

November 1, 2021

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

Dear Ms. Zee: I am writing to submit to the Federal Aviation Administration, my comments on the ***Draft Programmatic Environmental Assessment for the SpaceX Starship/Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas.***

General Comments

- The FAA erred in choosing to issue a Draft Programmatic Environmental Assessment (Draft PEA, EA), rather than a Draft Environmental Impact Statement (DEIS, EIS). The consequences of this decision are highly significant. The criterion that determines whether a Federal agency is responsible for issuing an Environmental Assessment or an Environmental Impact Statement, is whether or not the proposed action would have significant adverse effects on the environment. By choosing to only issue an EA rather than an EIS, FAA has apparently determined that the proposed action will not have significant adverse effects on the environment, although this is not explicitly stated in the Draft PEA. The burden of proof is on FAA to show that the selected alternative has no significant environmental impacts, using the criteria for significance (§ 1508.27). The Draft PEA did not show that the selected alternative has no significant environmental impacts, nor did it disclose criteria for significance for all affected resources it identified. **In response, I strongly assert that the proposed action WILL have significant adverse effects on the environment, and therefore, FAA must issue a DEIS rather than the Draft PEA.**
- Further, the Draft PEA asserts that one reason the effects of the proposed action on the environment are not significantly adverse, is because effects will be sufficiently mitigated so that they are not significant. However, the Draft PEA fails to even explain how mitigation will reduce adverse effects below the threshold of *significance*, or even how mitigation will render adverse effects insignificant *by any definition*. The Draft PEA fails to even define *criteria for significant adverse effects* for some environmental impact categories of the affected environment, much less provide actual commitments to clearly defined- detailed mitigation. To support a FONSI, the Draft PEA must:
 - Specifically explain how the conditions would mitigate the impact of the action, as applied and enforced (*The Steamboaters v. Federal Energy Regulatory Commission*, 759 F. 2d 1382 9th Cir. 1985)).
 - Demonstrate that all proposed mitigation is legally enforceable, not just tenuous assurances not within the authority of the agency to enforce (*Louisiana v. Lee*, 758 F. 2d (5th Circ. 1985)).
 - Analyze mitigation in detail and explain the effectiveness of the measures in terms of resulting impacts (*Northwest Indian Cemetery Protective Association v. Peterson*, 795 F. 2d 288 (9th Cir. 1986)).
 - Demonstrate compliance with *Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact*.

In addition, there are likely significant environmental effects for which proper and explicit mitigation has not even been proposed. Therefore, the FAA's case for a mitigated FONSI has clearly NOT been made. **FAA must either significantly revise the Draft PEA, ensuring that it meets all legal requirements for a mitigated FONSI, or it must withdraw the Draft PEA and issue an EIS.**

- As mentioned above, the Draft PEA does not define criteria for determining whether an adverse effect is significant for some of the environmental impact categories of the affected environment, including non-threatened or endangered wildlife and socioeconomic impacts. **FAA must define such criteria for all environmental impact categories.**
- FAA improperly defined the threshold for significant impacts to biological resources. FAA must defend its restrictive, and very high threshold for defining significant adverse effects to biological resources, or revise it. The threshold for ALL biological resources cannot be: *the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species, or would result in the destruction or adverse modification of federally designated critical habitat.* FAA has not established a significance threshold for unlisted species. **NEPA requires FAA to establish a significance threshold for unlisted species.** Without such criteria, FAA cannot assess the potential impacts of the proposed project.
- **FAA failed to assess the potential impacts of the proposed project on federally listed threatened and endangered species,** since the project's potential impact relative to the FAA's official significance threshold for federally listed threatened or endangered species, has not yet been determined (e.g. whether the action would be likely to jeopardize the continued existence of a federally threatened or endangered species).
- **I assert that adverse effects of the proposed action ARE significant for federally listed threatened and endangered species.**
 - First, it appears the proposed action will have significant adverse effects on the human environment, because it would result in the destruction or adverse modification of federally designated critical habitat for the piping plover.
 - Secondly, FAA's significance threshold for determining whether the proposed action would have a significantly adverse effect on the human environment, via its effects on federally threatened or endangered species, is inappropriate, since it constitutes a very “high bar”, rendering anything but the most seriously harmful effects insignificant. The proposed action would have to be shown to have the potential for jeopardizing the continued existence of an entire species, before it would be considered significant. This is outrageous and should not be accepted.
 - **Even FAA has determined the Proposed Action may affect and is likely to adversely affect the following species and critical habitat:**
 - piping plover and piping plover critical habitat
 - red knot
 - northern aplomado falcon
 - Gulf Coast jaguarundi
 - ocelot
 - Kemp’s ridley sea turtle
 - hawksbill sea turtle
 - leatherback sea turtle
 - loggerhead sea turtle
 - green sea turtle

