on grounds of race, color, sexual orientation, national origin, disabilities, religion, age, or sex, as well as in compliance with the requirements of any applicable federal laws, regulations, or policies prohibiting such discrimination.
- C. Anti-Deficiency Act. Pursuant to 31 U.S.C. § 1341, nothing contained in this Agreement shall be construed to obligate the STRC, the Department of the Interior, or the United States to any current or future expenditure of funds in advance of the availability of appropriations from Congress. Nor does this Agreement obligate the STRC, the Department of the Interior, or the United

States to spend funds on any particular project or purpose, even if funds are available.

- D. Member of Congress. Pursuant to 41 U.S.C. § 22, no Member of Congress shall be admitted to any share or part of any contract or agreement made, entered into, or adopted by or on behalf of the United States, or to any benefit to arise thereupon.
- E. Compliance with Applicable Laws. This Agreement and performance hereunder is subject to all applicable laws, regulations and government policies, whether now in force or hereafter enacted or promulgated. Nothing in this Agreement shall be construed as in any way impairing the general powers of the STRC to supervise, regulate, and control its property under applicable laws, regulations, and management policies. Nothing in this Agreement shall be construed to be inconsistent with or contrary to the purpose or intent of any Act of Congress.
- F. Disclaimers of Government Endorsement. SpaceX will not publicize or circulate any materials (including advertisements, solicitations, brochures, press releases, speeches, pictures, movies, articles, manuscripts, or other publications), suggesting expressly or implicitly that the Government, the Department, STRC, or Government employees endorse any business, brands, goods or services. Nothing herein is intended to prevent STRC or the Department from recognizing the partnership or contributions made by the SpaceX to STRC, or from authorizing, on a case-by-case basis, inclusion of such recognition in materials generated by SpaceX related to this Agreement.
- G. Merger. This Agreement, including any attachments, and or documents incorporated by reference, is the sole and entire Agreement of the Parties with respect to the subject matter hereof.
- H. Waiver. If a party fails to exercise any right or to insist that the other party comply with any obligation, no such failure or insistence shall be a waiver of a right of a party to demand strict compliance with each duty or obligation under this Agreement. No custom or practice of the parties which varies from this Agreement shall constitute a waiver of the right of a party to demand exact compliance. Waiver by one party of any particular default by the other party shall not affect or impair a party's rights in connection with any subsequent default of the same or of a different nature, nor shall any delay or omission of a party to exercise any rights arising from such default affect or impair the rights of that party as to such default or any subsequent default. Waivers by one party of any duty or obligation owed by another party must be express and evidenced in writing.
- I. Assignment. No part of this Agreement shall be assigned to any third-party without prior written approval of the other party.





- J. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original (including copies sent to a party by facsimile transmission) as against the party signing such counterpart, but which together shall constitute one and the same instrument.
- K. Agency. SpaceX is not an agent or representative of the United States, the Department of the Interior, or STRC, nor will SpaceX represent itself as such to third parties. STRC employees are not agents of SpaceX and will not represent themselves as such to third parties. No joint venture, joint enterprise or other entity is created by this Agreement.
- L. Non-Exclusive Agreement. This Agreement in no way restricts either STRC or SpaceX from entering into similar agreements, or participating in similar activities or arrangements, with other public or private agencies, organizations, or individuals.
- M. No Third-Party Beneficiaries. Unless expressly stated herein, nothing in this Agreement is intended to grant any rights or provide any benefits to any third-party.
- N. Survival. Any and all provisions that, by their terms or otherwise, are reasonably expected to be performed after the expiration or early termination of this Agreement, shall survive and be enforceable after the expiration or early termination of this Agreement. Any and all liabilities, actual or contingent, that have arisen during the term of this Agreement and in connection with it shall survive expiration or termination of this Agreement.
- O. Partial Invalidity. If any provision of this Agreement or the application thereof to any party or circumstance shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement or the application of such provision to the parties or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.
- P. Captions and Headings. The captions, headings, article numbers and paragraph numbers appearing in this Agreement are inserted only as a matter of convenience and in no way shall be construed as defining or limiting the scope or intent of the provision of this Agreement, nor in any way affecting this Agreement.
- Q. Force Majeure. Neither party shall be liable for failure to perform its obligations under this Agreement due to events beyond its reasonable control, including, but not limited to, strikes, riots, wars, fire, acts of God, and acts in compliance with or required by any applicable laws or regulations.

- S. Jointly Drafted. This Agreement shall be deemed to have been jointly drafted by both Parties and, in the event of a dispute, shall not be construed against either party.
- T. Further Assurances. If requested by one party, the other party shall execute and deliver such other documents and take such other action as may be necessary to effect the terms of this Agreement.
- U. Donation Acceptance. This Agreement assists in ensuring that STRC's donation acceptance and the related activities of the parties comply with applicable laws, regulations and government policies. Therefore, in consideration of the mutual promises and covenants contained herein, and for other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, both Parties intend to be legally bound by this Agreement.
- V. Disputes and Venue. The Parties agree that in the event of a dispute between them, STRC and Signatories of Agreement agree to work together in good faith to resolve such disputes, using the informal dispute resolution procedures set forth in this section, or such other procedures upon which the parties may later agree. However, if at any time any party determines that circumstances so warrant, it may seek any available remedy in a federal court of appropriate jurisdiction without waiting to complete informal dispute resolution.
- W. Informal Dispute Resolution Process. Unless the parties agree upon another dispute resolution process, or unless an aggrieved party has initiated administrative proceedings or suit in federal court as provided in this section, the parties may use the following process to attempt to resolve disputes:
- (a) The aggrieved party will notify the other parties of the provision that may have been violated, the basis for contending that a violation has occurred, and the remedies it proposes to correct the alleged violation.
  - (b) The party alleged to be in violation will have 30 days, or such other time as may be agreed, to respond. During this time it may seek clarification of the information provided in the initial notice. The aggrieved party will use its best efforts to provide any information then available to it that may be responsive to such inquiries.
  - (c) Within 30 days after such response was provided or was due, representatives of the parties having authority to resolve the dispute will meet and negotiate in good faith toward a solution satisfactory to all parties, or will establish a specific process and timetable to seek such a solution.
  - (d) If any issues cannot be resolved through such negotiations, the parties will consider non-binding mediation and other alternative dispute resolution processes and, if a dispute resolution process is agreed upon, will make good faith efforts to resolve all remaining issues through that process.

- X. Prohibited Source. The parties represent that SpaceX is not a Prohibited Source as that term is defined at 267 FW 1.12.

WITNESS WHEREOF, the parties hereto have caused this Reimbursable Funding and Donation Agreement to be executed as of the date therein written.

Space Exploration Technologies Corp.

By:

Name: John D. ...

Title: Director

9/11/15

Date

U.S. Fish and Wildlife Service

08/11/2015  
Date

**Aaron M. Archibeque**  
**Regional Chief, NWRS**

# Attachment A

## Space-X Proposed Project - Boca Chica Beach



## Space-X Proposed Project - Boca Chica Beach





Attachment B

Initial Land Acquisition Area

Space-X Proposed Project - Boca Chica Beach



## Attachment C

Location of soft check point in relation to Control Center and Launch Site



## Attachment D

### Sample Salaries\*, Benefits and 25% Management Capability (FY 2014)

Table 1. FY 14 General Schedule (GS) Salary Table (\$) by Step (1,5,10) plus 40% for Benefits\*\* [Bnfts] and 25% Management Capability\*\*\* (MC) by Step for the South Texas Refuge Complex area.

SALARY								
Grade	Step 1	[Bnfts]	(MC)	Total				
	Step 10	[Bnfts]	(MC)	Total	Step 5	[Bnfts]	(MC)	Total
5	31,628	12,651	(7,907)	52,186	35,847	15,539	(8,962)	60,348
	41,122	16,449	(10,281)	67,852				
7	39,179	15,672	(9,795)	64,646	44,403	17,761	(11,101)	73,271
	50,932	20,373	(12,733)	84,038				
9	47,923	19,169	(11,981)	79,073	54,312	21,725	(13,578)	89,615
	62,297	24,919	(15,574)	102,790				
11	57,982	23,193	(14,496)	95,671	65,713	26,285	(16,428)	108,426
	75,376	30,150	(18,844)	124,370				
12	69,497	27,799	(17,374)	114,670	78,762	31,505	(19,691)	129,958
	90,344	36,138	(22,586)	149,068				

Note: \*Salaries based on current year General Schedule Salary Table. \*\*Benefits are determined based on 40% of the Grade/Step (information provided by Joanne Pena, HR). \*\*\*Management Capability is determined based on 25% of the Grade/Step (not including Benefits).

# Attachment O



**RE: [EXTERNAL] LAB Padre**

Davis Libbey &lt;[REDACTED]&gt;

Thu 10/17/2019 2:45 PM

**To:** Winton, Bryan <[REDACTED]>**Cc:** Perez, Sonny <[REDACTED]> Orms, Mary <[REDACTED]> Reyes, Ernesto <[REDACTED]>

Bryan,

Lots of good input and background here. I agree that the EIS needs modification and we can talk about that tomorrow. I appreciate all the feedback. 130-2pm is fine for me tomorrow. Would really like to chat face to face on a number of these issues.

Give me a call when you are on the way!

-Dave

**From:** Winton, Bryan <[REDACTED]>**Sent:** Thursday, October 17, 2019 2:37 PM**To:** Davis Libbey <[REDACTED]>**Cc:** Sonny Perez <[REDACTED]> Extranet Contact - Mary\_Orms <[REDACTED]> Extranet

Contact - ernesto\_reyes &lt;[REDACTED]&gt;

**Subject:** Re: [EXTERNAL] LAB Padre

The only coordination we anticipate having with Louis Balderas is if he gathers footage of any value to US Fish & Wildlife Service, regarding species or habitat impacts, regardless of whether it is related to Space X or the public use/impacts on the beach. His coordination with us was for 3 weeks while he waited for us to issue him a permit. Now we have even a better insight into his intentions or focus for gathering footage. There is no way to determine the full rationale of any of the permit applicants seeking a permit from us to fly a drone. Again, they really don't need our permit and our permit doesn't authorize anything in addition to what FFA allows. We do own the land beneath the HW 4 'TxDOT' right-of-way/roadway from the Historical Marker to the beach last 10.2 miles of HW 4), so there is really no non-refuge property in the area of Space X launch site, where general drone users could park along the side of the road and launch without technically being on the refuge. Therefore, the "no drone" signs Space-X has are fine with us, as it really applies to all users that have not previously coordinated with us and received our SUP. We are really trying to decide how we continue to issue permits for drone usage, assuming the interest will continue to climb because of Space X activity. We also need to figure out how to draw the line and decide when enough permits have been issued. Any

advice or insight you could provide along those lines would be considered.

I was led to believe (by L. Balderas) that the information he has been gathering regarding Space-X activity has been acceptable to Space-X as it has offered the public an opportunity to see what is going on out at Boca Chica?! If that has not been the case, please provide me example, if you can, of any issues or problems you've had previously with Mr. Balderas and we will take that into consideration regarding continued permittance of his drone use. We didn't intentionally issue Mr. Balderas a SUP for drone use so we can have him watchdog Space-X. That was not the motivation. He plead a case that he has documented activity there since testing began and wanted to be able to continue for continuity purposes, because he stands to lose his access to private land in the Kopernick Shores area, which I understand landowners have until today to decide whether or not to sell to Space-X. He actually contacted us about installing a tower on the refuge but obtaining a ROW from DOI will take a year or more so I'd prefer to see CBP and Space-X team up on a tower location that provides you both 24/7 coverage of the refuge so that your drone usage would no longer be necessary to insure the area is human-free. It would be better for the refuge since we would have 24/7 footage available as well in the event we needed to revisit anything that happens or happened. We do need mutually beneficial monitoring of the area for all interested parties, particularly landowners, land managers, and any remaining private lands, for the public record.

I was not able to attend the last Management Task Force meeting. My assistance manager, Scot Edler, attended on my behalf. I was informed that there was a discussion on moving the soft checkpoint beyond the Massey Way Road, so that Massey can continue to accommodate users of his shooting range un-interrupted. My understanding, is that is not an option (i.e., changing the checkpoint locations). The Checkpoint locations were mutually agreed upon by all interested parties beginning in April 2011 when discussions on the Space-X project began. The checkpoint locations are in the Environmental Impact Statement documents as well. Unfortunately, Mr. Massey missed his opportunity to

debate the decision regarding checkpoint locations when the EIS was out for public review. Therefore, I don't expect to see any modification to what has been occurring this coming week. Please let me know if you or the County have different plans, because this aspect is not negotiable without re-opening the EIS for renegotiation, which actually needs to be done. Space-X's Steve Davis made it clear early on that Space-X was not interested or willing to mitigate for damages to the refuge due to public access into the refuge, which is why the checkpoint was negotiated to be west of the CBP Checkpoint along the canal. Also, allowing the public to enter further beyond the checkpoint affords an opportunity for illegal trafficking activity, depending upon the public interest, which I suspect will continue to grow as Space-X launches or test bigger and bigger ships. Therefore, despite the impacts to Mr. Massey's gun range, there is not a current option to adjust the location(s) of the checkpoints for Space-X road closures. Note: I've copied my immediate supervisor and those with Ecological Services to validate further what I've stated above. Until further notice, Space-X should probably make sure that Cameron County is also aware of this.

Lastly, if you are available tomorrow afternoon, maybe 1:30 or so, I can meet you at the UTRGV building, provide you a refuge key, so you have access to the material, and we can discuss drones, road closures, fencing, anything you want to talk about in person. I am tied up from 8-12:30 or so tomorrow, but can probably make it to Boca Chica by 1:30-2pm if you will be available and are interested in discussing any of these matters further. Just let me know. Thanks!

Sincerely,  
bryan

On Thu, Oct 17, 2019 at 9:45 AM Davis Libbey <[REDACTED]> wrote:

Bryan,

A couple of quick things first. We applied and received the permit from you guys prior to our first hop, thank you for that. Louis Balderas, in his communications to us, stated that he was working for you guys. I just wanted to be sure that he was only out here to document habitat for USFW. We figured he was full of bologna but thanks for confirming.

I don't have any exact concerns and nor does the County. Sounds like he now just wants to parade the permit in our faces. To be honest, We don't care about drone flights as long as they don't violate our property or

create a hazard to operations. And if it does become either of those two things, the permit doesn't matter at that point. Below is the email he sent to our media department. I highlighted the sentence where he eludes to his relationship with USFW.

Good evening James.

I'm reaching out to you in regards to aerial videography and photography in the Boca Chica area. We are working in coordination with US Fish & Wildlife to monitor, and document the impact on the environment and wildlife due to the recent surge in activity in the area. These areas include the length of and either side of TX HWY 4 from the beach line up to the property just west of STARGATE. We will also be monitoring known migrant trails in the vicinity in which some I've heard have caused some issues with SpaceX operations.

We do not have any intentions of flying over any populated SpaceX property.

My FAA UAV pilot license number is # 4092165. We have a one year permit with US Fish & Wildlife and we would like to keep a direct line of communication open with the proper local channels to coordinate in the event of any SpaceX UAV flights. We will also be informing Cameron County Sheriff's Department so that there is not any discrepancy as to merit of our presence.

If you have any questions please feel free to call me at any time.

Louis Balderas, Jr., Pilot



Thanks for clearing that up and if you need anything, you know where to find me!  
-Dave

**From:** Winton, Bryan <[REDACTED]>  
**Sent:** Wednesday, October 16, 2019 4:13 PM  
**To:** Davis Libbey <[REDACTED]>  
**Subject:** Re: [EXTERNAL] LAB Padre

Davis:

Louis Balderas is the 3rd drone application we have received in the past 6 months or so. We've "permitted" all 3. We (USFWS) do not and really cannot regulate drone use or not, that is FAA job. However, our law enforcement authority can enforce violations of migratory bird treat act, including disturbance to birds (and the public). Truthfully, we are issuing permits to inquiries because it affords us an opportunity to advise them (drone users) of our concerns for flying height, bird migration, and noise/disturbance to wildlife. That's it. In addition, we don't want the general public (everyone) flying drones over the refuge because that is not an appropriate use really for the refuge (aerial recreation). We are not permitting anyone for specifically research purposes at this time. Really the only reason we permitted Louis is because he claims he has been collecting footage from private land

within Kopernick Shores since the beginning, and wants to maintain continuity. Also, he informed me that he attended the recent meeting with Elon about the private landowners buyout and that he is at risk of losing his current location to continue documenting SpaceX activity, which he claims Elon and Space-X are in support of because his work is on the local news channels and the internet. We know that Space-X also is flying drones over the refuge to insure the area is human-free during testing/launches. Space-X should probably have our permit too for the same reason, which it gives us an opportunity to advise you about our biological concerns from aerial machines, which during nesting season, birds could be reactive too. Its really just our opportunity to educate and document who will be out there with drones. Anyone out there with a drone without our permit should be aware of our concerns as the surrounding landowner, but FAA regulates the use. If people launch and retrieve drones from private land they can fly over the refuge and there isn't anything we can do about it unless we document disturbance to the public or wildlife while they are doing it.

Can you be more specific about concerns you or the county have?  
bryan

On Wed, Oct 16, 2019 at 10:01 AM Davis Libbey <[REDACTED]> wrote:

Bryan,

Just got hit up by the Sheriff saying that LaB Padre is working with you guys to gather wildlife footage in the refuge for you guys. Can you verify that? I just want to make sure he's not hustling the SO so he doesn't get hassled filming us, as he has done in the past.

Additionally, funding has been approved for the bollards so that order should go through today. I will let you know when I have a delivery date for those.

Davis R Libbey  
Security Supervisor, South Texas  
Space Exploration Technologies (SpaceX)

[REDACTED]  
M: (321) [REDACTED]

"All that is required for the triumph of evil is that good men do nothing"

-E. Burke

--

Bryan R. Winton, Wildlife Refuge Manager  
Lower Rio Grande Valley National Wildlife Refuge  
3325 Green Jay Road, Alamo, Texas 78516  
[REDACTED] office; (956) [REDACTED] cell  
[REDACTED]

--

Bryan R. Winton, Wildlife Refuge Manager  
Lower Rio Grande Valley National Wildlife Refuge  
3325 Green Jay Road, Alamo, Texas 78516  
[REDACTED] office; (956) [REDACTED] cell  
[REDACTED]

# Attachment P





Orms, Mary &lt;[REDACTED]&gt;

**[EXTERNAL] SpaceX - Refuge fire meeting**

2 messages

**Grey, Leslie (FAA)** <[REDACTED]> Wed, Jul 31, 2019 at 2:40 PM  
 To: "Orms, Mary" <[REDACTED]> Dawn Gardiner <[REDACTED]> Pat Clements  
 <[REDACTED]> Bryan Winton <[REDACTED]> "deLaGarza, Laura" <[REDACTED]>  
 Ernesto Reyes <[REDACTED]> "Zee, Stacey (FAA)" <[REDACTED]>

This meeting day/time worked for most all attendees. Thank you, Leslie Grey

 **invite.ics**  
3K

**Winton, Bryan** <[REDACTED]> Wed, Jul 31, 2019 at 3:13 PM  
 To: [REDACTED]  
 Cc: "Orms, Mary" <[REDACTED]> Pat Clements <[REDACTED]> "Whitehead, Dawn"  
 <[REDACTED]> Ernesto Reyes <[REDACTED]> Laura <[REDACTED]>

Ecological Services Branch of USFWS requested a meeting/conference call with FAA and Space-X to discuss the fire occurring on the evening of July 25. Topics will likely be focused on the EIS and Written-Re-evaluation to the project and show that the recent fire is something that was not addressed in the EIS because initially Space-X proposed launches, and included in their plans to construct a water tower and infrastructure to difuse the flame of the rocket during launches. Now that the site is for testing, there is no such infrastructure in place, therefore, as before the likelihood of fire on refuge was stated to be unlikely, it is now apparent that given the changes to Space-X project/activity and constructed infrastructure, there is a likelihood we will have a fire, and maybe more to come, given Space X plans for more engines, bigger rockets, higher hops, etc. Therefore, the purpose of the conference call with FAA and Space-X and FWS will be to find out how the NEPA can be improved/amended to address what is actually happening now, as opposed to what was proposed when the project was first presented in April 2011. Because the fire occurred on TPWD lands, I'm sharing this information so please join the call if you can. Also, the frequency of road closures has been much higher than originally anticipated, so access to state and federal public lands and the beach has been impacted to a higher degree, possibly such that the public are now being conditioned to no longer anticipate being able to access this area. These and other discrepancies between the NEPA documents and what is currently occurring will be the focus of the call.

Sincerely,

bryan

[Quoted text hidden]

--

Bryan R. Winton, Wildlife Refuge Manager  
 Lower Rio Grande Valley National Wildlife Refuge  
[3325 Green Jay Road, Alamo, Texas 78516](#)

[REDACTED] office; (956) [REDACTED] cell  
 [REDACTED]

**invite.ics**



12/5/2019

DEPARTMENT OF THE INTERIOR Mail - [EXTERNAL] SpaceX - Refuge fire meeting

 3K

# Attachment Q

## Space-X

Winton, Bryan <[REDACTED]>

Mon 3/25/2019 12:17 PM

To: Orms, Mary <[REDACTED]>

Randy Rees left me a message a 09:54am stating the road would be closed today from 10-4, and again Tomorrow and Wednesday. This will be 6 consecutive days of closure not counting the weekend. Can you contact Cameron County and inform them there road closure is violating the terms of agreement between all the agencies and Space-X which agreed to 14-day notice in advance BEFORE road closures so the public could be advised. This is totally unacceptable. If we don't stop this now, we'll never be able to reel it back in. The damage will be done. The public trust will be lost and nobody will go out to Boca Chica again for fear the road will be closed with no notice. What about the Spring Breakers? Sea Turtle Inc? The Refuge. We need to be collecting milkweed and yucca seed right now for our native habitat program, plants are in bloom now, birds are nesting now. Advance notice would give us time to evaluate what all entities and species will be impacted. We had the first snowy plover chicks hatch today. We have other shorebirds nesting in the vicinity of the Space-X site. Cameron County and TxDOT obviously didn't read the EIS for Space-X project. How do we stop this thing in its tracks and start over?

bryan

--

Bryan R. Winton, Wildlife Refuge Manager  
Lower Rio Grande Valley National Wildlife Refuge  
3325 Green Jay Road, Alamo, Texas 78516

[REDACTED] office; (956) [REDACTED] cell  
[REDACTED]

# Attachment R

**From:** [Perez, Sonny](#)  
**To:** [Winton, Bryan](#); [Perez, Chris](#); [Gardiner, Dawn](#); [Orms, Mary](#); [delaGarza, Laura](#)  
**Subject:** Fw: [EXTERNAL] RE: FAA Investigation - SN8 & SN9  
**Date:** Wednesday, March 3, 2021 3:17:12 PM  
**Attachments:** [image001.png](#)

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Team,

I wanted to share this with you. I asked Reagan to reach out since I have been getting spread thin. He got a fairly quick reply.

Sonny

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**From:** Zee, Stacey (FAA) <[REDACTED]>  
**Sent:** Wednesday, March 3, 2021 3:59 PM  
**To:** Reagan Faught <[REDACTED]>  
**Cc:** Perez, Sonny <[REDACTED]> Clarkson, Chelsea (FAA) <[REDACTED]>  
Hanson, Amy (FAA) <[REDACTED]> Cushman, Anna (FAA) <[REDACTED]>  
Cantin, Jacob (FAA) <[REDACTED]> Murray, Daniel (FAA) <[REDACTED]>  
Searight, Howard (FAA) <[REDACTED]> Lang, Steven E (FAA) <[REDACTED]>  
**Subject:** [EXTERNAL] RE: FAA Investigation - SN8 & SN9

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Reagan –

I was able to get information from our inspection team regarding your request:

Following the SN8 and SN9 mishaps, the FAA authorized SpaceX to conduct the mishap investigations in accordance with their FAA-approved mishap investigation and emergency response plan under FAA oversight. As such, the FAA did not produce an investigation report; rather SpaceX completed the investigation and reported the investigation result to the FAA in accordance with 14 CFR 431.45(d). As these reports contain SpaceX commercial, competition-sensitive, and proprietary information, along with technical data subject to International Traffic in Arms Regulations, we are unable to share copies of the reports.

However, the team provided the following information regarding the hazard areas and debris:

SpaceX must establish a hazard area prior to the start of hazardous operations (e.g. propellant loading) for both ground and flight-testing. The minimum hazard area size is based on the volume of propellants loaded on the vehicle. For SN8 and SN9, SpaceX conservatively established a Blast Danger Area (BDA) of 7,200 ft radius from the launch pad, based on the propellant load plus

additional margin.

To close the road and beach, for public awareness, soft checkpoints are setup hours before the test operations/fuel loading begins. Before the testing begins, the soft checkpoint is enforced, and only SpaceX personnel, SpaceX guests, landowners, necessary Cameron County law enforcement and emergency services personnel, and other necessary agencies are granted access. Before test operations/fuel loading begins, the hard checkpoints are enforced, closing the local road at the intersection of the BDA and the beach from Port Isabel to the Rio Grande River. When the hard checkpoint is enforced, the public is not be allowed to pass on State Highway 4. SpaceX security personnel and Cameron County Sheriff's Office (CCSO), with the potential support of U.S Customs and Border Protection (CBP), enforce the hard checkpoint roadblock. The CCSO closes Boca Chica Beach and assists SpaceX Security in clearing the beach. Clearing the BDA ensures that SpaceX employees and the public remain outside of the hazard area. For flight operations, an additional Flight Caution Area is established, clearing the flight caution area ensures that the public remains outside of the BDA, and are not subject to greater than  $1E-6$  probability of casualty during a launch operation. In addition, Notices to Airman and Notices to Mariners are issued that include boundaries of the affected area. For SN8 and SN9, the BDA size remained the same. For future flights, the hazard area size may change based on increased propellant loads.

In the cases of the SN8 and SN9 mishaps, the vehicle impacted on the landing pad, which is located approx. 525 ft. from the launch pad. Debris resulting from both mishaps was contained within an area approx. 0.5 miles (2,640 ft.) from the impact point, well within the established BDA. Following each mishap, SpaceX used surveillance drones to safe the area and later geotagged, cataloged, and collected debris. No debris was found outside the ground hazard area. Debris was found on the wildlife refuge adjacent to SpaceX's property and the refuge was reopened to the public only after the debris collection was complete.



Thank you and please let me know if you have any questions. I look forward to speaking with you on

the March 11<sup>th</sup> Programmatic Agreement call.

-Stacey Zee

---

**From:** Reagan Faught <[REDACTED]>  
**Sent:** Friday, February 26, 2021 7:17 PM  
**To:** Zee, Stacey (FAA) <[REDACTED]>  
**Cc:** Perez, Sonny <[REDACTED]> Clarkson, Chelsea (FAA) <[REDACTED]>  
Hanson, Amy (FAA) <[REDACTED]>  
**Subject:** FAA Investigation - SN8 & SN9

Good Evening Stacey,

Following the anomaly events of both SN8 and SN9, SpaceX has referenced the completion of an FAA investigation report for each anomaly. Can you share a copy of those reports?

Also, this [news release](#) mentioned that *All debris was contained within the designated hazard area*. I have found "FAA-approved hazard area" referenced in the 2014-EIS and the SpaceX Security Plan, but it is unclear when or how the hazard area is established. I was also unable to find a map or details on the size of the hazard area. Does this change for each authorized test/launch event? Any clarification on the designated hazard area would be helpful.

Thanks and have a great weekend!

**Reagan Faught**  
**State Parks Region 2 Director**  
**Texas Parks and Wildlife Department**  
[REDACTED] cell



# Attachment S

**From:** [Winton, Bryan](#)  
**To:** [Edler, Scot](#); [Orms, Mary](#); [Gardiner, Dawn](#); [Reyes, Ernesto](#); [delaGarza, Laura](#); [Kendal Keyes](#)  
**Subject:** Fw: SpaceX Debris Locations / Details  
**Date:** Monday, March 2, 2020 7:22:30 AM  
**Attachments:** [image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image007.png](#)

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Scot and I will be meeting with CBBEP (Stephanie Bilodeaux) at 10am this morning to see where if any birds are nesting in proximity to the debris that needs removed.

bryan

---

**From:** Randy Rees <[REDACTED]>  
**Sent:** Saturday, February 29, 2020 10:10 PM  
**To:** Winton, Bryan <[REDACTED]> Extranet Contact - Tom.hushen <[REDACTED]> Extranet Contact - Stacey.Zee <[REDACTED]> Extranet Contact - kendal.keyes <[REDACTED]>  
**Cc:** Matthew Thompson <[REDACTED]> Paul Sutter <[REDACTED]> Kyle Meade <[REDACTED]>  
**Subject:** [EXTERNAL] SpaceX Debris Locations / Details

All,

Below is a recap of all the debris from our SN1 test anomaly, that we located outside of the SpaceX physical fence-line.

Notes are included with each of the maps. Debris surveys were performed with the permission of USFW, in both the Northern and Southern Debris areas, utilizing 4-wheel ATVs where appropriate and personnel on foot.

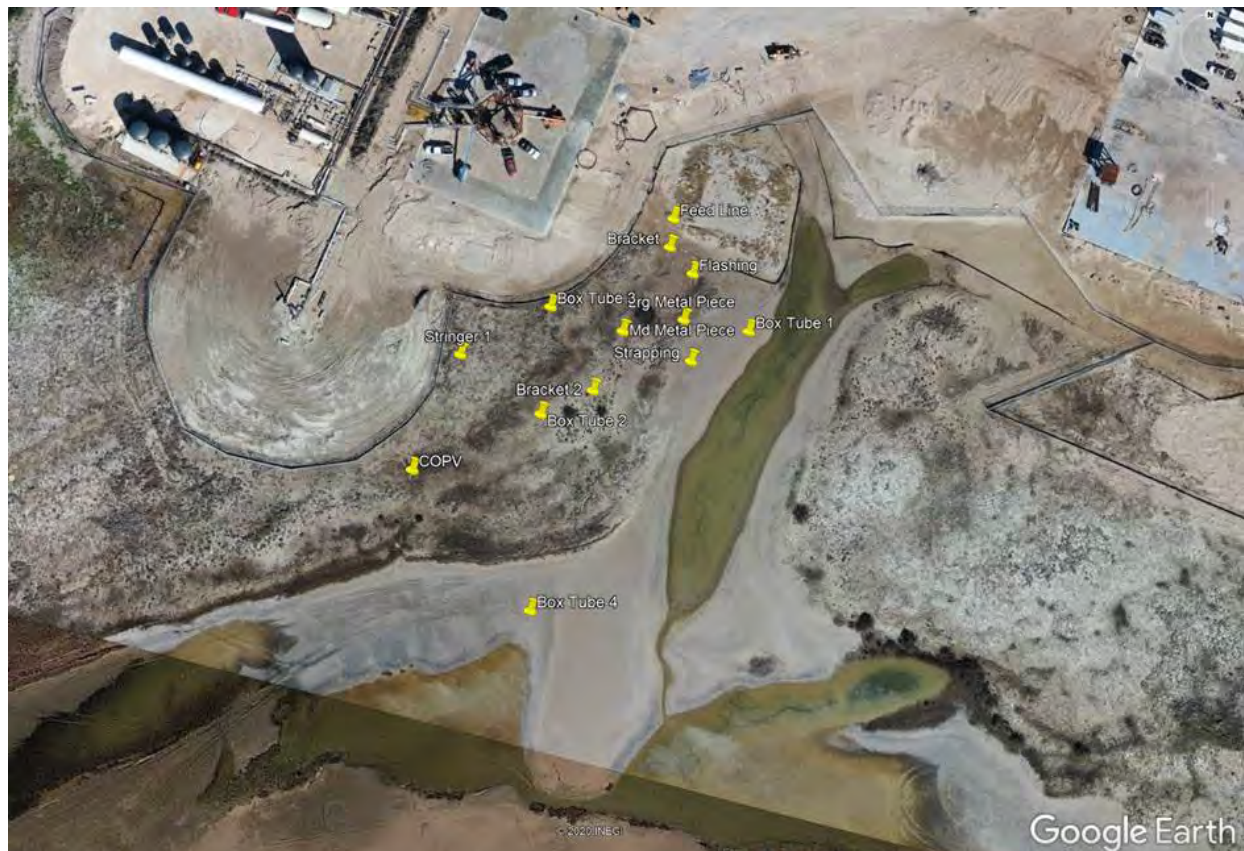
The individual pieces were each photographed and geo-tagged prior to being recovered (if recovery was possible by hand and on foot). No recovery by any mechanical means was authorized or executed.

Today, while performing evaluations, we did not come across any birds nests within the Northern or Southern Debris areas. In general the water covered areas of both South Bay and the Rio Grande tidal flats were about 6"-8" deep.

### Southern Debris

Each of the pins on the image below indicates a small hand carried piece of debris that was logged and recovered.

There were no pieces of debris to the South of the Launch Pad, that we were unable to recover back to our debris processing area, on foot. SpaceX personnel took the opportunity, while out in this area, to also collect general litter that was found during the search for SpaceX debris.



## Northern Debris

Three (3) pieces of debris that are located in the refuge North of Hwy 4, are indicated in the map below. These pieces all remain as found and have not been moved.

The **red** line from the Forward Dome indicates 407' from the edge of the highway.

The **blue** line from the North Sheet 1 indicates 137' from the edge of the highway.



## Detail Pictures

North Sheet 1





North Sheet 2



Forward Dome



Thank You,

**Randy Rees**

Environmental Health and Safety Manager  
Chief of Emergency Operations  
Space Exploration Technologies (SpaceX)



[South Texas Physical](#)

1 Rocket Road  
Brownsville, TX 78521-0008

W: (956) [REDACTED] | M: (515) [REDACTED]  
[REDACTED] : [www.spacex.com](http://www.spacex.com)



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# Attachment T



Orms, Mary &lt;[REDACTED]&gt;

**[EXTERNAL] RE: SpaceX Texas Launch Site - notes from 8/9 meeting**

3 messages

**Zee, Stacey (FAA)** <[REDACTED]> Mon, Aug 19, 2019 at 10:37 AM  
 To: Bryan Winton <[REDACTED]> "Gardiner, Dawn" <[REDACTED]> Pat Clements  
 <[REDACTED]> "Orms, Mary" <[REDACTED]> Ernesto Reyes <[REDACTED]> Kendal Keyes  
 <[REDACTED]> Reagan Faught <[REDACTED]> "Cushman, Anna (FAA)"  
 <[REDACTED]> "Collins, Ansel (FAA)" <[REDACTED]> "Ingram, Eric (FAA)" <[REDACTED]>  
 "Baker, Nicholas" <[REDACTED]> "Grey, Leslie (FAA)" <[REDACTED]> "Illoldi, Schedir (FAA)"  
 <[REDACTED]> <[REDACTED]> Randy Rees  
 <[REDACTED]> "Clarkson, Chelsea (FAA)" <[REDACTED]> Davis Libbey  
 <[REDACTED]> David Kroskie <[REDACTED]> "Czelusniak, Daniel (FAA)"  
 <[REDACTED]> "Murray, Daniel (FAA)" <[REDACTED]>  
 Cc: Katy Groom <[REDACTED]> Matthew Thompson <[REDACTED]>

All –

Attached is the summary from the August 9<sup>th</sup> meeting. Please let me know if we did not capture something correctly. There were a few TPWD folks that we did not capture.

Also attached is a nighttime inspection that SpaceX conducted in April 2019.

Also included is a doodle poll for discussion of the fire plan. Please fill this out so we can schedule a meeting this week:

<https://doodle.com/poll/p647cbz6c9awrp6z>

**From:** Zee, Stacey (FAA)  
**Sent:** Wednesday, August 14, 2019 3:00 PM  
**To:** Bryan Winton <[REDACTED]> Gardiner, Dawn <[REDACTED]> Pat Clements  
 <[REDACTED]> Orms, Mary <[REDACTED]> Ernesto Reyes <[REDACTED]> Kendal  
 Keyes <[REDACTED]> Reagan Faught <[REDACTED]> Cushman, Anna (FAA)  
 <[REDACTED]> Collins, Ansel (FAA) <[REDACTED]> Ingram, Eric (FAA) <[REDACTED]>  
 Baker, Nicholas <[REDACTED]> Grey, Leslie (FAA) <[REDACTED]> Illoldi, Schedir (FAA)  
 <[REDACTED]> Caryn Schenewerk <[REDACTED]> Randy Rees  
 <[REDACTED]> Clarkson, Chelsea (FAA) <[REDACTED]> Davis Libbey  
 <[REDACTED]> David Kroskie <[REDACTED]> Czelusniak, Daniel (FAA)  
 <[REDACTED]> Murray, Daniel (FAA) <[REDACTED]>  
**Cc:** Katy Groom <[REDACTED]> Matthew Thompson <[REDACTED]>  
**Subject:** SpaceX Texas Launch Site - Fire mitigation response plan

All –



Per our earlier meeting, attached is the Fire Mitigation Response Plan. Please review and provide any comments. I will set up a call next week to discuss – doodle poll to follow.

Stacey M. Zee

Office of Commercial Space Transportation

Federal Aviation Administration

800 Independence Ave, SW

Washington, DC 20591



---

**2 attachments**



**20190809 SpaceX Brownsville Fire Plan Meeting\_Meeting Notes.docx**  
77K



**2019 Nighttime Light Inspection.pdf**  
170K

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**Bryan Winton** <[REDACTED]> Mon, Aug 19, 2019 at 10:51 PM  
To: Kendal Keyes <[REDACTED]>  
Cc: [REDACTED], Sonny Perez <[REDACTED]>, Scot Edler <[REDACTED]>, Ernesto Reyes <[REDACTED]>, Laura <[REDACTED]>

It became the best choice of action since there is not a safe way to access the area without damaging habitat and risking sticking equipment in the sensitive area and causing significant disturbance to species in the occupied habitat. While the burn fortunately coincided with time of year a prescribed burn could actually be a benefit, burning the site is not in any prescribed fire plans and because it was an unplanned fire that could have as easily been devastating to nesting shorebird and resident species during their reproductive period. If Space X thinks they did a good thing they should be advised otherwise and prepare plans to make sure any future occurrences are avoided or minimized unless we advise them otherwise. Actually now that the area is a test site rather than a strategic launch location, their project should be moved to a far less environmentally sensitive area. Bryan

Sent from my iPhone

On Aug 19, 2019, at 4:55 PM, Kendal Keyes <[REDACTED]> wrote:

Hi Bryan:

In the notes from the call last week, Stacey wrote that

- Randy said USFWS conducted a prescribed burn in the area to reduce fuel load and the potential for another wildfire. He noted that USFWS does not currently burn this area as part of their prescribed fire program, but USFWS is considering adding this area to their burn program.

I think what he meant was the FWS did a back burn while the wildfire was underway to reduce fuel load and prevent the wildfire from spreading past a certain point. Right?

The other points are correct I think.

