

**CALIFORNIA COASTAL COMMISSION**

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# Th9a

**CD-0007-24 (United States Space Force)**

**October 10, 2024**

**Correspondence**



October 4, 2024

To: Caryl Hart, Chair, California Coastal Commission  
Cc: Kate Huckelbridge, Executive Director, California Coastal Commission  
Wesley Horn, Coastal Program Analyst, California Coastal Commission

**Re: Item Th9a – Increasing SpaceX Falcon 9 launch activities to 50 per year**

Dear Chair Hart and Commissioners,

The Surfrider Foundation and Audubon California submit the following joint comments regarding the consistency determination by the Department of Air Force (DAF) for the proposed expansion of the Space Exploration Technologies Corporation's (SpaceX) Falcon 9 Space Program at Vandenberg Space Force Base (VSFB) in Santa Barbara County to increase to 50 rocket launches annually.

Surfrider previously submitted comments on this issue at the Commission's April, June and August meetings, expressing concern about the rapid increase in the frequency of rocket launches. In August, we supported conditional concurrence for up to 36 launches annually. While we appreciate DAF's acceptance of the Commission's conditional concurrence from August, we are concerned about the proposed increase to 50 launches. The increase from 36 to 50 launches may be relatively minor but the increase from 6 to 50 launches over two to three years is extremely rapid. More information and data is needed on potential impacts before agreeing with additional launches.

Given the potentially significant impacts of SpaceX's proposed program expansion on beach access, water quality, and coastal species, we must proceed with caution. Potential impacts to coastal avian species are particularly concerning. For example, according to the staff report, "The USFWS also found that the proposed project is likely to adversely affect but would not likely jeopardize the continued existence of California Red-Legged Frog (*Rana draytonii*) and threatened Western Snowy Plover (*Charadrius nivosus nivosus*)" (from page 22). Given the disturbing potential for population level impacts and the great uncertainty, more frequent launches are not appropriate at this time.

Vandenberg Space Force Base sits within the Snowy Plover recovery unit (RU) 5. Based on the 2024 Pacific Coast Distinct Population Segment of Western Snowy Plover 5-year review, RU5 continues to hold the highest number of Snowy Plovers out of the 6

regional units<sup>1</sup>. However, since the 2019 Review, breeding adults counted during the breeding window have declined. The 2024 Review describes threats that Snowy Plovers are faced with which include increased rocket launches from spacecraft. The Review states, “During the terrestrial sonic boom events plovers exhibit stress responses such as hunkering down over the nest or abandoning the nest, which may have resulted in damage to eggs and embryos.” Increased nest abandonment was documented in 2023 and trends showed abandonment was higher for sites closer to rocket launches.

Increased launches at VSFB, carrying one of the largest snowy plover colonies along the U.S. West Coast, could have disproportionately negative impacts to the entire range and must be approached with caution. While these impacts and number of launches will be new to California, populations of Piping Plovers in Texas have shown what the potential impacts are when we increase launches. Based on data from Boca Chica, Texas, Piping Plover population occupancy decreased by 54%<sup>2</sup>. From the 2024 Review, the RU5 Snowy Plover population sits at 676 birds, which is significantly less than the recovery goal of 1200 breeding adults. A drop in population will move us further away from our goal to recover this threatened species.

While predators are an issue at military sites and predator management has been proposed, more must be done to protect these vulnerable species. We support the restoration opportunity at the Santa Ynez River Estuary, as Audubon California created a restoration design for the site several years ago funded by the California State Coastal Conservancy. However, the Environmental Species Act mitigation policy does not allow for retroactive mitigation. While we wait for two years to pass to monitor impacts from the increased launches, we could be putting Snowy Plovers at great risk. We believe mitigation should also be requested both on and off-site and an In-Lieu Fee (ILF) program be established to help fund these mitigation projects. Unfortunately, conservation banks aren't easily feasible with the lack of habitat and development along our coast. This ILF program can offer an opportunity to conserve existing areas Plovers depend on and ensure their population remains stable.

In August, DAF was required to submit monitoring and mitigation plans under conditional concurrence. The Commission should not consider more frequent launches until more robust and complete data from those plans is collected and analyzed,

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<sup>1</sup> USFWS, Pacific Coast Distinct Population Segment of Western Snowy Plover 5-Year Review, 2024 ([https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpubli sh/19614.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpubli sh/19614.pdf))

<sup>2</sup> Lipton, Eric. “Wildlife protections take a back seat to SpaceX’s ambitions” *New York Times*, 7 July 2024, [https://www.nytimes.com/2024/07/07/us/politics/spacex-wildlife-texas.html?unlocked\\_article\\_code=1.5U0. IrUE.d6z3KNQB\\_TLG](https://www.nytimes.com/2024/07/07/us/politics/spacex-wildlife-texas.html?unlocked_article_code=1.5U0. IrUE.d6z3KNQB_TLG).

especially for impacts to coastal species including threatened snowy Plovers and endangered CA Least Terns.