- Finally, in spite of the fact that FAA asserts that it has monitoring data to demonstrate that SpaceX's activities at Boca Chica have not had a significant effect on piping plover to date, **another analysis concludes *there has been 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*** (Newstead and Hill 2021).
- The Draft PEA appears to have determined that the proposed action's impacts on people from noise are not significantly adverse. FAA did define *criteria for significant adverse effects* of noise on people. However, discussion of these issues in the Draft PEA is highly complex, and certainly not easily understood by most citizens. I conducted a limited, but reasonably focused review of this part of the Draft PEA, and was unable to understand how FAA was able to conclude that the proposed action will have no significantly adverse effects on people from noise. Therefore, **I assert that adverse effects of the proposed action MAY BE significant for noise effects on people.** FAA should carefully review their conclusion, and if it is correct-based on FAA's stated criteria for significance- it should attempt to simplify and clarify for the public, exactly why it believes the proposed action will have no significant adverse effect on people due to noise.
- The Draft PEA should have assessed the aesthetic effects of increased noise and sonic booms on residents and users. Many people value quiet and the sounds of nature, particularly those who are engaging in outdoor recreation. FAA erred in ignoring or discounting this effect on the human environment. Relevant *criteria for significant adverse effects* based on this human value, will be very different than that selected by FAA, based on physical harm. **FAA must assess the risk of the proposed project affecting this value.**
- The Draft PEA does not include a sufficient level of detail about the project or its potential impacts. FAA must provide the public with sufficient detail regarding proposed actions and their impacts.
- FAA's approach to alternatives is not consistent with the intent of NEPA. While FAA's proposed alternative and the no-action alternative only, *may* technically satisfy absolute minimum NEPA requirements for consideration of alternatives, they in no way provide what is intended by the spirit of the act. Alternative locations should be considered. Note that FAA did not properly evaluate alternatives in the 2014 EIS either. Alternative sites were casually dismissed, and environmental criteria were improperly and insufficiently applied to the preferred alternative site (Boca Chica).
- The Draft PEA's descriptions of the Affected Environment fails to adequately describe the unique coastal ecosystems of the Boca Chica, Texas area, which will be impacted by the proposed action. FAA must ensure that the Draft PEA (or preferably Draft EIS), accurately reflects the uniqueness of the coastal ecosystems at Boca Chica, which the proposed action will affect.

- The Draft PEA failed to even consider whether the existing ongoing, and future proposed SpaceX activities- are/were/would be- in compliance with Federal and State law, including the Texas Open Beaches Act, the National Wildlife Refuge System Improvement Act of 1997, and the Coastal Barrier Resources Act. While the Draft PEA did address Section 4(f) of the U.S. Department of Transportation Act of 1966, I do not believe it correctly assessed the proposed action's compliance with it. In addition, I am concerned that SpaceX may not properly comply with Clean Water Act Section 404(b)(1), and 33 CFR Parts 325 and 332 and 40 CFR Part 230 (Compensatory Mitigation for Losses of Aquatic Resources; Final Rule). **FAA must properly review, and disclose, the proposed action's compliance with all relevant laws and regulations, including the Texas Open Beaches Act, the National Wildlife Refuge System Improvement Act of 1997, the Coastal Barrier Resources Act, the U.S. Department of Transportation Act of 1966, Clean Water Act Section 404(b)(1), and 33 CFR Parts 325 and 332 and 40 CFR Part 230 (Compensatory Mitigation for Losses of Aquatic Resources; Final Rule).**
- **The existing and proposed SpaceX activities at Boca Chica are inconsistent with some Goals and Policies of the Texas Coastal Management Program.**
- The Draft PEA failed to address indirect and cumulative environmental impacts, with the possible exception of noise and sonic boom cumulative impacts and indirect economic impacts. Indirect effects and cumulative impacts of the proposed action on aquatic habitats, threatened and endangered species, and on certain aspects of human socioeconomic conditions, were not considered. **FAA must assess potential indirect effects and cumulative impacts on aquatic habitats, threatened and endangered species, and on socioeconomic conditions related to the proposed action, as required by NEPA.**
- Mitigation and Monitoring: The Draft PEA fails to demonstrate an FAA commitment to monitoring and enforcement of mitigation. In many cases, proposed mitigation is not sufficiently clear or detailed so support monitoring or enforcement. **FAA should clarify and provide detailed descriptions of proposed mitigation, provide additional details regarding their proposed monitoring of mitigation, and should specify how it will make all mitigation enforceable.**