Thank you

Kendal Keyes, Regional Natural Resources Coordinator

Texas Parks & Wildlife Department - State Parks Division

715 S. Hwy. 35, Rockport, TX 78382

office [REDACTED]

mobile [REDACTED]  
[REDACTED]

[Quoted text hidden]

<20190809 SpaceX Brownsville Fire Plan Meeting\_Meeting Notes.docx>

<2019 Nighttime Light Inspection.pdf>

---

**Reyes, Ernesto** <[REDACTED]> Tue, Aug 20, 2019 at 8:01 AM  
To: Bryan Winton <[REDACTED]>  
Cc: Kendal Keyes <[REDACTED]> Donald Devriendt <[REDACTED]> Reynaldo Navarro  
<[REDACTED]> Sonny Perez <[REDACTED]> Scot Edler <[REDACTED]> Mary Orms  
<[REDACTED]> Pat Clements <[REDACTED]> Dawn Whitehead <[REDACTED]> Laura  
<[REDACTED]> David Hicks <[REDACTED]>

Bryan,

To answer Kendal's question is yes, it was a back fire and not a prescribed burn. Stacey mentioned that the Refuge Fire Management would consider adding this area to prescribed burning to reduce fuels, but it's not in their fire plan. My concern is that this sensitive area does not normally burn (lighting strikes), and by starting to burn an area that usually does not have fire can change the vegetation or cause more damage than good especially with the types of sand and salty soils which will loose protection once vegetation is removed, and change the ecology of the area; this needs to be considered before prescribed fire is recommended.

Ernesto Reyes  
U.S. Fish and Wildlife Service  
Alamo Ecological Service Sub-Office  
[3325 Green Jay Rd](#)  
[Alamo, Texas 78516](#)  
Tel: [REDACTED]  
Fax: [REDACTED]

[Quoted text hidden]

# Attachment U

**RE: Field Site Visit - Thursday, March 12**

Alma Walzer Santos &lt;[REDACTED]&gt;

Tue 3/10/2020 10:18 AM

**To:** Winton, Bryan <[REDACTED]> Randy Rees <[REDACTED]> Davis Libbey <[REDACTED]>**Cc:** Orms, Mary <[REDACTED]> Gardiner, Dawn <[REDACTED]> Reyes, Ernesto <[REDACTED]> delaGarza, Laura <[REDACTED]> Extranet Contact - Stacey.Zee <[REDACTED]>

Good morning, Bryan,

I'm sorry I'm unavailable to meet on Thursday.

I will be out of the office starting tomorrow, and return March 19.

I don't want to cause further delay for you but would like to meet with you when I return, if possible.

Thanks,

Alma

---

**From:** Winton, Bryan <[REDACTED]>**Sent:** Monday, March 9, 2020 2:16 PM**To:** Randy Rees <[REDACTED]> Davis Libbey <[REDACTED]> Alma Walzer Santos <[REDACTED]>**Cc:** Extranet Contact - Mary\_Orms <[REDACTED]> Extranet Contact - Dawn\_Gardiner <[REDACTED]>

&lt;[REDACTED]&gt; Extranet Contact - ernesto\_reyes &lt;[REDACTED]&gt; delaGarza, Laura &lt;[REDACTED]&gt;

&lt;[REDACTED]&gt; Extranet Contact - Stacey.Zee &lt;[REDACTED]&gt;

**Subject:** Field Site Visit - Thursday, March 12

Randy et al.

Would it be possible to meet you at Boca Chica this Thursday sometime to take a look at the debris removal from the refuge/Boca Chica State Park, from the February 28, 2020 10pm explosion?

I would like to assess the level of impact to the vegetation and alkaline flats resulting from dragging the debris to the road.

When we met on-site (Monday, March 2, 2020 at 10:30am), we viewed the 3 pieces of metal debris, and recommended that the 2 smaller pieces (closest to the road), be dragged out carefully over the vegetation, and that the largest piece be cut into pieces and removed by helicopter, as was originally recommended by you, Randy.

On Friday, March 6, 2020 at about 4:15pm I received a call from you stating the helicopter option was not going to be feasible due to high winds, uncertainty of debris weight, and because additional refuge lands would be needed for the helicopter to take off/land from, and because bird nesting has already begun, this would likely cause an unacceptable level of disturbance. So, during this call, I gave you permission to proceed with using a winch truck or cable to drag the pieces of debris from within the refuge. I viewed this "cheaper" "faster" option as beneficial to both Space-X and the refuge because of the unneeded action the debris was causing. The rationale was to expedite the removal, before bird nesting occurred in the vicinity of the debris.

Now that there have been 2 explosions, with debris both times in pretty much the same area, I want to meet with you and discuss remedies for the damage to vegetation and ruts created in the alkaline flats. I would also like to see the refuge cable fence damaged during the removal process repaired.

Lastly, I have received several reports of trash scattered about the refuge lands surrounding the Space X Launch Control Center where the recently hired 250-employees are now reporting. Trash is being blown into the refuge due to high winds, and negligence. Trash dumpsters and bins need lids, or stored in areas where blowing winds don't lift trash and blow it into the refuge. Also, there is over 200 vehicles parked on the side of the road next to the refuge wetland. This area is a safety issue for visitors to the beach. While the impacts are mostly to vegetation along the shoulder of the road, there is again a lot of trash being blown from truck beds, truck cabs, etc.

I noticed that when departing the beach, there is an Adopt-A-Highway sign that is in need of a sponsor. I am requesting that until a sponsor is determined, that Space-X and its employees take on the responsibility of removing trash and debris that is located between the launch site and control center, and even a few miles east of the control center, as it appears the owners of the dumpsters are also not covering the load adequately, as evident from the quantity of trash, type of trash, and distance of trash from the road. The refuge has never experienced this level of trash visible from the road ever.... not even after Memorial Day or July 4th weekends at Boca Chica. It is readily apparent that the trash is related to Space-X and the motorist driving to-from the site daily.

The refuge is being negatively impacted because of failure to properly store and remove trash, packaging material, boxes, etc when put in the dumpster and when transported to the landfill. Please institute measures to contain your trash and prevent it from blowing onto the refuge. Also, please educate your hired staff so they don't contribute further to the problem.

Please let me know if you can meet with me on Thursday, so we can discuss these matters in more detail.

Sincerely,  
bryan

# Attachment V

**From:** [Perez, Chris](#)  
**To:** [Perez, Sonny](#); [Gardiner, Dawn](#); [Orms, Mary](#); [delaGarza, Laura](#)  
**Cc:** [Winton, Bryan](#)  
**Subject:** Re: [EXTERNAL] RE: SN11 Anomaly March 30, 2021  
**Date:** Tuesday, March 30, 2021 11:12:48 AM

---

This video provides the best sequence showing the failure of the SN 11 craft.

<https://youtu.be/cN7855POvJ8>

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Tuesday, March 30, 2021 10:56 AM  
**To:** Perez, Chris <[REDACTED]> Gardiner, Dawn <[REDACTED]> Orms, Mary <[REDACTED]> delaGarza, Laura <[REDACTED]> Garza, Rolando L <[REDACTED]>  
**Cc:** Winton, Bryan <[REDACTED]>  
**Subject:** Re: [EXTERNAL] RE: SN11 Anomaly March 30, 2021

Chris,

Thank you for mentioning that as I should have included a note to that topic.

The cause of the anomaly was an engine failure and subsequent explosion. The self-detonation component is still intact and one of the critical components that the drone recon efforts are attempting to locate.

Sonny

---

**From:** Perez, Chris <[REDACTED]>  
**Sent:** Tuesday, March 30, 2021 10:50 AM  
**To:** Perez, Sonny <[REDACTED]> Gardiner, Dawn <[REDACTED]> Orms, Mary <[REDACTED]> delaGarza, Laura <[REDACTED]> Garza, Rolando L <[REDACTED]>  
**Cc:** Winton, Bryan <[REDACTED]>  
**Subject:** Re: [EXTERNAL] RE: SN11 Anomaly March 30, 2021

Can't confirm yet but on YouTube there was mention of SpaceX self-destruct being used this time?

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Tuesday, March 30, 2021 10:47 AM  
**To:** Gardiner, Dawn <[REDACTED]> Orms, Mary <[REDACTED]> delaGarza, Laura <[REDACTED]> Perez, Chris <[REDACTED]> Garza, Rolando L <[REDACTED]> Justin Kockritz <[REDACTED]>



**Cc:** Winton, Bryan <[REDACTED]> Reagan Faught <[REDACTED]>  
McDowell, Kelly <[REDACTED]>  
**Subject:** Re: [EXTERNAL] RE: SN11 Anomaly March 30, 2021

All,

This is the latest information on the SN11 anomaly.

Highway 4 remains closed, and site locked down as SpaceX continues to map out debris field and locate critical components that make the site unsafe for the time being.

SpaceX reported this anomaly to have a more substantial debris field on state lands north of Highway 4 than previous anomalies.

Debris has been observed via drone to be approximately [REDACTED] meters into state lands.

Debris size ranges from small, medium, and large pieces.

Response team will be meeting with SpaceX at 1300. It is projected that the critical components will be located before this time.

Bryan plus 2 other FWS refuge resources, TPWD deploying 1 staff resource, and CBBEP is deploying 1 staff resource for response.

Site conditions are described by SpaceX as wet and very soft after recent frontal passage and yesterday's rain events.

Sonny

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Tuesday, March 30, 2021 9:11 AM  
**To:** Gardiner, Dawn <[REDACTED]> Orms, Mary <[REDACTED]> delaGarza, Laura <[REDACTED]> Perez, Chris <[REDACTED]> Garza, Rolando L <[REDACTED]> Justin Kockritz <[REDACTED]>  
**Cc:** Winton, Bryan <[REDACTED]> Reagan Faught <[REDACTED]>  
**Subject:** Fw: [EXTERNAL] RE: SN11 Anomaly March 30, 2021

All,

This is a preliminary update. SpaceX had an anomaly this morning while the SN11 was still in flight. The foggy conditions prevented any decent observations of the potential debris field and extent of damage at this point. Bryan Winton will serve as lead responder for FWS and will be contacting Leo Alaniz (SpaceX POC). I anticipate that the foggy conditions will delay recon efforts by SpaceX. Also, there is the possibility that this explosion having taken place while still in flight may have a debris field larger than previous anomalies to the extent that other agencies may play a role in response.

A debris field map has been requested of SpaceX.

Bryan or I will provide details as they come available.

Sonny

---

**From:** Reagan Faught <[REDACTED]>  
**Sent:** Tuesday, March 30, 2021 8:25 AM  
**To:** Perez, Sonny <[REDACTED]>  
**Cc:** McDowell, Kelly <[REDACTED]> Winton, Bryan <[REDACTED]>  
**Subject:** [EXTERNAL] RE: SN11 Anomaly March 30, 2021

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Thank you Sonny, monitored the launch and have engaged the response team. I will be curious to see how large the debris field is this time.

Reagan

---

**From:** Perez, Sonny <[REDACTED]>  
**Sent:** Tuesday, March 30, 2021 8:22 AM  
**To:** Reagan Faught <[REDACTED]>  
**Cc:** McDowell, Kelly <[REDACTED]> Winton, Bryan <[REDACTED]>  
**Subject:** SN11 Anomaly March 30, 2021  
**Importance:** High

**ALERT: This email came from an external source. Do not open attachments or click on links in unknown or unexpected emails.**

Reagan,

I have been contacted by both Davis Libbey and Leo Alaniz of SpaceX to advise of an anomaly. They are currently focused on protecting the "methane farm" on the pad site and will begin recon when that is secure. Leo will contact me when they have completed their recon.

It is likely that we will need to engage the response individuals today.

Sonny

# Attachment W

**From:** [Eric Schroeder](#)  
**To:** [Zee, Stacey \(FAA\)](#); [REDACTED]; [Cushman, Anna \(FAA\)](#); [Cantin, Jacob \(FAA\)](#); [Murray, Daniel \(FAA\)](#); [Searight, Howard \(FAA\)](#); [Shabanowitz, Jamison L \(FAA\)](#); [Andrus, Katherine \(FAA\)](#); [Thomas, Lemuel \(FAA\)](#); [REDACTED]; [Pallante, Amy J](#); [Liverman, Astrid B](#); [Brunnemann, Eric J](#); [Rice, Heather E](#); [Henderson, Justin K](#); [Meyer, Mark E](#); [Fernandez, Oralia Z](#); [Stanley, Randy GRS](#); [Garza, Rolando L](#); [Todd, Shelley A](#); [REDACTED]; [Emily Dylla, PhD](#); [REDACTED]; [Hansel Hernandez](#); [REDACTED]; [David Kroskie](#); [Jackie Robinson](#); [Kendal Keyes](#); [Laura Zebrenzy](#); [Leslie Koza](#); [Melissa Jones \(WBC\)](#); [Michael Strutt](#); [Reagan Faught](#); [Russell Hooten](#); [Ted Hollingsworth](#); [Winton, Bryan](#); [Perez, Chris](#); [Ardizzone, Chuck CA](#); [Gardiner, Dawn](#); [Wasmund, Dayma L](#); [Orms, Mary](#); [Perez, Sonny](#); [REDACTED]; [Skaar, Karen S](#); [Clarkson, Chelsea \(FAA\)](#); [Hanson, Amy \(FAA\)](#)  
**Cc:** [Katy Groom](#); [Justin Kockritz](#); [Bill Irwin](#); [Sarah Banco](#)  
**Subject:** [EXTERNAL] RE: SpaceX Boca Chica site - noon - eastern  
**Date:** Friday, March 12, 2021 11:38:18 AM

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**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Hi Stacy: Thank you for putting this PA meeting together. I would like to echo Sara's concerns regarding the need to update the PA to include the mitigation of impacts due to the operation of the SpaceX facility at Boca Chica. In terms of impacts due to operations of the facility, there have been several anomalies that have had failures that resulted in a debris field that scatters onto the neighboring properties. One of these properties is a wildlife management area owned by Texas Parks and Wildlife Department that has archeological sites recorded on it. I'm concerned with not only the damage caused by the initial impact of the debris in an area having potentially significant archeological sites, but also the potential damage that might occur due to the removal of the debris by SpaceX. The other issue is that only a small portion of the Boca Chica Wildlife Management area has been surveyed for cultural resources and we are unsure that all historic properties have been discovered or adequately delineated that would provide the fidelity of information TPWD would need to fully evaluate such impacts as they occur.

Looking forward to further discussion on how we might structure an operational PA that all parties can live with.

Respectfully,

Eric

---

**Eric Schroeder, Ph.D.**

*Registered Professional Archaeologist #10197*

Cultural Resources Coordinator – Wildlife Division

Private Lands and Public Hunting Program

Office: (512) [REDACTED] Cell: (512) [REDACTED]

-----Original Appointment-----

**From:** Zee, Stacey (FAA) <[REDACTED]>

**Sent:** Friday, March 12, 2021 10:57 AM

**To:** [REDACTED] Cushman, Anna (FAA); Cantin, Jacob (FAA); Murray, Daniel (FAA); Searight, Howard (FAA); Shabanowitz, Jamison L (FAA); Andrus, Katherine (FAA); Thomas, Lemuel (FAA);

[REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] David Kroskie; Jackie Robinson; Kendal Keyes; Laura Zebehazy; Leslie Koza; Melissa Jones (WBC); Michael Strutt; Reagan Faught; Russell Hooten; Ted Hollingsworth;

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED] Skaar, Karen S; Eric Schroeder; Clarkson, Chelsea (FAA); Hanson, Amy (FAA)

**Cc:** Katy Groom; Justin Kockritz; Bill Irwin; Sarah Banco

**Subject:** SpaceX Boca Chica site - noon - eastern

**When:** Friday, March 12, 2021 12:00 PM-1:00 PM (UTC-05:00) Eastern Time (US & Canada).

**Where:** UPDATE - using SpaceX TEAMS info to facilitate SpaceX presentaiton and screensharing

**ALERT:** This email came from an external source. Do not open attachments or click on links in unknown or unexpected emails.

**SpaceX Teams teams info:**

**Meeting Info:**

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Dear Consulting Parties:

The FAA has scheduled the SpaceX Boca Chica Launch Site Section 106 Annual Meeting (Stipulation IX of the Programmatic Agreement (PA)). We will host a virtual meeting on **Friday, March 12<sup>th</sup> from noon to 1pm, eastern**. I will follow this email with an Outlook meeting invitation.

The purpose of the meeting is to discuss 2020 activities and activities scheduled for 2021. I will provide an agenda prior to the meeting. One of the discussion items will be amending the PA to account for the change to the undertaking (i.e., from Falcon launch vehicles to Starship/Super Heavy launch vehicles).

# Attachment X



## **PIPING PLOVER POPULATION ABUNDANCE, TREND AND SURVIVAL AT BOCA CHICA 2018-2021**

Report by Coastal Bend Bays & Estuaries Program – D. Newstead and B. Hill

22 October 2021

### **INTRODUCTION**

Piping Plovers are known to be highly faithful to wintering sites. Habitat used in winter consists mainly of Gulf beaches, and tidal flats (“mud flats,” “algal flats,” “sand flats” are commonly used descriptors). The species’ preference for one habitat or another is largely a function of habitat availability. High water levels that inundate the tidal flats reduce potential habitat there, at which time they are often found on the Gulf beach. While daily lunar-driven tides are relatively minor in the western Gulf of Mexico, seasonal tides are a more influential driver of habitat availability. Overall, tides tend to be highest in spring and fall periods, and lowest in summer and winter periods. Weather can have a strong overriding influence on this (e.g. storm surge from tropical systems, strong cold fronts), so plover habitat usage is not strictly a function of season.

The Boca Chica area is unique in that the inundation/exposure regimes of the flats north and south of the highway often alternate (Fig. 1). The north side becomes inundated when tides or strong northerly winds drive water through the pass into South Bay off the Brownsville Ship Channel. When this happens, water can be driven off the flats on the south side of the highway, “dewatering” those flats via a mangrove-lined connection to the Rio Grande near the rivermouth. When winds reverse, the opposite occurs. Flats that have recently become exposed after inundation provide preferred habitat for Piping Plovers and many other shorebirds, as prey items are still close to the surface. Blue-green algal mats are also an important foraging strata, where they forage on dipteran larvae that grow in cracks and crevices of the desiccated surface algal layer (Zonick 2000). Plovers are often found in groups when on the flats, and sometimes in groups exceeding 100 individuals. This would constitute an exceptionally large concentration in most parts of the species’ winter range, but in the past it has not been uncommon at Boca Chica to encounter groups of 200 or more (Zonick 2000, Maddock 2010). When flats are not available, they are more frequently found on the Gulf beach, where they are often quite territorial to a given linear stretch of beach. This mosaic of multiple habitat options – at least one of which is virtually always available to them – in a relatively confined area makes this site of unique importance for the species.

Piping Plovers depart their breeding grounds and arrive on the Texas coast as early as mid-July, and generally stay until at least March or April before returning north to breed. Based on previous radiotelemetry projects (Drake et al 2001, unpubl. data), most Piping Plovers are very territorial while on the beach and have small home range sizes throughout the full nonbreeding season. However, several birds captured in late September to mid-October (our study) on Padre Island National Seashore wintered further south in the Lower Laguna Madre including one that wintered in the flats at Boca Chica/South Bay.

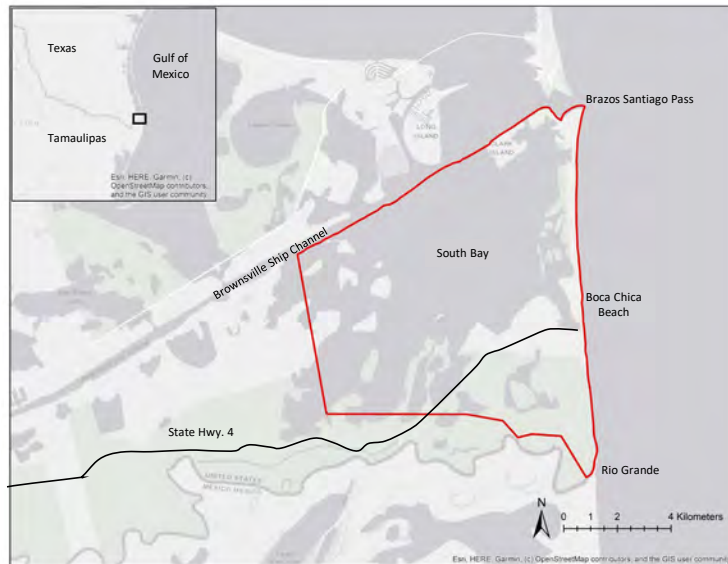


Figure 1. Study area including Piping Plover Critical Habitat Unit TX-1 outline in red.

Over the past 30 years there have been multiple banding programs on the species' breeding grounds. Most plovers that migrate to and winter in south Texas are from the Northern Great Plains (including Prairie Canada) and Great Lakes populations (Gratto-Trevor et al 2011). Birds captured for those projects were uniquely marked with a combination of color bands/flags and/or a leg flag with a unique alphanumeric code. Incorporating encounter histories of these birds – including the original marking and subsequent resightings – as well as proportions of marked and unmarked individuals into population models allows for estimation of important population parameters, including abundance and survival.

The objective of this analysis was to estimate population abundance, trend, and survival of Piping Plovers in the Boca Chica/South Bay area.

## METHODS

From late summer 2018 through fall 2021, we conducted surveys of Piping Plovers in the Boca Chica/South Bay area. The site is designated Critical Habitat Unit TX-1 for Piping Plover. Surveys were conducted along the Gulf beach, and in the tidal flats north and south of State Highway 4 (Fig.1).

Beach surveys were conducted as a linear transect covering the Gulf beach from the south jetty of Brazos Santiago Pass on the north end to the Rio Grande/Bravo rivermouth (international border) to the south. A skilled observer drove the beach slowly in order to detect Piping Plovers before they might be flushed. A GPS point was recorded for each individual observed. Each encountered plover was observed using binoculars and/or a spotting scope to determine if it was uniquely marked. If marked, the full band color/leg flag combination was recorded. If the observer was unable to read the full combination, it was recorded as “marked but unread.”

On the flats, a skilled observer familiar with habitats and behaviors of Piping Plovers used binoculars or a spotting scope to locate individuals or flocks from the highway or other access point, and then approached on foot. A GPS point was recorded in approximately the center of the flock. The whole flock was counted, and then the entire flock (or a sample in the case of a few very large flocks) were closely observed to determine how many marked and unmarked individuals were present. Once the ratio had

been recorded, the observer recorded the band combination of all uniquely marked plovers. In some cases, not all marks could be read.

In addition to records of individuals uniquely-marked on breeding grounds, we captured and marked four additional plovers at Boca Chica during the study (one in fall 2018, three in fall 2019) and these encounter histories were included in the analysis.

We used a Mark-Resight model in Program MARK to estimate abundance and other demographic parameters. Specifically, we used the Zero-Inflated Unidentified Marks Poisson Mark Resight Robust Design across Primaries model type (a type of zero-inflated Poisson log-normal estimator, hereafter, ZPNE). The ZPNE model allows for the estimation of the total population size by incorporating data describing temporal patterns in the number of both marked and unmarked individuals within a study system. This model assumes geographic closure within a single survey period (hereafter, primary period), but allows individuals to leave the population via mortality or permanent emigration (i.e., apparent survival;  $\phi$ ) between primary periods.

Encounter histories were compiled for each individual for each of the primary periods of the time range. A primary period consisted of all surveys conducted within a nonbreeding period ("year"). The year began with surveys following the arrival of birds from breeding grounds (earliest survey date July 24) and continued until as late as February 20. Each survey is considered a secondary occasion, and were grouped into 4 primary periods, with a varying number of secondaries in each: 2018/19 (16); 2019/20 (12); fall 2020 (9); and fall 2021 (8). The numbers of "marked unidentified" and "unmarked" for each primary period were also incorporated into the data structure to allow for an unbiased estimate of the total overwinter population size. As the number of marked birds within the system on the initial time step was considered known, we constrained the presence parameters ( $w$  and  $g$ ) to 1.0 (McClintock 2021). Likewise, as zero banded birds were observed beyond the confines of the study system during the overwinter period, we fixed the temporary emigration parameters ( $\gamma'$ ,  $\gamma''$ ) to zero to allow for the apparent survival ( $\phi$ ) and resight parameters to fully estimate. Models allowing the other parameters ( $\sigma^2$  – individual heterogeneity across primaries;  $\phi$  – apparent survival between primary occasions) to vary among years or remain constant were tested to determine the most parsimonious fit.

To assess the potential for immigration or emigration of individuals to or from the study area between occasions, we searched other datasets of similar surveys in the Mustang and North Padre Island areas (near Corpus Christi) and South Padre Island (just north of Boca Chica) for records of the individuals encountered at Boca Chica. The Boca Chica area was considered the terminal wintering site.

## RESULTS

A total of 379 observations of 85 uniquely marked Piping Plovers were recorded in the surveys. With the exception of the four individuals captured at Boca Chica, all others were originally marked on breeding grounds in the Northern Great Plains.

The model allowing  $\alpha$ ,  $\sigma^2$ ,  $U$ , and  $\phi$  to vary with time (with  $w$  and  $g$  fixed to 1.0 and  $\gamma'$  and  $\gamma''$  fixed to 0.0) was the only model that properly estimated all real and derived parameters.

The point estimates ( $\hat{N}$ ) indicate the wintering Piping Plover population at the site declined from approximately 308 to 142 over the course of three years, a 54% decline (Table 1, Fig. 1) since 2018 (= the 2018/19 nonbreeding season). The decline between the first and second years was over 38%, and the

trend continued downward in the following years. None of the confidence intervals in the last three years of the study overlap with the initial year. The fit of a linear trend through the point estimates over time was 0.82.

Apparent annual survival ( $\phi_a$ ) measured in this study ranged between 0.57-0.62 (Table 1). Since all marked birds in this study were breeding-age adults prior to entering the study area (or for those banded on site – were breeding-age adults at capture), these estimates reflect adult apparent annual survival.

Table 1: Population size ( $\hat{N}$ ), encounter probability ( $\hat{p}^*$ ) and annual survival estimates ( $\phi_a$ ) with lower/upper 95% confidence intervals for Piping Plovers at Boca Chica. “Year” is the calendar year of the beginning of the nonbreeding period (i.e. “2018” is fall and winter beginning 2018, ending 2019).

Year	$\hat{N}$	LCI (95%)	UCI (95%)	$\hat{p}^*$	LCI (95%)	UCI (95%)	$\phi_a$	LCI (95%)	UCI (95%)
2018	308.0	260.7	363.8	0.91	0.83	0.95	-	-	-
2019	189.0	146.1	244.4	0.83	0.72	0.91	0.57	0.43	0.69
2020	147.8	118.2	184.9	0.93	0.84	0.97	0.62	0.44	0.78
2021	141.8	86.6	232.3	0.81	0.49	0.95	0.61	0.30	0.85

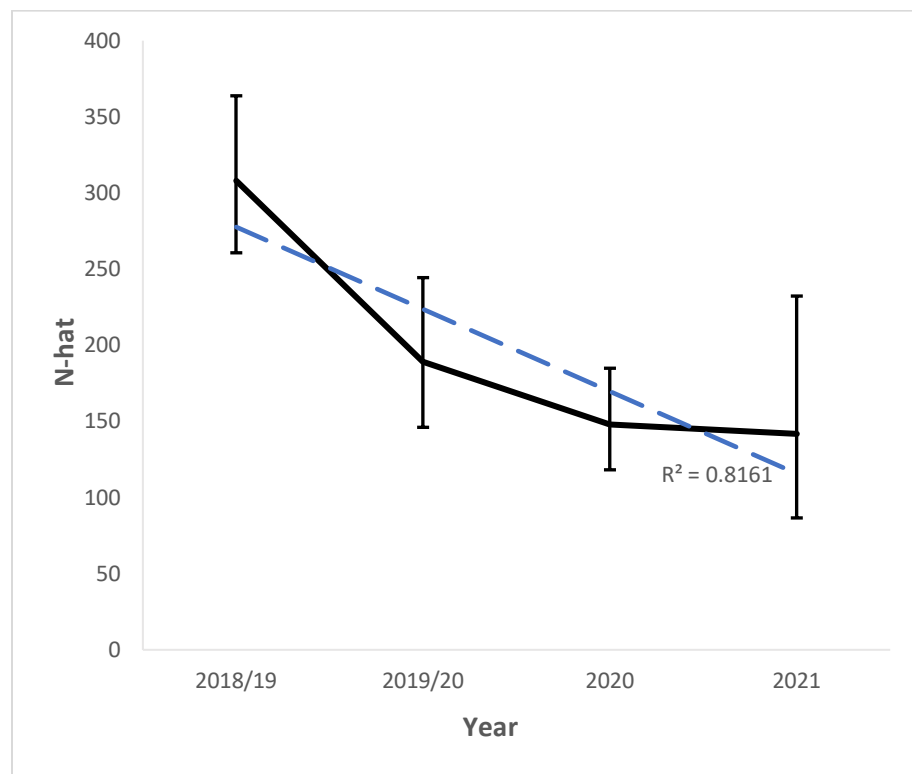


Fig. 1. Population estimate (including 95% confidence intervals) and trend of Piping Plovers at Boca Chica, 2018-2021.

## DISCUSSION

The overwhelming provenance of marked individuals from the Northern Great Plains (NGP) breeding population suggests plovers wintering at Boca Chica are almost entirely associated with that population (the two other breeding populations – the Great Lakes population of *C. m. circumcinctus* and the coastal Atlantic *C. m. melodus* population – had even more extensive banding programs during this timeframe but were not detected at the site during the study period), consistent with results of a range-wide connectivity analysis (Gratto-Trevor et al 2011). While birds from the far smaller Endangered Great Lakes population have been documented at the site in the past, none were detected at the site during this study.

The NGP breeding population is estimated at 4,700 individuals (Andres et al 2012). The population point estimate at Boca Chica in the first year of the study (~308) represents approximately 6.5% of that population while the point estimate in 2021 (~142 individuals) represents 3.0%. With no evidence that birds have changed wintering areas, this would suggest the NGP population experienced a ~3.5% decline over the period solely based on the trend at this specific site. Alternate hypotheses are that the entire NGP population has undergone a >50% decline in only four years, or that the population is in fact stable but greater numbers of unmarked individuals are now occupying other sites. The former hypothesis has no support, as such a catastrophic decline would not escape notice of many field-based projects on the species both in breeding and other wintering areas. While the latter hypothesis is plausible (it would require similar analysis of concurrent years at many other sites across the wintering range to test), wintering site fidelity is known to be very high with this species. If this hypothesis were correct, we would likely have detected at least some of these individuals at other wintering sites (none were).

Based on this model and data structure, the survival estimates represent the probability of an adult bird surviving from one nonbreeding season to the next. Since the nonbreeding season for Piping Plovers at the site is fairly long (~8 months), it cannot be definitively determined what part of the annual cycle is responsible for the highest component of the mortality (the inverse of survival). This model estimates “apparent” survival, assumed to be equal or lower than “true” survival which is the sum of apparent survival plus emigration from the site (a bird that survived but is no longer “available” to be seen at the site). However, none of the birds in this study were detected in other surveys in the most adjacent suitable habitat (Laguna Madre shoreline of South Padre Island), suggesting emigration is unlikely to have been a significant component of the inverse of apparent survival (i.e. the decline more likely reflects true mortality). The propensity for individuals to remain faithful to a wintering site despite high disturbance and/or degraded habitat quality can lead to lower site-level survival (Gibson et al 2018) as seen in this study.

Breeding-ground-based studies have yielded adult apparent annual survival estimates between 0.69-0.81 (Larson et al 2000; Roche et al 2010). Using a Barker model which approximates true survival (accounting for movement in/out of a site), Cohen and Gratto-Trevor (2011) estimated annual survival at 0.80 for adults for the studied Prairie Canada component of the NGP population. Similarly, a study incorporating both breeding and nonbreeding areas estimated apparent annual survival of the Texas population at 0.80 (Ellis et al, *in press*). Given the geographic scope of that study and very limited evidence of emigration, the authors suggest the apparent survival estimates closely approximate true survival.

Estimates from nonbreeding-ground-centric studies are more variable. Gibson et al (2018) estimated true survival at a range of sites across the southeast US Atlantic coast between 0.50-0.92, linking lower survival rates with sites experiencing higher levels of anthropogenic disturbance (a composite metric incorporating recreational beach usage and shoreline modification). The only sites in that study with lower survival estimates (0.50 and 0.55) than in our study were geographically proximate, not truly independent, and one was undergoing a significant natural loss of suitable habitat during the studied interval while the other had high levels of anthropogenic disturbance. Estimates of site fidelity in the Gibson et al (2017) study ranged from 0.73-0.91. While we did not explicitly measure site fidelity in this study, the fact that none of the uniquely-marked individuals detected in the study were ever detected in nearby sites in the winter suggests fidelity was very high. This would mean our apparent survival estimates are likely a close approximation to true survival.

A simulation study on the US NGP population of Piping Plovers (i.e., this study population, in part) demonstrated that variations in adult survival have the strongest potential to affect population trends compared to other demographic rates (McGowan and Ryan 2009). This means relatively minor decreases in adult survival across the population would likely accelerate population declines. A drastic decrease in survival at a key site such as this could have similar consequences.

The results of this study indicate a rapid and substantial loss of the population of Piping Plovers at the site (and to the NGP population), and that it may be functioning as a population sink.

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# Attachment Z





Orms, Mary &lt;[REDACTED]&gt;

---

**Fwd: Speeding Trucks**

3 messages

---

Reyes, Ernesto <[REDACTED]> Fri, Feb 12, 2016 at 12:55 PM  
To: Dawn Gardiner <[REDACTED]> Mary Orms <[REDACTED]> Pat Clements  
<[REDACTED]>

FYI

----- Forwarded message -----

From: Steve Davis &lt;[REDACTED]&gt;

Date: Fri, Feb 12, 2016 at 11:35 AM

Subject: Re: Speeding Trucks

To: "Winton, Bryan" &lt;[REDACTED]&gt;

Cc: Rob Jess &lt;[REDACTED]&gt; Sonny Perez &lt;[REDACTED]&gt; Ernesto Reyes

&lt;[REDACTED]&gt; Rene Avendano &lt;[REDACTED]&gt; Matt Donoho &lt;[REDACTED]&gt;

Matthew Thompson &lt;[REDACTED]&gt; Alma Walzer &lt;[REDACTED]&gt; Shelby McCay

&lt;[REDACTED]&gt;

Hi Bryan,

This is completely inexcusable on the contractors' part, especially as they had been given complete environmental training. We have implemented a zero-tolerance policy w them - if they ever deviate again, they will be fired from this and all future jobs.

And sounds great in the CBP front

Thanks!

Steve

On Feb 12, 2016, at 9:26 AM, Winton, Bryan <[REDACTED]> wrote:

Not sure what if anything you can do but the dump trucks importing dirt to your site are traveling in excess of the posted speedlimits. On truck crashed yesterday and the concern really is public safety, wildlife mortality increasing due to high speed trucks, and damage to our property (vegetation and fence) from accidents. If there is anything you can do to communicate to your contractor that they are traversing a wildlife refuge and that they should keep their speeds down. We will be having our refuge law enforcement follow up on this report as we have concurrent jurisdiction on the last 12 miles of HW 4 so our officers can cite motorists for speeding. You can share this with the contractor as well if you would please.

Thank you.

Note: Hoping to meet with Ft. Brown Station CBP in the next 2 weeks where I can get their input on a final cable fence design. Will keep you posted.

Sincerely,

--

Bryan R. Winton, Refuge Manager  
Lower Rio Grande Valley National Wildlife Refuge  
3325 Green Jay Road  
Alamo, Texas 78516

[REDACTED] office; (956) [REDACTED] cell

--  
Ernesto Reyes  
U.S. Fish and Wildlife Service  
Texas DOI State Border Coordinator  
Alamo Ecological Service Sub-Office  
3325 Green Jay Rd  
Alamo, Texas 78516  
Tel: [REDACTED]  
Fax: [REDACTED]

---

Reyes, Ernesto <[REDACTED]> Tue, Feb 16, 2016 at 9:14 AM  
To: Dawn Gardiner <[REDACTED]> Mary Orms <[REDACTED]> Pat Clements  
<[REDACTED]>

FYI

----- Forwarded message -----

From: Steve Davis <[REDACTED]>  
Date: Fri, Feb 12, 2016 at 6:02 PM  
Subject: RE: Speeding Trucks  
To: "Winton, Bryan" <[REDACTED]>  
Cc: Rob Jess <[REDACTED]> Sonny Perez <[REDACTED]> Ernesto Reyes  
<[REDACTED]> Rene Avendano <[REDACTED]> Matt Donoho <[REDACTED]>  
Matthew Thompson <[REDACTED]> Alma Walzer <[REDACTED]> Shelby McCay  
<[REDACTED]>

FYI, there were actually 2 truckers who were identified as speeding. Both were fired today.

---

From: Steve Davis  
Sent: Friday, February 12, 2016 12:36 PM  
To: Winton, Bryan  
Cc: Rob Jess; Sonny Perez; Ernesto Reyes; Rene Avendano; Matt Donoho; Matthew Thompson; Alma Walzer; Shelby McCay  
Subject: Re: Speeding Trucks

[Quoted text hidden]

[Quoted text hidden]

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Reyes, Ernesto <[REDACTED]> Thu, Feb 25, 2016 at 7:39 AM  
To: Dawn Gardiner <[REDACTED]> Mary Orms <[REDACTED]> Pat Clements  
<[REDACTED]>

FYI

----- Forwarded message -----

From: Winton, Bryan <[REDACTED]>  
Date: Fri, Feb 12, 2016 at 8:26 AM  
Subject: Speeding Trucks  
To: [REDACTED] <[REDACTED]>  
Cc: Rob Jess <[REDACTED]> Sonny Perez <[REDACTED]> Ernesto Reyes  
<[REDACTED]> Rene Avendano <[REDACTED]>

Not sure what if anything you can do but the dump trucks importing dirt to your site are traveling in excess of the posted speedlimits. On truck crashed yesterday and the concern really is public safety, wildlife mortality increasing due to high speed trucks, and damage to our property (vegetation and fence) from accidents. If there is anything you can do to communicate to your contractor that they are traversing a wildlife refuge and that they should keep their speeds down. We will be having our refuge law enforcement follow up on this report as we have concurrent jurisdiction on the last 12 miles of HW 4 so our officers can cite motorists for speeding. You can share this with the contractor as well if you would please.

Thank you.

Note: Hoping to meet with Ft. Brown Station CBP in the next 2 weeks where I can get their input on a final cable fence design. Will keep you posted.

Sincerely,

--

Bryan R. Winton, Refuge Manager  
Lower Rio Grande Valley National Wildlife Refuge  
3325 Green Jay Road  
Alamo, Texas 78516

[REDACTED] office; (956) [REDACTED] cell

--

Ernesto Reyes  
U.S. Fish and Wildlife Service  
Texas DOI State Border Coordinator  
Alamo Ecological Service Sub-Office  
3325 Green Jay Rd  
Alamo, Texas 78516  
Tel: [REDACTED]  
Fax: [REDACTED]

# **Attachment AA**

**From:** [David Newstead](#)  
**To:** [Orms, Mary](#); [Gardiner, Dawn](#); [Skoruppa, Mary Kay](#); [Winton, Bryan](#); [Perez, Sonny](#)  
**Subject:** [EXTERNAL] FW: TPWD scoping comments for SpaceX Boca Chica development  
**Date:** Friday, January 8, 2021 11:13:50 AM  
**Attachments:** [DRAFT Breeding Report Lower Texas Coast August 2020.pdf](#)  
[Nest locations of Snowy Plovers in vicinity of SpaceX launch site 2017-2020.pdf](#)  
[Nest locations of Snowy Plovers in immediate vicinity of SpaceX launch site 2017-2020.pdf](#)  
[Maddock PIPL winter gulf coast EC Report 2008-2009 Final.pdf](#)

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**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Hi folks,

Not sure who all is involved in the response/comment re SpaceX scoping, but I passed along our 2020 breeding season monitoring report ("draft" but the numbers and approach are fine, I just have some minor editing to do in the discussion), and some maps I put together yesterday that shows Snowy Plover nesting activity in the area just around the launch pad. Just wanted to make sure you had it too.