Sincerely,

Liliana Griego  
Sr. Coastal Program Manager  
Audubon California

Rachel Ameche  
Chapter President  
Ventura Audubon Society

Cynthia Hartley  
Shorebird Recovery Program Biologist  
Ventura Audubon Society

Mandy Sackett  
Sr. California Policy Coordinator  
Surfrider Foundation



October 4, 2024

Dr. Caryl Hart, Chair  
California Coastal Commission  
455 Market Street, Suite 300  
San Francisco, CA 94105  
Sent by email to: [EORFC@coastal.ca.gov](mailto:EORFC@coastal.ca.gov)

**Re: Item #9, 10/10/24 – CD-0007-24 Consistency Determination by the United States Space Force to increase Space Exploration Technologies' (SpaceX) Falcon 9 launch activities at Vandenberg Space Force Base (VSFB) from 36 to 50 per year, in Santa Barbara County**

Dear Commissioners,

The Santa Lucia Chapter of the Sierra Club represents over 3,000 Sierra Club members and supporters who are residents throughout San Luis Obispo County. The Sierra Club California Coastal Subcommittee works on coastal conservation interests of the California Chapter of the Sierra Club. Throughout the state of California the Sierra Club has over 500,000 members and supporters.

We ask the California Coastal Commission to ensure, prior to further launch expansion, there is sufficient time to collect the data necessary to establish a current baseline for impacts from launch disturbance, which is currently lacking.

We applaud the decision by the Department of the Air Force to accept all of the protective measures established through the Commission's conditional concurrence of August 8 and implement the plans for Enhanced Biological Monitoring, Coastal Access and Recreation Enhancement, Marine Debris Reduction, Commercial and Recreational Fishing Coordination, Lighting Management, and Sonic Boom Assessment and Minimization required by those conditions.

#### **CCC Staff Report**

The Staff Report carefully chronicles the numerous impacts and disturbances which impact the biological resources surrounding launches. Unfortunately, the ability to fully evaluate the impacts of increased launches is hampered by a lack of comprehensive data and studies.

The Staff Report acknowledges this fact by pointing out the "anticipated short duration before the Commission will be able to again consider this activity due to the expected submittal of another consistency determination for a further increase in launches to 100 per year," and the



“absence of robust data demonstrating that substantially more or different adverse impacts to coastal resources would occur with the proposed launch increase despite implementation of the protective measures previously required by the Commission and accepted by DAF.”

As the Staff Report notes, similar to what occurred in December 2023 with DAF’s Negative Determination No. ND-0009-23, the Commission also has the ability under the federal consistency regulations to re-open this consistency determination, should the proposed activity have effects on any coastal use or resources substantially different from those originally described in DAF’s consistency determination.

Should this scenario occur, the Commission’s finding that the project is “fully consistent” with the enforceable policies of the CCMP could be re-examined in light of new circumstances.

### **USFWS Biological Opinion**

In its previous Biological Opinion on the increase to 36 launches per year, the USFWS characterized the "absence of robust data" thusly: "[T]he Service cannot adequately determine how the proposed project’s 36 disturbance events would contribute to the existing launch baseline average of 6.2 events or the current permitted annual launch baseline of up to 47 events.”

The Service considers that “although the project has the potential to significantly contribute to the collective effects of the existing launch disturbance baseline and result in long term population level effects, until the novel effects of the project activity are studied, we are unable to anticipate the specific response at this time.”

This appears to be an admission that there has been insufficient data to assess the impacts from increasing the launch cadence from 6 to 36, not just from 36 to 50. Hence, what is before the Commission is a proposed eight-fold increase in impacts without an understanding of the collective effects.

Given the short duration before the scheduled ramp up to 100 launches per year, during which time the multi-agency working group comprised of Commission staff and federal resource management agencies are tasked with implementing biological monitoring, discussing monitoring results and identifying appropriate response measures, **how does the Commission propose to ensure there is a sufficient amount of time to collect enough data to establish a current launch disturbance baseline?**



Because the full understanding of impacts remains elusive for lack of sufficient research, we encourage Commission staff to press forward to ensure the multi-agency working group can provide the needed research to fully analyze impacts, and establish suitable and sufficient mitigations for those impacts before the rapid increase in launches progresses.

We support the Commission in its ongoing oversight and authority to reconsider consistency as appropriate to impacts of increased launches and additional data, and to press the point that this is in fact a private commercial project requiring a Coastal Development Permit. We encourage the Commission to fully support staff in these efforts.

Thank you for your commitment to upholding the Coastal Act and for your time and attention to this matter.