Specific Comments

- Significant Effects
 - FAA has incorrectly defined the threshold for significant impacts to biological resources.
 - FAA defined the threshold for significant impacts to biological resources as follows: *A significant impact on biological resources would occur if the USFWS or NMFS determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species, or would result in the destruction or adverse modification of federally designated critical habitat.*
 - The FAA threshold is incorrect for the following reasons:
 - It only allows for a significant impact on biological resources in the case of federally listed threatened or endangered species. The selected alternative could potentially have a significant impact on other biological resources, but FAA's definition of their threshold for biological effects would not allow them to find a significant impact.
 - FAA should adopt a threshold for significant impacts to biological resources other than federally listed threatened or endangered species.
 - FAA does list some reasonable candidates for official thresholds for significant effects to biological resources other than federally listed threatened or endangered species or their habitat, but they clearly do not commit to them as official FAA criteria for determining significant effects:
 - *Factors to consider when assessing the significance of potential impacts on unlisted species and habitats include whether the action would have the potential for:*
 - *A long-term or permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area;*
 - *Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats;*
 - *Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations;*
 - *Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance.*
 - Note that these appear to be far less significant biologically than FAA's existing significance criteria for biological resources (actually just applies to federally listed threatened and endangered species and critical habitat). Thus, if these were adopted by FAA as significance criteria for biological resources other than Federally-listed threatened or endangered species, these other biological resources would be better protected by FAA than Federally-listed threatened and endangered species would be under NEPA.

- It can be argued that a significant impact as per NEPA, on federally listed threatened or endangered species, could occur without USFWS or NMFS determining that the action would be likely to *jeopardize the continued existence of the species*. *Jeopardizing the continued existence of a species*, is a very high threshold indeed, for determining significant effects under NEPA. I assert that the appropriate threshold for determining significant effects on federally listed threatened and endangered species under NEPA, is significantly less than *jeopardizing the continued existence of the species*. For example, the following may be a more appropriate threshold for determination of significant effects on Federally listed threatened or endangered species or critical habitat than the current FAA criterion:
 - A determination that the Proposed Action may affect and is likely to adversely affect Federally listed threatened or endangered species and critical habitat;
 - Even better criteria could include those that FAA failed to adopt for non-Federally listed threatened or endangered species, but which they acknowledged might be appropriate for use in determining significant effects:
 - *A long-term or permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area;*
 - *Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats;*
 - *Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations;*
 - *Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance.*
- FAA has not defined a threshold for significant effects to human users/uses of the area affected by the proposed action, nor for significant effects to the Boca Chica Village community.
 - FAA must define thresholds for determination of significant effects of the proposed action on users of Boca Chica Beach, both state parks, and the federal wildlife refuge.
 - FAA must estimate the effects of the proposed project on users, compare the estimate with an appropriate threshold of significance, and make a determination of significance of effects on the human environment.
 - FAA must also define a threshold for determination of significant effects of the proposed action on residents of Boca Chica Village, and on the Boca Chica Village community.
 - FAA must estimate the effects of the proposed project on residents of Boca Chica Village, and on the Boca Chica Village community. Impacts of SpaceX actions to date must also be considered.