Also, someone had asked me about the total amount of closure times and the announcements, so I put together a chronology of just the past four days for their illustration:

1/5 9:33 am: email (Wing) announcing closure for 1/6 between 8:00 am and 5:00 pm (9 hours)  
1/6 2:36 pm: email (Wing) notifying the beach is now closed until 8:00 pm (~5.5 hours, but apparently it wasn't actually closed since 8 am as they said in the email from yesterday? And they extended the closure beyond the 5:00 pm originally announced?)  
1/6 5:45 pm: email (Wing) announcing closure for 1/7 between 8:00 am and 5:00 pm (9 hours)  
1/6 7:47 pm: email (Wing) saying beach is now open  
1/7 2:00 pm: email (Libbey) including county order for closure same day between 5:00pm to 8:00 pm (3 hours closure, with only 3 hours notice of this closure); backup date of 1/8 between 8:00 am and 5:00 pm (9 hours)  
1/7 4:29 pm: email (Lee) revoking the closure announced 2.5 hours earlier that it would be closed between 5-8 (30 minutes from the time of the email); notifying that the beach is now open  
1/8 9:53 am: email (Wing) the area is now closed (so presumably wasn't closed for the two hours since 8:00 after all?)

I realize you are privy to at least these emails/notices as well, but we need to track them very carefully in order to figure out a window of time when we can get down there to do any monitoring. That's usually for one of my staff to have to navigate but I thought putting it in a chronology might help illustrate how difficult it is to track. I understand there is perhaps some different ways of calculating how much closure time they have actually used. I think three different people working through that chronology would probably come up with six different answers! As far as I know, only the one closure (1/7 2:00 pm email from Libbey) was announced on the county website. If you're

not receiving the deluge of emails direct from SpaceX I'm not sure how you're supposed to know if it's open or not.

Let me know if you have any questions.

Thanks

David

---

**From:** David Newstead

**Sent:** Thursday, January 7, 2021 12:51 PM

**To:** Russell Hooten <[REDACTED]>

**Cc:** Jackie Robinson <[REDACTED]>

**Subject:** RE: TPWD scoping comments for SpaceX Boca Chica development

Hi Russell,

Yes, actually I was just talking to Jackie a bit about this! We've been monitoring Wilson's and Snowy Plovers from our monitoring project there since 2017. These represent nesting attempts, so more nests in one year may not necessarily mean more birds, perhaps just more failures and re-nest attempts. However, we do also have nest fate for the majority of these nests. I've attached two versions of the same type of document just compiling four maps – one is a slightly more zoomed out area than the other.

We do also have locations of rocket-associated debris from failures/explosions that landed in the flats. I will look for that.

We haven't written any reports relating specifically to SpaceX potential impacts yet, but I've attached the draft breeding season report from 2020, which contains an image showing the locations of the debris. We had no specific funding to do it, but have been continuing it as part of our regular operations down there for a while.

If you need the shapefile of the plover nesting data for the whole site I'll be happy to provide that too if you'd like to make your own maps.

I have been hoping to use some other monitoring data to estimate the Piping Plover wintering population in the area but haven't gotten to it yet. It's a lot. I've also attached a report that Sid Maddock did while surveying the entire Gulf for Piping Plovers in winter 2008/9, where he found 239 in the Boca Chica/South Bay area on 2/3/2009. That's about in line with what I would have estimated up until the past winter. We haven't been able to keep up the same level of monitoring there this winter.

Let me know if you need anything else.

Thanks

David

---

**From:** Russell Hooten <[REDACTED]>

**Sent:** Thursday, January 7, 2021 11:03 AM

**To:** David Newstead <[REDACTED]>

**Subject:** TPWD scoping comments for SpaceX Boca Chica development

Hey David,

Hope you are doing well. TPWD is preparing scoping comments for the FAA as they plan to prepare a new environmental document for SpaceX's activities at Boca Chica and we were curious if you all have any data documenting changes in bird use in the area since SpaceX began developing the areas and/or since the explosions and fires started. Jackie thought she'd heard from you that nesting plovers have evacuated from the area and not returned? Would you have any written reports, summaries, or other information you could share with us that we could include in our comments? Thanks!

Happy New Year,  
Russell

Russell Hooten  
Wildlife Habitat Assessment Program  
TPWD-Wildlife Division  
6300 Ocean Drive, NRC 2501  
Unit 5846  
Corpus Christi, TX 78412

[REDACTED]  
[REDACTED]



**Texas Breeding Seabird and Shorebird  
Monitoring and Stewardship Project:  
Lower Texas Coast**

**August 29, 2020**



One recently hatched Snowy Plover (*Charadrius nivosus*) chick and another emerging from an egg at Boca Chica, Texas (2020).

Submitted by:  
Justin LeClaire  
Coastal Bend Bays and Estuaries Program



## SITES

Site Name	Acres Monitored	Acres Protected	Habitat Description	Survey Frequency	# of Surveys
Boca Chica	338.2	0	Algal mudflats, sand overwashes, and beach	3-4 times per week	79



Figure 1. Map of Boca Chica on the lower Texas coast with monitored subsites highlighted in white (2020).

## Posting Sites

The vast majority of the Boca Chica area of South Texas is protected as either State or Federal land, including Boca Chica State Park, Brazos Island State Park, Las Palomas Wildlife Management Area- Boca Chica Unit, and Lower Rio Grande Valley National Wildlife Refuge. These areas are patrolled weekly by state and federal officials.

Over a dozen permanent National Wildlife Refuge (NWR) and American Bird Conservancy (ABC) signs were put up during the last breeding season in 2019. While most of the signs along the highway are still in place, many of the signs in the North and South Overwash entrances have been run over or pushed aside for vehicles to illegally enter the dunes and mudflats with off road vehicles (Figure 2).

At the beginning of the season, NWR staff and volunteers began installing wooden bollards along the highway mudflats with the intention of stringing cable through them to block off all of the mudflats and overwash entrances. This work was delayed in March after the coronavirus pandemic began and has not been restarted since.



Figure 2. Informational signs pushed aside and strewn about illegally for vehicle access at the entrance to the North Overwash at Boca Chica, Texas (2020).

## RESULTS

The estimated number of pairs observed across all subsites at Boca Chica was 16 Wilson's Plovers (*Charadrius wilsonia*) and 23 Snowy Plovers (Table 1). The total number of nests located across all sites was 9 Wilson's Plover, 37 Snowy Plover, and 63 Least Tern (*Sternula antillarum*). The total high counts of fledglings observed across all subsites at Boca Chica was 3 Wilson's Plovers and 6 Snowy Plovers.

Table 1. Average number of adults during the core breeding season, estimated number of breeding pairs, total nests located, and max high counts for chicks observed during a single survey in the 2020 season (April-June for Wilson's Plover, March-July for Snowy Plover, April-July for Least Tern).

WIPL=Wilson's Plover, SNPL=Snowy Plover, LETE=Least Tern, N/A = not applicable/not monitored

Metric / Description	Northwest Flats			Southwest Flats			Southeast Flats			Launch Cove			South Overwash			North Overwash			Total		
	WIPL	SNPL	LETE	WIPL	SNPL	LETE	WIPL	SNPL	LETE	WIPL	SNPL	LETE	WIPL	SNPL	LETE	WIPL	SNPL	LETE	WIPL	SNPL	LETE
Average # of Adults	0	1	0	5	2	1	0	7	0	5	1	0	3	1	23	5	6	14	18	17	38
Estimated # of Breeding Pairs	0	2	N/A	5	3	N/A	0	8	N/A	4	3	N/A	3	0	N/A	4	7	N/A	16	23	N/A
Total Nests Monitored	0	1	0	3	3	6	0	12	0	2	4	1	2	0	34	2	17	27	9	37	63
# of Successful Nest Hatches	0	0	N/A	1	1	N/A	0	4	N/A	1	0	N/A	1	0	N/A	1	3	N/A	4	8	N/A
# of Failed Nests	0	1	N/A	2	0	N/A	0	6	N/A	0	4	N/A	1	0	N/A	1	12	N/A	4	22	N/A
Max # of Downy Chicks	0	0	0	3	3	0	2	3	0	0	0	1	0	0	0	3	3	1	8	9	1
Max # of Feathered Chicks	0	0	0	0	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	5	0
Max # of Flight Capable/ Fledged Chicks	0	0	0	3	1	0	1	1	0	0	0	0	0	0	0	2	1	0	6	3	0
Max # of Unknown Age Chicks	0	0	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0





Figure 3. A well-camouflaged Wilson's Plover nest at Boca Chica, Texas (2020).



Figure 4. A full brood of Snowy Plover chicks taking cover behind some vegetation at Boca Chica, Texas (2020).

### Wilson's Plover

We estimated 16 total Wilson's Plover breeding pairs between the six Boca Chica subsites during the prime breeding season from April to June: five breeding pairs in the Southwest Flats, four in the Launch Cove, three in the South Overwash, four in the North Overwash, and zero in the Northwest and Southeast Flats. Average Wilson's Plover adult counts during the breeding season included zero adults in the Northwest Flats (range 0-1 bird), five adults in the Southwest Flats (range 1-10 birds), zero adults in the Southeast Flats (range 0-4 birds), five adults in the Launch Cove (range 0-7 birds), three adults in the South Overwash (range 0-8 birds), and five adults in the North Overwash (range 0-9 birds, Figure 5).

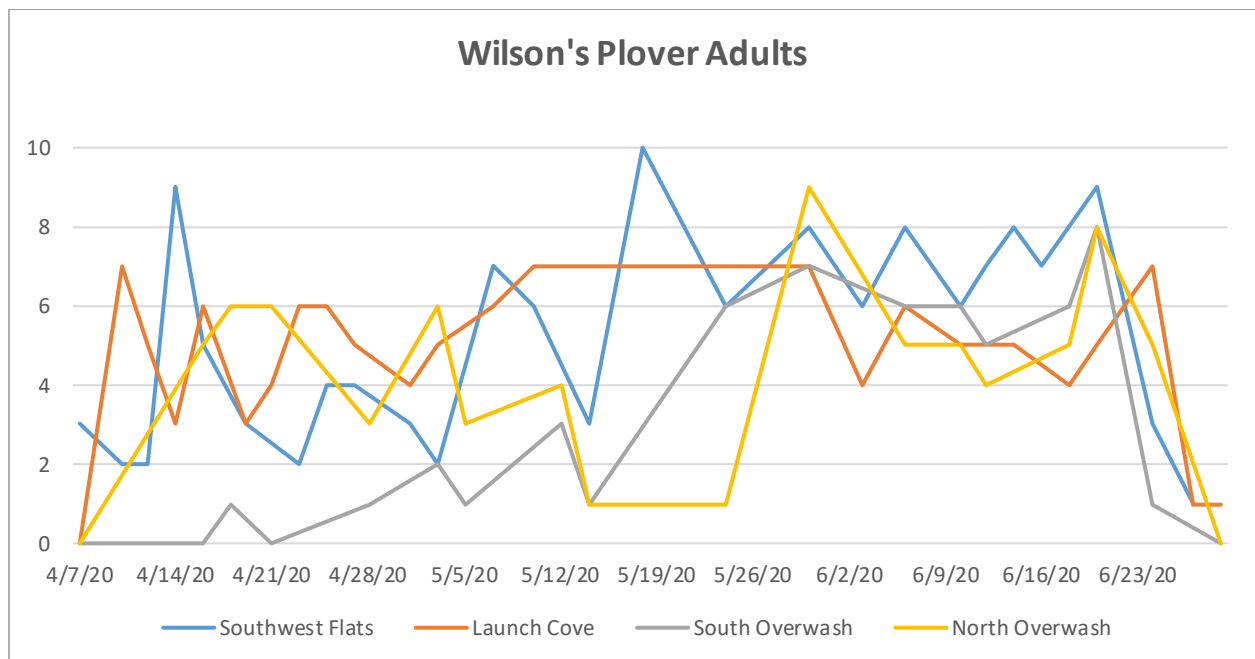


Figure 5. Survey counts of adult Wilson's Plovers at four subsites at Boca Chica, Texas during the prime breeding season (April – June). Two surveyed subsites were not included as they did not average at least one bird per day through the prime breeding season.

We found the first nest on April 10 in the Launch Cove, April 18 in the North Overwash, May 3 in the South Overwash, and May 18 in the Southwest Flats (Figure 6). We located and monitored a total of three nests in the Southwest Flats, two nests in the Launch Cove, two nests in the South Overwash, and two nests in the North Overwash.

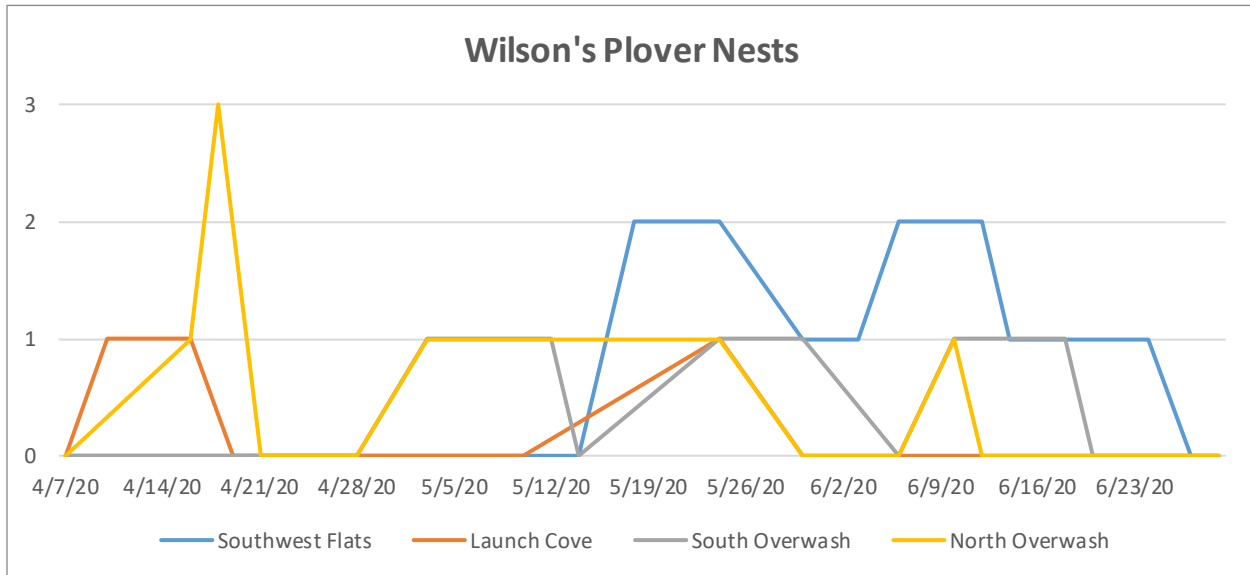


Figure 6. Survey counts of active Wilson's Plover nests at four subsites at Boca Chica, Texas during the 2020 breeding season. The Northwest and Southeast Flats were not included as they did not have any nests.

We monitored a total of 9 Wilson's Plover nests between the six subsites at Boca Chica: three in the Southwest Flats, two in the Launch Cove, two in the South Overwash, and two in the North Overwash (Table 2). Similar to last year, no nests were observed in the Northwest and Southeast Flats as have been in previous years, with little to no change in habitat. It is unclear why these subsites were not favorable to Wilson's Plovers again this year.

Table 2. Wilson's Plover nest fates monitored at six subsites (Northwest Flats, Southwest Flats, Southeast Flats, Launch Cove, South Overwash, North Overwash) at Boca Chica, Texas, during the entirety of the 2020 nesting season.

Nest Fates	Northwest Flats	Southwest Flats	Southeast Flats	Launch Cove	South Overwash	North Overwash	Total
Hatched	0	1	0	1	1	1	4
Unknown	0	0	0	0	0	0	0
Washout	0	0	0	0	0	0	0
Depredated	0	2	0	1	1	1	5
Coyote	0	1	0	0	1	0	2
Unknown Predator	0	1	0	1	0	1	3
Abandoned	0	0	0	0	0	0	0
Human Caused	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>9</b>

The nest success was 44.4% overall between all subsites- 33.3% in Southwest Flats, and 50% in the North Overwash, Launch Cove, and South Overwash. All 5 nest failures observed were depredated. Of the depredated nests, two were confirmed depredated by coyotes (*Canis latrans*) and three by unknown predators.

Four Wilson's Plover nests were confirmed to have hatched in 2020: one each in the Southwest Flats, Launch Cove, South Overwash, and North Overwash. Out of the 4 nests that were successful, 12 chicks were presumed to have hatched (based on the number of eggs in each clutch just prior to hatching). The peak opportunistic count of downy chicks during a single survey across all of the surveyed area at Boca Chica was two chicks on 5/30 and 6/6. No feathered chicks were observed at Boca Chica in 2020. The peak count of fledglings during a single survey across all of the surveyed area at Boca Chica was three on 6/14. Peak counts are not good indicators of overall fledging success at Boca Chica due to the vast mudflats nearby that are prime areas for foraging but were not part of these surveys.

One Wilson's Plover brood with three downy chicks was observed safely crossing Highway 4 from south to north in the Southwest Flats on 5/10. Only one of the three chicks were able to be captured and banded. This brood was not observed again later in the season, providing evidence that plover broods at Boca Chica likely travel significant distances across the wide-open mudflats in search of optimal habitat.



Figure 7. A Wilson's Plover nest in classic vegetated habitat at Boca Chica, Texas (2020).



Figure 8. A Wilson's Plover chick using its brown and black camouflage to hide under vegetation at Boca Chica, Texas (2020).

## Snowy Plover

We estimated 23 Snowy Plover total breeding pairs between the six Boca Chica subsites during the prime breeding season from March through July: two breeding pairs in Northwest Flats, three in the Southwest Flats, eight in the Southeast Flats, three in the Launch Cove, zero in the South Overwash, and seven in the North Overwash. Average Snowy Plover adult counts during the breeding season included one in the Northwest Flats (range 0-4 birds), two adults in the Southwest Flats (range 0-9 birds), seven adults in the Southeast Flats (range 1-15 birds), one adult in the Launch Cove (range 0-7 birds), one adult in the South Overwash (range 0-4 birds), and six adults in the North Overwash (range 0-12 birds, Figure 9).

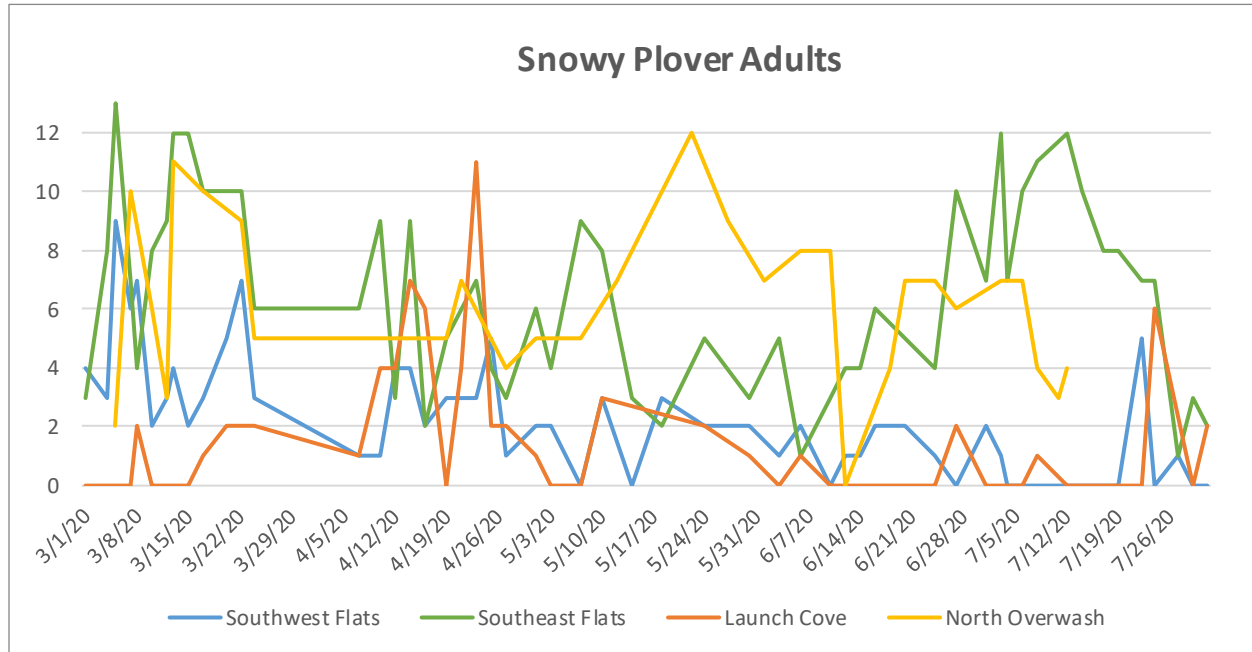


Figure 9. Survey counts of adult Snowy Plovers at six subsites at Boca Chica, Texas during the prime breeding season (April – June).

We found the first nest on February 21 in both the Southwest Flats and Southeast Flats, February 25 in the North Overwash, March 17 in the Launch Cove, and July 3 in the Northwest Flats (Figure 10). Out of the 37 total nests observed in 2020, one was in the Northwest Flats, three were in the Southwest Flats, eight were in the Southeast Flats, four were in the Launch Cove, three were in the South Overwash, and 17 were in the North Overwash.

The nest success was 24.3% between all subsites, 0% in the Northwest Flats, 33.3% in the Southwest Flats and Southeast Flats, 25% in the Launch Cove, and 17.6% in the North Overwash. These success rates may be higher depending on the actual fate of the six unknown nest outcomes at Boca Chica in 2020. Out of 22 nest failures observed, 14 were washed out, seven were depredated, and one was human caused. Of the seven depredated nests, five were confirmed depredated by coyotes and two were depredated by unknown predators, likely from avian predators or ghost crabs. The high number of washouts is due to extreme rain and high tides at multiple intervals throughout the year. The low success rate in the North Overwash was primarily due to washouts and depredation (12 out of 17 nest attempts failed due to these causes).

Several banded Snowy Plover re-nests were observed after initial attempts. One female and male pair, banded as X,YY:R,R in 2017 and X,RR:R,B in 2020 at Boca Chica, had a presumed successful first nest in the Southeast Flats (3/7-4/7) but no chicks were observed, and a second nest attempt in the Southeast Flats with an unknown fate occurred later in the season (6/20-7/20). A female banded as X,GG:R,N in 2018 at Boca Chica had two unsuccessful nest attempts at Boca Chica in 2020, both due to washouts (3/12-3/24 and 4/7-4/16).



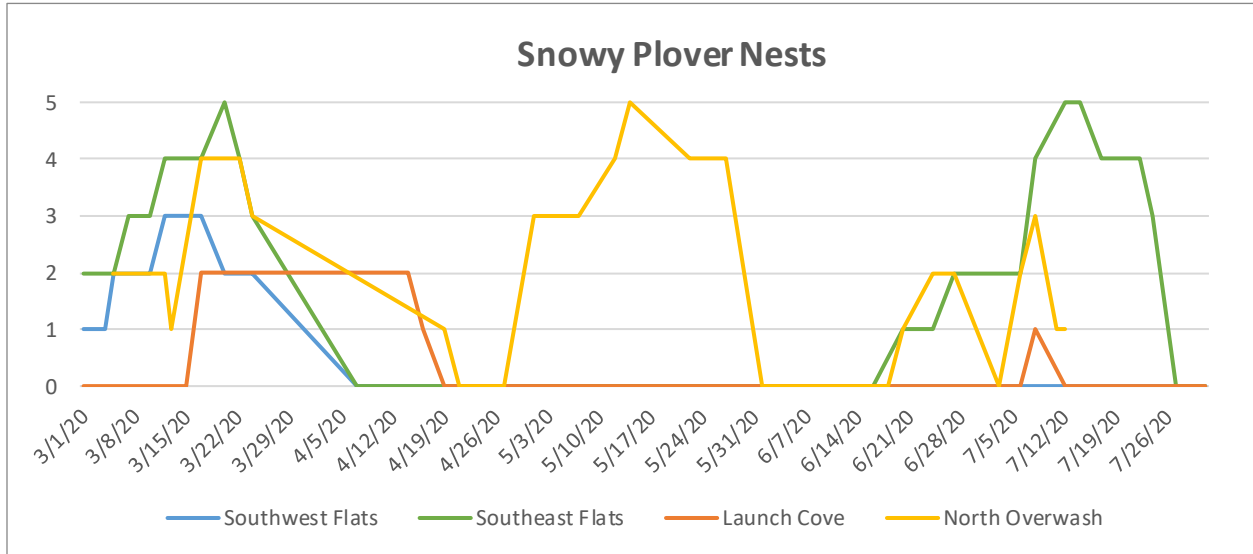


Figure 10. Survey counts of active Snowy Plover nests at five subsites at Boca Chica, Texas during the 2020 breeding season. One subsite, the South Overwash, was not included as it did not have any nests.

One Snowy Plover chick from a freshly hatched brood in the Southeast Flats (S132) was banded after being found in the nest cup of the adjacent nest S138 along with 3 eggs two days after hatching (Figure 11). The eggs from nest S138 failed shortly after, but the unbanded adults continued to care for the adopted Snowy Plover chick and it eventually fledged. This chick was also observed several times on the mudflats both north and south of Highway 4, continuing the trend from previous years where plover broods at Boca Chica habitually cross the highway in search of preferential habitat. The other two chicks that hatched from nest S132 did not appear to fledge.



Figure 11. A downy Snowy Plover chick “adopted” by an unbanded pair at a nearby unhatched nest, likely after being separated from its familial brood at Boca Chica, Texas (2020).



Figure 12. A Snowy Plover nest laid on a discarded plastic bottle in the North Overwash at Boca Chica, Texas (2020).



On June 27, a 1-egg Snowy Plover nest was discovered in the Southeast Flats. The nest was being incubated and defended by a male banded X,-R,-, indicating that it was banded as a chick in a previous year along the Texas coast (likely at Boca Chica). This is the first documented record of a chick banded at Boca Chica coming back to breed in a future year. The nest had failed by July 3, so the bird was not able to be captured to determine exactly when and where it was banded.

A number of Snowy Plovers nested unusually early in 2020, including a female banded as X, KK:R, W in 2019 in the North Overwash. This female was documented to have at least six failed nest attempts in the North Overwash in 2019, but her first nest in 2020 successfully hatched. The adults and brood moved off into the open mudflats to the west of the subsite and were not observed again for the remainder of the season.

Nine total Snowy Plover nests were confirmed to have hatched in 2020: one in the Southwest Flats, four in the Southeast Flats, one in the Launch Cove, and three in the North Overwash (Table 3). Out of the nine nests that succeeded, at least 26 chicks were presumed to have hatched (based on the number of eggs in each clutch prior to hatching). The peak opportunistic count of downy chicks was six on 3/20. The peak count of feathered chicks was four on 4/7. The peak count for fledglings was two on 5/1. As with Wilson's Plovers, opportunistic peak counts are not good indicators of overall fledging success at Boca Chica.

Table 3. Snowy Plover nest fates monitored at six subsites (Northwest Flats, Southwest Flats, Southeast Flats, Launch Cove, South Overwash, North Overwash) at Boca Chica, Texas, during the 2020 nesting season.

<b>Nest Fates</b>	<b>Northwest Flats</b>	<b>Southwest Flats</b>	<b>Southeast Flats</b>	<b>Launch Cove</b>	<b>South Overwash</b>	<b>North Overwash</b>	<b>Total</b>
Hatched	0	1	4	1	0	3	9
Unknown	0	2	2	0	0	2	6
Washout	0	0	4	2	0	8	14
Depredated	0	0	2	1	0	4	7
<i>Coyote</i>	0	0	1	1	0	2	5
<i>Unknown Predator</i>	0	0	1	0	0	2	2
Human Caused	1	0	0	0	0	0	1
<b>Total</b>	<b>1</b>	<b>3</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>17</b>	<b>37</b>

After heavy inland rains in June, a substantial amount of invasive water hyacinth (*Pontederia crassipes*) was swept downriver in the Rio Grande and washed up along mudflat edges south of Highway 4 (Figure 13). After drying up, the sandy-colored decaying vegetation appeared to be a favorable nesting location for Snowy Plovers late in the breeding season in the Southeast Flats. Of the six Snowy Plover nests initiated on or after June 20 in the Southeast Flats, five were laid in patches of dried up water hyacinth. These nests appeared to be well camouflaged by both sight and smell from predators, but three were washed out by heavy rains associated with Hurricane Hanna just prior to hatching in late July.



Figure 13. A Snowy Plover nest well-camouflaged in washed-up water hyacinth vegetation at Boca Chica, Texas (2020).

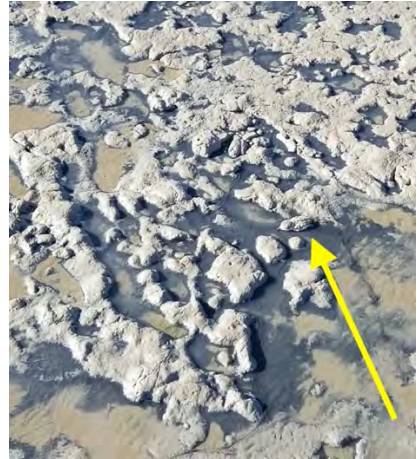


Figure 14. A downy Snowy Plover chick uses its natural camouflage to blend in with wet algal mudflats at Boca Chica, Texas (2020).

### Least Tern

We observed an average of 38 total adult Least Terns between the four subsites where Least Terns nested during the prime breeding season from April through July at Boca Chica: one in the Southwest Flats, 23 in the South Overwash, and 14 in the North Overwash (Figure 15). We found the first nest on April 28 in the South Overwash, May 2 in the North Overwash, May 18 in the Southwest Flats, and June 27 in the Launch Cove (Figure 16). A total of at least 63 Least Tern nests were observed between all subsites. A high count of one chick was observed in the Launch Cove on 7/12 and North Overwash on 7/14. As with plovers, opportunistic peak chick counts are not good indicators of overall fledging success at Boca Chica.

Similar to Snowy Plovers, Least Tern nest success in 2020 was severely impacted by heavy rain and high tide events spread out throughout the season. On June 1, active Least Tern nests had dropped by a count of 31 after a high tide and heavy rain event. On June 8, active Least Tern nests had again dropped by a count of 12 after a high tide event.



Figure 15. Two Least Terns defend their nest from an Atlantic ghost crab in the North Overwash at Boca Chica, Texas (2020).

Figure 16. A downy Least Tern chick seeks shelter under an adult at Boca Chica, Texas (2020).

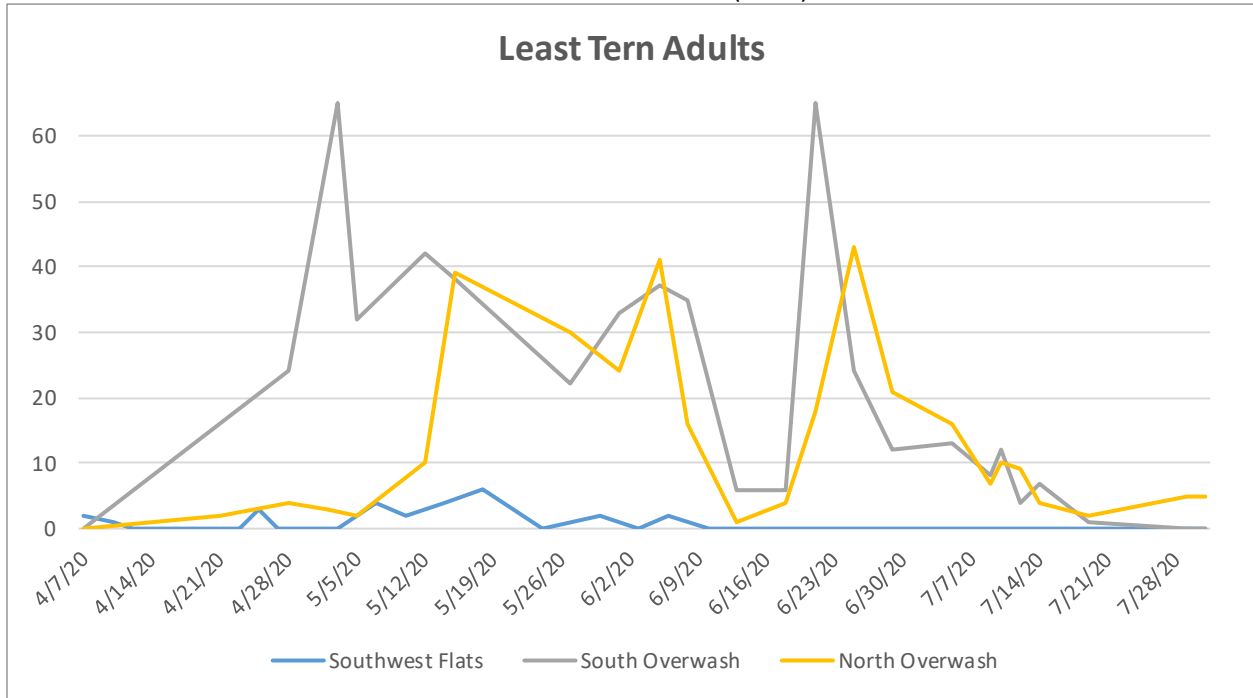


Figure 17. Survey counts of adult Least Terns at three subsites at Boca Chica, Texas during the 2020 breeding season (April – July).

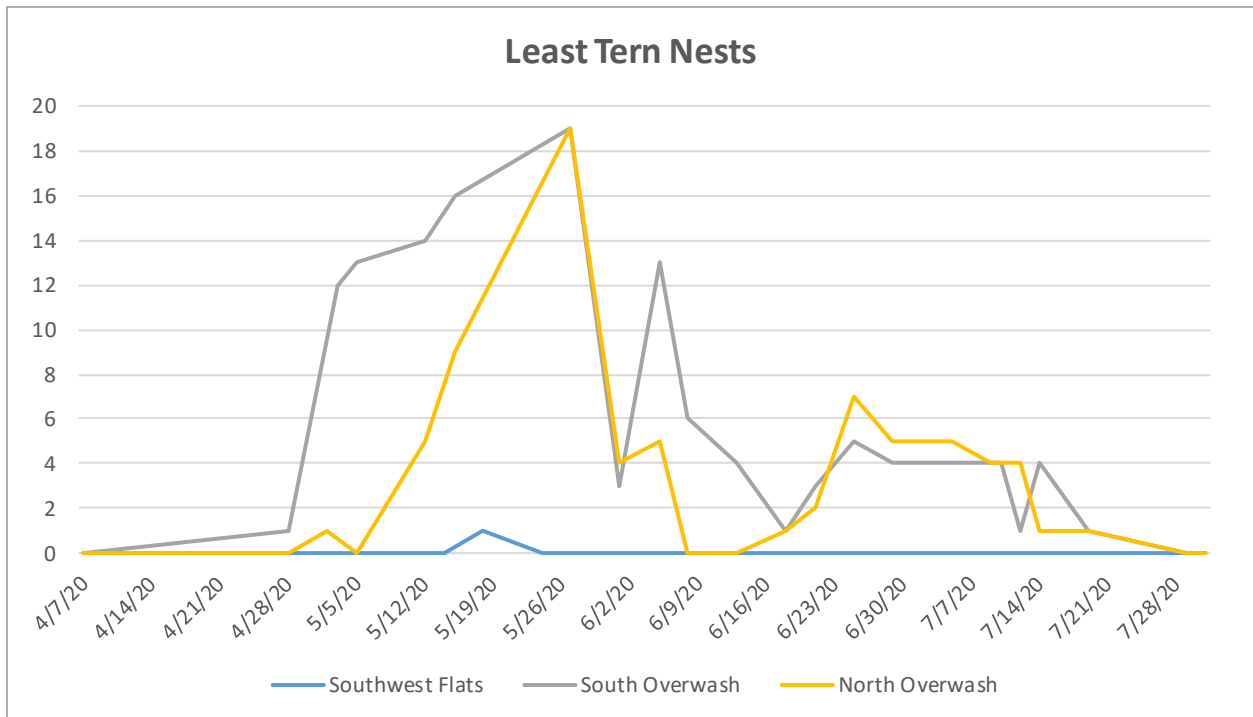




Figure 18. Survey counts of active Least Tern nests at five subsites at Boca Chica, Texas during the 2020 breeding season (April – July).

### Black Skimmer

For the first time, Black Skimmers were documented attempting to nest within the Boca Chica complex. In late April, 100-200 Black Skimmers were observed daily roosting out on a small low-lying sandy island off the shoreline of the Southeast Flats at 25.97706, -97.18610 (Figure 19). On May 3, we performed a visit to the island and found 4 Black Skimmer nests and at least 176 adults on the island (Figure 20). These numbers increased to 7 nests and 183 adults by May 10. By May 20 however, only single digit numbers of Black Skimmers were observed on the island and there were no longer any active nests. It is unknown if the birds left due to predation from coyotes, disturbance from other birds such as pelicans roosting on the island, high-water levels, or other reasons.



Figure 19. A Black Skimmer colony nesting and roosting on a small sandy island south of the Southeast Flats at Boca Chica, Texas (2020).



Figure 20. The first ever documented Black Skimmer nest in the Boca Chica complex (2020).

## Disturbances

We recorded disturbances when something traveled close enough to the target species to disrupt ordinary behavior. Fresh predator tracks within 50 yards of known nesting habitat were considered disturbances in addition to sightings.

The most common sources of disturbance in 2020 (Table 4) were Laughing Gulls (*Leucophaeus atricilla*) (640 observations of individuals and/or fresh tracks), Great-tailed Grackles (*Quiscalus mexicanus*) (302 sightings/tracks), coyotes (74 sightings/tracks, Figure 19 & 20), trucks (45 sightings/tracks, Figure 22), and ghost crabs (41 sightings/tracks). While Laughing Gull or Grackle nest depredation was not confirmed in 2020, coyote depredation was confirmed as the cause for two out of the five failed Wilson's Plover nests and five of 21 failed Snowy Plover nests. It is presumed that some Least Tern nests in the North and South Overwashes were also depredated by coyotes due to their similarity to plover nests. Heavy fresh coyote tracks and occasional direct observations were recorded throughout both overwashes during nearly every survey. Unlike previous years though, nest success was not severely impacted by coyote depredation. Higher numbers of nest washouts this year (14) may have limited the number of nests available for coyote depredation.

Table 4. Types and number of disturbance occurrences observed within the nesting habitat at Boca Chica in Texas during the 2020 breeding season.