Sincerely,

Sue Harvey  
Chair, Conservation Committee  
Santa Lucia Chapter of the Sierra Club  
San Luis Obispo County, CA  
(805) 543-8717  
[Sierraclub8@gmail.com](mailto:Sierraclub8@gmail.com)

Nancy Okada  
Chair, Coastal Subcommittee  
Sierra Club California

CC:  
Coastal Band of the Chumash Nation Chair Gabe Frausto  
Northern Chumash Tribal Council Chair Violet Sage Walker  
Representative Salud Carbajal  
Representative Jimmy Panetta  
Representative Jared Huffman  
Senator Monique Limón  
Senator John Laird  
Assemblymember Dawn Addis  
Assemblymember Gregg Hart  
Assemblymember Steve Bennett



October 4, 2024

California Coastal Commission  
455 Market Street, Suite 300  
San Francisco, CA 94105

RE: Item Th9a, Federal Consistency Determination No. CD-0007-24 (United States Space Force/SpaceX)

Dear Chair Hart and Honorable Coastal Commissioners,

The Gaviota Coast Conservancy (GCC) is a California public benefit organization committed to permanently protecting the rural character and environmental integrity of the Gaviota Coast for present and future generations. Along with rural character and environmental integrity, public access and recreational opportunities is the “third pillar” that together fulfills GCC’s mission. Vandenberg Space Force Base (VSFB) encompasses an important and substantial portion of the Gaviota Coast and its biodiversity. Sensitive wildlife species have historically thrived at VSFB, with the Space Force (and formerly Air Force) investing substantial effort and resources in their protection, and restoration of important habit areas. The exponential increase in rocket launches, largely attributed to the commercial activities of SpaceX, represents a dramatic change with significant consequences for the habitats and species on and around VSFB.

When the Commission previously considered the proposed increase to 36 annual SpaceX launches, we raised concerns about the proposal’s impact on public access and recreation, marine debris, commercial fishing, and wildlife. Through the diligent efforts of the Commission and its staff, conditions were identified and strengthened to mitigate many of these impacts. Impacts to wildlife from frequent exposure to rocket launch noise and sonic booms however went largely unaddressed. We were pleased to learn that the Space Force and SpaceX have now agreed to comply with the biological and acoustic monitoring conditions that the Commission required at the August hearing. Those monitoring conditions are critical to understanding how sensitive species on VSFB and in surrounding areas respond to regular disturbance from launch noise and sonic booms, and importantly, how they can be protected from adverse consequences.

It is premature to increase the number of annual SpaceX launches from 36 to 50 when this monitoring effort is only just beginning. It is particularly important to hold off on additional increases because initial data shows an atypical increase in western snowy plover nest abandonment, a decrease in nest establishment at Surf Beach, and indicates a declining trend in western snowy plover residency time during the breeding season at sites near the SpaceX launch facility. (United States Fish & Wildlife Service (USFWS) Biological



Opinion, 8/28/24, p. 94.) Until this data is analyzed and *protective* mitigation measures for this threatened species are in place, it would be reckless to further increase launch activity.

USFWS has also determined that adverse effects are likely for other threatened and endangered species including California least tern, southwestern pond turtle<sup>1</sup>, and California red-legged frog. (Staff Report, p. 22.) However, the most recent Biological Opinion (8/28/24) only covers the three month period from October to December, and accordingly did not analyze effects on California least tern, breeding western snowy plover, and effects on other threatened and endangered species that would occur outside that 3-month window. This Consistency Determination (CD) however would authorize 50 launches per year indefinitely. Without current USFWS analysis of impacts occurring over 9 months of the year, and without monitoring data that USFWS admits is necessary to determine the magnitude of the likely effects<sup>2</sup>, there is no basis for concluding that the CD is consistent with the California Coastal Management Program (CCMP) including protections for Environmentally Sensitive Habitat Areas (e.g. Coastal Act §§ 30240, 30107.5) for activities occurring beyond December 2024. For this reason, the CD is overbroad and a full concurrence is not supportable.

We request that the Commission object to the Consistency Determination for the increase to 50 annual SpaceX launches from Vandenberg, to provide sufficient time for monitoring to assess how species are reacting to the increase in disturbance and whether the increase is resulting in significant adverse impacts. If significant impacts are detected, project changes and/or mitigation measures such as those included in the “Conservation Recommendations” identified in the 8/28/24 Biological Opinion must be pursued. These USFWS Conservation Recommendations, attached to this letter, show that there is a potential path forward to increase rocket launch activity at Vandenberg while also protecting the ecological integrity of the incredibly important habitats on the base.

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<sup>1</sup> Southwestern pond turtle is not yet listed under the Endangered Species Act but is currently proposed threatened and under federal review for listing under the Act (88 FR 68370).