- The purpose and need seem to suggest that it is official US policy to colonize Mars. This is used to help justify the need for the proposed project. I question whether it is official US policy to colonize Mars.
 - If it is not, FAA must revise the purpose and need section to remove suggestions that it is US policy to colonize Mars.
 - If this is official US policy, but is based on policies of the previous Executive Branch administration, I strongly recommend that FAA brief the current administration on these policies, and provide the current administration the option of revising such policies.
- The Draft PEA approach to alternatives is not consistent with the intent of NEPA. Only the Preferred Alternative and the No Action Alternative are considered. While FAA's proposed alternative and the no-action alternative only, *may* technically satisfy absolute minimum NEPA requirements for consideration of alternatives, they in no way provide what is intended by the spirit of the act. Alternative locations should be considered. Note that FAA did not properly evaluate alternatives in the 2014 EIS either. Alternative sites were inappropriately dismissed, and environmental criteria were improperly, and insufficiently, applied to the preferred alternative site (Boca Chica). Boca Chica is, and was, an alternative site with very significant environmental impacts, due to threatened and endangered species impacts and socioeconomic impacts, and potentially.
 - While this *might* be technically acceptable if the environmental impacts of the Preferred Alternative were insignificant, they are not (see below). Therefore, in view of my assertion that the environmental impacts of the Preferred Alternative *are* significant, additional alternatives, including alternative sites, should be considered.
- EPA has designated aquatic habitats at the site as Aquatic Resources of National Importance, which brings with it special procedural requirements for Clean Water Act, Section 404 permit review. This would seem to suggest that the impacts of the proposed actions may be more broadly significant under NEPA as well, suggesting in turn that FAA should have prepared an EIS rather than an EA.
- FAA failed to disclose that SpaceX may not properly comply with Clean Water Act Section 404(b)(1) Guidelines. I assert the the U.S. Army Corps of Engineers improperly ignored SpaceX's previous failure to comply with the Guidelines when they applied for their original Clean Water Act Section 404 permit. SpaceX failed to demonstrate adequate consideration of alternatives and adequate consideration of avoidance and minimization of impacts to aquatic habitats, and compensatory mitigation did not fully comply with the Mitigation Rule. SpaceX failed to consider some obvious alternatives that would have avoided and minimized impacts to aquatic habitats. SpaceX also failed to properly justify compensatory mitigation by preservation, as required by the Mitigation Rule. Similarly, SpaceX's recent application for a Clean Water Act Section 404 permit for the proposed activities assessed by this Draft PEA, failed to demonstrate adequate consideration of alternatives and adequate consideration of avoidance and minimization of impacts to aquatic habitats, and compensatory mitigation was not disclosed for public review.
- FAA asserts that *the Proposed Action includes all practicable measures to minimize harm to wetlands that may result from construction*. However, I believe this is erroneous. At a minimum, the wetland impacts from the proposed parking lot on site, could be completely avoided, by locating the parking lot near Boca Chica Village, and providing workers transport to the site via shuttle bus. I assert that such an alternative would be practicable. Similar alternatives are often adopted to avoid and minimize impacts to wetlands in other Clean Water Act Section 404 permitting situations.

- The proposed parking lot could potentially indirectly impact 14 acres of seagrasses that lie within 1 km to the north. Parking lot construction could result in increased sediment loading to Boca Chica Bay/South Bay, potentially resulting in increased light attenuation on the seagrass beds. Seagrasses are highly sensitive to reductions in light availability. Dunton et al (2003) recommended no dredging within 1 km of seagrass beds in Laguna Madre. While parking lot construction adjacent to tidal flats isn't dredging, it could result in sediment-rich runoff to adjacent tidal flats, and potentially to lagoon water during high tides. At a minimum, FAA should technically assess this potential risk.
- The Draft PEA asserts that SpaceX's Clean Water Act Section 404 permit may ultimately include compensatory mitigation for unavoidable impacts to aquatic resources, that may include out of kind mitigation or preservation. While the mitigation rule allows for these types of mitigation under certain circumstances, they require serious justification, something they were not required to do in the original permitting effort. I hope the USACE has learned the requirements of the mitigation rule regarding this, and I hope they properly require SpaceX to comply with these requirements this time.
- The existing authorized project is clearly having greater impacts than were disclosed by FAA in the 2014 EIS, and the proposed expansion and additional activities will clearly have even greater impacts than the currently authorized project does. Some of the ongoing impacts were not properly disclosed in the original EIS. The Draft PEA should disclose this.
- The existing/proposed site of SpaceX activities (Boca Chica) was an improperly selected alternative with significant, unmitigated environmental impacts. The site is situated on a tiny parcel of SpaceX property in the middle of a federal wildlife refuge and two state parks. SpaceX effectively uses this embeddedness of its very small property within large expanses of public property to support its objectives. Furthermore, this area is prime habitat for many threatened or endangered species. FAA would have to look long and hard to find another such environmentally inappropriate site.
- The project would result in violations of the National Wildlife Refuge System Improvement Act of 1997 for use of the refuge, such as it serving as a debris field within the blast danger area and it being used for debris retrieval, which has destroyed refuge habitat in the past and would likely do so in the future.
- The existing and proposed SpaceX activities at Boca Chica appear to violate the Coastal Barrier Resources Act (CBRA). The CBRA requires that Federal agencies not fund activities on Coastal Barrier Resource System (CBRS) lands. It is my understanding that the existing and proposed SpaceX activities at Boca Chica are partly funded with Federal funds. SpaceX activities at Boca Chica occur within the CBRS. In addition, the PEA clearly states that it is the intent of SpaceX to apply for Federal flood insurance for facilities at Boca Chica. Thus, it appears that existing, and future planned SpaceX facilities at Boca Chica, are not compliant with CBRA. FAA should document this in an EIS, and FAA and USFWS should take compliance action against Federal agencies who are funding SpaceX activities in the CBRS. Finally, FEMA should refuse to provide SpaceX with Federal flood insurance for facilities at Boca Chica.