Disturbance at Boca Chica							
Predator/Disturbance	Observed	Tracks	Total	Human Disturbance	Observed	Tracks	Total
Laughing Gull	640	0	<b>640</b>	Truck	6	39	<b>45</b>
Great-tailed Grackle	302	0	<b>302</b>	Human	0	20	<b>20</b>
Coyote	5	69	<b>74</b>	ATV	0	12	<b>12</b>
Ghost Crab	10	31	<b>41</b>	Dog	0	4	<b>4</b>
Raccoon	0	23	<b>23</b>	Construction vehicle	0	1	<b>1</b>
Crested Caracara	20	0	<b>20</b>	SpaceX Explosion	4	0	<b>4</b>
Great Blue Heron	10	0	<b>10</b>				
Chihuahuan Raven	10	0	<b>10</b>				
Peregrine Falcon	4	0	<b>4</b>				
Turkey Vulture	3	0	<b>3</b>				
White-tailed Hawk	2	0	<b>2</b>				
Bobcat	1	0	<b>1</b>				
Merlin	1	0	<b>1</b>				
Harris's Hawk	1	0	<b>1</b>				

One human-caused nest failure in 2020 occurred when a truck drove through a section of the Northwest Flats and crushed the nest. This encounter was not directly observed, but the nest was found one morning without any whole eggs, with a wet/sticky cup lining, and with truck-sized tire tracks passing directly over the nest. Predators likely ate the remnants of the eggs and their contents after being crushed. Similar to previous years, truck tracks were a common sight in nearly every subsite in 2020.





Figure 21. A Border Patrol agents driving in the Southeast Flats nesting habitat at Boca Chica, Texas (2020).



Figure 22. The remains of a color-banded Piping Plover (*Charadrius melodus*) that was likely eaten by a Peregrine Falcon (*Falco peregrinus*) or Merlin (*Falco columbarius*) from a board, with a SpaceX facility in the background at Boca Chica, Texas (2020).



Figure 23. A crushed Snowy Plover nest in the Northwest Flats that had fresh truck tire tracks passing over it at Boca Chica, Texas (2020).



Figure 24. Fresh raccoon tracks overlapping fresh coyote tracks in the North Overwash at Boca Chica, Texas (2020).

## SpaceX

SpaceX tests have continued to be an extreme source of disturbance this year at Boca Chica since construction of the launch facility began in December 2018. In 2020, all areas within 1.5 miles of the launch facility (near the beach access) were closed off to the public for more than 500 hours during planned SpaceX “tests”. Most tests are likely moderate disturbances, but three tests in 2020 produced tremendous explosions during failed tests.

- On February 28, 2020, Starship SN1 exploded after a cryogenic leak during a pressure test, sending significant amounts of ship debris into the surround Lower Rio Grande Valley National Wildlife Refuge tract. The 20-foot wide cap from the ship landed approximately 1200 feet north of the launch station at 25.99946, -97.15887. The cap was dragged through the flats back to Highway 4, causing extensive scarring to the vegetation and mudflats.

- On April 3, 2020, Starship SN3 exploded after another cryogenic leak during a pressure test, sending similar amounts of debris across the landscape. Another 20-foot wide piece of the ship also landed approximately 1200 feet northwest of the 25.999270, -97.158781 (Figure 26). The piece was again dragged back to the Highway, causing significant mudflat and vegetation scarring.
- On May 29, 2020, the largest explosion to date occurred after the Starship SN4's single raptor engine test failed, igniting cryogenic methane and liquid oxygen. The explosion created a loud sonic boom and set off car alarms over 1.5 miles away at Boca Chica Village. Hundreds of pieces of debris were scattered on both sides of the highway, including at least 13 large parts (3 feet wide or more) that we documented and took coordinates for (Figure 25).



Figure 25. Debris locations after an explosion from a failed SpaceX test on May 29 at Boca Chica, Texas (2020).



Figure 26. The cap from an exploded SpaceX test ship where it landed in the Lower Rio Grande Valley National Wildlife Refuge on February 28, 1200 feet away the launch site Boca Chica, Texas (2020).

In addition to tests, several hundred vehicles were present every day throughout the breeding season, including personal vehicles and large construction trucks moving back and forth between the launch site near the beach and the construction site at Boca Chica Village (Figure 27). With this increased traffic, we documented roadkill on Highway 4 between the Border Patrol checkpoint and Boca Chica Beach. We totaled 47 individuals from 22 species, including Texas indigo snake (*Drymarchon melanurus erebennus*) (state threatened), javelina (*Pecari tajacu*) (the high count of any species with 13 individuals), bobcat (*Lynx rufus*), Snowy Plover, Sanderling (*Calidris alba*), and Harris's hawk (*Parabuteo unicinctus*) among others (Figure 28). Heavy amounts of wind-blown trash from the two SpaceX locations is also present in many natural areas surrounding them.



Figure 27. Hundreds of personal vehicles line the roadsides of Highway 4 at the SpaceX construction site in Boca Chica, Texas (2020).



Figure 28. A roadkill Sanderling on Highway 4 between the Northwest and Southwest Flats at Boca Chica, Texas (2020).

### Banding Efforts and Resights

We banded 8 Wilson's Plovers (1 adult and 7 chicks from 4 broods) and 19 Snowy Plovers (8 adults and 11 chicks from 6 broods, Table 5). Low numbers of adults banded this season was due to higher ratios of returning birds who were previously banded, lower number of adults and nests found, and limited ability to plan nest trapping ahead of time due to the dynamic SpaceX testing schedule. Lower numbers of chicks banded was due to lower number of nests found, lower hatch rate, and the limited ability to be at the site on the morning that a nest was due to hatch, also due to the dynamic SpaceX testing schedule. Additionally, several nests potentially hatched out during the county-wide shelter in place order during the start of the Covid-19 pandemic.

Table 5. Wilson's and Snowy Plover adults and chicks banded in the six subsites at Boca Chica, Texas (2020).

Site	Wilson's Plovers		Snowy Plovers	
	Adults	Chicks	Adults	Chicks
Northwest Flats	0	0	1	0
Southwest Flats	0	5	0	3
Southeast Flats	0	2	4	6
Launch Cove	1	0	0	0
South Overwash	0	0	0	0
North Overwash	0	0	3	2
<b>Total</b>	<b>1</b>	<b>7</b>	<b>8</b>	<b>11</b>





Figure 29. A newly banded Snowy Plover chick has its mass taken in the Southeast Flats at Boca Chica, Texas (2020).



Figure 30. An adult female Wilson's Plover uniquely banded with the wrap-around black alphanumeric band, code "YT". This bird was banded in the Launch Cove at Boca Chica, Texas (2020).

### Outreach

Though there can be numerous people visiting the beach at Boca Chica, typically they do not enter plover and tern nesting areas, so there is relatively low disturbance to the birds. This means that field biologists do not have regular encounters with the public while conducting surveys. We had a number of very short conversations with members of the public or law enforcement, but no true outreach at Boca Chica in 2020.

### Discussion

Overall, it was a relatively poor breeding season for plovers and terns at Boca Chica. The biggest negative factors for nesting plovers and terns at Boca Chica this season was split between high water events and predator disturbance/predation. The North Overwash was a particularly difficult subsite for plovers to be successful in, where just 3 of 17 Snowy Plover nest attempts were successful (17.6%). Both Snowy Plovers and Least Terns faced relatively higher numbers of washed out nests from heavy rains and high tides than in past years across all subsites (Figure 31). Due to the Covid-19 pandemic, we were not able to survey between March 24 and April 7. This resulted in five nests that we were not able to determine a nest fate for, meaning success may be slightly higher or lower than they appeared.

Similar to previous years, there was more evidence this season that broods hatching out in the Southwest and Southeast Flats make their way to places where there is open ground on both side of Highway 4 in order to cross and reach more expansive mudflats on the north side of the road. On several surveys this season, we observed broods either going East from the Southwest Flats or West from the Southeast Flats and then not observed again in any future surveys. It is presumed that the vast mudflats to the north offer more extensive and dynamic habitat for feeding and hiding from predators than the surveyed subsites have to offer. The main obstacle to this is that the broods have to cross the

50-foot wide section of roadway and roadside vegetation to access the north side habitat. In previous years, chicks hatched on the south side flats were observed in the mudflats to the North and were even observed crossing northward over the highway on one occasion. This habit of broods crossing the highway in the Southwest and Southeast Flats combined with the fact that there are extensive mudflats adjacent to the Launch Cove, South Overwash, and North Overwash means that re-sights of chicks and fledglings are rarely possible at the Boca Chica subsites.

The SpaceX launch site and construction facility continue to be the most notable source of potential disturbance to nesting birds at Boca Chica via increased vehicle traffic, general noise from construction, and concussive force and noise from spaceship tests and launches. This may be evidenced by the reduction in Snowy and Wilson's Plover nests that we found in the Launch Cove this year compared to last year (4 Wilson's and 11 Snowy Plover nests in 2019, 1 Wilson's and 4 Snowy Plover nests in 2020). This is echoed in the reduction of Snowy Plover average number of adults and estimated breeding pairs at the Launch Cove compared to last year (4 adults and 5 breeding pairs in 2019, 1 adult and 3 breeding pairs in 2020).



Figure 31. Heavy rains and high tides completely flooded the North Overwash on June 1 at Boca Chica, Texas (2020).

### Recommendations

Even with limited human disturbance affecting nesting plovers and terns at Boca Chica, there is still a need to minimize disturbance. In 2019, United States Fish and Wildlife Service (USFWS) officials installed over a dozen signs in public disturbance-prone areas just before the Fourth of July holiday. Some of these signs have seen heavy disturbance and vandalism from the public, particularly the ones at the North and South Overwash entrances where most signs have been dug up, tossed aside, or stolen. It is recommended that all areas with signage be repaired on at least a yearly basis prior to the start of the nesting season. While the USFWS still has plans to install permanent bollards and cables across most public entrances to the mudflats after the Covid-19 pandemic is over, it is highly recommended that the Overwash entrances be blocked off to vehicular traffic as soon as possible. CBBEP will continue to work with stakeholders to improve signage and protect habitat in this region.

As discussed previously, SpaceX activity has and will undoubtedly continue to be a major source of disturbance to the hundreds of thousands of birds and other wildlife that utilize the dynamic Boca Chica complex throughout the year. The exact impacts thus far and future implications of this work are still unknown and proper surveys and studies have not been conducted by SpaceX-funded staff.



Nest locations of Snowy Plovers in vicinity of SpaceX launch site – Boca Chica, Cameron County, Texas





Nest locations of Snowy Plovers in vicinity of SpaceX launch site – Boca Chica, Cameron County, Texas



# Wintering Piping Plover Surveys 2008-2009

Boca Chica, Texas to Marco Island, Florida

December 2, 2008 – March 13, 2009

Final Report, Contract # K4E21-08-0662



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**Cover photograph:** Lf,OL:X,Y, a Great Plains Canada Piping Plover, photographed by Sidney Maddock on March 8, 2009 at Cat Island, Gulf Island National Seashore, Mississippi.

## Summary

Surveys to locate banded Piping Plovers (*Charadrius melodus*) were conducted on the Gulf of Mexico between December 2, 2008, and March 13, 2009. Seventy eight locations were visited from Marco Island in southwest Florida to Boca Chica beach in Texas near the United States border with Mexico. Ninety seven surveys were conducted, and twelve locations in Texas were surveyed two or more times to increase the detectability of banded birds.

There were 3,300 observations of Piping Plovers, with 236 observations in Florida, 50 in Alabama, 172 in Mississippi, 214 in Louisiana, and 2,628 in Texas. There were 397 observations of banded Piping Plovers, about 12% of all observations. There were 44 band observations in Florida, 7 in Alabama, 19 in Mississippi, 32 in Louisiana, and 295 in Texas. By population, 170 of the banded Piping Plover observations were from Great Plains Canada, 176 were from Great Plains United States, 29 were unknown, 22 were from the Great Lakes, and 0 were from Atlantic Canada or Atlantic United States.

## Introduction

These surveys were conducted to locate the Piping Plover (*Charadrius melodus*), a small shorebird with a short, stout bill, pale upperparts, and orange legs (Haig 1992). The known wintering range of Piping Plovers includes the Atlantic Coast of the United States, the Gulf Coast of the United States and northern Mexico, and the Bahamas, Cuba, and other Caribbean islands (Ferland and Haig 2002, Elise Elliot Smith et al. 2009).

In Canada and the United States, scientists on the breeding grounds of Piping Plovers have conducted studies that include banding adults, chicks, or both, with a series of unique and non-unique color band and flag combinations. These programs have provided extensive data regarding breeding behaviors. However, it has become apparent that these programs also have generated helpful data regarding non-breeding Piping Plovers, such as wintering locations for the populations. In addition, resightings from the wintering grounds may give a more accurate survival estimate as birds that were not seen during the summer may be detected during winter observations.

This survey effort is a continuation of a series of surveys on the wintering grounds that were initiated by the Canadian Wildlife Service (Stucker et. al. 2003, Maddock 2008).

## Methods

The goal of this survey effort was to find and accurately identify banded Piping Plovers wintering on the Gulf of Mexico. Between December 2, 2008 and March 13, 2009, surveys were conducted from Marco Island in southwest Florida (25.96653 -81.74993) to Boca Chica beach in Texas near the United States border with Mexico (25.95377 -97.14883). Most of the known sites on the Gulf with relatively large numbers of Piping Plovers were searched. Some high quality sites were not surveyed if Piping Plover surveys already were being conducted by others, and for a few sites, most notably the Chandeleur Islands, if poor weather conditions prevented access to survey the area.

These surveys followed the methods discussed in Maddock (2008), where more detailed information is provided. Surveys were conducted on foot, by all terrain vehicle, and by four-wheel drive vehicle. Vehicle surveys were conducted at low speed (<10 mph) unless suitable Piping Plover habitat was not present. Particular attention was given to locations where Piping Plovers could be easily missed, such as roosting habitats. When a Piping Plover was seen, a spotting scope was used to scan the legs for color bands. If possible, a picture was taken of the band combination using a high quality digital camera (Canon 1Ds MkIII or 40 D) and high power lens (600mm with 2X converter (1200mm)) to confirm the band locations and colors. The band combination was recorded on written data sheets.

The following abbreviation system identifies the band combination:

- Band location on the leg is listed in the following order: left tibia, left tarsus: right tibia, right tarsus.
- If there were two bands on a tibia or tarsus, the band combination is presented as top band first and bottom band second, with no comma between the bands.
- Band or flag color abbreviations are: R = red, P= pink, G = dark green, g = light green, U=purple, B = dark blue, b = light blue, V = violet, W = white, A = gray, S = salmon, P = Pink, O = orange, Y = yellow, and L = black.
- A split band is indicated with a forward slash (L/A) and a triple split band has two forward slashes (g/O/g); the colors of the split are listed from the top to bottom of the band on the leg.

- Band types are: X for metal band, – for no band, N for not able to observe if a band was present; a single letter means a plastic band unless f is added after the letter, which means flag.

Information on the observed band combination was provided to banders on the breeding grounds in the Great Plains and Great Lakes to confirm the observed combination and the population identification.

## Results

Ninety seven surveys were conducted over 70 full or partial field days; 78 different locations were visited. There were 3,300 observations of Piping Plovers. Of those observations, 12% (n=397) were banded Piping Plovers.

Not all observations were of different individuals. Some individuals moved between adjoining survey sites. In addition, in Texas, there were repeat visits to twelve sites to increase the detectability of banded birds, and in Alabama, there was overlap on two survey sites. Thus, some banded birds were seen more than once. While it is possible to identify repeat observations of uniquely marked birds, there also were non-unique band combinations that were observed multiple times.

Table 1 provides a breakdown of surveys, locations, total Piping Plover observations, and band observations by state.

**Table 1. Piping Plover Survey Days, Survey Numbers, Survey Locations, Total Observations, and Band Observations By State**

State	Survey Days	Surveys	Survey Locations	Total PIPL Observations	Band Observations
<b>Florida</b>	9	16	16	236	44
<b>Alabama</b>	3	5	4	50	7
<b>Mississippi</b>	9	11	11	172	19
<b>Louisiana</b>	10	13	13	214	32
<b>Texas</b>	39	52	34	2,628	295
<b>Total</b>	70	97	78	3,300	397

Table 2 provides a breakdown of banded Piping Plovers by state and population.

**Table 2. Piping Plover Band Observations By State and Population**

<b>State</b>	<b>Great Plains Canada</b>	<b>Great Plains US</b>	<b>Great Lakes</b>	<b>Unknown</b>	<b>Atlantic Canada or US</b>	<b>Total State</b>
<b>Florida</b>	6	22	14	2	0	44
<b>Alabama</b>	2	5	0	0	0	7
<b>Mississippi</b>	8	7	2	2	0	19
<b>Louisiana</b>	6	20	4	2	0	32
<b>Texas</b>	148	122	2	23	0	295
<b>Total Pop.</b>	170	176	22	29	0	397

## **Florida**

In Florida, sixteen surveys were conducted over nine days; 16 locations were visited. There were 236 observations of Piping Plovers and 44 observations of banded Piping Plovers. By population, 6 observations of banded Piping Plovers were birds from the Canadian Great Plains, 22 from the United States Great Plains, 14 from the Great Lakes, 2 were unknown, and 0 from Atlantic Canada or Atlantic United States.

The 44 band observations represent at least 40 individuals: five birds from the Canadian Great Plains, 20 from the United States Great Plains, and 14 from the Great Lakes. One uniquely marked bird from the U.S. Great Plains, -,LW:Gf,GW was seen on both the north end of Honeymoon Island and Three Rooker Bar, two adjoining islands. One uniquely marked bird from the Canadian Great Plains, -,RY:Wf,OX, and one uniquely marked bird from the U.S. Great Plains, -,WW:Gf,LL, were observed on both Phipps Preserve and the mainland beach just to the north, an interesting movement across the bay.

Another combination, -,-:BX, also was seen on both Honeymoon Island and Three Rooker Bar. From the first observation, this particular combination was identified as a bird that was banded in the Great Lakes, based on photographs of the metal band numbers. The next observation, the metal band was not photographed closely enough to allow identification of the numbers. However, as the bird with this combination was missing the lower right tarsus with the break in a similar location, had an old style metal band, and the two islands are next to each other



separated by only a small inlet, it is likely the observations were of the same bird. While the second observation of this combination is listed as “unknown” in Table 1, the bird likely is from the Great Lakes. Another combination, -,:X,b, with vertical lettering on the joint, was seen at Charley Pass, is listed as “unknown” but likely was from the Great Lakes. The Great Lakes uses this combination and the same style of metal band, and no other banders claimed this combination. However, possible use by other banders could not be ruled out.

The following habitat changes were noted since the 2005-2006 winter surveys for CWS. Vegetative succession covered previously unvegetated areas of roosting or intertidal habitats at Marco Island, Honeymoon Island, and Phipps Preserve. Increases in the area of upland or intertidal habitats were observed at Three Rooker Bar and Anclote Bar, due to accretion. At the other sites, habitat changes were not significant enough to be remembered or noted, or the sites were not previously visited. On North Captiva Island, “Charley Pass” was created by Hurricane Charley in 2004 (Casey Lott, Pers. Comm. 2009). While this site was not previously visited in the 2005-2006 surveys, it now contains high quality habitat Piping Plover, though vegetative succession appears to be occurring, based on a comparison of the Google Earth satellite imagery and habitat conditions during the time of visit.

## **Alabama**

In Alabama, five surveys were conducted over three days. Four locations were visited; however, one of those locations was covered twice as part of a survey of a larger area of habitat on the west end of Dauphin Island.

There were 50 observations of Piping Plovers including seven observations of banded Piping Plovers: two observations of birds from the Canadian Great Plains and five observations of birds from the U.S. Great Plains. Due to resightings of two individuals at adjoining survey locations, five individuals were observed, representing two birds from the Canadian Great Plains and three birds from the U.S. Great Plains.

A significant habitat change was the creation of a new inlet at Dauphin Island in 2005 from Hurricane Katrina. The west end of Dauphin Island was not visited during the 2005-2006 surveys for Canadian Wildlife Service. During this trip, the area was visited and high quality

Piping Plover habitat was seen at either side of the newly created inlet. Another change is that the west end of Pelican Island is no longer separated from Dauphin Island.

One interesting observation was Piping Plovers and large numbers of other shorebirds were using an overwash fan area just east of the west end of the developed area of Dauphin Island; this area was surrounded by buildings to the east and west and a road and buildings to the south. It is possible that the moderately high winds on this day may have caused birds to congregate in this area as an alternative roost during bad weather. When the area was viewed a few days later as part of a larger survey that covered areas of the west end of Dauphin Island, only one Piping Plover was seen in the area, with the others at the inlet spit and scattered along the bay shoreline.

## **Mississippi**

In Mississippi, 11 locations were surveyed over 9 days. There were 172 observations of Piping Plovers, including 19 observations of banded Piping Plovers. Eight observations were of birds from the Canadian Great Plains, seven observations were of birds from the U.S. Great Plains, two observations were from the Great Lakes, and two were unknown. At least 18 of the banded Piping Plovers were different individuals. One non-unique band combination from Great Plains Canada, Lf,-:X,-, was seen on the east end of Petit Bois Island on December 12, 2008, and on the southwest end of Cat Island on March 8, 2009.

High quality Piping Plover habitat was observed in Gulf Islands National Seashore on East Ship Island, Horn Island, Cat Island, and Ship Island. All these islands had areas of overwash, though it was not possible to tell which were from Hurricane Katrina and which were from more recent hurricanes.

Moderate numbers of Piping Plovers were counted on the mainland beaches. These beaches originally were not scheduled for surveys, as the Mississippi Department of Wildlife, Fisheries, and Parks conducts Piping Plover surveys there. However, due to poor weather conditions precluding boat access to the offshore barrier islands in December, mainland beach locations were walked instead, albeit in dense fog that may have influenced the results. Between Waveland and Long Beach, there were 31 observations of Piping Plovers. After Hurricane

Katrina, there was a beach replenishment project for these areas (Nick Winstead, Pers. Comm. 2009). The profile of these replenished beaches in the intertidal area is relatively flat, with moderate areas of intertidal habitat available for feeding at mid and low tides at certain areas. There were activities that could adversely affect Piping Plover use of these beaches, such as the human disturbance as well as the observed practice of raking of the beach to remove wrack. However, the moderately high number of Piping Plovers raises an interesting question whether replenished beaches on the Gulf of Mexico can have design standards that mimic natural beaches and allow regular wintering use by Piping Plovers and other shorebird species.

## **Louisiana**

In Louisiana, 13 locations were surveyed in 10 days. There were 214 observations of Piping Plovers, including 32 banded Piping Plovers. There were six birds from the Canadian Great Plains, 20 birds from the U.S. Great Plains, four from the Great Lakes, and two that were unknown. The 32 banded Piping Plovers that were observed were different individuals.

As in the 2006-2007 surveys, areas of high quality Piping Plover habitat were observed. One area of improvement was the east end of Elmers Island, where the old inlet had closed, providing extensive high quality, low energy feeding habitat on bay-side flood bar and overwash fans. Large numbers of Piping Plovers were present at certain locations, including 30 at West Bell Pass and 53 at the west end of Raccoon Island.

Extensive habitat changes were observed at all of the locations that were previously visited in the 2006-2007 surveys. On September 1, 2008, Hurricane Gustave made landfall near Cocodrie, Louisiana as a Category 2 hurricane with maximum winds near 90 knots (Beven and Kimberlain 2009). In addition, Hurricane Ike, which made landfall at Galveston Island on September 13, 2008 as a Category 2 storm, caused a storm surge of 3-6 feet along Louisiana with 5 – 10 feet along the coast of south-central Louisiana and 10-13 feet in southwestern Louisiana (Berg 2009). These hurricanes caused varying levels of habitat impacts. On East Grand Terre, Grand Terre, Fourchon Beach, and West Belle Pass, moderate to extensive erosion of the Gulf beach backshore occurred. In certain areas, the area between the vegetation and the water was very narrow, with the loss of much of the backshore beach, so higher elevation roosting habitats were reduced. These islands also had new low overwash fans, new intertidal feeding habitats on

the backside of the overwash fans in some areas, and new small inlets on East Grand Terre and West Belle Pass. The high levels of erosion that have been experienced at some locations along the Louisiana coast (Sallenger 2009) raise concerns about loss of piping plover habitat in Louisiana.

## **Texas**

In Texas, 52 surveys were conducted over 39 field days; 34 locations were visited. Twelve locations were surveyed more than once to increase the detectability of banded Piping Plovers that may not have been observed in the first survey. There were 2,628 observations of Piping Plovers, including 295 observations of banded Piping Plovers. There were 148 observations of banded Piping Plovers from the Canadian Great Plains, 122 from the U.S. Great Plains, two from the Great Lakes, and 23 that were unknown.

Of the 75 uniquely marked Great Plains Piping Plovers banded by Dr. Cheri Gratto-Trevor that were observed in Texas, 21 were observed twice. Of those repeat observations, 15 were resightings on a subsequent survey at the same location, one was a movement across an inlet, four were movements along the bayside shoreline across adjoining survey boundaries, and one was a movement from a bayside shoreline at Mollie Beattie Coastal Habitat Community to a shoal in the bay off Mustang Island State Park.

In South and Central Texas, no significant changes to habitat conditions were observed since the prior CWS surveys, other than habitat availability changes due to varying water levels in the Laguna Madre. There was a large flats area exposed west of Mustang Island State Park during the first part of the visit that was flooded during the return visit to Mustang Island. At Boca Chica beach, the water level in interior lagoon area south of the road and west of the beach was very low, with much of the area being exposed, dry flats; when the area was visited one winter ago, that interior lagoon area was almost fully flooded.

In North Texas, there were extensive habitat changes since the 2006-2007 CWS surveys. On September 13, 2008, Hurricane Ike made landfall on Galveston Island as a strong Category 2 storm with winds of 110 mph; on the Bolivar Peninsula, the storm surge was estimated to be between 15 and 20 feet by ground assessment teams (NHC 2009).

On Bolivar Peninsula, Galveston Island, and between San Louis Pass and Surfside, there was extensive erosion of the Gulf backshore roosting habitat; in many locations, areas that previously would have been backshore or vegetated uplands were at or near the elevation of the intertidal beach with scattered new ephemeral ponds. Gulf beach intertidal feeding habitats remained, though their location may have moved landward.

There were several locations where feeding habitats were adversely impacted. At Bolivar Flats, there was extensive erosion of the intertidal feeding habitats. The preferred feeding substrate of sand with a thin top layer of mud or algal growth was missing in large areas and in its place was either a sand substrate in certain areas of the flats or in other areas, the intertidal area was no longer exposed, even at low tide. East of the Town of Gilchrist, the beach was much narrower than in the 2006-2007 survey, with a very limited intertidal area; as a result, a survey was not done at this beach due to limited habitat.

Not all habitat changes from the Hurricane Ike were adverse. Near the western boundary of San Bernard National Wildlife Refuge at Cedar Creek Cut, there were extensive new overwash fans, with large areas of high quality intertidal feeding habitat as well as new areas of roosting habitat. At Rollover Pass, the intertidal feeding habitat appeared larger than when a visit was made to this site in 2006-2007; the area now has large overwash fans on the bayside.

There were several interesting results from the Texas surveys. First, over 100 Piping Plovers were seen on both surveys at Cedar Creek Cut near the western boundary of San Bernard NWR. In contrast, in the 2006-2007 season CWS survey, 24 were seen in the same area (Maddock 2006). The sharp increase may be due to the extensive new flats that were observed.

Second, 239 Piping Plovers were seen during a survey of the west and south sides of South Bay. This area has high quality habitat. However, it may be difficult to locate the Piping Plovers due to how remote and expansive the habitat is in this area. Depending on water levels in the bay, Piping Plovers in this area may move between South Bay on the north side of the road, the south side of the road, and Boca Chica beach.

Third, 344 Piping Plovers were observed on South Padre Island between 26.31659, -97.22882 and 26.34347, -97.26362, a distance of about 2.8 miles of bayside shoreline. Over 200

Piping Plovers were visible in less than 400 yards of shoreline. However, when the survey resumed three days later at this location, Piping Plovers were not observed. The area where the birds were seen previously was under water due to a shift in the wind direction and an increase in the wind speed after a cold front came through the area.

Fourth, sharply lower numbers of Piping Plovers were observed at Bolivar Flats during these surveys. Prior to Hurricane Ike, this location was known for high numbers of Piping Plovers. Due to a concern that wintering banded Piping Plovers might have been missed at this location, this area was surveyed four times, and 0, 17, 83, and 0 Piping Plovers were seen. As discussed above, Hurricane Ike caused the loss and degradation of intertidal feeding habitats at Bolivar Flats. The high count of 83 Piping Plovers was on a day when there were strong northeast winds that would have raised water levels on the bayside habitats and increased the chance of Piping Plovers being present on the Gulf beach. On both days when Piping Plovers were seen at Bolivar Flats, after the tide dropped to a certain level, Piping Plovers were observed flying towards the bay so it is possible that a bayside feeding location was being used.

A serious long term conservation concern is habitat loss on developed areas of the Gulf beach as erosion brings the high tide line closer to existing line of development. At Quintana, Surfside to San Louis Pass, Galveston Island, and Bolivar Peninsula, in certain areas, structures now are located close to the high tide line, reducing the available area of roosting habitat. In contrast, there were areas of beach without buildings – such as the inlet spit at the west end of Galveston Island, or the flats west of San Bernard National Wildlife Refuge – where the hurricane did not adversely affect habitat or increased the size of available habitat. As erosion continues on developed beaches, roosting habitat could be lost. Other conservation concerns were the mechanized raking to remove wrack that was seen in certain locations and high levels of human disturbance and ORV use on certain beaches.

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**Table 3. Florida Surveys, Date, Survey Location, Site Access, Survey Method, and Total Number of Piping Plovers and Banded Piping Plovers**

Survey	Date	Location	Site Access	Survey Method	Total Number of PIPL	Number of Banded PIPL
1	12/2/08	Honeymoon Island State Park	Boat	Foot	19	4
2	12/2/08	Anclote Key, South End	Boat	Foot	17	3
3	12/3/08	Anclote Bar	Boat	Foot	4	2
4	12/3/08	North Three Rooker Bar	Boat	Foot	8	1
5	12/3/08	Three Rooker Bar	Boat	Foot	45	7
6	12/4/08	St. Joseph Peninsula State Park	Car	ATV/foot	8	0
7	12/5/08	Tyndall – West Crooked Island	Car	UTV/foot	9	1
8	12/5/08	Tyndall – East Crooked Island	Car	UTV/foot	0	0
9	12/6/08	Phipps Preserve	Boat	Foot	29	5
10	12/6/08	Franklin County Shoreline	Boat	Foot	6	3
11	12/6/08	Lanark Reef West	Boat	Foot	12	2
12	12/7/08	Dog Island East	Boat	Foot	4	2
13	3/11/09	Charley Pass, North Captiva Island	Boat	Foot	19	4
14	3/12/09	Estero Lagoon	Car	Foot	7	1
15	3/12/09	Bunche Beach	Car	Foot	11	2
16	3/13/09	Marco Island, Tigertail Beach	Car	Foot	38	7
<b>16 Surveys</b>	<b>9 Days</b>	<b>16 Locations</b>	<b>6 Car 10 Boat</b>	<b>13 Foot 1 ATV/Foot 2 UTV/Foot</b>	<b>236</b>	<b>44</b>

**Table 4. Florida Surveys, Banded Piping Plovers**

#	Date	Location	Pop.	Band String	Pic.	Lat.	Long.	Notes
1	12/2/2008	Honeymoon Island S.P North	GP US	-,WR:Gf,RG	Y	28.08657	-82.83392	
2	12/2/2008	Honeymoon Island S.P North	GL US	X,O/L:O,-	Y	28.08715	-82.83309	
3	12/2/2008	Honeymoon Island S.P North	GP US	-,LW:Gf,GW	Y	28.08831	-82.83405	
4	12/2/2008	Honeymoon Island S.P North	GL US	-,:-,BX	Y	28.08959	-82.8345	Missing part of left tarsus; ID by metal band number
5	12/2/2008	Anclote Key South	GP US	Gf,GY:-,RG	Y	28.16333	-82.84547	
6	12/2/2008	Anclote Key South	GP US	L/YA,-:Gf,-	Y	28.16424	-82.84637	
7	12/2/2008	Anclote Key South	GL US	Of,GB:X,Y	Y	28.16442	-82.84653	
8	12/3/2008	Anclote Bar	GP C	Lf,Gg:X,Y	Y	28.23413	-82.83791	
9	12/3/2008	Anclote Bar	GP US	-,LL:Gf,LL	Y	28.23234	-82.83984	
10	12/3/2008	North Three Rooker Bar	GL US	Of,YB/O:X,g	Y	28.13014	-82.83088	
11	12/3/2008	Three Rooker Bar	GP US	Gf,WL:-,RR	Y	28.11099	-82.8347	
12	12/3/2008	Three Rooker Bar	GL US	-,gO:X,Y	Y	28.11136	-82.83693	
13	12/3/2008	Three Rooker Bar	GP US	-,LW:Gf,GW	Y	28.11136	-82.83694	
14	12/3/2008	Three Rooker Bar	GL US	X,b/O:O,-	Y	28.11385	-82.83864	
15	12/3/2008	Three Rooker Bar	?	-,:-,BX	Y	28.11401	-82.83861	Likely same bird as seen 12/2; missing part of left tarsus; old style metal band
16	12/3/2008	Three Rooker Bar	GP US	-,YL:Gf,LY	Y	28.11407	-82.83898	
17	12/3/2008	Three Rooker Bar	GP C	Lf,YB:X,G	Y	28.11578	-82.83899	
18	12/5/2008	Tyndall – West Crooked Island	GP C	X,-:Wf,OB	N	30.06648	-85.61691	CLGT: Missing band is B; seen Tyndall last winter
19	12/6/2008	Phipps Preserve	GP US	-,WW:Gf,LL	Y	29.91516	-84.4399	
20	12/6/2008	Phipps Preserve	GL US	-,:-,O/LX	Y	29.91465	-84.43966	
21	12/6/2008	Phipps Preserve	GP US	-,AA:Gf,LA	Y	29.90761	-84.42969	
22	12/6/2008	Phipps Preserve	GP C	-,RY:Wf,OX	Y	29.91232	-84.43632	
23	12/6/2008	Phipps Preserve	GP US	-,AL:Gf,GA	Y	29.91279	-84.4369	

#	Date	Location	Pop.	Band String	Pic.	Lat.	Long.	Notes
24	12/6/2008	Bay Shoreline, Franklin County	GL US	Of,LY:X,b	Y	29.92705	-84.43921	
25	12/6/2008	Bay Shoreline, Franklin County	GP US	-,WW:Gf,LL	Y	29.92682	-84.4386	
26	12/6/2008	Bay Shoreline, Franklin County	GP C	-,RY:Wf,OX	Y	29.92697	-84.43893	
27	12/6/2008	Lanark Reef West	GP US	X,R:Yf,RB	Y	29.87441	-84.58159	
28	12/6/2008	Lanark Reef West	GP US	-,AR:Gf,LL	Y	29.87453	-84.58138	
29	12/7/2008	Dog Island East	GL US	Of,BL/O;X,Y	Y	29.82568	-84.57854	Holding up left leg and limping
30	12/7/2008	Dog Island East	GP US	PB/R,-;Gf,-	Y	29.82569	-84.57886	
31	3/11/2009	Charley Pass, North Captiva Island	GL US	X,L:Of,RL	Y	26.56888	-82.20478	
32	3/11/2009	Charley Pass, North Captiva Island	GP US	X,B:Yf,RL	Y	26.56855	-82.20461	
33	3/11/2009	Charley Pass, North Captiva Island	GL US	X,G/O:O,-	Y	26.56888	-82.20478	
34	3/11/2009	Charley Pass, North Captiva Island	?	-, -:X,b	Y	26.56888	-82.20478	Probable Great Lakes; combination used by Great Lakes but use by others could not be ruled out.
35	3/12/2009	Estero Lagoon	GP US	Gf,WY:-,RG	Y	26.40594	-81.89779	
36	3/12/2009	Bunche Beach	GL US	Of,Y/O/YL;X,g	Y	26.47711	-81.97028	
37	3/12/2009	Bunche Beach	GP US	Gf,YG:-,RG	Y	26.47759	-81.97559	
38	3/13/2009	Marco Island, Tigertail Beach	GL US	-,b:X,O/b	Y	25.94923	-81.74797	010 on b plastic band
39	3/13/2009	Marco Island, Tigertail Beach	GP US	-,WY:Gf,GA	Y	25.94849	-81.74722	
40	3/13/2009	Marco Island, Tigertail Beach	GL US	X,g:O,-	Y	25.94886	81.7477	018 on g plastic band
41	3/13/2009	Marco Island, Tigertail Beach	GP US	-,WG: Gf,GW	Y	25.95963	81.75362	
42	3/13/2009	Marco Island, Tigertail Beach	GP C	X,-:,-	Y	25.95963	81.75362	801[]-4557[] visible on X band; no number in front of 8, last number consistent with 5. Matches 8011-45575, seen Marco Island 12/2003
43	3/13/2009	Marco Island, Tigertail Beach	GP US	Gf,LW:-,RR	Y	25.95963	81.75362	
44	3/13/2009	Marco Island, Tigertail Beach	GP US	-,RG:Gf,GL	Y	25.95891	81.75386	

**Table 5. Alabama Surveys, Date, Survey Location, Site Access, Survey Method, and Total Number of Piping Plovers and Banded Piping Plovers**

Survey	Date	Location	Site Access	Survey Method	Total Number of PIPL	Number of Banded PIPL
1	12/8/08	Pelican Island	Car	Foot	14	1
2	12/9/08	Little Dauphin Island	Boat	Foot	4	0
3	12/9/08	Dauphin Island Washover Fan (West End)	Car	Foot	11	4
4	12/13/08	West Dauphin Island, East End	Boat	Foot	2	0
5	12/13/08	Dauphin Island, West End Inlet and Bayside	Car	Foot	19	2
<b>5 Surveys</b>	<b>3 days</b>	<b>4 locations</b>	<b>3 Car 2 Boat</b>	<b>5 Foot</b>	<b>50</b>	<b>7</b>

**Table 6. Banded Piping Plovers in Alabama**

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
1	12/8/2008	Pelican island	GP C	Lf,GO:-,GX	Y	30.23134	-88.11543	
2	12/9/2008	Dauphin Island Overwash	GP US	-,LG:Gf,RL (?)	N	30.249537	-88.189324	Observed for short time before bird flew; think string is correct but not sure
3	12/9/2008	Dauphin Island Overwash	GP US	Gf,-:YL/P	Y	30.249537	-88.189324	
4	12/9/2008	Dauphin Island Overwash	GP US	Gf,WG:-,RW	Y	30.249537	-88.189324	
5	12/9/2008	Dauphin Island Overwash	GP C	X,-:Wf,LR	Y	30.249537	-88.189324	CGT: Missing band is O; seen Dauphin Island winter 06
6	12/13/2008	Dauphin Island West End	GP US	Gf,-:YL/P	Y	30.24932	-88.1961	
7	12/13/2008	Dauphin Island West End	GP US	Gf,WG:-,RW	Y	30.25023	-88.19408	

**Table 7. Survey Number, Date, Location, Site Access, Survey Method, and Total Number of Piping Plovers and Banded Piping Plovers Observed in Mississippi**

<b>Survey #</b>	<b>Date</b>	<b>Location</b>	<b>Site Access</b>	<b>Survey Method</b>	<b>Total Number of PIPL</b>	<b>Number of Banded PIPL</b>
1	12/12/08	Petit Bois Island East End	Boat	Foot	14	2
2	12/14/08	Deer Island, East and West Ends	Boat	Foot	8	1
3	12/17/08	Long Beach	Car	Foot	13	1
4	12/18/08	Pass Christian	Car	Foot	0	0
5	12/18/08	Bay St. Louis	Car	Foot	12	2
6	12/19/08	East Long Beach	Car	Foot	3	0
7	12/21/08	Lakeshore – Waveland	Car	Foot	3	0
8	3/03/09	East Ship Island	Boat	Foot	24	3
9	3/04/09	Horn Island, East and West Ends	Boat	Foot	29	3
10	3/08/09	Cat Island, Southwest Spit	Boat	Foot	41	5
11	3/08/09	Ship Island, East End	Boat	Foot	25	2
<b>11 Surveys</b>	<b>9 days</b>	<b>11 Locations</b>	<b>6 Boat 5 Car</b>	<b>11 Foot</b>	<b>172</b>	<b>19</b>

**Table 8. Banded Piping Plovers in Mississippi**

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
1	12/12/08	Petit Bois Island East end	GP C	X,R:Lf,Lg	Y	30.20793	-88.41483	
2	12/12/08	Petit Bois Island East end	GP C	Lf,-:X,-	Y	30.20704	-88.42043	
3	12/14/08	Deer Island West and East Ends	GP C	X,Yg:Lf,L	Y	30.36645	-88.82062	
4	12/17/08	Long Beach	GL US	-,O:X,b/O/b	Y	30.33623	-89.17142	
5	12/18/08	Bay Saint Louis	GP C	Lf,L:X,YR	Y	30.31672	-89.32246	
6	12/18/08	Bay Saint Louis	GL US	O,-:X,g	Y	30.28767	-89.36112	
7	3/3/2009	East Ship Island	GP US	A,R/B:Gf,-	Y	30.24466	-88.87688	
8	3/3/2009	East Ship Island	GP US	L/YO,-:Gf,-	Y	30.24497	-88.87505	
9	3/3/2009	East Ship Island	GP C	-,X:-,W/LL/W	Y	30.24009	-88.88748	
10	3/4/2009	Horn Islands, East and West Ends	GP US	Gf,RL:-,RY	Y	30.24195	-88.77038	
11	3/4/2009	Horn Islands, East and West Ends	GP US	Yf,BB:X,Y	Y	30.24087	-88.76646	
12	3/4/2009	Horn Islands, East and West Ends	GP US	-,CA:Gf,- (?)	Y	30.24112	-88.76439	"C" band color uncertain from fading; most likely P based on color and what bands were issued.
13	3/8/2009	Cat Island, Southwest Spit	GP US	Gf,AG:-,RL	Y	30.21021	-89.08869	
14	3/8/2009	Cat Island, Southwest Spit	GP C	Lf,-:X,-	Y	30.21263	-89.08814	
15	3/8/2009	Cat Island, Southwest Spit	?	-,RX:-,W	Y	30.21017	-89.08916	
16	3/8/2009	Cat Island, Southwest Spit	GP C	Lf,OL:X,Y	Y	30.21037	-89.0892	
17	3/8/2009	Cat Island, Southwest Spit	GP US	Gf,WG:-,RG	Y	30.2101	-89.08902	
18	3/8/2009	Ship Island, East End	GP C	X,R:Wf,OB	Y	30.21545	-88.94804	
19	3/8/2009	Ship Island, East End	?	-, -:X,-	Y	30.21545	-88.94804	

**Table 9. Survey Number, Date, Location, Site Access, Survey Method, and Total Number of Piping Plovers and Banded Piping Plovers Observed in Louisiana**

Survey #	Date	Location	Site Access	Survey Method	Total Number of PIPL	Number of Banded PIPL
1	12/23/08	East Grand Terre	Boat	Foot	12	1
2	12/24/08	Grand Terre	Boat	Foot	4	0
3	12/25/08	Grand Isle East End	Car	Foot	0	0
4	12/27/08	West Belle Pass	Boat	Foot	30	4
5	12/28/08	Fourchon Beach East	Car	Foot	26	3
6	12/29/08	East Timbalier Island, East and West Ends	Boat	Foot	3	1
7	12/30/08	Elmers Island East	Boat	Foot	22	4
8	12/31/08	Raccoon Island West	Boat	Foot	53	6
9	1/2/09	Whisky Island West End	Boat	Foot	24	4
10	1/2/09	Whisky Island East End	Boat	Foot	11	3
11	1/2/09	Trinity Island/East Island East End	Boat	Foot	13	3
12	3/06/09	South Pass, East and West Sides	Airboat	Foot	16	3
13	3/06/09	Islands West of South Pass	Airboat	Foot	0	0
<b>13 Surveys</b>	<b>10 days</b>	<b>13 Locations</b>	<b>9 Boat 2 Airboat 2 Car</b>	<b>13 Foot</b>	<b>214</b>	<b>32</b>

**Table 10. Banded Piping Plovers in Louisiana**

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
1	12/23/08	East Grand Terre	GP US	-,WL:Gf,GL	Y	29.30918	-89.88502	
2	12/27/08	West Belle Pass	GP US	-,Y:Gf,LW	Y	29.09796	-90.25182	
3	12/27/08	West Belle Pass	GL US	X,L:O,-	Y	29.09796	-90.25182	



#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
4	12/27/08	West Belle Pass	GP US	Gf,-:PR/W,-	Y	29.09498	-90.24918	Picture of all bands but P
5	12/27/08	West Belle Pass	GL US	-,b:X,O/b	Y	29.09550	-90.24960	
6	12/28/08	Fourchon Beach East	GP US	Yf,BY:X,Y	Y	29.11209	-90.17889	
7	12/28/08	Fourchon Beach East	GP US	Yf,b:X,G	Y	29.11230	-90.17883	
8	12/28/08	Fourchon Beach East	GP C	Lf,Rg:-,XO	Y	29.11431	-90.17657	
9	12/29/08	East Timbalier Island, East and West Ends	GP US	Gf,Y/L:W,-	Y	29.07154	-90.31676	
10	12/30/08	Elmers Island East	GP US	-,RL:Gf,LG	Y	29.18424	-90.06293	
11	12/30/08	Elmers Island East	GP US	-,b:Yf,Gb	Y	29.18430	-90.06456	
12	12/30/08	Elmers Island East	GP US	O,P/L:Gf,-	Y	29.18343	-90.06763	
13	12/30/08	Elmers Island East	UK	X,-:-,-	Y	29.18374	-90.06748	
14	12/31/08	Raccoon Island	GP US	X,R:Yf,BL	Y	29.05993	-90.94122	
15	12/31/08	Raccoon Island	GP US	Yf,OR:X,B	Y	29.05980	-90.94147	
16	12/31/08	Raccoon Island	GP US	X,A:bf,G	Y	29.06106	-90.94357	
17	12/31/08	Raccoon Island	GP C	X,b:Lf,OY	Y	29.06310	-90.94778	
18	12/31/08	Raccoon Island	GP US	R,-:Gf,P/L	Y	29.06348	-90.94841	
19	12/31/08	Raccoon Island	GP C	L/W,-:X,W	Y	29.06573	-90.95191	
20	1/2/09	Whisky Island, West End	GP US	-,AG:Gf,GL	Y	29.05446	-90.85658	
21	1/2/09	Whisky Island, West End	GP US	Gf,-:YP,-	Y	29.05458	-90.85791	
22	1/2/09	Whisky Island, West End	GP C	Lf,gR:X,O	Y	29.05480	-90.85868	
23	1/2/09	Whisky Island, West End	GP C	X,GO:Wf,-	Y	29.05527	-90.85873	X,GO:Wf,B seen at this location 12/28/06
24	1/2/09	Whisky Island, East End	GP US	Yf,LL:X,Y	Y	29.06188	-90.80260	
25	1/2/09	Whisky Island, East End	GP US	-,YW:Gf,GW	Y	29.06213	-90.80265	
26	1/2/09	Whisky Island, East End	GP C	W,-:-,X	Y	29.06228	-90.80256	
27	1/2/09	Trinity Island/East Island East End	GP US	Gf,LG:-,RR	Y	29.06453	-90.65620	
28	1/2/09	Trinity Island/East Island East End	GP US	Gf,LL:-,RG	N	29.06457	-90.65627	
29	1/2/09	Trinity Island/East Island East End	UK	O,-:-,-	Y	29.06469	-90.65596	O,X:-,- seen at this location 12/28/06
30	3/6/2009	South Pass, East and West Sides	GL US	-,LX:-,OL	Y	29.01999	-89.13818	
31	3/6/2009	South Pass, East and West Sides	GL US	Of,Y/O/YR;X,g	Y	29.02004	-89.13792	
32	3/6/2009	South Pass, East and West Sides	GP US	Yf,OB:X,L	Y	29.02004	-89.13792	

**Table 11. Survey Number, Date, Location, Site Access, Survey Method, and Total Number of Piping Plovers and Banded Piping Plovers Observed in Texas**

Survey #	Date	Location	Site Access	Survey Method	Total Number of PIPL	Number of Banded PIPL
1	1/4/09	San Louis Pass to Surfside	Car	ORV	41	8
2	1/5/09	San Louis Pass to Galveston Seawall	Car	ORV	89	10
3	1/6/09	Quintana Beach	Car	ORV	11	0
4	1/7/09	Dewberry Island and Shoalwater Bay	Airboat	Airboat/ Foot	63	8
5	1/8/09	Matagorda NWR	Boat	ORV	2	1
6	1/9/09	Dewberry Island and Shoalwater Bay	Boat	Foot	94	13
7	1/11/09	Surfside to San Louis Pass	Car	ORV	14	5
8	1/11/09	San Louis Pass East Bayside Flats	Car	Foot	9	0
9	1/12/09	Bolivar Flats	Car	Foot	0	0
10	1/12/09	Rollover Pass East	Car	Foot	15	2
11	1/13/09	Sargent Beach to San Bernard NWR	Car	ORV/ Foot	136	15
12	1/14/09	Redfish Bay	Boat	Foot	28	3
13	1/14/09	San Jose Island Bayside, North Pass Center and South	Boat	Foot	92	5
14	1/15/09	San Jose Island Bayside, North Pass	Boat	Foot	73	11
15	1/15/09	Redfish Bay East	Boat	Foot	55	8
16	1/16/09	Mustang Island Beach, Inlet to Jetty at MISP	Car	ORV	0	0
17	1/17/09	Mollie Beattie	Car	Foot	56	3
18	1/18/09	Mustang Island Bayside Flats	Car	Foot	161	17
19	1/19/09	Padre Island National Seashore (PINS) N End No ORV Beach to MP 15	Car	ORV	7	0
20	1/19/09	Yarbrough Pass North	Car	Foot	8	0
21	1/20/09	PINS S End No ORV Beach to Mansfield Pass	Car	ORV	1	0

Survey #	Date	Location	Site Access	Survey Method	Total Number of PIPL	Number of Banded PIPL
22	1/23/09	PINS – Nighthawk Bay Flats	Foot	Foot	118	20
23	1/25/09	Mustang Island, Wilson’s Cut Bayside Flats	Car	Foot	0	0
24	1/31/09	Boca Chica Beach and Inlet Shoreline	Car	ORV	3	1
25	1/31/09	Boca Chica Interior Overwash Fans and Interior Flats (South of road and north of road (South Bay South))	Car	Foot/ATV	63	5
26	2/1/09	South Padre Island Beach, Atwood Park to Mansfield Channel	Car	ORV	0	0
27	2/3/09	South Bay, South and West Sides	ATV	Foot/ATV	239	26
28	2/4/09	South Padre Island Bayside, 26.27442 -97.20823 to 26.31659 -97.22882 (5)	ATV	Foot/ATV	85	12
29	2/5/09	South Padre Island Bayside, 26.31659 -97.22882 to 26.34347 -97.26362 (6)	ATV	Foot/ATV	344	31
30	2/6/09	South Padre Island Bayside, 26.23860 -97.19531 to 26.27442 -97.20823 (4)	ATV	ATV/Foot	21	1
31	2/6/09	Convention Center Bayside Flats 26.14650 -97.17915 to 26.13451 -97.17744 (2)	Car	ORV/Foot	5	2
32	2/8/09	South Padre Island Bayside, 26.34838 -97.25242 to 26.52671 -97.34589 (7)	ATV	ATV/Foot	2	0
33	2/9/09	Convention Center Bayside Flats (2)	Car	ORV/Foot	40	6
34	2/9/09	South Padre Island Bayside, Bridge Flats (1)	ATV	Foot	0	0
35	2/11/09	South Padre Island Bayside, 26.15570 -97.18124 to 26.23860 -97.19530 (3)	ATV	ATV/Foot	47	6
36	2/11/09	South Padre Island Bayside, (4)	ATV	ATV/Foot	39	6
37	2/12/09	South Padre Island Bayside, 26.55370 -97.34488 to 26.53348 -97.32872 (8)	Boat	Foot	164	16
38	2/17/09	East Bayside Flats and Pelone Island Flats, Mustang Island	Boat	Boat/Foot	0	0
39	2/18/09	Padre Island National Seashore Bayside	Car	Foot	15	1
40	2/19/09	Padre Island National Seashore Bayside	Car	Foot	3	0
41	2/19/09	Padre Island National Seashore Gulf Beach	Car	ORV	29	3

Survey #	Date	Location	Site Access	Survey Method	Total Number of PIPL	Number of Banded PIPL
42	2/20/09	Quintana Beach	Car	ORV/Foot	9	0
43	2/21/09	Surfside to San Louis Pass	Car	ORV	74	11
44	2/22/09	Big Reef (East End Galveston Island)	Car	Foot/ORV	0	0
45	2/23/09	Bolivar Flats	Car	Foot	17	1
46	2/23/09	East Boundary Bolivar Flats to Gilchrist	Car	ORV	48	3
47	2/24/09	San Louis Pass to Galveston Seawall, 29.24229, -94.86973	Car	ORV/Foot	87	12
48	2/27/09	Sargent Beach to San Bernard National Wildlife Refuge	Car	Foot/ORV	115	15
49	2/28/09	East Boundary Bolivar Flats to Crystal Beach	Car	ORV	3	0
50	2/28/09	Bolivar Flats	Car	Foot	83	6
51	3/2/09	Bolivar Flats	Car	Foot	0	0
52	3/2/09	Rollover Pass – East Side of Pass	Car	Foot	20	2
<b>52 Surveys</b>	<b>39 days</b>	<b>34 Locations</b>	<b>34 Car 8 Boat 8 ATV 1 Foot 1 Airboat</b>	<b>21 Foot 14 ORV 8 Foot/ATV 7 ORV/Foot 1 Airboat/ Foot 1 Boat/Foot</b>	<b>2628</b>	<b>295</b>

**Table 12. Banded Piping Plovers in Texas**

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
1	1/4/09	San Louis Pass to Surfside	GP US	-,GG:Gf,GG	Y	29.05687	-95.14326	
2	1/4/09	San Louis Pass to Surfside	GP C	-, -:X,WW	Y	29.04349	-95.16283	CLGT: CHAPLIN L SK chick from 2003 (missing celluloid bicolour up left)
3	1/4/09	San Louis Pass to Surfside	GP C	X,O:Lf,GG	Y	29.03785	-95.17091	
4	1/4/09	San Louis Pass to Surfside	GP C	X,G:Wf,Rg	Y	29.00898	-95.21193	
5	1/4/09	San Louis Pass to Surfside	GP C	Lf,gB:X,Y	Y	29.00756	-95.21372	
6	1/4/09	San Louis Pass to Surfside	GP US	-,LG:Gf,GR	Y	29.00599	-95.21571	
7	1/4/09	San Louis Pass to Surfside	GP US	Gf,-:L/YO,-	Y	29.02357	-95.19115	
8	1/4/09	San Louis Pass to Surfside	GP C	Lf,gL:X,G	Y	29.06743	-95.12858	
9	1/5/09	San Louis Pass to Galveston Seawall	GP US	-,YY:Gf,LG	Y	29.08952	-95.10642	
10	1/5/09	San Louis Pass to Galveston Seawall	GP C	Lf,OX:-,YG	Y	29.09348	-95.10348	
11	1/5/09	San Louis Pass to Galveston Seawall	GP C	Lf,-:X,-	Y	29.10894	-95.08622	
12	1/5/09	San Louis Pass to Galveston Seawall	GP C	Lf,GG:X,Y	Y	29.11351	-95.07987	
13	1/5/09	San Louis Pass to Galveston Seawall	GP US	Gf,-: -,AG	Y	29.11828	-95.07309	
14	1/5/09	San Louis Pass to Galveston Seawall	GP US	Gf,-: -,L/PW	Y	29.16395	-95.00141	
15	1/5/09	San Louis Pass to Galveston Seawall	GP C	X,-:Lf,-	Y	29.16445	-95.00054	
16	1/5/09	San Louis Pass to Galveston Seawall	GP C	Lf,O:X,gB	Y	29.19165	-94.95530	
17	1/5/09	San Louis Pass to Galveston Seawall	GP US	Gf,-:AL/Y,-	Y	29.18476	-94.96706	
18	1/5/09	San Louis Pass to Galveston Seawall	GP US	Gf,WG:-,RY	Y	29.20949	-94.92535	
19	1/7/09	Dewberry Island and Shoalwater Bay	GP US	X,R:Yf,YR	N	28.32236	-96.61871	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
20	1/7/09	Dewberry Island and Shoalwater Bay	GP US	L/PY,-:Gf,-	N	28.32236	-96.61871	
21	1/7/09	Dewberry Island and Shoalwater Bay	?	-,:-:,b	N	28.35877	-96.57294	
22	1/7/09	Dewberry Island and Shoalwater Bay	GP C	Lf,-:X,-	N	28.37370	-96.53825	
23	1/7/09	Dewberry Island and Shoalwater Bay	GP US	Gf,LR:-,RR	N	28.37557	-96.53271	
24	1/7/09	Dewberry Island and Shoalwater Bay	GP C	X,-:Wf,-	N	28.37557	-96.53271	
25	1/7/09	Dewberry Island and Shoalwater Bay	GP US	-,YR:Gf,GR	N	28.37557	-96.53271	
26	1/7/09	Dewberry Island and Shoalwater Bay	GP C	Lf,R:X,RO	N	28.37557	-96.53271	
27	1/8/09	Matagorda NWR	?	-,Y:-,-	Y	28.09454	-96.81258	
28	1/9/09	Dewberry Island and Shoalwater Bay	GP C	Lf,RY:X,Y	Y	28.37614	-96.53238	
29	1/9/09	Dewberry Island and Shoalwater Bay	GP C	Lf,R:X,RO	Y	28.37614	-96.53238	
30	1/9/09	Dewberry Island and Shoalwater Bay	GP C	W,Y:-,X	Y	28.37614	-96.53238	
31	1/9/09	Dewberry Island and Shoalwater Bay	GP C	X,-:Wf,-	Y	28.37614	-96.53238	
32	1/9/09	Dewberry Island and Shoalwater Bay	GP US	-,YR:Gf,GR	Y	28.37614	-96.53238	
33	1/9/09	Dewberry Island and Shoalwater Bay	GP US	Gf,LR:-,RR	Y	28.37614	-96.53238	
34	1/9/09	Dewberry Island and Shoalwater Bay	GP C	Lf,B:X,Lg	Y	28.37614	-96.53238	
35	1/9/09	Dewberry Island and Shoalwater Bay	GP US	Gf,GG:-,RL	Y	28.33908	-96.60440	
36	1/9/09	Dewberry Island and Shoalwater Bay	GP C	X,g:Lf,gL	Y	28.33908	-96.60440	
37	1/9/09	Dewberry Island and Shoalwater Bay	GP C	Wf,-:X,-	N	28.33908	-96.60440	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
38	1/9/09	Dewberry Island and Shoalwater Bay	GP C	Lf,RY:X,O	Y	28.33908	-96.60440	
39	1/9/09	Dewberry Island and Shoalwater Bay	GP C	-,YX:Wf,LB	Y	28.33908	-96.60440	Left leg limp, holding foot up.
40	1/9/09	Dewberry Island and Shoalwater Bay	GP US	L/PY,-:Gf,-	Y	28.33908	-96.60440	
41	1/11/09	Surfside to San Louis Pass	?	-,G:-,-	Y	29.97046	-95.26159	
42	1/11/09	Surfside to San Louis Pass	GP C	X,GR:Wf,O	Y	29.97046	-95.26159	
43	1/11/09	Surfside to San Louis Pass	GP C	Lf,-:X,-	Y	29.97046	-95.26159	
44	1/11/09	Surfside to San Louis Pass	GP C	X,-:Wf,RR	Y	29.97046	-95.26159	
45	1/11/09	Surfside to San Louis Pass	GP US	Gf,-:L/YO,-	Y	29.03555	-95.17342	
46	1/12/09	Rollover Pass	GP US	Gf,R/WB:-,-	Y	29.51388	-94.49698	
47	1/12/09	Rollover Pass	GP US	X,B:Yf,OL	Y	29.51385	-94.49887	
48	1/13/09	Sargent Beach to San Bernard NWR	GP US	Gf,RY:-,RL	Y	28.81761	-95.52600	
49	1/13/09	Sargent Beach to San Bernard NWR	GP C	X,RO:Wf,g	Y	28.81761	-95.52600	
50	1/13/09	Sargent Beach to San Bernard NWR	GP C	X,O:Lf,RB	Y	28.81825	-95.52639	
51	1/13/09	Sargent Beach to San Bernard NWR	GP US	Yf,BL:X,R	Y	28.81825	-95.52639	
52	1/13/09	Sargent Beach to San Bernard NWR	GP US	Gf,YL:-,RL	Y	28.81843	-95.52734	
53	1/13/09	Sargent Beach to San Bernard NWR	GP C	L/W,X:-,-	Y	28.81843	-95.52734	
54	1/13/09	Sargent Beach to San Bernard NWR	GP C	Lf,BB:X,Y	Y	28.81843	-95.52734	
55	1/13/09	Sargent Beach to San Bernard NWR	GP US	BL/Y,-:Gf,-	Y	28.81937	-95.52665	
56	1/13/09	Sargent Beach to San Bernard NWR	GP C	X,B:Lf,GY	Y	28.82065	-95.52696	
57	1/13/09	Sargent Beach to San Bernard NWR	GP C	Lf,R:X,LB	Y	28.82020	-95.52657	
58	1/13/09	Sargent Beach to San Bernard NWR	GP C	X,YR:Wf,Y	Y	28.82020	-95.52657	



#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
59	1/13/09	Sargent Beach to San Bernard NWR	GP US	Gf, RG:-, RL	Y	28.82020	-95.52657	
60	1/13/09	Sargent Beach to San Bernard NWR	GP C	X,-:-, R/bL/W	Y	28.82004	-95.52695	
61	1/13/09	Sargent Beach to San Bernard NWR	GP C	-,-:L/W, W/LX	Y	28.82004	-95.52695	
62	1/13/09	Sargent Beach to San Bernard NWR	GP US	-, R/WB; Gf,-	Y	28.82004	-95.52695	
63	1/14/09	Redfish Bay	GP C	-,-OL/W; X,-	Y	27.91611	-97.08248	
64	1/14/09	Redfish Bay	GP C	X, BG:Wf, G	Y	27.98693	-97.06614	
65	1/14/09	Redfish Bay	GP US	A,-:Gf, R/B (?)	Y	27.98693	-97.06614	Pictures match combination but unsure
66	1/14/09	North Pass, Center and South	GP US	Yf, LG:X, Y	Y	27.89861	-97.03993	
67	1/14/09	North Pass, Center and South	GP C	Lf, O:X, OL	Y	27.89861	-97.03993	
68	1/14/09	North Pass, Center and South	GP US	Gf, RG:-, RY	N	27.89670	-97.04053	
69	1/14/09	North Pass, Center and South	GP US	X, O:bf, G	N	27.89670	-97.04053	
70	1/14/09	North Pass, Center and South	GP US	X,-:Gf, OY	N	27.89670	-97.04053	
71	1/15/09	North Pass	GP C	Lf, O:X, OL	N	27.89541	-97.04103	
72	1/15/09	North Pass	GP US	Gf, RG:-, RY	N	27.89541	-97.04103	
73	1/15/09	North Pass	GP C	X,-:Lf,-	N	27.89541	-97.04103	
74	1/15/09	North Pass	GP US	-,-LL:Gf, LW	Y	27.89627	-97.04082	
75	1/15/09	North Pass	GP US	-,-LA:Gf, GG	Y	27.89580	-97.04089	
76	1/15/09	North Pass	GP US	Yf, RG:X, b	Y	27.89678	-97.04070	
77	1/15/09	North Pass	?	-,-X:-,-	Y	27.89678	-97.04070	
78	1/15/09	North Pass	GP US	Yf, LG:X, Y	Y	27.89722	-97.04069	
79	1/15/09	North Pass	GP US	-,-YR:Gf, LG	Y	27.89745	-97.04060	
80	1/15/09	North Pass	GP C	-,-X:-, W/LL/W	Y	27.89654	-97.04073	
81	1/15/09	North Pass	GP US	X, O:bf, G	Y	27.89547	-97.04103	
82	1/15/09	Redfish Bay East	GP US	-,-LA:Gf, GG	N	27.91510	-97.08222	
83	1/15/09	Redfish Bay East	GP US	X, O:bf, G	Y	27.91510	-97.08222	
84	1/15/09	Redfish Bay East	GP US	-,-YR:Gf, LG	Y	27.91510	-97.08222	
85	1/15/09	Redfish Bay East	?	-,-X:-,-	Y	27.91510	-97.08222	
86	1/15/09	Redfish Bay East	GP US	Gf, GL/Y:-,-	Y	27.91454	-97.08247	
87	1/15/09	Redfish Bay East	GP C	-,-OL/W:X,-	N	27.91478	-97.08221	
88	1/15/09	Redfish Bay East	?	Y,-:-, R/B	Y	27.91478	-97.08221	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
89	1/15/09	Redfish Bay East	GP US	X,-:Gf,OY	Y	27.91477	-97.08221	
90	1/17/09	Mollie Beattie	GP C	X,L:Lf,OG	Y	27.63389	-97.21342	
91	1/17/09	Mollie Beattie	GP C	Lf,LO:X,g	Y	27.63606	-97.21387	
92	1/17/09	Mollie Beattie	GP US	X,L:bf,G	Y	27.63791	-97.21504	
93	1/18/09	Mustang Island Bayside Flats	GP US	X,RG:Gf,RR	Y	27.68300	-97.20723	
94	1/18/09	Mustang Island Bayside Flats	GP C	X,L/Wb/R:-,-	Y	27.68300	-97.20723	
95	1/18/09	Mustang Island Bayside Flats	GP C	X,RO:Wf,R	Y	27.68300	-97.20723	
96	1/18/09	Mustang Island Bayside Flats	GP C	W,Y:B,X	Y	27.68300	-97.20723	
97	1/18/09	Mustang Island Bayside Flats	GP US	-,LW:Gf,LA	Y	27.68305	-97.20946	
98	1/18/09	Mustang Island Bayside Flats	GP C	X,B:Lf,GB	Y	27.68305	-97.20946	
99	1/18/09	Mustang Island Bayside Flats	GP C	X,R:Lf,LB	Y	27.68305	-97.20946	
100	1/18/09	Mustang Island Bayside Flats	GP C	Lf,YG:-,OX	Y	27.68306	-97.20531	
101	1/18/09	Mustang Island Bayside Flats	GP C	Lf,-:X,-	Y	27.68306	-97.20531	
102	1/18/09	Mustang Island Bayside Flats	GP C	W,X:-,R	Y	27.68306	-97.20531	
103	1/18/09	Mustang Island Bayside Flats	GP US	X,YG:bf,G	Y	27.68299	-97.20625	
104	1/18/09	Mustang Island Bayside Flats	GP US	Gf,-:-,g/VY	Y	27.68273	-97.20824	
105	1/18/09	Mustang Island Bayside Flats	GP US	Gf,-:O,(?)	N	27.68291	-97.20793	
106	1/18/09	Mustang Island Bayside Flats	?	-,LG:-,RY	Y	27.68291	-97.20793	Would match GP US if Gf fell off
107	1/18/09	Mustang Island Bayside Flats	GP C	X,L:Lf,OG	Y	27.68291	-97.20793	
108	1/18/09	Mustang Island Bayside Flats	GP US	-,GL/P:Gf,-	Y	27.68291	-97.20793	
109	1/18/09	Mustang Island Bayside Flats	GP C	-,gB:Wf,YX	Y	27.68302	-97.20595	All bands very faded
110	1/23/09	PINS – Nighthawk Bay Flats	GP US	W,P/L:Gf,-	Y	27.53587	-97.27755	
111	1/23/09	PINS – Nighthawk Bay Flats	GP C	-, -:X,L/W	Y	27.53758	-97.27612	
112	1/23/09	PINS – Nighthawk Bay Flats	GP C	W,X:O,R	Y	27.53746	-97.27667	
113	1/23/09	PINS – Nighthawk Bay Flats	GP US	Gf,GG:-,WG	Y	27.53746	-97.27667	
114	1/23/09	PINS – Nighthawk Bay Flats	GP C	Lf,GG:X,B	Y	27.53746	-97.27667	
115	1/23/09	PINS – Nighthawk Bay Flats	GP US	-,YG:Gf,GW	Y	27.53746	-97.27667	
116	1/23/09	PINS – Nighthawk Bay Flats	GP C	Lf,G:X,OY	Y	27.53746	-97.27667	
117	1/23/09	PINS – Nighthawk Bay Flats	GP C	-,L/W:X,W/L	N	27.53746	-97.27667	
118	1/23/09	PINS – Nighthawk Bay Flats	GP C	W,Y:-,X	Y	27.53746	-97.27667	
119	1/23/09	PINS – Nighthawk Bay Flats	GP C	W,G:-,X	Y	27.53746	-97.27667	Location estimated
120	1/23/09	PINS – Nighthawk Bay Flats	GP C	Lf,RB:X,Y	Y	27.53948	-97.27648	
121	1/23/09	PINS – Nighthawk Bay Flats	GP C	-, -:X,W	Y	27.53948	-97.27648	
122	1/23/09	PINS – Nighthawk Bay Flats	GP US	-,RL:Gf,GA	Y	27.53956	-97.27564	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
123	1/23/09	PINS – Nighthawk Bay Flats	GP C	X,-:Wf,-	Y	27.53956	-97.27564	
124	1/23/09	PINS – Nighthawk Bay Flats	?	-,Y:-,-	Y	27.53956	-97.27564	Location estimated
125	1/23/09	PINS – Nighthawk Bay Flats	GP C	Lf,YO:-,OX	Y	27.53922	-97.27667	
126	1/23/09	PINS – Nighthawk Bay Flats	GP C	Lf,GX:-,gO	Y	27.53922	-97.27667	
127	1/23/09	PINS – Nighthawk Bay Flats	GP US	Yf,R:X,G	Y	27.53952	-97.27753	
128	1/23/09	PINS – Nighthawk Bay Flats	GP C	W,X:b,B	Y	27.53952	-97.27695	
129	1/23/09	PINS – Nighthawk Bay Flats	GP US	X,R:Yf,BR	Y	27.53542	-97.27760	
130	1/31/09	Boca Chica Beach and Inlet Shoreline	?	-,X:-,-	Y	25.99273	-97.14979	
131	1/31/09	Boca Chica Interior Overwash Fans, Interior Flats, and South Bay	GP US	?Y,-:Gf,-	Y	25.97269	-97.15812	South of Road; bird flew N towards South Bay.
132	1/31/09	Boca Chica Interior Overwash Fans, Interior Flats, and South Bay	GP C	Lf,O:X,BR	Y	25.99711	-97.18549	
133	1/31/09	Boca Chica Interior Overwash Fans, Interior Flats, and South Bay	GP US	-,R/WL:Gf,-	Y	25.99711	-97.18549	
134	1/31/09	Boca Chica Interior Overwash Fans, Interior Flats, and South Bay	GP US	Gf,YG:-,GA	Y	25.99711	-97.18549	
135	1/31/09	Boca Chica Interior Overwash Fans, Interior Flats, and South Bay	GP US	Gf,-:,-,PL/Y	Y	25.99739	-97.18519	
136	2/3/09	Boca Chica - South Bay	GP US	Gf,LR:-,LY	N	26.00220	-97.20258	
137	2/3/09	Boca Chica - South Bay	GP US	Gf,LW:-,RY	Y	26.00397	-97.20190	
138	2/3/09	Boca Chica - South Bay	GP C	Lf,O:X,BR	Y	26.00397	-97.20190	
139	2/3/09	Boca Chica - South Bay	GP US	X,R:Yf,OR	Y	26.00397	-97.20190	
140	2/3/09	Boca Chica - South Bay	GP US	-,LW:Gf,GL	Y	26.00397	-97.20190	
141	2/3/09	Boca Chica - South Bay	GP C	X,B:Wf,RY	Y	26.00397	-97.20190	
142	2/3/09	Boca Chica - South Bay	GP US	-,RA:Gf,GA	N	26.00420	-97.20364	
143	2/3/09	Boca Chica - South Bay	GP US	-,R/AL:Gf,-	N	26.00420	-97.20364	
144	2/3/09	Boca Chica - South Bay	GP C	X,L:Lf,YR	Y	26.00420	-97.20364	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
145	2/3/09	Boca Chica - South Bay	GP US	Gf,-:O,W/R	Y	26.00420	-97.20364	Position estimated
146	2/3/09	Boca Chica - South Bay	GP US	WY,-:Gf,- (?)	Y	26.00420	-97.20364	Position estimated
147	2/3/09	Boca Chica - South Bay	GP C	Lf,B:X,GY	Y	26.00289	-97.20467	
148	2/3/09	Boca Chica - South Bay	GP C	Lf,g:X,GL	Y	26.00289	-97.20467	
149	2/3/09	Boca Chica - South Bay	GP C	X,YY:Wf,B	Y	26.00289	-97.20467	Poor picture quality.
150	2/3/09	Boca Chica - South Bay	GP US	-,YW:Gf,LL	Y	26.00289	-97.20467	
151	2/3/09	Boca Chica - South Bay	GP C	X,Y:Wf,AR	Y	26.00289	-97.20467	
152	2/3/09	Boca Chica - South Bay	GP US	G,R/B:Gf,-	Y	26.00289	-97.20467	
153	2/3/09	Boca Chica - South Bay	GP US	-,AA:Gf,GA	Y	25.99747	-97.20145	
154	2/3/09	Boca Chica - South Bay	GP US	Gf,YG:-,GA	Y	25.99747	-97.20145	
155	2/3/09	Boca Chica - South Bay	GP US	Gf,-:L/YA,-	Y	25.99747	-97.20145	
156	2/3/09	Boca Chica - South Bay	GP US	Gf,P/L:R,-	Y	25.99747	-97.20145	
157	2/3/09	Boca Chica - South Bay	GP C	X,AB:Wf,g	Y	26.00059	-97.20190	
158	2/3/09	Boca Chica - South Bay	GP C	W,LL:-,X	Y	26.00059	-97.20190	
159	2/3/09	Boca Chica - South Bay	GP US	Gf,RG:-,GR(?)	N	26.00059	-97.20190	
160	2/3/09	Boca Chica - South Bay	GP US	-,GL:Gf,LA	Y	25.99891	-97.19797	
161	2/3/09	Boca Chica - South Bay	GP C	-, -:X,L/Wb/R	Y	25.99891	-97.19797	
162	2/4/09	South Padre Island Bayside (5)	?	-,X:-,Y	N	26.27590	-97.21119	
163	2/4/09	South Padre Island Bayside (5)	GP US	Yf,OL:X,B	Y	26.28504	-97.21446	
164	2/4/09	South Padre Island Bayside (5)	GP C	Lf,O:X,LR	N	26.29819	-97.22213	
165	2/4/09	South Padre Island Bayside (5)	GP C	Lf,BR:X,Y	Y	26.29819	-97.22213	
166	2/4/09	South Padre Island Bayside (5)	GP US	-,LL:Gf,GL	Y	26.29819	-97.22213	
167	2/4/09	South Padre Island Bayside (5)	GP US	-, -:Gf,?	N	26.30146	-97.22440	
168	2/4/09	South Padre Island Bayside (5)	?	-, -:X,-	Y	26.30146	-97.22440	
169	2/4/09	South Padre Island Bayside (5)	GP C	X,Y:Lf,Og	Y	26.29880	-97.22424	
170	2/4/09	South Padre Island Bayside (5)	GP US	-,AW:Gf,LL	Y	26.30974	-97.22877	
171	2/4/09	South Padre Island Bayside (5)	?	R,-:X,Y	N	26.31322	-97.23158	
172	2/4/09	South Padre Island Bayside (5)	GP C	X,OY:Wf,-	Y	26.31322	-97.23158	GLGT: missing dark green
173	2/4/09	South Padre Island Bayside (5)	GP C	W,X:O,O	Y	26.31322	-97.23158	
174	2/5/09	South Padre Island Bayside (6)	GP US	-,GY:Gf,RR	Y	26.33165	-97.25072	
175	2/5/09	South Padre Island Bayside (6)	GP C	Lf,BR:X,Y	Y	26.33255	-97.25156	
176	2/5/09	South Padre Island Bayside (6)	GP C	W,X:-,Y	Y	26.33255	-97.25156	
177	2/5/09	South Padre Island Bayside (6)	GP US	Gf,-:GP,-	Y	26.33255	-97.25156	
178	2/5/09	South Padre Island Bayside (6)	?	-, -:X,-	N	26.33255	-97.25156	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
179	2/5/09	South Padre Island Bayside (6)	GP US	Yf,OL:X,B	Y	26.33638	-97.25494	
180	2/5/09	South Padre Island Bayside (6)	GP US	-,YL/Y:Gf,-	Y	26.33638	-97.25494	
181	2/5/09	South Padre Island Bayside (6)	?	-,:-,B	Y	26.33693	-97.25589	
182	2/5/09	South Padre Island Bayside (6)	GP US	Gf,YY:-,RL	Y	26.33693	-97.25589	
183	2/5/09	South Padre Island Bayside (6)	GP US	Gf,AR/W:-,-	Y	26.34135	-97.25900	
184	2/5/09	South Padre Island Bayside (6)	GP C	X,g:Lf,YL	Y	26.34135	-97.25900	
185	2/5/09	South Padre Island Bayside (6)	GP C	-,:-L/W,g	Y	26.34135	-97.25900	
186	2/5/09	South Padre Island Bayside (6)	GP C	W,X:G,W	Y	26.34135	-97.25900	
187	2/5/09	South Padre Island Bayside (6)	GP US	-,:-Gf,L/YL/Y	Y	26.34344	-97.25976	
188	2/5/09	South Padre Island Bayside (6)	GP US	-,LL:Gf,GG	Y	26.34353	-97.25988	
189	2/5/09	South Padre Island Bayside (6)	?	-,:-,X	Y	26.34353	-97.25988	
190	2/5/09	South Padre Island Bayside (6)	GP C	X,O:Lf,Og	Y	26.34353	-97.25988	
191	2/5/09	South Padre Island Bayside (6)	GP C	Lf,O:X,GY	Y	26.34028	-97.26105	
192	2/5/09	South Padre Island Bayside (6)	?	-,X:-,BL/A	N	26.34028	-97.26105	
193	2/5/09	South Padre Island Bayside (6)	GP C	X,OY:Wf,-	Y	26.34028	-97.26105	GLGT: missing dark green
194	2/5/09	South Padre Island Bayside (6)	GP C	-,X:-,b/RL/W	Y	26.34028	-97.26105	
195	2/5/09	South Padre Island Bayside (6)	GP C	X,:-,WW	Y	26.34028	-97.26105	
196	2/5/09	South Padre Island Bayside (6)	GP US	L/PG:-,Gf,-	Y	26.34028	-97.26105	
197	2/5/09	South Padre Island Bayside (6)	GP C	W,:-,WX	Y	26.34149	-97.26131	
198	2/5/09	South Padre Island Bayside (6)	GP C	Lf,R:X,LY	Y	26.34303	-97.26339	
199	2/5/09	South Padre Island Bayside (6)	GP US	X,R:Yf,RR	Y	26.34303	-97.26339	
200	2/5/09	South Padre Island Bayside (6)	GP US	Gf,LG:-,RG	Y	26.34303	-97.26339	
201	2/5/09	South Padre Island Bayside (6)	GP C	Lf,OB:X,O	Y	26.34303	-97.26339	
202	2/5/09	South Padre Island Bayside (6)	GP C	-,:-X,W/L	Y	26.34303	-97.26339	
203	2/5/09	South Padre Island Bayside (6)	GP US	Yf,OR:X,Y	Y	26.34303	-97.26339	
204	2/5/09	South Padre Island Bayside (6)	GP US	Gf,AL/Y:-,-	Y	26.34303	-97.26339	
205	2/6/09	South Padre Island Bayside (4)	GP C	Lf,O:X,GY	Y	26.26275	-97.20407	
206	2/6/09	Convention Center Bayside Flats (2)	?	-,:-,X	Y	26.13766	-97.17714	
207	2/6/09	Convention Center Bayside Flats (2)	GP C	Lf,OX:-,GL	Y	26.13766	-97.17714	
208	2/9/09	Convention Center Bayside Flats (2)	GP C	X,LL:Lf,g	Y	26.14178	-97.17819	
209	2/9/09	Convention Center Bayside Flats	?	-,:-,X	Y	26.14227	-97.17830	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
		(2)						
210	2/9/09	Convention Center Bayside Flats (2)	GP C	Lf,OX:-,GL	N	26.14293	-97.17838	
211	2/9/09	Convention Center Bayside Flats (2)	GP US	Gf,-:PL/P,-	Y	26.14604	-97.17973	
212	2/9/09	Convention Center Bayside Flats (2)	GL	O,-:X,O/g	Y	26.14623	-97.17979	
213	2/9/09	Convention Center Bayside Flats (2)	GP C	W,X:O,-	Y	26.14636	-97.17950	
214	2/11/09	South Padre Island Bayside (3)	GL	O,-:X,O/g	N	26.16440	-97.18179	
215	2/11/09	South Padre Island Bayside (3)	?	-,:-,X	N	26.16440	-97.18179	
216	2/11/09	South Padre Island Bayside (3)	GP US	Gf,-:PL/P,-	N	26.16440	-97.18179	
217	2/11/09	South Padre Island Bayside (3)	GP C	X,LL:Lf,g	Y	26.19361	-97.18725	
218	2/11/09	South Padre Island Bayside (3)	GP C	Lf,O:X,OO	Y	26.19361	-97.18725	
219	2/11/09	South Padre Island Bayside (3)	GP US	P(?)A,-:Gf,-	N	26.22082	-97.19283	Not sure on upper band left leg - possible split
220	2/11/09	South Padre Island Bayside (4)	GP US	L/PG,-:Gf,-	Y	26.24696	-97.19642	
221	2/11/09	South Padre Island Bayside (4)	GP US	Gf,LY:-,RY	Y	26.24800	-97.19658	
222	2/11/09	South Padre Island Bayside (4)	?	-,:-,W	N	26.25665	-97.20119	
223	2/11/09	South Padre Island Bayside (4)	GP US	Yf,OL:X,B	Y	26.26129	-97.20181	Poor quality picture
224	2/11/09	South Padre Island Bayside (4)	GP C	-,X:-,b/RL/W	Y	26.26129	-97.20181	Poor quality picture
225	2/11/09	South Padre Island Bayside (4)	GP C	W,X:-,-	N	26.26268	-97.20335	
226	2/12/09	South Padre Island Bayside (8)	GP US	Gf,LL:-,RY	N	26.55687	-97.33219	
227	2/12/09	South Padre Island Bayside (8)	GP C	-,X:-,b/RL/W	N	26.55687	-97.33219	
228	2/12/09	South Padre Island Bayside (8)	GP C	X,B:Lf,BL	Y	26.54038	-97.33265	
229	2/12/09	South Padre Island Bayside (8)	GP C	X,AA:Wf,G	Y	26.53395	-97.32904	
230	2/12/09	South Padre Island Bayside (8)	GP US	L/PB/R,-:Gf,-	N	26.53382	-97.32874	
231	2/12/09	South Padre Island Bayside (8)	GP US	Gf,-:R,g	N	26.53551	-97.32828	
232	2/12/09	South Padre Island Bayside (8)	GP C	X,RO:Wf,G	Y	26.53551	-97.32828	
233	2/12/09	South Padre Island Bayside (8)	GP C	X,-:L/W,-	N	26.53689	-97.32874	
234	2/12/09	South Padre Island Bayside (8)	GP C	X,R:Lf,BG	N	26.53723	-97.32848	
235	2/12/09	South Padre Island Bayside (8)	GP C	X,-:Wf,-	N	26.53723	-97.32848	
236	2/12/09	South Padre Island Bayside (8)	GP C	Lf,gL:X,Y	Y	26.53822	-97.32774	
237	2/12/09	South Padre Island Bayside (8)	GP US	-,WW:Gf,GL	N	26.53822	-97.32774	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
238	2/12/09	South Padre Island Bayside (8)	GP US	Gf,WL:-,RY	Y	26.53822	-97.32774	
239	2/12/09	South Padre Island Bayside (8)	GP US	X,R:bf,Y	Y	26.53915	-97.32761	
240	2/12/09	South Padre Island Bayside (8)	GP C	Lf,-:X,-	N	26.54043	-97.32842	
241	2/12/09	South Padre Island Bayside (8)	GP US	Gf,-:N,GP(?)	N	26.54140	-97.32860	
242	2/18/09	Padre Island National Seashore Bayside	GP C	X,O:Lf,gR	Y	27.30013	-97.37000	
243	2/19/09	Padre Island National Seashore Beach	GP C	Lf,BY:X,Y	Y	27.27276	-97.34898	
244	2/19/09	Padre Island National Seashore Beach	GP C	Lf,-:X,-	Y	27.19525	-97.36600	
245	2/19/09	Padre Island National Seashore Beach	GP C	W,-:-,X	Y	27.18288	-97.36808	
246	2/21/09	Surfside to San Louis Pass	?	-,X:O,W	N	28.99770	-95.22657	
247	2/21/09	Surfside to San Louis Pass	GP US	-,LG:Gf,GR	N	29.00471	-95.21713	
248	2/21/09	Surfside to San Louis Pass	GP C	X,G:Wf,Rg	N	29.00995	-95.21012	
249	2/21/09	Surfside to San Louis Pass	GP C	Lf,gB:X,Y	N	29.01157	-95.20792	
250	2/21/09	Surfside to San Louis Pass	GP US	Gf,-:L/YO,-	N	29.01727	-95.19997	
251	2/21/09	Surfside to San Louis Pass	GP C	Lf,gL:X,G	N	29.06752	-95.12852	
252	2/21/09	Surfside to San Louis Pass	GP C	-, -:L/WW/LX	N	29.05988	-95.13882	
252	2/21/09	Surfside to San Louis Pass	GP US	Gf,LR:-,-	N	29.03296	-95.17809	
254	2/21/09	Surfside to San Louis Pass	GP C	-, -:X,WW	N	29.03269	-95.17857	
255	2/21/09	Surfside to San Louis Pass	GP C	X,-:Wf,RR	Y	28.97450	-95.25696	CLGT: missing dark blue
256	2/21/09	Surfside to San Louis Pass	?	N,G:N,N	N	28.97056	-95.26173	Would match -,G:-, seen previous survey near here
257	2/23/09	Bolivar Flats	GP C	X,-:Lf,-	N	29.36620	-94.74335	
258	2/23/09	Bolivar Flats East Boundary to Gilchrist	GP C	X,Y:Lf,OY	N	29.41443	-94.69502	
259	2/23/09	Bolivar Flats East Boundary to Gilchrist	GP C	X,-:Lf,-	N	29.41805	-94.69039	
260	2/23/09	Bolivar Flats East Boundary to Gilchrist	?	N,X:gY,-	N	29.41488	-94.69531	
261	2/24/09	San Louis Pass to Galveston Seawall	GP C	X,O:Lf,GG	N	29.09361	-95.11589	
262	2/24/09	San Louis Pass to Galveston Seawall	GP C	Lf,-:X,-	N	29.09350	-95.11619	