- Existing authorized activities have had significant socioeconomic impacts on the users of Boca Chica State Park, including surfers, fishermen, beach-goers, swimmers, etc. Existing authorized activities have also impacted property owners and residents of Boca Chica Village, who have had their community invaded and taken over by SpaceX. Proposed additional actions will only make these worse. The impacts of SpaceX on the community of Boca Chica Village, may be one of the worst examples of negative socioeconomic impacts of a proposed Federal action on a small community.
- Part of the existing facility lies within Coastal Barrier Resources System Unit T12. Therefore, if this existing project includes any Federal funding, it would seem to violate the Coastal Barrier Resources Act (CBRA). Similarly, if any Federal funding is involved in the current proposed expansion, it too would seem to violate the CBRA. Finally, FAA's statement that SpaceX intends to use the site to meet what it claims are official US space program goals, suggests that SpaceX intends to use the site to accomplish US government funded missions, which would appear to violate the CBRA.
- Even more egregiously, The Draft PEA explicitly states that it is SpaceX's intent to participate in FEMA's National Flood Insurance Program (NFIP) (3.9.4.4 Floodplains; p. 98; 1st complete paragraph; 2nd sentence). Note that, *in particular*, the CBRA is intended to restrict the ability to obtain National Flood Insurance in CBRS units. The Draft PEA must be revised to reflect this, and FAA must acknowledge that it is unacceptable for SpaceX to pursue Federal flood insurance for portions of the project that are on, or would be on, CBRS units.
- Regarding the following assertions:
 - *The design engineer will certify that the design elevation will withstand the depth and velocity of 100-year flood events (hydrostatic and hydrodynamic loads), any potential increase in wind load, or any other relevant load factors. Compliance with the NFIP as well as county regulations would ensure that the construction will have no significant impacts on floodplain storage and base flood elevations.*
 - The close proximity to the Gulf of Mexico shoreline and the extremely low topography surrounding the site, suggest that up to 9 ft of fill may be required to elevate construction sites above potential storm surge elevations. While this can be done, the resulting side slopes of the isolated, elevated sites, would be highly vulnerable to erosion due to storm surge related flow and waves.
- FAA grudgingly acknowledges the potential for “anomalies”, otherwise known as rocket explosions. However, rather than being just a possibility, such events are virtually guaranteed, since they have occurred multiple times already. So, the first problem with this is that FAA does not adequately acknowledge and disclose the high probability of such events. Secondly, FAA acknowledges some potential environmental impacts as a result of these, or from their cleanup. However, this acknowledgment too is tepid. The EA should include estimates of such impacts, and a commitment to mitigate for them. The disturbing discomfort that arises from the audacity of FAA and SpaceX to assume they have the authority to explode rockets over Federal and State wildlife refuges containing multiple threatened and endangered species, with impunity, should be pointed out.