#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
263	2/24/09	San Louis Pass to Galveston Seawall	GP US	X,B:Yf,OY	Y	29.09292	-95.11563	
264	2/24/09	San Louis Pass to Galveston Seawall	GP US	-,AW:Gf,LW	N	29.15181	-95.02082	
265	2/24/09	San Louis Pass to Galveston Seawall	GP US	Gf,WY:-,RR	N	29.15754	-95.01170	
266	2/24/09	San Louis Pass to Galveston Seawall	GP C	X,L:Lf,Rg	Y	29.18467	-95.96700	Galveston Island State Park
267	2/24/09	San Louis Pass to Galveston Seawall	GP C	Lf,O:X,gB	Y	29.19129	-94.95571	Galveston Island State Park
268	2/24/09	San Louis Pass to Galveston Seawall	GP US	R,P/L:Gf,-	Y	29.19290	-94.95282	Galveston Island State Park
269	2/24/09	San Louis Pass to Galveston Seawall	GP C	Lf,GG:X,Y	Y	29.11377	-95.07959	
270	2/24/09	San Louis Pass to Galveston Seawall	GP US	-,YY:Gf,LG	Y	29.08733	-95.10893	
271	2/24/09	San Louis Pass to Galveston Seawall	GP C	-,X:WW	Y	29.08571	-95.11084	
272	2/24/09	San Louis Pass to Galveston Seawall	GP C	Lf,GB:X,R	Y	29.08571	-95.11084	
273	2/27/09	Sargent Beach to San Bernard NWR	GP US	Gf,YL:-,RL	N	28.82654	-95.52534	
274	2/27/09	Sargent Beach to San Bernard NWR	GP US	-,R/WB:Gf,-	N	28.82654	-95.52534	
275	2/27/09	Sargent Beach to San Bernard NWR	GP US	Gf,RY:-,RL	N	28.82654	-95.52534	
276	2/27/09	Sargent Beach to San Bernard NWR	GP C	Lf,R:X,LB	N	28.82672	-95.52584	
277	2/27/09	Sargent Beach to San Bernard NWR	GP US	BL/Y,-:Gf,-	N	28.82672	-95.52584	
278	2/27/09	Sargent Beach to San Bernard NWR	GP C	L/W,X:-,-	N	28.82696	-95.52681	
279	2/27/09	Sargent Beach to San Bernard NWR	GP US	Gf,RG:-,RL	N	28.82696	-95.52681	
280	2/27/09	Sargent Beach to San Bernard	GP C	X,RO:Wf,g	N	28.82681	-95.52348	



#	Date	Location	Pop.	Bands	Pic.	Lat.	Long.	Notes
		NWR						
281	2/27/09	Sargent Beach to San Bernard NWR	GP C	X,-:L/WA/R	N	28.82571	-95.52272	
282	2/27/09	Sargent Beach to San Bernard NWR	GP US	Gf,-:AB/R,-	N	28.82557	-95.52279	
283	2/27/09	Sargent Beach to San Bernard NWR	GP US	-, -:Gf,L/PA	Y	28.82519	-95.52278	
284	2/27/09	Sargent Beach to San Bernard NWR	GP C	Lf,BB:X,Y	N	28.82679	-95.52258	
285	2/27/09	Sargent Beach to San Bernard NWR	GP C	X,B:Lf,GY	N	28.82570	-95.52182	
286	2/27/09	Sargent Beach to San Bernard NWR	GP C	X,O:Lf,RB	N	28.82446	-95.52564	
287	2/27/09	Sargent Beach to San Bernard NWR	GP C	X,YR:Wf,Y	N	28.82446	-95.52564	
288	2/28/09	Bolivar Flats	GP C	Lf,B:X,BO	Y	29.36470	-94.73713	
289	2/28/09	Bolivar Flats	GP C	X,B:Lf,OG	Y	29.36470	-94.73713	
290	2/28/09	Bolivar Flats	GP C	Lf,Rg:X,B	Y	29.36448	-94.73828	
291	2/28/09	Bolivar Flats	GP C	X,-:Wf,YG	Y	29.36453	-94.73875	
292	2/28/09	Bolivar Flats	GP C	W,YR:-,X	Y	29.36453	-94.73875	
293	2/28/09	Bolivar Flats	GP C	X,Og:Lf,B	N	29.36453	-94.73875	
294	3/2/09	Rollover Pass – East Side of Pass	GP US	Gf,R/WB:-,-	N	29.51292	-94.49804	
295	3/2/09	Rollover Pass – East Side of Pass	GP US	X,B:Yf,OL	N	29.51298	-94.49774	

# Attachment BB

**From:** [Winton, Bryan](#)  
**To:** [Gardiner, Dawn](#); [Orms, Mary](#); [Perez, Sonny](#); [Ardizzone, Chuck CA](#); [Perez, Chris](#)  
**Subject:** Space X Traffic Volume (Construction/Trucks) and Wildlife Mortality -- Road Closure Implications  
**Date:** Thursday, September 17, 2020 10:13:59 PM  
**Attachments:** [DSC02224\(1\).JPG](#)

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There may actually be a time of year when we (FWS) would close HW 4 were we granted the same authority as Space-X. This would be for benefit of migratory bird fallout when spring migrating birds land exhausted in lomas on Boca Chica to rest, feed and prepare for their inland journey to nesting grounds.

Road closures impact the public. Road traffic as a result of the constantly evolving and continuously under construction Space-X sites, which pose an even a heavier death toll for migratory birds. The attached photos were taken in 4-25-2013 before Space-X traffic began to exponentially increase. The 5 species of birds in the bags were collected during a single trip through Boca Chica. You can be assured there were many others I was not able to detect. During events such as this once we have a refuge representative on-site daily, we should seek authorization to close HW 4 for wildlife benefits and Space-X can stay home until we open the road..... which will instill an appreciation for why we are dissatisfied with not having access to our lands. Putting the shoe on the other foot by simply making the request may motivate them to take us serious. Our closure would be for public benefit not personal benefit.

PS the birds were donated to UTRGV through American Bird Conservancy representative, Mary Gustafson.

bryan

# **Attachment CC**

**From:** [Gardiner, Dawn](#)  
**To:** [Perez, Chris](#); [Winton, Bryan](#); [Perez, Sonny](#)  
**Cc:** [Orms, Mary](#); [Ardizzone, Chuck CA](#)  
**Subject:** Re: Conversation with Merritt Island NWR (Cape Canaveral) -- re: Space-X  
**Date:** Tuesday, September 29, 2020 9:45:00 AM

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Or FAA could be persuaded to play a similar role as NASA or NASA could buy into collaborating in this SpaceX project to give more transparency, more funding for monitoring, more certainty, and more compliance with regulations.

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**From:** Perez, Chris <[REDACTED]>  
**Sent:** Tuesday, September 29, 2020 10:34 AM  
**To:** Winton, Bryan <[REDACTED]> Perez, Sonny <[REDACTED]>  
**Cc:** Orms, Mary <[REDACTED]> Gardiner, Dawn <[REDACTED]>  
**Subject:** Re: Conversation with Merritt Island NWR (Cape Canaveral) -- re: Space-X

Exactly, it's apples and oranges. SpaceX needs to pay for environmental monitoring, but that we control or direct. Perhaps they provide us funding through an agreement and we hire the consultants or monitors we want?

---

**From:** Winton, Bryan <[REDACTED]>  
**Sent:** Monday, September 28, 2020 3:32 PM  
**To:** Perez, Sonny <[REDACTED]>  
**Cc:** Orms, Mary <[REDACTED]> Gardiner, Dawn <[REDACTED]> Perez, Chris <[REDACTED]>  
**Subject:** Conversation with Merritt Island NWR (Cape Canaveral) -- re: Space-X

I spoke with Stan Howarter, Wildlife Biologist at Merritt Island NWR last Wednesday, September 23, as promised, for purposes of following up on a statement or request Space-X made to Sonny previously during a phone conversation.

Space-X asked Sonny why we couldn't coordinate more in alignment with how coordination is done at Kennedy Space Center, which is surrounded by Merritt Island NWR.

Curious to find out how coordination occurs at Kennedy Space Center, and why Space-X was asking Sonny why we couldn't coordinate similarly, I called Stan, who helped with setting up a June 4, 2020 call we had with Layne Hamilton at Merritt Island, to discuss how coordination with FAA (and NASA) worked there.

Stan said that NASA conducts all vibration, noise, air quality, and biological monitoring at Kennedy Space Center so the refuge doesn't have to do any such related monitoring or research. Unfortunately we do not have NASA here, helping with all levels of oversight. Therefore, I'm not sure what Space-X is asking that we (FWS) do to make things similar. If Space-X can get NASA to monitor all the same things here as they do in Florida, I think that is

the only way we can operate similarly.

NASA is the landowner that includes Kennedy Space Center and Merritt Island NWR. Merritt Island NWR is an overlay refuge created to serve as a buffer around the Space Center. We (LRGV NWR) were not established to be a space center buffer, so in that respect, we cannot provide similarity in operations here as they have in Florida. NASA has more biology staff than the Merritt Island NWR has in total. Space-X leases from NASA. NASA performs all environmental monitoring in Florida. I'm not certain if their data is publicly available.

So, Not sure how to respond to Space-X except to say we don't have NASA here to monitor all their activities..... so how do we cover the costs and provide staff to actually do this internally? It seems reasonable to assume that there are impacts from their activity, to include impact from fires, explosions, sonic booms, and other noise. We know for sure there is a direct loss of wildlife due to increased traffic serving Space-X. Can we get them to cover the costs of qualified biologists we recommend for them to choose from? Third-party monitoring and environmental findings will be more credible if they are conducted by an independent program, like Coastal Bend Bay Estuary Program, or JD Cortez who owns LandHawk Consulting, or Margo Zdravkovic, Conservian, Blanton & Associates, etc..... someone familiar with the area from prior to Space-X arrival. Not students from UTRGV. Bless their heart! Not one month of monitoring for the year, but intermittently all year long, encompassing every season, spring/fall migration, nesting season for terns/turtles, winter for curlews and reddish egrets, and of course all year long for impacts to Aplomado falcons, piping plovers, red knots, and ocelots.

Sonny, what is it they want to see similar? Stan Howarter said they (Space-X) don't pay for anything that he knows of at Kennedy Space Center. If that is the case, then I can see why they want things to be similar here..... because they've not paid for anything here yet either.

bryan

# Attachment DD

**From:** [Perez, Chris](#)  
**To:** [Winton, Bryan](#); [Gardiner, Dawn](#); [Perez, Sonny](#); [Edler, Scot](#); [DeLaGarza, Imer](#); [McDowell, Kelly](#); [Ardizzone, Chuck CA](#); [Garza, Rolando L](#); [Orms, Mary](#); [Kendal Keyes](#)  
**Subject:** Re: SpaceX Development - Photos 9-8-20  
**Date:** Thursday, September 10, 2020 8:46:00 AM

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Is this new construction that has yet to be evaluated? Which of course, limits the availability of alternatives under NEPA since they've already undertaking a particular connected action...I suppose they would argue that the building construction in the photo is not a part of their NEPA evaluation, but all SpaceX development is a connected action (but for the FAA permit, these projects would not be occurring)...

#### **40 CFR § 1506.1 Limitations on actions during NEPA process.**

(a) Until an agency issues a record of decision as provided in [§ 1505.2](#) (except as provided in [paragraph \(c\)](#) of this section), **no action concerning the proposal shall be taken which would:**

**(1) Have an adverse environmental impact; or**

**(2) Limit the choice of reasonable alternatives.**

(b) If any agency is considering an application from a non-Federal entity, and is aware that the applicant is about to take an action within the agency's jurisdiction that would meet either of the criteria in [paragraph \(a\)](#) of this section, then the agency shall promptly notify the applicant that the agency will take appropriate action to insure that the objectives and procedures of NEPA are achieved.

(c) While work on a required program environmental impact statement is in progress and the action is not covered by an existing program statement, agencies shall not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:

(1) Is justified independently of the program;

(2) Is itself accompanied by an adequate environmental impact statement; and

(3) Will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.

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**From:** Winton, Bryan <[REDACTED]>  
**Sent:** Wednesday, September 9, 2020 9:12 PM  
**To:** Gardiner, Dawn <[REDACTED]> Perez, Sonny <[REDACTED]> Perez, Chris <[REDACTED]> Edler, Scot <[REDACTED]> DeLaGarza, Imer <[REDACTED]> McDowell, Kelly <[REDACTED]> Ardizzone, Chuck CA <[REDACTED]> Garza, Rolando L <[REDACTED]> Orms, Mary <[REDACTED]> Kendal Keyes <[REDACTED]>  
**Subject:** SpaceX Development - Photos 9-8-20

Shelby Bassette w SPI Coastal Studies Lab sent the photos yesterday. Why can't FWS, NPS,



TxDOT/TPWD or FAA issue cease and desist. Can't write NEPA on a moving target. Viewshed impacts to Palmito Battlefield and planting vegetation without consultation. We should request they remove them. They aren't native and they'll block the road eventually if they live. And grow elsewhere with the ecosystem we own that surrounds them. The skyscraper is a different story.







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# Attachment EE

**From:** [Perez, Chris](#)  
**To:** [Gardiner, Dawn](#); [Perez, Sonny](#); [Orms, Mary](#); [Winton, Bryan](#)  
**Cc:** [Ardizzone, Chuck CA](#)  
**Subject:** Re: [EXTERNAL] More DOA's  
**Date:** Monday, January 4, 2021 8:42:57 AM

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And closures prevent sea turtle personnel from being able to provide quick assistance for stranded turtles...?

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**From:** Gardiner, Dawn <[REDACTED]>  
**Sent:** Monday, January 4, 2021 9:33 AM  
**To:** Perez, Sonny <[REDACTED]> Orms, Mary <[REDACTED]> Winton, Bryan <[REDACTED]> Perez, Chris <[REDACTED]>  
**Cc:** Ardizzone, Chuck CA <[REDACTED]>  
**Subject:** Fw: [EXTERNAL] More DOA's

Unintended consequence of SpaceX launches, illegal activities capitalize on area closures? I dont know if we can do anything but bringing this to others awareness is a first step. Can we get more Coast Guard patrols?

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**From:** Skoruppa, Mary Kay <[REDACTED]>  
**Sent:** Tuesday, December 29, 2020 11:27 AM  
**To:** Gardiner, Dawn <[REDACTED]>  
**Subject:** Fw: [EXTERNAL] More DOA's

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**From:** Shaver, Donna J <[REDACTED]>  
**Sent:** Tuesday, December 29, 2020 11:25 AM  
**To:** Lt. Les Casterline <[REDACTED]> Jarret Barker <[REDACTED]> Skoruppa, Mary Kay <[REDACTED]> Matthew Roberson - NOAA Federal <[REDACTED]> Brian Stacy <[REDACTED]> Stacy Hargrove - NOAA Federal <[REDACTED]>  
**Subject:** Fw: [EXTERNAL] More DOA's

URGENT URGENT

I just received this information. This email is the FIRST THAT I HAVE heard about this second surge of strandings. This carcass was found on South Padre Island. There is no doubt it is a victim of gill netting. We suspected and reported to authorities gill netting being the likely cause of the pulse a few weeks ago, but I was never told of any vessels captured in those waters or any nets retrieved. Enforcement is critical and I urge the authorities to please intensify your patrols of those nearshore waters off Boca Chica Beach and South Padre Island. We know that they also can go as far north as the southern half of North Padre Island.

The MO of these folks seems to be to take advantage of times when they think enforcement will not be out there or will be slim. This includes:

- foggy conditions deemed too unsafe boat operations for federal and state officials.
- holidays when they think people will be on vacation or require holiday pay
- closure of nearshore waters and beaches on Boca Chica to vessels and people (Space X rocket launches?)

If you know of other officials not on this email distribution list that can help get patrols into this area to apprehend boats or nets or that need to be notified to help deal with this issue, please pass this email to those officials.

**MARTHA AND HEATHER - PLEASE IMMEDIATELY NOTIFY OUR U.S. COAST GUARD CONTACTS**

Please notify me if you require additional information from us. On the scene for most information about carcasses will be the crew from Sea Turtle Inc. I am on leave the rest of the week but there should be someone on duty at our Sea Turtle Laboratory at Padre Island National Seashore (with Heather and Martha being the primary leads for strandings).

Thank you,  
Donna

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**From:** Mariana Devlin <[REDACTED]>  
**Sent:** Tuesday, December 29, 2020 9:38 AM  
**To:** Wilson, Heather M <[REDACTED]> Villalba-Guerra, Martha R <martha\_villalba-guerra@nps.gov>; Amy Bonka <[REDACTED]> Shaver, Donna J <[REDACTED]> Skoruppa, Mary Kay <[REDACTED]>  
**Subject:** [EXTERNAL] More DOA's

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good morning all,  
I am attaching yet another stranding report of a DOA we picked up yesterday. Seems like we are getting another pulse of dead greens, I am not caught up on databases but well over 20 in the last two weeks.  
We also have evidence of gill nets since one of our DOA's from a few days ago came in entangled in one (please see attached photograph). Martha and Heather, we are shipping the entanglement material to you all today, we collected all that gear. Just want to keep everyone alert, we will continue to document everything as best as we can.  
Thanks!  
**Mariana A. Devlin, M.Sc.**

Conservation Coordinator

Sea Turtle Inc.

(956) [REDACTED] Ext. 6

6617 Padre Boulevard

South Padre Island, TX

78597

<http://www.seaturtleinc.org/>



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**From:** Stitt Linda ([REDACTED]) Sent You a Personal Message <[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 5:40 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment for Programmatic EA on Starship/Super Heavy launch operations

Dear Federal Aviation Administration,

I urge the FAA to conduct a new EIS for the SpaceX Starship/Super Heavy operations currently underway at SpaceX's Boca Chica site. From the 2014 FEIS, the objective, launch vehicle, and the size and scope is entirely different, which potentially may include off-shore launches via Super Heavy-class spaceports, Super Heavy re-landing on the launch stand, simultaneous launches, and a resort.

FAA should consider not just the "proposed project" and "no action" alternatives, but also other alternatives that include launches of Starship from an offshore platform or moving Starship launches to Cape Canaveral, for which the necessary infrastructure already exists and is situated further away from National Wildlife Refuges and/or state park land.

A new cumulative analysis needs to be conducted. A 3rd-party launch failure analysis is needed due to the proximity of Port Isabel, Long Island Village and potentially three LNG export terminals within five miles of the launch site. Additionally, an analysis of the potential impacts to the proposed Jupiter LLC project, a crude upgrading, processing and export facility which includes an offshore VLCC loading facility six miles offshore.

A new biological opinion is needed. The Starship is much larger, there will be more testing, more beach closures, and more traffic where endangered wildlife is present. More closures of Boca Chica beach will result in increased inaccessibility to monitoring of endangered sea turtle nesting sites.

Additionally, I request the FAA enforce and/or hold SpaceX accountable to their required mitigation.

Sincerely,

Stitt Linda  
[REDACTED]  
[REDACTED]  
[REDACTED]

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at [REDACTED] or [REDACTED]



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**From:** Michael Butler ([REDACTED]) Sent You a Personal Message  
<[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 6:59 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment for Programmatic EA on Starship/Super Heavy launch operations

Dear Federal Aviation Administration,

I urge the FAA to conduct a new EIS for the SpaceX Starship/Super Heavy operations currently underway at SpaceX's Boca Chica site. From the 2014 FEIS, the objective, launch vehicle, and the size and scope is entirely different, which potentially may include off-shore launches via Super Heavy-class spaceports, Super Heavy re-landing on the launch stand, simultaneous launches, and a resort.

FAA should consider not just the "proposed project" and "no action" alternatives, but also other alternatives that include launches of Starship from an offshore platform or moving Starship launches to Cape Canaveral, for which the necessary infrastructure already exists and is situated further away from National Wildlife Refuges and/or state park land.

A new cumulative analysis needs to be conducted. A 3rd-party launch failure analysis is needed due to the proximity of Port Isabel, Long Island Village and potentially three LNG export terminals within five miles of the launch site. Additionally, an analysis of the potential impacts to the proposed Jupiter LLC project, a crude upgrading, processing and export facility which includes an offshore VLCC loading facility six miles offshore.

A new biological opinion is needed. The Starship is much larger, there will be more testing, more beach closures, and more traffic where endangered wildlife is present. More closures of Boca Chica beach will result in increased inaccessibility to monitoring of endangered sea turtle nesting sites.

Additionally, I request the FAA enforce and/or hold SpaceX accountable to their required mitigation.

Sincerely,

Michael Butler  
[REDACTED]  
[REDACTED]  
[REDACTED]

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at [REDACTED] or [REDACTED]

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**From:** Jared Hockema <[REDACTED]>  
**Sent:** Monday, November 1, 2021 9:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment of City of Port Isabel, SpaceX Boca Chica PEA  
**Attachments:** 20211101\_230225\_Raven\_Scan.pdf

Please find attached the comments of the City of Port Isabel on this matter.

-Jared Hockema, City Manager  
City of Port Isabel, Texas

Telephone: [REDACTED]



CITY OF PORT ISABEL  
"An Equal Opportunity Provider, Lender and Employer"  
305 East Maxan Street  
Port Isabel, Texas 78578  
(956) 943-2682  
(956) 943-2029 Facsimile

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November 1, 2021

Stacey Zee  
SpaceX PEA c/o ICF  
9300 Lee Highway  
Fairfax VA 22031

RE: Programmatic Environmental Assessment for the SpaceX Starship/Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas, released September 2021

Dear Ms. Zee,

Please accept this letter as the comment of the City of Port Isabel on the above-referenced Programmatic Environmental Assessment (PEA). This letter is intended to amplify and expand comments previously submitted by Ms. Valerie Bates, Marketing Director for the City of Port Isabel.

*Noise, Vibration and Overpressure*

The City of Port Isabel has serious concerns regarding the potential impact of noise, vibration and overpressure from the activities described in the PEA on the City of Port Isabel and surrounding areas.

As noted in the PEA, these impacts may be sufficient to cause property damage, up to and including the destruction of property.

The city is concerned that the analysis in the PEA does not adequately account for the effects of topography on the propagation of sound, vibration and overpressure. We note that the city and its environs are mostly separated from the proposed launch site by open water and coastal plains. The lack of structures and vegetation in this area means that sound waves will not be absorbed or dispersed as they travel to the city. In March of 2020, the explosion of a static test tank at the SpaceX site generated sufficient overpressure and vibration to cause items to fall from shelves at local stores, doors and windows to be forced open and police officers to report that their ears 'popped.'

Given the potential severe impact of noise, vibration and overpressure, the City of Port Isabel is concerned that structures in the city may be damaged, or that residents may be required to leave their homes or businesses when launch activity is conducted.

In order to mitigate these impacts, the City of Port Isabel feels that the applicant, at minimum should: be required to limit the number of launches per year; to limit the time of day that launch activity is conducted; limit launch activity to certain meteorological conditions; pay for independent monitoring of noise, vibration and overpressure; undertake to discontinue future launch activity if the noise, vibration or overpressure exceeds the thresholds established in the PEA; undertake to repair any damage caused by or reasonably attributed to the launch activity.

### *Biological Resources*

The location of the proposed activity is within the habitat of numerous threatened and endangered species. Of particular concern are potential impacts on marine mammals, Ocelots, Kemp's Ridley Sea Turtles and numerous migratory bird species. Bright lights, loud noises, vibration and other effects have the potential to harm or harass threatened or endangered species.

Additionally, access restrictions to SH 48 due to the proposed activity have the potential to deny public access to these biological resources.

In order to mitigate these impacts, the City of Port Isabel feels that the applicant, at minimum should: be required to limit the number of launches per year; to limit the time of day that launch activity is conducted; limit launch activity to certain meteorological conditions; limit launch activity to avoid nesting and breeding seasons of threatened or endangered species; reduce light trespass onto Boca Chica beach that may impact sea turtles; pay for independent monitoring of noise, vibration and overpressure; undertake to discontinue future launch activity if the noise, vibration or overpressure exceeds the thresholds established in the PEA; undertake to remove debris generated from launch activity; undertake to repair any damage caused by or reasonably attributed to the launch activity.

### *Antiquities*

Extensive archeological resources, historic sites and antiquities are located within or adjacent to the location of the proposed activity. This includes numerous shipwrecks, the Palmito Hill ranch, historic railroad trestles, historic markers and Indigenous American sites. Noise, vibration or overpressure from launch events; physical damage from construction activities or launch failures; deposition of debris from construction activities or launch failures; and access restrictions on SH 4 all impact these resources.

Additionally, numerous historic sites within the City of Port Isabel are subject to damage from noise, vibration and overpressure. These include the Port Isabel Lighthouse, the Champion Building, the Queen Isabella Inn and the Alta Vista Apartments.

In order to mitigate these impacts, the City of Port Isabel feels that the applicant, at minimum should: be required to limit the number of launches per year; to limit the time of day that launch activity is conducted; limit launch activity to certain meteorological conditions; pay for independent monitoring of noise, vibration and overpressure; undertake to discontinue future launch activity if the noise, vibration or overpressure exceeds the thresholds established in the PEA; undertake to remove debris generated from launch

activity; undertake to repair any damage caused by or reasonably attributed to the launch activity.

### *Transportation*

Access restrictions during the proposed activities have the potential to impact public roadways and waterways in the vicinity of the launch site. These public transportation resources serve vital interests, including the transportation of essential materials, the transportation of perishable agricultural products and the support of recreational activities and nature tourism. If access to roadways and waterways is impaired, local businesses may be harmed. Additionally, restrictions on the use of SH 4 may lead to an increase in traffic on SH 48 and SH 100.

In order to mitigate these activities, the City of Port Isabel feels that the applicant, at a minimum, should undertake to limit launch activities during high traffic periods; and, construct transportation alternatives to alleviate access restrictions.

### *Lack of Consideration of Functionally Dependent Activities*

Despite published reports that SpaceX intends to construct gas wells, a gas liquefaction train, a liquid oxygen plant, a nitrogen plant, a power plant and associated pipelines at the site, the impacts of these functionally dependent activities were not discussed in the PEA.

The City of Port Isabel believes that consideration should be given to the aggregate impact of a proposed activity and any functionally dependent activities. The failure of the PEA to account for these functionally dependent activities means that it has not adequately examined the significant environmental impacts of the proposed activity.

### *Inadequacy of Public Involvement*

The City of Port Isabel feels that the process used to solicit public involvement during the comment period for the PEA was inadequate and does not comply with the requirements of 40 CFR § 1506.6, which requires “diligent efforts to involve the public,” and further requires that consideration be given to the “ability of affected persons and agencies to access electronic media.”

No public hearings were held in the City of Port Isabel or surrounding areas, even though this is the closest population center to the proposed facility. Furthermore, no public repositories of PEA documents in the City of Port Isabel or the surrounding areas were used.

The only public hearings for this PEA were held online. In Cameron County, 57.1% of households lack access to broadband (ACS 2019).

Additionally, no information was presented at the public hearings in Spanish, and the PEA was not translated into Spanish, even though 70.1% of Cameron County residents speak Spanish at home (ACS 2019).

### *Denial of Finding of No Significant Impact Urged*

Based on the foregoing concerns, the City of Port Isabel urges the FAA to deny the issuance of a Finding of No Significant Impact (FONSI) for the proposed activities. The proposed activities will plainly have significant impacts on the environment, including the human environment. The PEA does not adequately examine these impacts, nor does it adequately present alternatives or mitigation proposals. Therefore, issuance of a FONSI is not appropriate, nor would such an action be protective of the environment or public health or safety.


*Full Environmental Impact Statement Requested*

The inadequacy of the PEA, combined with serious potential environmental impacts of the proposed activity, including activities that significantly affect the quality of the human environment require the preparation of an Environmental Impact Statement (EIS).

Therefore, the City of Port Isabel requests that an EIS be prepared. Such a document should more fully examine the areas of concern outlined by the city, and more fully consider the alternatives to action, and any potential mitigation activities.

Sincerely,

\_\_\_\_\_  
JARED HOCKEMA  
City Manager





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**From:** [REDACTED] on behalf of Melissa Mann  
**Sent:** Monday, November 1, 2021 5:06 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Melissa Mann

[REDACTED]

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**From:** [REDACTED] on behalf of CHRISTOPHER MITCHELL  
**Sent:** Monday, November 1, 2021 5:29 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
CHRISTOPHER MITCHELL



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**From:** [REDACTED] on behalf of Caitlin Curtin <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:29 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

All spring and summer, I paid careful attention to the work of the NY Piping Plover project — I learned about these amazing birds and how vulnerable they are to habitat disturbance. I was already aware of the vulnerability of other shoreline species. I was appalled to hear that there has not been a careful, thorough analysis (and on-going monitoring) of the impact of SpaceX operations on birds and other wildlife before allowing its Boca Chica Starship/Super Heavy Project and launch site & expansion activities to go forward.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that — according to the National Environmental Policy Act — the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Caitlin Curtin

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**From:** [REDACTED] on behalf of Lucy Weltner <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:36 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am a former professional naturalist and educator writing to express my concern that SpaceX operations in Boca Chica are threatening birds, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Piping plovers are endangered birds which nest in the area where SpaceX is expanding; these birds are incredibly sensitive to human activity, and will abandon their nesting sites if they feel threatened. Increased construction activities, foot traffic and noise are very likely to drive these little birds away. For the sake of piping plovers and many other species, I urge you to require a full environmental impact study before greenlighting SpaceX's expansion.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lucy Weltner



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**From:** [REDACTED] on behalf of Michael Madsen <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:43 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Michael Madsen

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**From:** [REDACTED] on behalf of Mara Lyn Leverett  
**Sent:** Monday, November 1, 2021 5:44 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Mara Lyn Leverett

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**From:** [REDACTED] on behalf of Kathy Harris <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Kathy Harris

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Suzie Etschmaier <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Suzie Etschmaier

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**From:** [REDACTED] on behalf of Hertfelder Kt  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Hertfelder Kt



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**From:** [REDACTED] on behalf of Zapata Ana <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:51 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Zapata Ana

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**From:** [REDACTED] on behalf of Ramona Montello  
**Sent:** Monday, November 1, 2021 5:59 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ramona Montello

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Tina Deraco <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:12 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Honestly seeing the debris and understanding what damage is being done should warrant immediate attention to the matter.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tina Deraco

[REDACTED]

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**From:** [REDACTED] on behalf of Laura Desantis <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:00 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Laura Desantis

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**From:** [REDACTED] on behalf of Emily Smith <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Emily Smith

[REDACTED] [REDACTED]

---

**From:** [REDACTED] on behalf of Sarika Arora  
**Sent:** Monday, November 1, 2021 6:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Sarika Arora

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**From:** [REDACTED] on behalf of Cecelia Lynch  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cecelia Lynch

[REDACTED]

---

**From:** [REDACTED] on behalf of Janice Rogacki  
**Sent:** Monday, November 1, 2021 6:13 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Janice Rogacki



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**From:** [REDACTED] on behalf of Barbara Poissant <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:15 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Barbara Poissant

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**From:** [REDACTED] on behalf of Marlyn Zuluaga  
**Sent:** Monday, November 1, 2021 6:15 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marlyn Zuluaga

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**From:** [REDACTED] on behalf of Judith Wecker  
**Sent:** Monday, November 1, 2021 6:18 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Judith Wecker

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**From:** [REDACTED] on behalf of Denise Russo  
**Sent:** Monday, November 1, 2021 6:20 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Denise Russo

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**From:** [REDACTED] on behalf of Chris Allieri <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:15 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am the founder of NYC Plover Project, an organization protecting endangered Piping Plovers.

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Chris Allieri

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**From:** [REDACTED] on behalf of Dorothy Wilson <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:21 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Dorothy Wilson

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**From:** [REDACTED] on behalf of Stephanie Coates <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:22 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am an ornithologist who works with shorebirds at the Intermountain Bird Observatory and I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica. As a researcher who conducts the majority of my work on public lands, I've seen places trashed by people who dump garbage, leave trigger trash, and otherwise degrade the land. In most of those cases, the issue is difficult to address because there are so many culprits and the landscape is vast. Here, you have one main culprit. And you have the ability to restrict or contain the damage SpaceX is causing. Please do so.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,

Stephanie Coates





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**From:** [REDACTED] on behalf of Barbara Lautenbach  
**Sent:** Monday, November 1, 2021 6:24 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Barbara Lautenbach

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**From:** [REDACTED] on behalf of Pam Eastwood [REDACTED]  
**Sent:** Monday, November 1, 2021 6:24 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Pam Eastwood

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**From:** [REDACTED] on behalf of Hertfelder Kt  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:26 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Hertfelder Kt

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**From:** [REDACTED] on behalf of Ben Pearl [REDACTED]  
[REDACTED] >  
**Sent:** Monday, November 1, 2021 6:26 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on piping plovers, aplomado falcons, sea turtles, and other sensitive wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. A full EIS is required by law for the proposed changes to the operations.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ben Pearl

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**From:** [REDACTED] on behalf of Straeter Alycia <a [REDACTED]  
@ [REDACTED]>  
**Sent:** Monday, November 1, 2021 6:31 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Straeter Alycia  
[REDACTED]

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**From:** [REDACTED] on behalf of Gisela Schmidt  
**Sent:** Monday, November 1, 2021 6:33 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Gisela Schmidt

[REDACTED]

---

**From:** [REDACTED] on behalf of Claudia Ingraham  
**Sent:** Monday, November 1, 2021 6:35 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. A comprehensive study on possible detrimental effects on the birds and other wildlife needs to be done first.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Claudia Ingraham

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**From:** [REDACTED] on behalf of Grendel Tirado <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:39 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Grendel Tirado  
[REDACTED]



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**From:** [REDACTED] on behalf of Birgit De La Torre  
**Sent:** Monday, November 1, 2021 5:16 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Birgit De La Torre

[REDACTED]

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**From:** [REDACTED] on behalf of Jennifer Brown  
**Sent:** Monday, November 1, 2021 6:39 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I don't think the race to Mars warrants the destruction of our home planet.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jennifer Brown

[REDACTED]

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**From:** [REDACTED] on behalf of Roslyn Simon <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Roslyn Simon

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Siamak Owhadi  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Siamak Owhadi

[REDACTED]

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**From:** [REDACTED] on behalf of Jennifer Hamel  
**Sent:** Monday, November 1, 2021 6:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. I sincerely hope that we can pause development and carefully evaluate its impacts.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jennifer Hamel

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Leila Mohseni  
**Sent:** Monday, November 1, 2021 6:57 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Leila Mohseni

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**From:** [REDACTED] on behalf of Rocco Sirico <[REDACTED]>  
**Sent:** Monday, November 1, 2021 6:57 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Rocco Sirico

[REDACTED]

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**From:** [REDACTED] on behalf of Katie Johnson  
**Sent:** Monday, November 1, 2021 7:02 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Katie Johnson

[REDACTED]



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**From:** [REDACTED] on behalf of Jeff Dorer <[REDACTED]>  
**Sent:** Monday, November 1, 2021 7:04 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jeff Dorer

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**From:** [REDACTED] on behalf of Idaliz Santos  
**Sent:** Monday, November 1, 2021 7:07 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Idaliz Santos

[REDACTED]

---

**From:** [REDACTED] on behalf of Ferrara Michael  
**Sent:** Monday, November 1, 2021 7:07 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ferrara Michael

[REDACTED]

---

**From:** [REDACTED] on behalf of Kathlene Croasdale  
**Sent:** Monday, November 1, 2021 5:18 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kathlene Croasdale

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**From:** [REDACTED] on behalf of Jill Brennan [REDACTED]  
**Sent:** Monday, November 1, 2021 7:11 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jill Brennan

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**From:** [REDACTED] on behalf of Shoshana Serxner-Merchant <[REDACTED]>  
**Sent:** Monday, November 1, 2021 7:12 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Shoshana Serxner-Merchant  
[REDACTED]

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**From:** [REDACTED] on behalf of APRIL WILK <[REDACTED]>  
**Sent:** Monday, November 1, 2021 7:15 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
APRIL WILK  
[REDACTED]

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**From:** [REDACTED] on behalf of Caroline O'Dwyer  
**Sent:** Monday, November 1, 2021 7:15 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

I, along with millions of other Americans, became an avid birder during the early days of the covid-19 pandemic lockdown. The more I learn about birds than more I have come to understand how human beings are the biggest threat to most bird species. Our omnipresence and environment-harming activities have decimated their natural habitats and breeding grounds and poisoned their food sources.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.



Sincerely,  
Caroline O'Dwyer

[REDACTED]

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**From:** [REDACTED] on behalf of Megan Hoff <[REDACTED]>  
**Sent:** Monday, November 1, 2021 7:18 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Megan Hoff

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**From:** [REDACTED] on behalf of Regina Bennett  
**Sent:** Monday, November 1, 2021 7:24 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Regina Bennett

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**From:** [REDACTED] on behalf of Catherine Keitz  
**Sent:** Monday, November 1, 2021 7:25 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Catherine Keitz  
[REDACTED]

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**From:** [REDACTED] on behalf of mauricio carvajal [REDACTED]  
**Sent:** Monday, November 1, 2021 7:25 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
mauricio carvajal

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**From:** [REDACTED] on behalf of Constance Johnson [REDACTED]  
**Sent:** Monday, November 1, 2021 7:31 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Constance Johnson  
[REDACTED]

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**From:** [REDACTED] on behalf of Lindsay Fitch <[REDACTED]>  
**Sent:** Monday, November 1, 2021 7:33 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

To the Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Please do a full Environmental Impact Study of SpaceX's plans and how they are detrimental to the wildlife, of all kinds, in the area they are using. I have always been a great supporter of the space program, but am very disappointed that now, it has become at the expense of our precious and fragile wildlife. You cannot begin to make proper judgement about the activities on the site until you have looked at how it effects the wildlife and total environment in the location and nearby the location. Thank you for any help you may give regarding this issue.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lindsay Fitch





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**From:** [REDACTED] on behalf of Megan Taggart <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:20 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Megan Taggart

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**From:** [REDACTED] on behalf of Terry Markmann  
**Sent:** Monday, November 1, 2021 7:58 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Terry Markmann

[REDACTED]

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**From:** [REDACTED] on behalf of Barbara Baird [REDACTED]  
**Sent:** Monday, November 1, 2021 8:28 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

Bird numbers are in decline. These national treasures must be protected. I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Barbara Baird

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**From:** [REDACTED] on behalf of Bonnie Zuckerman  
**Sent:** Monday, November 1, 2021 8:31 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Bonnie Zuckerman

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Eleonora Basteiro  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 8:35 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Eleonora Basteiro

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**From:** [REDACTED] on behalf of James Zinck  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 8:37 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
James Zinck

[REDACTED]

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**From:** [REDACTED] on behalf of Caroline Bering <[REDACTED]>  
**Sent:** Monday, November 1, 2021 8:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Caroline Bering

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**From:** [REDACTED] on behalf of Donna Alexander <[REDACTED]>  
@ [REDACTED]  
**Sent:** Monday, November 1, 2021 9:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Donna Alexander



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**From:** [REDACTED] on behalf of Clifford And Sharon Pfeil  
**Sent:** Monday, November 1, 2021 9:37 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

We are both deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Clifford And Sharon Pfeil  
[REDACTED]

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**From:** [REDACTED] on behalf of Karen Marquardt <[REDACTED]  
[REDACTED]@[REDACTED]>  
**Sent:** Monday, November 1, 2021 9:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Karen Marquardt  
[REDACTED]

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**From:** [REDACTED] on behalf of Sharon LeVine  
**Sent:** Monday, November 1, 2021 10:24 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Sharon LeVine  
[REDACTED]

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**From:** [REDACTED] on behalf of Waterman Eve  
**Sent:** Monday, November 1, 2021 5:24 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Waterman Eve

[REDACTED] [REDACTED]

---

**From:** [REDACTED] on behalf of Abbie Bernstein  
**Sent:** Monday, November 1, 2021 10:29 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Abbie Bernstein

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**From:** [REDACTED] on behalf of Tyra Gaylord  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 10:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tyra Gaylord  
[REDACTED]

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**From:** [REDACTED] on behalf of Tarah Peltz <[REDACTED]>  
**Sent:** Monday, November 1, 2021 10:51 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tarah Peltz

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Tyra Gaylord  
<[REDACTED]>  
**Sent:** Monday, November 1, 2021 11:19 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tyra Gaylord

[REDACTED]



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**From:** [REDACTED] on behalf of Lisa Brice <[REDACTED]>  
**Sent:** Monday, November 1, 2021 11:30 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lisa Brice

[REDACTED]

---

**From:** [REDACTED] on behalf of Ruth Elkin <[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 1:00 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ruth Elkin  
[REDACTED]

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**From:** [REDACTED] on behalf of Michael Heinsohn  
<[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 1:00 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Michael Heinsohn  
[REDACTED]

---

**From:** [REDACTED] on behalf of Abbie Bernstein  
**Sent:** Tuesday, November 2, 2021 2:09 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Abbie Bernstein

[REDACTED]

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**From:** [REDACTED] on behalf of Renata Bartosiewicz  
**Sent:** Tuesday, November 2, 2021 2:15 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Renata Bartosiewicz  
[REDACTED]

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**From:** [REDACTED] on behalf of Benjamin Meredyk  
**Sent:** Monday, November 1, 2021 5:22 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Benjamin Meredyk

[REDACTED]

---

**From:** [REDACTED] on behalf of Shirley Shaw <[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 2:52 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Shirley Shaw  
[REDACTED]

---

**From:** [REDACTED] on behalf of Lauren McClure <[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 3:15 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lauren McClure  
[REDACTED]



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**From:** [REDACTED] on behalf of Marsha Heinrich  
**Sent:** Tuesday, November 2, 2021 3:29 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marsha Heinrich

---

**From:** [REDACTED] on behalf of Felicia Reale <[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 4:55 AM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica. The company is now developing a natural gas extraction and delivery facility, and is also launching much bigger rockets than those that were being launched when the company received authorization in 2014. These changes are substantial enough that the FAA should require a full Environmental Impact Study rather than the PEA. The area is home to hundreds of thousands of birds including several endangered and threatened species. The Federally Threatened Piping Plover has seen population loss of 54% in the past three years since SpaceX started launching. The area is also home to several Endangered Species of mammals and sea turtles. The current assessment fails to adequately analyze the impact of the facility on wildlife, the environment, and nearby communities. A full Environmental Impact Study must be done. Sincerely, Felicia Reale 259 Glen Park Road, Haines Falls, NY 12436

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Felicia Reale

[REDACTED]

---

**From:** [REDACTED] on behalf of Karen Bachman <[REDACTED]>  
**Sent:** Monday, November 1, 2021 5:26 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Karen Bachman  
[REDACTED]

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**From:** Steven Massaro <[REDACTED]>  
**Sent:** Tuesday, November 2, 2021 11:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Draft comments for SpaceX Starship Attn: Chelsea Clarkson  
**Attachments:** Draft Programmatic Environmental Assessment for the SpaceX Starship.docx

As requested.

Thank you for your attention to this very important matter.

Steven Samuel Massaro  
Mas-Aero Aircraft Services

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**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 10:53 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message  
dhd

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**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 11:22 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Let starship fly !

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**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 12:36 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I'm 79 and have been waiting 50 years for the USA to get back to space exploration with humans on the Moon, Mars, and beyond. Please give Space X clearance for it's launch tower and to launch the Super Booster and Starship ASAP at Boca Chica.



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**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 1:55 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I have looked at sections of the draft report and it reminded me of a trip that I made to Dartmoor in England; an enthusiastic biologist told us how some of the plants had specifically adapted to horse and cart traffic (some plants needed the soil to be disturbed in order to favor their germination). When I visited Boca Chica as a tourist I could see that the rockets would disturb the wildlife but I suspected that it would also keep the region free of wider development. I understand that the draft report is concerned by the height of the buildings on the site as it becomes busier. My preference would be for the site to become taller rather than larger (so I would prioritize habitat protection versus skyline protection). In fact, I went to visit the site and, as a result, I was exposed to and I enjoyed the wild habitat that I might never have seen otherwise. The draft report includes an analysis of possible risks to historical sites and seems to conclude that there is a low risk to a small number of sites. Please consider the likelihood that this site may, in future, be the point where man first moved from Earth in earnest. In addition, it could also become a historically significant element of the USA's defence of its citizens (even though that is not what is intended at present). Regards Megan Macafee (Chicago Northwestern University) (currently in Austin Texas)

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**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 3:45 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

SpaceX/Boca Chica Env. Impct. Asst Team, Please consider "green-lighting" the upcoming SpaceX launch endeavors with regards to environmental impacts associated with Starbase operations. I am confident the SpaceX team will take appropriate actions to minimize impacts to the surrounding wildlife, and in the event such actions are not enough - they will, no doubt, find a compromise through popular mitigation strategies. Our country needs the FAA's oversight for such space activities, as we must demonstrate to the world our safe approach to exploration. However, this is not the time for needless gridlock and petty bureaucracy. Look at the success of Cape Canaveral's protected wildlife areas for a real-world example of science co-existing with nature. Starbase could be another example of this; let them proceed. Together, you can make us all proud, and be the safe, caring, yet bold stewards of aviation excellence once more. Our nation is in dire need of positive achievements. This is one of them and the time is now. Don't stop them, please. Sincerely, Thomas Doane

---

**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 5:42 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Please allow starship's first orbital launch. Thank you!

---

**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 7:11 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I request you to approve for launching of SpaceX Starship and also for further development.

---

**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 8:36 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Hello, my name is John and I'm writing from Port Saint Lucie, Florida. I may not be in Texas but I'm asking you to please allow space x to continue with their starship and super booster launches. Reaching Mars is going to be a very important milestone for mankind and will ensure our safety in the long run. This is very important!

---

**From:** MailCenter\_VA01  
**Sent:** Wednesday, November 3, 2021 8:57 AM  
**To:** SpaceXBocaChica  
**Cc:** MailCenter\_VA01  
**Subject:** Mail Center Document Services  
**Attachments:** patricia\_kelley.pdf

The Mail Center has sent you a document.



stjude.org 10/16/21

Dear Mr. Repcheck,  
I support Elon Musk  
in his endeavor to reach  
for the moon, space travel, &  
the stars! He is a one in a  
billion kind of person. Like a  
modern Christopher Columbus!  
Of course the US Govt. needs to  
encourage his efforts for safety  
to the general public but  
please don't stifle his dreams!

Sincerely,  
Patricia R. Kelley  
RN, Private Pilot  
Carrollton GA



ATLANTA METRO 301

29 OCT 2021 PM 5 L



FOREVER / USA

James R. Repcheck  
Manager, Safety Authorization Division  
9300 Lee Hwy  
Fairfax, VA 22031

22031-605039



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**From:** Michael R. Brewer DPM <[REDACTED]>  
**Sent:** Wednesday, November 3, 2021 3:40 PM  
**To:** SpaceXBocaChica  
**Subject:** Please add me to mailing list for updates

When will you announce if SpaceX is able to move forward with their first planned suborbital test of the full starship stack?

Sent from [Mail](#) for Windows



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**From:** Kimberly Walsdorf <[REDACTED]>  
**Sent:** Wednesday, November 3, 2021 8:46 AM  
**To:** SpaceXBocaChica  
**Subject:** RE: Support of SpaceX Starship  
**Attachments:** Support for Starship.pdf

Good Morning Ms. Zee,

I do apologize for not getting in my letter of support earlier. I sent an email last night but thought I should correct my errors and put it on a letterhead. Please see the attached.

Respectfully,

**Kimberly Walsdorf**  
**President**  
**RM Walsdorf, Inc.**

[REDACTED]



**RM Walsdorf, Inc**  
**PO Box 577**  
**117 N Arroyo Blvd.**  
**Los Fresnos, Texas 78566**  
**P(956) 831-3984 F(956) 831-4923**

November 3, 2021

Ms. Stacey Zee  
SpaceX PEO  
9300 Lee Highway  
Fairfax, VA 22031

To Whom It May Concern,

Having SpaceX choose the Lower Rio Grande Valley, the Boca Chica Beach location, has been a gift for the community as a whole. SpaceX has provided hundreds of jobs to the citizens of Cameron County and they have also brought in new residents to the county. Local contractors have been hired to do some of the site work as well as other services required by SpaceX. SpaceX has added many dollars to local communities for miles around. The opportunity provided by these jobs, and the boost to the local economy, is something that Cameron County was in need of. That this economic boost comes from Space Technology is amazing and an advance towards everyone's future.

SpaceX is an American company that works to design, manufacture and launch advanced rockets and space craft. They work with the community and their surroundings to minimize any negative affects to the environment and their surrounding areas. They are also a company willing to mitigate land for any land that they may disturb.

I have heard, and I have also read, negative comments by some who are against SpaceX being at the Boca Chica Beach location. For someone reading those articles, it may sound like Boca Chica Beach was a pristine deserted beach paradise. In my opinion, it was a poorly maintained, littered and not a heavily used beach. Many people abused the beach by leaving trash, including bottles, plastics, cans, and a number of other discarded items strewn among the beach and surrounding dunes. The housing area directly behind the SpaceX facility had many homes and buildings that were run down or in disrepair. SpaceX has cleaned up much of the beach area and they have purchased most of the run down homes and reconditioned them. The area is now much cleaner. SpaceX now brings in more tourists to the area who are interested in the possibility of seeing a Space Ship rocket into space or at least to see a rocket up close as they make a trip out to the site.

Nowhere on planet earth is any government or company able to make advances in space technology without some disturbance to someone, or something. We should be proud to have a American Company so willing to work with the community and the surrounding areas as they build the future of Space Technology in our community.

Respectfully,

Kimberly Walsdorf  
President, RM Walsdorf, Inc.

---

**From:** [REDACTED] on behalf of [REDACTED]  
**Sent:** Wednesday, November 3, 2021 1:21 PM  
**To:** SpaceXBocaChica  
**Subject:** Re:Outdoor LED underground/spike/underwater/street light manufacturer  
**Attachments:** ATT00001.htm; Photo.png; Photo.png; Photo.png; Photo.png

Dear Sir,Good day!

This is Leo from Foshan CHO lighting which specialize in outdoor light with 10 years experience.

We mainly supply buried light, spike light, underwater light, flood light...to Europe and US market since 2012.

Here attach small part of category for your reference.

Hope we can work together in the near future.

Best regards,

Leo

Sales manager: Leo Cho

[REDACTED]

---

**From:** Ramirez Rose <[REDACTED]>  
**Sent:** Wednesday, November 3, 2021 4:12 PM  
**To:** SpaceXBocaChica  
**Subject:** SpaceX

FAA Federal Aviation Administration,

Stop SpaceX. This is ridiculous This one percent [REDACTED] and SpaceX is a waste of time spent your time and money on people

Ramirez Rose

[REDACTED]

[REDACTED]

---

**From:** Steven Massaro <[REDACTED]>  
**Sent:** Wednesday, November 3, 2021 8:03 AM  
**To:** SpaceXBocaChica  
**Subject:** starship public comments attn: Celsea Clarkson  
**Attachments:** Draft Programmatic Environmental Assessment for the SpaceX Starship.docx

As we discussed.  
Not sure if it made it yesterday from my other email.  
steve  
Steven Massaro  
[REDACTED]

"If you will not stand behind our BLUE"  
"Feel free, to stand in front of them"

[REDACTED]

# Draft Programmatic Environmental Assessment for the SpaceX Starship/Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas September 2021.

Comments by Steven Samuel Massaro blue text

Founder: MasAero Aircraft Services



Oct 31, 2021

The following comments are in response to the Draft Programmatic Environmental Assessment for the SpaceX/Super Heavy Launch Vehicle to be utilized by SpaceX, for passenger and cargo flights into low earth orbit, inter-planetary exploration and beyond.

- **Appendix G: Exhaust Plume Calculations for SpaceX Raptor Booster Engine: “Methane emissions”:**  
Fuel components will be consumed by combustion forces within nominal parameters for the outlying ring of 24 Raptor engines.  
Fresh air entrainment is well within specs for this engine combination. The inner core of seven engines will not achieve optimum methane conversion, due to a lack of exposure to outside air, until after turbulence induced mixing occurs well clear of the engine bells.
- Methane levels will be within limits specified. 31 Raptor engines all running at peak rated power simultaneously, will find their own individual running frequency. This natural harmonization, along with the engine management software, should keep all the combustion gases within the optimum temperatures necessary for conversion and consumption. Some plume gases will extend farther due to inner ring locations.

## Appendix E: Section 4(f) of the Department of Transportation Act Consultation,

*“U.S. Fish and Wildlife Service (FWS) input on FAA’s initiation of a Section 4(f) consultation of eligible properties that” include the Boca Chica Tract of the Lower Rio Grande Valley National Wildlife Refuge (Refuge) for the SpaceX Starship/Super Heavy Launch project at Boca Chica, Texas. FWS input to FAA also extends to the Palmito Ranch Battlefield National Historic Landmark (NHL) as a significant portion of the NHL is within the Refuge.*

- This letter has a lot of great points regarding road closures and debris recovery.
- All efforts should be taken to minimize all physical incursions into the above-mentioned wildlife sanctuaries.
  - Increased use of hi-lift drone (UAV) and helicopter operations (Hi-line flights) should be considered.

- Specialized transport and or recovery vehicles with large diameter, high volume tires should be always utilized.
- Specially trained park personnel should be accompanying all vehicles or park activities. This person will be responsible to identify and alert recovery personnel where to drive and what not to damage or run over. There are always alternative ways into an area deemed too sensitive. Other than a timeline to be followed for rapid and complete cleanup, there should be no rush to get in there and get the pieces.

## **Appendix B: STARSHIP ROCKET NOISE ASSESSMENT FOR FLIGHT AND TEST OPERATIONS AT THE BOCA CHICA LAUNCH FACILITY**

- Noise will be as described in the noise abatement study. Launch, landing, equipment tests and static fire will generate noise that will be heard locally. Since some noise scenarios will occur on land, efforts should be given to alerting the local populations of upcoming events. Simple banner alerts rolling across the TV or over a cell phone should be evaluated. The most prevalent sound may be the occasional “Sonic Boom.” This can be of concern to some residents impacted by the sudden shock/wave event rolling thru their respective area. Again, today’s populations are accustomed to phone and TV alerts. Since most sonic booms are almost predictable, this should be an easy event to manage.
- **SpaceX plans to utilize a portable sound detection and ranging (SODAR) device to facilitate collecting weather data, needed for launch and landing. The SODAR sends out a brief sonic pulse every 15 minutes. This pulse can reach 92 decibels (dB) at the source and dissipates to 60 dB within 100 feet. The SODAR would be located at the SpaceX production and would operate continuously, 24/7:**
- **Which type of Sodar will be utilized?**
  - **Monostatic or Bistatic? Both have distinct capabilities and parameters.**
  - **Parabolic or Phased Array? Also, with distinct capabilities and parameters.**
  - **There will be times when the Sodar will not be required, why the continuous operation?**
  - **Would this Sodar be directed across the NWR areas?**
  - **Will it be directional or fixed?**
  - **Will this be directed across parkland during times of non-closure?**
  - **Will the facility also have fixed towers for weather data?**
  - **Is there any documented, test results or statistical figures that show the medical effects of Sodar exposure, whether continuous or intermittent?**

### **2.1.4.5 Desalination Plant**

- A 2950-foot-deep injection brine well will be necessary to balance out the 2 (two) 650 foot, 40gpm water wells.  
What will be the effects on the aquifer?

### **2.1.4.7 Power Plant**

- Will the powerplant be able to run on excess methane derived from the propellant extraction process?  
Has that process been perfected yet for full recovery of unused Methane?

### **2.1.3.3 Suborbital Launches**

#### 2.1.3.4 Orbital Launches

- Residual Methane (LCH<sub>4</sub>) would be routinely vented into the surrounding atmosphere. Each venting will release over ten tons of liquid Methane. Is this necessary?
- What does a “loss of pneumatics” mean? Why is this a limiting factor? Releasing over 800 metric tons of Methane into the surrounding atmosphere may be a rare event/anomaly, but there should be a robust system and or backup system to mitigate such and occurrence.
- Other than small residual amounts left in the tanks and piping, any appreciable amounts should be captured and subsequently burned in an offsite fixture or collected and reused as required.
  - The statement that says the “FAA is assuming all residual LCH<sub>4</sub> is released to the atmosphere”, should not be a given! Every effort must be made to capture these gases. With the number of flights, static fires, landings, and the like, the amount released has not been properly determined and should be unacceptable considering present technology.

I thank you for your time and consideration regarding these requests for additional information and study. Additional requests for information may be forthcoming after receipt of newly requested data.

Some excerpts in this document have been researched from this Draft EIS Proposal.

Steven Samuel Massaro



---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 7:37 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Please allow SpaceX to continue its progression at Star Base in Boca chica. The private spaceflight industry has made more progress in a decade than all space agencies made in half a century.

---

**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 10:02 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

SpaceX is making us multi-planetary. Help them not box them. Best, Morshed

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 6:09 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I believe, that “Elon Musk, and one day myself, will revolutionize the way we view our reality relative to space”

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 7:42 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I believe SpaceX should be able to continue their work towards an orbital flight out of StarBase in Boca Chica. I believe that the work they are doing is critical to the progress of make sure the U.S. maintains its superiority in Space Technology and all of the technologies that are spurred by this. My vote so to speak is to allow SpaceX to safely keep the tower that they have built and to approve a test flight as soon as possible.

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 2:04 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I live in Czech , but we are watching what spaceX doing and we support it. Please don't destroy they work by some bureaucratic paperwork. Let them live !

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 8:07 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

LET SPACE X GO TO MARSSSSSS

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 8:28 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

We need SpaceX to be able to work freely in Boca Chica. I only see minimal amount of environmental impact mainly noise. This is nothing compare to airplane at any US airport. SpaceX is developing those starships for the entire globe to advance humanity and make life multiplanetary.

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 9:19 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Please let SpaceX continue to move forward with the Starship program and Tower as planned.



---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 10:20 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

SpaceX should be allowed to continue their building, testing, and launching their rockets at the Boca Chica site. This includes the construction of high bays for rocket builds and their launch tower. With their current plans this will obviously require a multiple towers. With SpaceX leading the way to the stars for humanity it is critical that they continue to permission to build at that site. It is clear that only SpaceX has both the will and financial backing to make us a multiplanetary species.

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 1:16 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I think whatever SpaceX is doing in bocachica is fine and its good for all of humanity

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 1:28 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

SpaceX is doing something very meaningful for our future and they should keep doing what they`re doing as it is contributing to the local economy and is very good for mankind.

---

**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 8:22 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I fully support all the Space X is doing. Let's give them approval for the November 2021 launch.

---

**From:** [REDACTED]  
**Sent:** Wednesday, November 3, 2021 9:06 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

FAA please make the path easier for SpaceX. What they are doing is absolutely critical. Please help the mission move as fast as possible. Regards, Rick

---

**From:** anubus42 <[REDACTED]>  
**Sent:** Thursday, November 4, 2021 5:08 PM  
**To:** SpaceXBocaChica  
**Subject:** MY NEW COMENT

Boca Chica will soon be under water according to 97% of the world's scientists . I say the environmental damage is more an aesthetic concern . For the sake of our entire eco system , I prey let SpaceX continue .

Sent from [Mail](#) for Windows

---

**From:** stephen teager <[REDACTED]>  
**Sent:** Thursday, November 4, 2021 11:34 AM  
**To:** SpaceXBocaChica

Please keep me updated as to when the official draft document is final form and released

Yours Stephen Teager.

---

**From:** [REDACTED]  
**Sent:** Friday, November 5, 2021 3:15 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Dear FAA, In regard to the upcoming SpaceX starship launch, please enable mankind to make this inspiring and progressive endeavour. Work with them over time to enable them to move to more isolated launch site without endangering life. This will be an amazing enterprise for humanity if even some of the aspired goals are achieved.  
Regards Wayne



---

**From:** [REDACTED]  
**Sent:** Friday, November 5, 2021 12:15 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Dear directors of the FAA, I am 17 years old and I am a student. SpaceX has claimed credit on making my future brighter. I have been watching progress of the Starship and Starbase everyday for more than a year now. I have learned a lot from it and it has given me a feeling of creating something incredible in my future as well. I am sure that I am not alone. SpaceX has inspired a lot of people and companies and I think it should get the approval for the Starship flight and program.

---

**From:** [REDACTED]  
**Sent:** Friday, November 5, 2021 12:08 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

#### Message

Inhabit Space healthcare Development of Life Support Systems That Enables Extended Human Presences in Space Here I am going to express my ideas to extend human life presences in Mars, which is an important planet of our solar system. Here are some points are mentioned ; which we will have to do to live on the mars. To increase the temperature of the planet: As the range of the Temperature on the planet is – 17 degree Celsius to -143 degree Celsius with an average temperature of -63 degree Celsius. There is no chance to survive in that condition, so we will have to increase the temperature of the planet. To increase the temperature of the planet, we can do two things: a) By melting the Ice of the Poles: Melting the ice of the poles will increase the temperature of the planet. We can do it by attacking the poles of the planet with the nuclear weapons. This will melt the ice in the list and period, in the comparison of the other activities. b) By expelling the Magma form the four volcanoes: As we can see the four huge volcanoes on the surface of the Mars, we can increase the temperature of the planet by attacking on the volcanoes by nuclear bomb. The excreted SO<sub>2</sub> and other substances will increase the temperature of the planet. Management of the atmospheric pressure: Atmospheric pressure will be an issue for us, in the space ships and the planet; we can over-come with it by wearing hi-tech space suite. On the surface of the Mars, we can make bio bubble on it to overcome the pressure. Atmospheric Control: The atmospheric of the mars mainly contain CO<sub>2</sub>, N<sub>2</sub>, argon and other gases, with 95.2 % of CO<sub>2</sub>, we cannot breathe there. Therefore, we will need O<sub>2</sub> for it, which we can get from the hydrolysis of the water. We can over-come with this thing, by first preparing the soil of the mars and then growing plants on it. We can use SO<sub>2</sub> and NH<sub>3</sub> of the volcanoes in the industrial use Preparation of soil: We will have to change the upper toxic surface of the Mars into good plant growing soil. With water from the poles, we will first grow lichen over the surface, which changes the soil into good plant growing soil. Plantation on Mars: As the atmospheric pressure on the Mars is even less than 1% of the atmospheric pressure on Earth, we will have to make artificial environment inside the glasses to grow the plants. Food Management: As the surface of the Mars is too cold with plenty of Iron Oxides and perchlorates in it, we cannot grow crops there. We have to manage our food requirements by some of the processes given below. A) Hydroponics: It will be an effective method to fulfil our food requirements in the space ships and on the Mars. B) Bio-Capsules: We can use bio-capsules to fulfil our food requirements. This will be costlier but will decrease the mass load on the space ships. C) Kitchen Garden: With some soil of the earth and using some nutrients, we can grow some of vegetables for food by this method. To select an appropriate position on the Mars to establish colony: We will need to select the most suitable place of the planet to establish the colony .We will select the region around the equator of the planet to do so. The area around the equator will receive the most solar light, which we will use for our energy requirements. In addition, there will be more temperature in comparison to any other place of the planet. This will help us to save us from the excess water of the poles, which will melt due to nuclear attack on the poles of the planet. Management of the Water Resources: We can take the molten water of the poles and use it after purifying and testing its quality. We can also make the water by the reaction of the Hydrogen and Oxygen. Management of the Energy Resources: Energy will be required most on the Mars to live and fulfil our other requirements . With energy, we will able to do more exciting things there. To fulfil our energy needs there we can do some important things listed below: a) Solar Panels: We will use solar panels to fulfil our energy requirements. It will be cheaper, wider and renewable resource of energy. First, we will take solar panels with us on the spaceships and then after establishment of the colonies, we can manufacture solar panels from the silicon available in the soil of the Mars

on large scale. b) Helium ion Battery: We can carry helium ion batteries with us from the earth and can use them. c) Hydrogen as a Fuel: It is a complicated thing to say it but we can do it by working on it. First, we can get hydrogen by the electrolysis of the water available on the Mars and then we will use it as a fuel by burning it and by its nuclear fusion. Self-Expansion: To live and grow best on the planet we will need to expand ourselves. We can do it best by using the resources from the planet in comparison to the supply of it from the Earth. The surface of Mars mainly contains Silica with the Oxides of Iron. We can use the extracted Iron in the manufacturing work and us silicon solar cells to fulfil our energy requirements. We can separate Oxygen and Hydrogen from the water and use hydrogen as an energy resource and Oxygen to breathe. Supply of Resources from the Earth: In the starting of the settlements, we will need supply of resources from the Earth. We can do it having a good network of at least 5 to 6 spaceships. By doing these things, Inhabitation of human will extend on the planet Mars. We can make some changes on Mars and some in ourselves to make it suitable to live on.

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**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 10:00 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

I support space exploration.

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**From:** [REDACTED]  
**Sent:** Thursday, November 4, 2021 9:29 PM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Please allow space x to continue with starbase... I is an testament to what can be if you push the boundaries and aren't afraid to fail.

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**From:** [REDACTED]  
**Sent:** Friday, November 5, 2021 5:32 AM  
**To:** SpaceXBocaChica  
**Subject:** From www.faa.gov: [REDACTED]

This email was sent through the Federal Aviation Administration's public website. You have been contacted via an email link on the following page: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship/](https://www.faa.gov/space/stakeholder_engagement/spacex_starship/)

Message

Please let SpaceX to launch Starship! Thank you!

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**From:** Steve Lamb <[REDACTED]>  
**Sent:** Friday, November 5, 2021 3:17 AM  
**To:** SpaceXBocaChica  
**Subject:** SpaceX

Hi from the UK,

When can we expect a decision on the spacex environmental review. I was hoping to see super heavy and starship launch this year.

Kind Regards,

Steve

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**From:** [REDACTED] on behalf of Josie Brosnan  
**Sent:** Saturday, October 30, 2021 4:26 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Josie Brosnan



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**From:** [REDACTED] on behalf of Ray Morris  
**Sent:** Wednesday, October 27, 2021 9:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ray Morris

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**From:** [REDACTED] on behalf of Jean Rios <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:57 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jean Rios

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**From:** [REDACTED] on behalf of Jean Gillespie  
**Sent:** Friday, October 29, 2021 3:38 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jean Gillespie  
[REDACTED]

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**From:** [REDACTED] on behalf of Lisa Goodrich  
**Sent:** Friday, October 29, 2021 1:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

Please, birds need protection.

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lisa Goodrich  
[REDACTED]



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**From:** [REDACTED] on behalf of Michelle Tirpak  
<[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 9:43 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Michelle Tirpak

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**From:** [REDACTED] on behalf of Gwen Hadland <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:57 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Gwen Hadland  
[REDACTED]

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**From:** [REDACTED] on behalf of anthony montapert  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:08 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
anthony montapert



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**From:** [REDACTED] on behalf of Bill Todman  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 1:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

This insanity must stop...!

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Bill Todman  
[REDACTED]

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**From:** [REDACTED] on behalf of Mary Conmee  
<[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 9:37 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Many species are being directly threatened. Please require a complete environmental impact study to be conducted and do the oversight necessary to protect endangered species and human life.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Mary Conmee

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**From:** [REDACTED] on behalf of BARBARA GROSSETT  
**Sent:** Saturday, October 30, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
BARBARA GROSSETT  
[REDACTED]

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**From:** [REDACTED] on behalf of Donna Ennis <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:38 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Donna Ennis  
[REDACTED]

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**From:** [REDACTED] on behalf of Lisa Van Poyck <[REDACTED]>  
**Sent:** Friday, October 29, 2021 1:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lisa Van Poyck

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**From:** [REDACTED] on behalf of Denise Henyard  
**Sent:** Wednesday, October 27, 2021 9:30 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Denise Henyard

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**From:** [REDACTED] on behalf of Barb Kruse  
**Sent:** Saturday, October 30, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Barb Kruse

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**From:** [REDACTED] on behalf of Parnell Terry <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:38 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Parnell Terry



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**From:** [REDACTED] on behalf of Timothy Norling  
**Sent:** Friday, October 29, 2021 1:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. While I support space flights, I would love for it to be done in a safe and responsible way.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Timothy Norling

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**From:** [REDACTED] on behalf of Susan Waddell <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:23 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Susan Waddell

[REDACTED]

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**From:** [REDACTED] on behalf of Charlotte Songer  
**Sent:** Saturday, October 30, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Please stop this you are killing innocent animals, and their habitat's.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Charlotte Songer

[REDACTED]

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**From:** [REDACTED] on behalf of Zalben Angeline  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:37 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Zalben Angeline

[REDACTED]

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**From:** [REDACTED] on behalf of Nancy Woolley <[REDACTED]>  
**Sent:** Friday, October 29, 2021 1:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Nancy Woolley

[REDACTED]

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**From:** [REDACTED] on behalf of Nicole Bishop  
**Sent:** Wednesday, October 27, 2021 7:23 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Nicole Bishop

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**From:** [REDACTED] on behalf of Ahna-Kristen Backstrom  
**Sent:** Saturday, October 30, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ahna-Kristen Backstrom

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**From:** [REDACTED] on behalf of Joe Marsala <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:07 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Joe Marsala



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**From:** [REDACTED] on behalf of Laura Altman <[REDACTED]@[REDACTED]>  
**Sent:** Friday, October 29, 2021 1:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Our wildlife is constantly under attack on many fronts. We must protect them so they don't disappear!