- Regarding the following statement: *In conjunction with final design and CWA permitting, SpaceX would submit a Notice of Intent to TCEQ for application of the general permit authorization for point source discharges of stormwater associated with industrial activity to surface water in the state. SpaceX would develop a SWPPP that would adhere to the permit effluent limitations and requirements applicable to the industrial activities.*
 - This simply says: Trust us. We will get the permit and everything will be ok. Such an approach renders NEPA assessment useless. If all an applicant has to do is say they will take care of everything, what's the point?
 - A better approach for this issue, would be for the document to disclose what the stormwater pollutant load might be in the absence of any specific measures to reduce it, and then what that load might be with specific measures to reduce that load.
- The DEA commits to retention ponds, if required. So, does that mean there may be additional impacts to aquatic resources from retention pond construction?
- The DEA states that SpaceX would “*develop appropriate sampling protocols and water quality criteria in coordination with the TCEQ in accordance with Texas Surface Water Quality*”. That is not how it works. Water quality criteria are part of the water quality standards, which are developed by TCEQ and approved by EPA. SpaceX has no role in this process. In addition, the only “sampling protocols SpaceX might be involved with, is required discharge monitoring under any permit. Again, this would be a permit condition mandated by TCEQ. SpaceX would not be involved in developing these requirements. They would be told what they must do. All this is very telling, reflecting how FAA, or most likely, SpaceX, does not understand the NPDES permitting program they are subject to, and apparently taking the same American oligarch attitude they seem to have taken regarding everything else they are doing at Boca Chica. It is unacceptable.
- 3.10.3.3 Protected Species and Critical Habitat; Terrestrial: This section doesn't make sense. It isn't really about terrestrial protected species. Rather, it is about all protected species. Finally, it includes statements that seem to exaggerate the potential for some of these species to occur here. It is outrageous that it does not even mention the ocelot or jaguarundi.
- Marine: It is not at all clear what any of this has to do with this DEA or these proposed actions at this site.
- In general, this section of the DEA is completely dismissive of any potential impacts on protected species, and barely mentions the highly significant endangered species- ocelot and jaguarundi. The treatment of this seems completely unacceptable.
- Essential Fish Habitat (p 115): The DEA fails to acknowledge that there is EFH just north of the proposed parking lot. I have already mentioned that there is a risk that construction of this parking lot may impact seagrasses to the north due to decreased light availability due to sediment loading/turbidity. These seagrasses are EFH.
- 3.10.4.3 Protected Species and Habitat; Terrestrial Species: The DEA states the following: *The FAA has determined the Proposed Action may affect and is likely to adversely affect the following species and critical habitat: piping plover and piping plover critical habitat, red knot, northern aplomado falcon, Gulf Coast jaguarundi, ocelot, Kemp's ridley sea turtle, hawksbill sea turtle, leatherback sea turtle, loggerhead sea turtle, and green sea turtle.*
 - How is this not a significant environmental impact then? If it is, then an EIS should be prepared.

- Critical Habitat; Regarding the following assertion: *While the Proposed Action would adversely affect critical habitat, the small amount of habitat that would be affected by the Proposed Action would not substantially affect the recovery of the piping plover or the breeding and wintering grounds of migratory birds.*
 - While this may be true, I assert that cumulative impacts on piping plover habitat are significant.
- 3.10.5 Mitigation and Monitoring; Regarding the following assertion: *The FAA would ensure that SpaceX implements the following measures to minimize impacts on biological resources.*
 - FAA has not ensured that SpaceX complies with many of the requirements/commitments from the original EIS, so why should we believe them this time?
- Construction Measures; 1: These may not be sufficient to protect seagrasses within 1 km of the proposed parking lot, from turbidity/reduced light availability, due to sediment loading.
 - 5. An alternative limiting construction to the time of the year when birds are not breeding should have been considered.
- 3.11 Coastal Resources; 3.11.3 Existing Conditions: The Draft PEA acknowledges: *The VLA is located within the Coastal Barrier Resource System Unit T12 and within and adjacent to the Otherwise Protected Area Unit T12P (USFWS 2021a), as mapped under the Coastal Barrier Resources Act.* However, the implications of this are not discussed. If existing facilities and/or proposed facilities are funded in part with Federal funds, this is a violation of the CBRA. Perhaps more importantly, this Draft PEA states that SpaceX intends to apply for Federal flood insurance, which the CBRA expressly seeks to avoid within the CBRS.
- 3.11.4 Environmental Consequences: The existing and proposed SpaceX activities at Boca Chica are inconsistent with the following Goals and Policies of the Texas Coastal Management Program.
 - Goals
 - to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas (CNRAs);
 - to ensure and enhance planned public access to and enjoyment of the coastal zone in a manner that is compatible with private property rights and other uses of the coastal zone;
 - to balance the benefits from economic development and multiple human uses of the coastal zone, the benefits from protecting, preserving, restoring, and enhancing CNRAs, the benefits from minimizing loss of human life and property, and the benefits from public access to and enjoyment of the coastal zone;

Sincerely,
Kenneth G. Teague, PWS (emeritus), Senior Certified Ecologist
Austin, Texas