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Laura Altman  
[REDACTED]



---

**From:** [REDACTED] on behalf of Deborah DeBrown  
**Sent:** Wednesday, October 27, 2021 7:20 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Deborah DeBrown

[REDACTED]

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**From:** [REDACTED] on behalf of Stacey Greene  
**Sent:** Saturday, October 30, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Can't we just find ways not to kill everything we come into contact with??? Jeez. Space travel is dangerous anyway, since the earth only has a finite amount of water. Sending it out into space to be permanently lost is pretty stupid on our part.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Stacey Greene  
[REDACTED]



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**From:** [REDACTED] on behalf of Lily Doris <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lily Doris  
[REDACTED]

---

**From:** [REDACTED] on behalf of David Patrusevich  
**Sent:** Thursday, October 28, 2021 4:58 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
David Patrusevich  
[REDACTED]

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**From:** [REDACTED] on behalf of Marty Bostic <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:17 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marty Bostic



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**From:** [REDACTED] on behalf of Robert McSwain [REDACTED]  
**Sent:** Saturday, October 30, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

Please reject the current assessment and, instead, require a full-scale Environmental Impact Study of SpaceX's plans.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Robert McSwain

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**From:** [REDACTED] on behalf of Scott Species <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Scott Species

[REDACTED]

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**From:** [REDACTED] on behalf of Karen Miller <[REDACTED]  
@everyactioncustom.com>  
**Sent:** Thursday, October 28, 2021 4:54 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Karen Miller

[REDACTED]

---

**From:** [REDACTED] on behalf of Linda Lowenstine  
**Sent:** Wednesday, October 27, 2021 7:17 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. It seems very short sighted to put space exploration ahead of taking care of our earth's critical environments and endangered species. It's as if SpaceX believes the earth can be trashed to allow the possibility of future colonization of space. A complete environmental impact review and appropriate mitigation must be conducted before SpaceX is allowed to further damage the critically important area for endangered birds and other wildlife.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,



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**From:** [REDACTED] on behalf of Angie Dixon <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

When are we going to put our fellow species and ecosystems that SUPPORT US first and not our stupidity?

Starships do not support life on earth and we really don't have another place to live so don't you think it is stupid to sabotage and destroy our home and ecosystems and food chains and fellow species that live here for SpaceX. Is SpaceX going to help you breathe? Is SpaceX going to help you find food to eat? Is SpaceX going to support clean water? No and you know it so use your common sense if you have any and support whole ecosystems first and the wildlife and biodiversity that live there and need those places left untouched in order to live there - as we do too - as your first priority. Then you can play your stupid games.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act.

The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Angie Dixon

[Redacted signature line]

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**From:** [REDACTED] on behalf of Jane Poklemba <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:06 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jane Poklemba  
[REDACTED]



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**From:** Jorgen Rasmussen <[REDACTED]>  
**Sent:** Saturday, November 6, 2021 7:46 AM  
**To:** SpaceXBocaChica  
**Subject:** SoaceX Study of environmental impact

Hello

I'll keep it brife, and make a simple point, "SpaceX will use RNG on Mars to return home, ask SpaceX to use RNG fabricated here on earth to go-to Mars" we as a Nation can get busy making RNG acrossse the nation and via our Natural Gas lines route it to Starbase, to be used to go-to Mars.

Jorgen

PS please add me to your subscription list.

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**From:** [REDACTED] on behalf of Jennifer Elden <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 4:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jennifer Elden  
[REDACTED]

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**From:** [REDACTED] on behalf of Spiridon Anton <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:14 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Spiridon Anton  
[REDACTED]

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**From:** [REDACTED] on behalf of Lori Clifford-Hacker [REDACTED]  
**Sent:** Saturday, October 30, 2021 3:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lori Clifford-Hacker

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**From:** [REDACTED] on behalf of Tracy Ouellette  
**Sent:** Friday, October 29, 2021 3:36 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tracy Ouellette

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**From:** [REDACTED] on behalf of Linda lewison [REDACTED]  
**Sent:** Thursday, October 28, 2021 4:47 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Linda lewison  
[REDACTED]

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**From:** [REDACTED] on behalf of Jane Ziff <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:17 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

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Thank you for your attention on this matter.

Sincerely,  
Jane Ziff  
[REDACTED]

---

**From:** [REDACTED] on behalf of Frances Moyle  
**Sent:** Saturday, October 30, 2021 3:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

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Thank you for your attention on this matter.

Sincerely,  
Frances Moyle

[REDACTED]



---

**From:** [REDACTED] on behalf of Dante DeStefano <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

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Thank you for your attention on this matter.

Sincerely,  
Dante DeStefano

[REDACTED]

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**From:** [REDACTED] on behalf of Jennifer Gitschier <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 4:45 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Jennifer Gitschier  
[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Jennifer Klugman <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:54 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jennifer Klugman

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**From:** [REDACTED] on behalf of Barbara Driscoll  
<[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:12 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Barbara Driscoll

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**From:** [REDACTED] on behalf of Kathryn Loper <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:36 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kathryn Loper

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**From:** [REDACTED] on behalf of Daniel Mink  
**Sent:** Thursday, October 28, 2021 4:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Daniel Mink  
[REDACTED]

---

**From:** [REDACTED] on behalf of Jena Hallmark  
**Sent:** Wednesday, October 27, 2021 7:09 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jena Hallmark

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**From:** [REDACTED] on behalf of Flora Mattis  
**Sent:** Saturday, October 30, 2021 3:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Flora Mattis



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**From:** [REDACTED] on behalf of Beth Golden  
**Sent:** Friday, October 29, 2021 4:00 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Conservation of our natural environment is the key voting issue for me.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Beth Golden

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**From:** [REDACTED] on behalf of Cynthia Allen <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 4:25 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cynthia Allen

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**From:** [REDACTED] on behalf of janet forman <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:07 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
janet forman  
[REDACTED]

---

**From:** [REDACTED] on behalf of Nancy Denbo  
**Sent:** Saturday, October 30, 2021 3:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Nancy Denbo

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**From:** [REDACTED] on behalf of Paul Kalka <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:51 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Paul Kalka

[REDACTED]

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**From:** [REDACTED] on behalf of Stephanie Putnam  
**Sent:** Thursday, October 28, 2021 4:21 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

Please hold spacex accountable for their negative environmental impacts.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,

[REDACTED]

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**From:** [REDACTED] on behalf of Alana Sprague <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:07 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Alana Sprague  
[REDACTED]

---

**From:** [REDACTED] on behalf of Lex Hames  
**Sent:** Saturday, October 30, 2021 3:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lex Hames

[REDACTED]



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**From:** [REDACTED] on behalf of Cathy Cox  
**Sent:** Friday, October 29, 2021 3:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cathy Cox

[REDACTED]

---

**From:** [REDACTED] on behalf of Robert Richards <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 4:04 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Robert Richards

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**From:** [REDACTED] on behalf of Claire Nemes  
**Sent:** Wednesday, October 27, 2021 7:06 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Claire Nemes  
[REDACTED]

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**From:** [REDACTED] on behalf of Melissa Davis <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:51 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Melissa Davis

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**From:** [REDACTED] on behalf of Nicky Edelman <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:00 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Nicky Edelman

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**From:** [REDACTED] on behalf of Janet Cerretani  
**Sent:** Thursday, October 28, 2021 4:03 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Janet Cerretani

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**From:** [REDACTED] on behalf of olivia rothberg <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:06 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
olivia rothberg  
[REDACTED]

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**From:** [REDACTED] on behalf of Iris Patty Yermak <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Iris Patty Yermak



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**From:** [REDACTED] on behalf of Scott Finamore  
**Sent:** Friday, October 29, 2021 3:35 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Scott Finamore

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**From:** [REDACTED] on behalf of J H <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 3:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
J H

[REDACTED]

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**From:** [REDACTED] on behalf of Kelly W <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kelly W

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**From:** [REDACTED] on behalf of Moktar Salama  
**Sent:** Saturday, October 30, 2021 3:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Moktar Salama

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**From:** [REDACTED] on behalf of Linda Schmidt  
**Sent:** Friday, October 29, 2021 3:35 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Linda Schmidt  
[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Avis Segedy <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 3:43 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Avis Segedy

[REDACTED]

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**From:** [REDACTED] on behalf of Barb Stenross <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 7:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Barb Stenross

[REDACTED]

---

**From:** [REDACTED] on behalf of Michael Smith  
**Sent:** Saturday, October 30, 2021 3:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I hope you share my deep concern about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Michael Smith



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**From:** [REDACTED] on behalf of Madeleine K. Barnes  
**Sent:** Friday, October 29, 2021 3:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Madeleine K. Barnes

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**From:** [REDACTED] on behalf of Roland Romo <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 3:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Roland Romo

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**From:** [REDACTED] on behalf of felicia Reale <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
felicia Reale

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**From:** [REDACTED] on behalf of Erika Lamb <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Erika Lamb

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**From:** [REDACTED] on behalf of Donna Hamilton [REDACTED]  
**Sent:** Friday, October 29, 2021 3:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Donna Hamilton

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**From:** [REDACTED] on behalf of Cynthia Hellmuth  
<[REDACTED]>  
**Sent:** Thursday, October 28, 2021 3:36 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cynthia Hellmuth  
[REDACTED]

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**From:** [REDACTED] on behalf of Connie Ottman <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Connie Ottman  
[REDACTED]

---

**From:** [REDACTED] on behalf of Chris Pedone  
**Sent:** Saturday, October 30, 2021 3:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Chris Pedone



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**From:** [REDACTED] on behalf of Lyn Lukich  
**Sent:** Friday, October 29, 2021 3:04 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lyn Lukich

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**From:** [REDACTED] on behalf of Kim Hudyma <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 3:31 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kim Hudyma

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**From:** [REDACTED] on behalf of Mary Swilling <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Mary Swilling

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**From:** [REDACTED] on behalf of Susan Weinstein  
**Sent:** Saturday, October 30, 2021 3:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Susan Weinstein

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**From:** [REDACTED] on behalf of Christine Golias <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Christine Golias

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**From:** [REDACTED] on behalf of George Mayfield  
**Sent:** Thursday, October 28, 2021 3:24 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. While the technology is inspiring, we must realize there are also significant impacts and "costs" to the surrounding habitat and its residents. We must ensure that steps are taken to protect these ecosystems and ensure the survival and health of the natural communities in this area.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
George Mayfield



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**From:** [REDACTED] on behalf of Rick Godawa <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Rick Godawa



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**From:** [REDACTED] on behalf of Jacquelyn Digiovanni  
**Sent:** Saturday, October 30, 2021 3:47 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jacquelyn Digiovanni  
[REDACTED]

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**From:** [REDACTED] on behalf of Tony Segura <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:05 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tony Segura

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**From:** [REDACTED] on behalf of Ashley Behrens  
**Sent:** Thursday, October 28, 2021 3:14 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

Please take care of these rapidly diminishing species!!

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ashley Behrens

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**From:** [REDACTED] on behalf of Karol Duncan <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Karol Duncan

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**From:** [REDACTED] on behalf of Denise Bennett <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Denise Bennett

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Joellen Domenico  
**Sent:** Friday, October 29, 2021 3:04 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

This area is habitat to many bird species and other wildlife, such as endangered sea turtles. An extensive environmental impact study needs to be implemented in order to determine the ramifications of creating this launch site for SpaceX, before construction can be allowed.

Please adhere to all the guidelines set forth by the FAA, instead of fast tracking this project without first considering the effects on native wildlife and their environment.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Joellen Domenico

[REDACTED]

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**From:** [REDACTED] on behalf of Susan Ewing  
<[REDACTED]>  
**Sent:** Thursday, October 28, 2021 3:13 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

This project gives literal meaning to the expression "Earth First." SpaceX is trying to sneak under the FAA's radar with their expansion, given they have already substantially changed their initial scope of work. It appears the SpaceX project is motivated by vanity and the impulse to commercialize space. At what cost? The SpaceX facility is surrounded by important habitat for thousands of birds of a variety of species, not to mention already-threatened sea turtles and mammals. Once birds and habitat are gone, they're gone. Please put the needs of the environment we live in first. I urge you to reject the current assessment and require a full-scale EIS of SpaceX's operations. The birds need your attention and protection.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.



Sincerely,  
Susan Ewing

[Redacted signature block]

**From:** [REDACTED] on behalf of Renee Rule <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife SpaceX's operations have and will have in the future in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Renee Rule

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**From:** [REDACTED] on behalf of Daniel Kinnucan  
**Sent:** Saturday, October 30, 2021 3:47 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Daniel Kinnucan  
[REDACTED]

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**From:** [REDACTED] on behalf of LauraL Anastasio  
**Sent:** Friday, October 29, 2021 3:04 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
LauraL Anastasio

[REDACTED]

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**From:** [REDACTED] on behalf of Stormy Jech  
**Sent:** Thursday, October 28, 2021 3:11 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Stormy Jech

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**From:** [REDACTED] on behalf of Christine Jacobs <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Christine Jacobs

[REDACTED]

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**From:** [REDACTED] on behalf of Grace Williams <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:47 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Grace Williams

[REDACTED]

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**From:** [REDACTED] on behalf of Kimerly Wilcox <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:03 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kimerly Wilcox  
[REDACTED]



---

**From:** [REDACTED] on behalf of Amber Murphy <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 3:11 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

Please take into serious consideration the effects of SpaceX operations on the wildlife that inhabits the surrounding areas. Space exploration should not come at the cost of trashing life on Earth.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Amber Murphy  
[REDACTED]

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**From:** [REDACTED] on behalf of Shawna Zanney  
**Sent:** Wednesday, October 27, 2021 6:45 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Shawna Zanney

[REDACTED]

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**From:** [REDACTED] on behalf of Brianna Antao  
**Sent:** Saturday, October 30, 2021 3:45 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. We need to think about the animals... not just humans. It's sad that endangered species are at risk even more.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Brianna Antao

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**From:** [REDACTED] on behalf of Troy Ullrich <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:02 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Elon is a turd.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Troy Ullrich

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**From:** [REDACTED] on behalf of Mary Tober <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:59 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Mary Tober

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**From:** [REDACTED] on behalf of Marisa Kozmick  
<[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:43 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marisa Kozmick  
[REDACTED]

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**From:** [REDACTED] on behalf of Nan McGuire <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:44 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Nan McGuire

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Lauren Bond <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lauren Bond



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**From:** [REDACTED] on behalf of Robert Deck <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Robert Deck

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**From:** [REDACTED] on behalf of Lianghui Kau <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lianghui Kau  
[REDACTED]

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**From:** [REDACTED] on behalf of Paula Cargile <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:44 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Paula Cargile  
[REDACTED]

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**From:** [REDACTED] on behalf of Ducat Kristine  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

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Thank you for your attention on this matter.

Sincerely,  
Ducat Kristine

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Emily Tilley <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Emily Tilley  
[REDACTED]

---

**From:** [REDACTED] on behalf of Elizabeth Johnson  
**Sent:** Wednesday, October 27, 2021 6:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Elizabeth Johnson  
[REDACTED]

---

**From:** [REDACTED] on behalf of Kathy Padula <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:43 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Kathy Padula  
[REDACTED]

---

**From:** [REDACTED] on behalf of Calvin Pipher <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Calvin Pipher



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**From:** [REDACTED] on behalf of Joan Miller <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Joan Miller

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**From:** [REDACTED] on behalf of Osborne Dyan J <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:39 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

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Thank you for your attention on this matter.

Sincerely,  
Osborne Dyan J  
[REDACTED]

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**From:** [REDACTED] on behalf of Suzanne Chapin-Donalson  
**Sent:** Saturday, October 30, 2021 3:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Suzanne Chapin-Donalson

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**From:** [REDACTED] on behalf of Margaret Southwell <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:00 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Margaret Southwell  
[REDACTED]

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**From:** [REDACTED] on behalf of Marie Calleja  
**Sent:** Thursday, October 28, 2021 2:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marie Calleja  
[REDACTED]

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**From:** [REDACTED] on behalf of Christopher Hall [REDACTED]  
**Sent:** Wednesday, October 27, 2021 6:37 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am a retired physician in Utah, raised in Texas. I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Christopher Hall  
[REDACTED]

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**From:** [REDACTED] on behalf of Carolyn King <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am writing as a parent, grandparent and great-grandparent to urge you to consider future generations. We need to protect and preserve our precious resources for them. I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Carolyn King

[REDACTED]

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**From:** [REDACTED] on behalf of Tina Turner [REDACTED]  
**Sent:** Friday, October 29, 2021 3:00 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tina Turner

[REDACTED]



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**From:** [REDACTED] on behalf of Jude Power <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

The Federal Aviation Administration is not adequately supervising what SpaceX is doing in Boca Chica! There are many reports from local residents and wildlife biologists about damage and environmental insults to habitat, wild animals, and humans.

Please insist on a more comprehensive environmental impact report for the very impactful activities of SpaceX.

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jude Power

[Redacted signature block]

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**From:** [REDACTED] on behalf of Ginny Gonell <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:36 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ginny Gonell  
[REDACTED]

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**From:** [REDACTED] on behalf of Cathy Hoskins <H [REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cathy Hoskins

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**From:** [REDACTED] on behalf of Eileen Gerrity <[REDACTED]>  
**Sent:** Friday, October 29, 2021 3:00 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Eileen Gerrity

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**From:** [REDACTED] on behalf of Amy McCoy  
**Sent:** Thursday, October 28, 2021 2:44 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Amy McCoy

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**From:** [REDACTED] on behalf of Steven Thompson <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:35 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Steven Thompson

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Jennie Rolon  
**Sent:** Saturday, October 30, 2021 3:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jennie Rolon

[REDACTED]



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**From:** [REDACTED] on behalf of Dennis kreiner <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:59 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Dennis kreiner  
[REDACTED]

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**From:** [REDACTED] on behalf of James Rogers <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:39 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
James Rogers

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**From:** [REDACTED] on behalf of Maxi Backhouse  
**Sent:** Wednesday, October 27, 2021 6:35 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Maxi Backhouse

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**From:** [REDACTED] on behalf of Peter Johnson  
**Sent:** Saturday, October 30, 2021 3:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Peter Johnson  
[REDACTED]

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**From:** [REDACTED] on behalf of Heidi Shuler <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:59 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Heidi Shuler  
[REDACTED]

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**From:** [REDACTED] on behalf of William Guion <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:36 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
William Guion

[REDACTED]

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**From:** [REDACTED] on behalf of Adrienne Trattner <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:34 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Adrienne Trattner  
[REDACTED]

---

**From:** [REDACTED] on behalf of Peter Johnson  
**Sent:** Saturday, October 30, 2021 3:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

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Thank you for your attention on this matter.

Sincerely,  
Peter Johnson  
[REDACTED]



---

**From:** [REDACTED] on behalf of Virginia Mendez  
**Sent:** Friday, October 29, 2021 2:58 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

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Thank you for your attention on this matter.

Sincerely,  
Virginia Mendez  
[REDACTED]

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**From:** [REDACTED] on behalf of MaryEllen Rogers <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:34 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
MaryEllen Rogers

[REDACTED]

---

**From:** [REDACTED] on behalf of Domenic Lanciano  
**Sent:** Wednesday, October 27, 2021 6:33 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Domenic Lanciano

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**From:** [REDACTED] on behalf of Linda Skelton <[REDACTED]>  
**Sent:** Saturday, October 30, 2021 3:40 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Linda Skelton

[REDACTED]

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**From:** [REDACTED] on behalf of Gary Lang [REDACTED]  
**Sent:** Friday, October 29, 2021 2:58 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

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Thank you for your attention on this matter.

Sincerely,  
Gary Lang  
[REDACTED]

---

**From:** [REDACTED] on behalf of Hannelore Willeck  
**Sent:** Thursday, October 28, 2021 2:34 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

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Thank you for your attention on this matter.

Sincerely,  
Hannelore Willeck  
[REDACTED]

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**From:** [REDACTED] on behalf of Amy Schumacher <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:32 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Amy Schumacher  
[REDACTED]

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**From:** [REDACTED] on behalf of AUDREY RANNEBARGER  
**Sent:** Saturday, October 30, 2021 3:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
AUDREY RANNEBARGER  
[REDACTED]



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**From:** [REDACTED] on behalf of Joseph Brigandi <[REDACTED]>  
**Sent:** Friday, October 29, [REDACTED] 2:57 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Joseph Brigandi

[REDACTED]

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**From:** [REDACTED] on behalf of Deborah Wills <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:30 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Deborah Wills

[REDACTED]

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**From:** [REDACTED] on behalf of Michele Meli [REDACTED]  
**Sent:** Wednesday, October 27, 2021 6:32 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Michele Meli

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**From:** [REDACTED] on behalf of Heather Wickings  
**Sent:** Saturday, October 30, 2021 3:40 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Heather Wickings

[REDACTED]

---

**From:** [REDACTED] on behalf of Sharon Procter <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:57 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Sharon Procter  
[REDACTED]

---

**From:** [REDACTED] on behalf of Connor Wagner  
**Sent:** Thursday, October 28, 2021 2:24 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Connor Wagner

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**From:** [REDACTED] on behalf of Stephanie Naftal <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:31 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Stephanie Naftal  
[REDACTED]

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**From:** [REDACTED] on behalf of Kempf William <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:54 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kempf William



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**From:** [REDACTED] on behalf of Bronwen Evans  
**Sent:** Friday, October 29, 2021 2:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Bronwen Evans

[REDACTED]

---

**From:** [REDACTED] on behalf of Megan Gibney  
**Sent:** Thursday, October 28, 2021 2:17 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Megan Gibney

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**From:** [REDACTED] on behalf of katherine barrett zywan <[REDACTED]>  
@ [REDACTED]  
**Sent:** Wednesday, October 27, 2021 6:28 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
katherine barrett zywan  
[REDACTED]

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**From:** [REDACTED] on behalf of Maryetta Pinn [REDACTED]  
**Sent:** Friday, October 29, 2021 4:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Maryetta Pinn

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**From:** [REDACTED] on behalf of Janelle Camp [REDACTED]  
**Sent:** Friday, October 29, 2021 2:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Janelle Camp

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**From:** [REDACTED] on behalf of Jim Maloney  
**Sent:** Thursday, October 28, 2021 2:07 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

As a retired energy resource ecologist, with more than 30 years experience dealing with the interface of technological development and natural/altered wildlife habitats, I find the proposal to continue and even expand operations at this site to be in dire need of an expanded and more comprehensive EIS. A new and complete EIS would also include an evaluation and analysis of cumulative effects of all factors contributing to negative wildlife impacts at the project site and in zones around the area. In addition, any analysis should include at least a reasonable treatment of the near term and longer term effects of climate change including any adaptive measures likely to be implemented.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jim Maloney

[REDACTED]

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**From:** [REDACTED] on behalf of Jennifer Meshna <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:25 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jennifer Meshna



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**From:** [REDACTED] on behalf of Robert Rogers III <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Robert Rogers III

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**From:** [REDACTED] on behalf of Yee Chow <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Yee Chow

[REDACTED]

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**From:** [REDACTED] on behalf of Tara Verbridge  
**Sent:** Thursday, October 28, 2021 2:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tara Verbridge  
[REDACTED]

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**From:** [REDACTED] on behalf of John Gerwin  
<[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:23 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I have been reading about the plans for a SpaceX facility in Boca Chica, Texas. The area is surrounded by federal and state public lands, which are home to a huge array of plants and animals (both in terms of species, and individuals). As such, I am deeply concerned about the impacts on all the wildlife in the area that will result from SpaceX operations in Boca Chica.

I am, in the end, opposed to this plan as it is currently proposed.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,

John Gerwin



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**From:** [REDACTED] on behalf of Cathy Harsh  
**Sent:** Friday, October 29, 2021 4:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cathy Harsh

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**From:** [REDACTED] on behalf of Richard Kite  
**Sent:** Friday, October 29, 2021 2:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Richard Kite

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**From:** [REDACTED] on behalf of Cheryl Garcia <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 2:00 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cheryl Garcia



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**From:** [REDACTED] on behalf of Sandy Rodgers  
**Sent:** Wednesday, October 27, 2021 6:23 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Sandy Rodgers

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**From:** Maggie Topalian <[REDACTED]>  
**Sent:** Monday, November 8, 2021 6:15 PM  
**To:** SpaceXBocaChica  
**Subject:** Stop the Expansion of SpaceX in Brownsville, TX

FAA Federal Aviation Administration,

To the Federal Aviation Administration -

I am deeply concerned about the SpaceX launch site expansion and its economic, cultural, & environmental impacts on the region. Since the operations began in Brownsville, TX, numerous explosions have threatened public safety, caused dangerous fires near wildlife refuges, and stripped locals' access to the pristine beach. These explosive risks will only increase because of three liquefied natural gas (LNG) terminals, with their safety hazards, plan to build within 6-miles of SpaceX. The facility is also actively gentrifying the region by displacing people from their homes at Boca Chica Village. SpaceX should not be allowed to expand and increase the size and scale of these damages.

Our elected officials and SpaceX should not be allowed to privatize or commercialize Boca Chica and further restrict access from the public. Boca Chica beach is culturally and spiritually sacred to the Rio Grande Valley people, especially to the Carrizo Comecrudo Tribe of Texas, who were never consulted about the SpaceX project.

For these reasons, the FAA should reject Elon Musk's plans to expand the SpaceX facility because of the negative impacts on the region. At the very least, the FAA needs to extend the commenting period because of the increase in COVID-19 cases in South Texas and should provide a hearing with Spanish interpreting and closed captioning for the public to ask questions about operations.

Sincerely,

Maggie Topalian  
[REDACTED]

Cleveland Heights, Ohio 44121

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**From:** Curtis Lambert <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 4:01 PM  
**To:** SpaceXBocaChica  
**Subject:** SpaceX Support

I'm writing to offer my enthusiastic support for SpaceX/Elon Musk and their dreams and efforts to forward mankind's quest to explore beyond Earth, both near and far, to expand our knowledge and ensure our survival as a species by populating other planets.

I'm a disabled Vietnam Vet who has, over the course of my lifetime, witnessed the beginnings of our space program to the current day. In 1969 when I was 18 and in Basic Training at Ft. Polk, La. we were allowed to watch Apollo 11 land on the moon and cheer for the words "One Small Step For Man, One Giant Leap For Mankind", It was so very exciting and filled us that watched with pride. I went on to become an Army combat assault helicopter pilot in Vietnam with dreams of becoming an Astronaut like Neil and Buzz and Michael.

Didn't happen but what a dream to have!

To hinder the progress being made by SpaceX would be very sad and disappointing for us as a nation, a planet and certainly for me personally.

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**From:** [REDACTED] on behalf of Roxanne Allison <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Roxanne Allison

[REDACTED]

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**From:** [REDACTED] on behalf of nuanprang sheppard  
**Sent:** Friday, October 29, 2021 2:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
nuanprang sheppard

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**From:** [REDACTED] on behalf of Daniel Lara <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 1:58 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Daniel Lara

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**From:** [REDACTED] on behalf of Joe Salazar <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:20 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Joe Salazar

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**From:** [REDACTED] on behalf of Danielle Clark  
**Sent:** Friday, October 29, 2021 4:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

We do not need more rockets sent into space. The money used to fund that project could be spent on so many more impactful areas that could improve life on earth, here and now, for so many people and animals. Please take action to ensure a comprehensive and proper environmental impact evaluation is done. We need to take care of the beauty and resources we have here on earth, not destroy them for ego and vanity's sake. The Piping Plover is just one of many species that call the area that SpaceX will be impacting home. Please take action to ensure its protection. It may seem like just one small bird, but it stands do so much more.

Sincerely,  
Danielle Clark

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Danielle Clark

[REDACTED]

---

**From:** [REDACTED] on behalf of Mary Burton <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Mary Burton

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**From:** [REDACTED] on behalf of James Young  
**Sent:** Thursday, October 28, 2021 1:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
James Young

[REDACTED]

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**From:** [REDACTED] on behalf of Gayla Hostetler  
**Sent:** Wednesday, October 27, 2021 6:16 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Gayla Hostetler

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**From:** [REDACTED] on behalf of Ken Martin <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Ken Martin

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**From:** [REDACTED] on behalf of Andrea Floresta <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Andrea Floresta

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**From:** [REDACTED] on behalf of Jerry Broadus <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 1:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jerry Broadus

[REDACTED]

---

**From:** [REDACTED] on behalf of Carolyn Davis  
**Sent:** Wednesday, October 27, 2021 6:12 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Carolyn Davis



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**From:** [REDACTED] on behalf of Kristin Vyhna  
**Sent:** Friday, October 29, 2021 4:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kristin Vyhna

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Sarah Chapman <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Sarah Chapman  
[REDACTED]

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**From:** [REDACTED] on behalf of Marian Frobe <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 1:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marian Frobe

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**From:** [REDACTED] on behalf of T.J.Zenzal [REDACTED]  
@ [REDACTED]  
**Sent:** Wednesday, October 27, 2021 6:12 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
T.J. Zenzal

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**From:** [REDACTED] on behalf of KEN BRENDLINGER  
**Sent:** Friday, October 29, 2021 4:47 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
KEN BRENDLINGER

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**From:** [REDACTED] on behalf of Najmeddin Ravan <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Najmeddin Ravan  
[REDACTED]

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**From:** [REDACTED] on behalf of Susan Ponchot  
**Sent:** Thursday, October 28, 2021 1:38 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Susan Ponchot

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**From:** [REDACTED] on behalf of Jennifer Heuer <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:10 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am writing because I am take deep pleasure in watching birds, and see their survival as an indication of the health of our environment. I am thus deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jennifer Heuer



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**From:** [REDACTED] on behalf of Adrian Paul  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Adrian Paul

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**From:** [REDACTED] on behalf of Lauri Luck <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lauri Luck  
[REDACTED]

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**From:** [REDACTED] on behalf of Deett Buttimer  
<[REDACTED]>  
**Sent:** Thursday, October 28, 2021 1:28 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Deett Buttimer

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**From:** [REDACTED] on behalf of Jane Mahoney <[REDACTED]  
@ [REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:10 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. It is absolutely egregious that you are actively working to hurt our environment by not advocating for its and our protection.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jane Mahoney

[REDACTED]

---

**From:** [REDACTED] on behalf of Julie Martin <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Julie Martin

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**From:** [REDACTED] on behalf of Barbara VanDyken  
**Sent:** Friday, October 29, 2021 2:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Barbara VanDyken

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**From:** [REDACTED] on behalf of Jim Aldrich <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 1:28 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Jim Aldrich

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**From:** [REDACTED] on behalf of Marsha Robbins  
<[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:10 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marsha Robbins

[REDACTED]



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**From:** [REDACTED] on behalf of Marco M.Khanlian <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:45 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marco M. Khanlian

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**From:** [REDACTED] on behalf of Lisa Johnson <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Lisa Johnson

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**From:** [REDACTED] on behalf of Crystal Arp <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 1:27 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Crystal Arp  
[REDACTED]

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**From:** [REDACTED] on behalf of Shelley Snyder <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 6:04 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Shelley Snyder  
[REDACTED]

---

**From:** [REDACTED] on behalf of timothy Wing <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:44 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
timothy Wing

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**From:** [REDACTED] on behalf of Geri de seve <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Geri de seve  
[REDACTED]

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**From:** [REDACTED] on behalf of JoEllen Rudolph <jobee949@everyactioncustom.com>  
**Sent:** Thursday, October 28, 2021 1:22 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
JoEllen Rudolph

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**From:** [REDACTED] on behalf of Idaliz Santos  
**Sent:** Wednesday, October 27, 2021 6:01 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Idaliz Santos



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**From:** [REDACTED] on behalf of Uiara Schmid  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:44 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Uiara Schmid

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of David Garrett <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:52 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
David Garrett

[REDACTED] [REDACTED]

---

**From:** [REDACTED] on behalf of Kathy Harrop  
**Sent:** Thursday, October 28, 2021 1:21 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kathy Harrop

[REDACTED]

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**From:** [REDACTED] on behalf of Sandi Armstrong <[REDACTED]>  
@ [REDACTED]  
**Sent:** Wednesday, October 27, 2021 5:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Sandi Armstrong

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**From:** [REDACTED] on behalf of Holly Sharps  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:43 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Holly Sharps

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**From:** [REDACTED] on behalf of Henry Hansen  
**Sent:** Friday, October 29, 2021 2:51 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Henry Hansen

[REDACTED]

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**From:** [REDACTED] on behalf of Lynn Killam <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 1:06 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

This area is a sensitive one, with reptiles, birds and mammals as well as plant life to be conserved. It is imperative that this be studied before another launch goes up.

Thank you for listening and please do the right thing here. Our nation is watching.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,

Lynn Killam





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**From:** [REDACTED] on behalf of Susan Bechtholt <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 5:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded. Please do something to put a stop to this.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Susan Bechtholt

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**From:** [REDACTED] on behalf of Hern Lisa <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Hern Lisa

[REDACTED] [REDACTED]

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**From:** [REDACTED] on behalf of Valerie Holmes [REDACTED]  
@ [REDACTED]  
**Sent:** Friday, October 29, 2021 2:51 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Valerie Holmes  
[REDACTED]

---

**From:** [REDACTED] on behalf of Kurt Emmert <[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 5:53 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kurt Emmert

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**From:** [REDACTED] on behalf of Kimberly Comito <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kimberly Comito

[REDACTED]

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**From:** [REDACTED] on behalf of Beverley Calvert  
**Sent:** Friday, October 29, 2021 2:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Beverley Calvert

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**From:** [REDACTED] on behalf of Marge Fear <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 12:56 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marge Fear

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**From:** [REDACTED] on behalf of Priscilla Trudeau  
**Sent:** Wednesday, October 27, 2021 5:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Priscilla Trudeau

[REDACTED]



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**From:** [REDACTED] on behalf of Kirsten Lear  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:43 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kirsten Lear

[REDACTED]

---

**From:** [REDACTED] on behalf of William Hekking  
**Sent:** Friday, October 29, 2021 2:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
William Hekking

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**From:** [REDACTED] on behalf of Eve Saglietto <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 12:55 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Eve Saglietto  
[REDACTED]

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**From:** [REDACTED] on behalf of Susan Ambler  
**Sent:** Wednesday, October 27, 2021 5:50 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Susan Ambler  
[REDACTED]

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**From:** [REDACTED] on behalf of Andy Ersfeld  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Andy Ersfeld

[REDACTED]

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**From:** [REDACTED] on behalf of Tascha [REDACTED]  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Tascha [REDACTED]

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**From:** [REDACTED] on behalf of Anita Dauberman <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 12:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Anita Dauberman

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**From:** [REDACTED] on behalf of Rose Bachman  
**Sent:** Wednesday, October 27, 2021 5:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Rose Bachman



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**From:** [REDACTED] on behalf of Joanna Behrens <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:42 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Joanna Behrens

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**From:** [REDACTED] on behalf of Kathleen Shabi  
<[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

There are several endangered species out there, and birds have taken a major hit in the last couple decades anyway with populations being devastated from encroachment, poisons and cats.

Please make sure all the birds and marine species are safe.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Kathleen Shabi

[Redacted Signature]

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**From:** [REDACTED] on behalf of Julie Butche <[REDACTED]>  
@ [REDACTED]  
**Sent:** Thursday, October 28, 2021 12:45 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Julie Butche

[REDACTED]

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**From:** [REDACTED] on behalf of Gilda Levinson  
<[REDACTED]>  
**Sent:** Wednesday, October 27, 2021 5:47 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

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Various individual components of the SpaceX Starship Super Heavy Project are massive and complex, and it is reasonable to foresee that they could result in significant environmental impacts. Elements of the project, such as liquefied natural gas processing plants, seawater desalination plants, and solar farms, are of sufficient complexity that they typically warrant analysis through an EIS as stand-alone projects, let alone as components of a larger project. Yet, no EIS has been required.

I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Gilda Levinson

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**From:** [REDACTED] on behalf of Richard Baker <[REDACTED]>  
**Sent:** Friday, October 29, 2021 4:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

Construction at the facility, launch activities, fires, and rocket debris are already impacting the wildlife and people of the Boca Chica region. This region contains critically important and sensitive bird habitat used by hundreds of thousands of individual birds of many different species throughout the year – from the federally Threatened Piping Plover and Red Knot to the Endangered Northern Aplomado Falcon. According to an analysis by Coastal Bend Bays & Estuaries Program in Corpus Christi, the Piping Plover population in the Boca Chica region has decreased by 54% over the past 3 years (2018-2021) since SpaceX started testing and launching rockets.

These lands also support several species of sea turtle and mammals listed under the Endangered Species Act. The current assessment fails to adequately analyze the impact of operations on wildlife, the environment, and surrounding communities. The assessment presents only two alternatives to be considered: a Preferred Alternative and a No Action Alternative. At this time, the No Action Alternative is recommended by conservation organizations given the lack of an in-depth EIS.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Richard Baker

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**From:** [REDACTED] on behalf of Marilyn Watkins <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:49 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Marilyn Watkins

[REDACTED]

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**From:** [REDACTED] on behalf of Sarika Arora  
**Sent:** Thursday, October 28, 2021 12:45 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Sarika Arora



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**From:** [REDACTED] on behalf of Cheryl Hutchison <[REDACTED]>  
@ [REDACTED]  
**Sent:** Wednesday, October 27, 2021 5:46 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Cheryl Hutchison  
[REDACTED]

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**From:** [REDACTED] on behalf of Chris Guillory <[REDACTED]>  
@ [REDACTED]  
**Sent:** Friday, October 29, 2021 4:41 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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I am submitting my support of the No Action Alternative in the current assessment. I further reiterate my request that the Administration conduct a comprehensive EIS to more fully assess environmental impacts of the SpaceX operations in Boca Chica.

Thank you for your attention on this matter.

Sincerely,  
Chris Guillory

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**From:** [REDACTED] on behalf of Janie Finch <[REDACTED]>  
**Sent:** Friday, October 29, 2021 2:48 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy Project and launch site are being built and expanded.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Statement (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Janie Finch

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**From:** [REDACTED] on behalf of Manucher Baybordi <[REDACTED]>  
**Sent:** Thursday, October 28, 2021 12:44 PM  
**To:** SpaceXBocaChica  
**Subject:** Comment on SpaceX Starship/Super Heavy project

Dear Federal Aviation Administration,

Dear FAA Official:

I am deeply concerned about the impacts on birds and other wildlife from SpaceX operations in Boca Chica, where the company's Starship/Super Heavy (aka 420-Rocket) project is underway. Kennedy space center in Florida is well equipped to handle these kind of launch activities. The wildlife refuge near Kennedy space center is a shell of what it used to be. We do not want the same thing happen to Boca Chica. Elon Musk's 420-rocket requires 4500 tons of fuel (liquid oxygen and Methane) for launch. A launchpad failure will have the destructive power of a kiloton range nuclear bomb, which SpaceX thinks is OK! Elon Musk thinks, a launchpad explosion is good publicity. Even a successful launch, will rattle, shake and roll everything within miles (420- Rocket's 32 Raptor engine burns 21.5 tons of fuel every second! - twice the Saturn V rocket which took men to the Moon more than half century ago). Colonizing a dead planet (Mars), is Musk's fantasy! Destroying a living planet for the sake of colonizing a dead one is not progress.

SpaceX operations have significantly changed since 2014, when the company was authorized to test and launch much smaller rockets than those being proposed today. The company is also now developing a natural gas facility to extract and deliver fuel to the site. These changes to SpaceX's activities in Boca Chica are substantial enough that – according to the National Environmental Policy Act – the Federal Aviation Administration (FAA) should require a full Environmental Impact Study (EIS), rather than the faster, less comprehensive Programmatic Environmental Assessment (PEA) that has now been produced.

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Thank you for your attention on this matter.

Sincerely,  
Manucher Baybordi

A black rectangular redaction box covering the signature area.