<sup>2</sup> “The Service considers that although the project may result in effects to southwestern pond turtle’s stress hormone accumulation and associated behavior, deleterious physiological effects, and overall habitat degradation, until the novel effects of the project activity are studied, we are unable to adequately anticipate the magnitude of any specific response at this time.” (8/24 BO, p. 75.)

“The Service considers that although the project may result in effects to [California red-legged frog] dispersal behavior, calling, and stress hormone accumulation that could have deleterious physiological effects and overall degrade the quality of existing habitat, until the novel effects of the project activity are studied, we are unable to adequately anticipate the magnitude of any specific response at this time.” (Id., p. 87.)

Sincerely,

A handwritten signature in black ink, appearing to read 'Ana Citrin', written over a horizontal line.

Ana Citrin  
GCC Legal and Policy Director

Attachment: USFWS Conservation Recommendations, 8/28/24 Biological Opinion

CC: Cassidy Teufel, Deputy Director  
Wesley Horn, Environmental Scientist

Beatrice L. Kephart

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The Space Force must take care in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The Space Force must transport injured animals to a qualified veterinarian. Should any treated southwestern pond turtle, California red-legged frog, or western snowy plover survive, the Space Force must contact the Service regarding the final disposition of the animal(s).

The remains of southwestern pond turtles, California red-legged frogs, or western snowy plovers, must be placed with educational or research institutions holding the appropriate State and Federal permits, such as the Santa Barbara Natural History Museum (Contact: Paul Collins, Santa Barbara Natural History Museum, Vertebrate Zoology Department, 2559 Puesta Del Sol, Santa Barbara, California 93460, (805) 682-4711, extension 321), Western Foundation of Vertebrate Zoology (Contact: Linnea S. Hall, Ph.D., Executive Director, Western Foundation of Vertebrate Zoology, 439 Calle San Pablo Camarillo, CA 93012, (805) 388-9944), or the Cheadle Center for Biodiversity and Ecological Restoration (CCBER) (CCBER, Herpetological Collection, University of California, Santa Barbara, Harder South, Building 578, MS-9615 Santa Barbara, CA 93106-9615).

#### CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The conservation recommendations below are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information and can be used by the Space Force to fulfill their 7(a)(1) obligations.

1. We recommend that the Space Force work with project proponents to design the launch schedule such that launches, particularly launches with associated boost-backs involving terrestrial landing, occur to the maximum extent possible outside of sensitive breeding windows for listed species. Previous monitoring and comparable literature indicate that routine and frequent exposure to disturbance during these sensitive windows and corresponding accumulation of stress hormone has the potential to significantly impact long-term breeding success and overall population level fitness. In the event that impacts to breeding success, abundance, and distribution are observed in response to increased launch cadence, we strongly recommend proactively working with project proponents on designing the launch schedule to avoid sensitive windows to help preclude associated effects and build in temporal separation between disturbance events to minimize the induced stress on species.
2. The Space Force has indicated there is uncertainty in modeling projections as a result of atmospheric conditions (MSRS 2024a, p. 99). We recommend that prior to any further implementation of launches with easterly trajectories with identified mainland sonic boom potential, that the Space Force require the project proponent to explore partnership with NASA's Neil A. Armstrong Flight Research Center that have demonstrated

experience with aircraft sonic boom research and attenuation. Service staff have previously spoken to interested parties at this research center and can help facilitate this connection with your team. This partnership could help with model projection accuracy and subsequently also prove valuable to address future improvements in vehicle design and operational optimization. To ensure consistency with this analysis, we recommend that the Space Force implement measures for making decisions on launch time and trajectory based on this coordination and analysis of available data to avoid and minimize to the maximum degree possible the spatial extent and severity of sonic booms experienced both on and off-base.

3. Correspondingly, we recommend that the Space Force proactively require their project proponents to design launch vehicles (and SLCs) to attenuate sensory pollutants, similar to what is being done with aircraft at another installation (i.e., Edwards Air Force Base, X-59 Quiet SuperSonic Technology; NASA 2022, entire). Design considerations in combination with new sensory pollutant attenuation technologies may prove to be pertinent based on a growing body of evidence that suggests noise, vibration, and light can have detrimental impacts on natural ecosystems as previously discussed.
4. We recommend and encourage the Space Force to proactively coordinate with the Service as they learn new information related to this proposed project and during the early stages of future project development. This will improve efficiencies for both agencies and promote the development of meaningful recommendations to avoid and minimize impacts to listed species.
5. We recommend that the Space Force proactively conduct a small-scale California red-legged frog egg-mass relocation study into the existing Oxbow Restoration site. Previous survey efforts have not yet demonstrated that California red-legged frog will utilize these areas for breeding (Evans 2022, p. 4; Kephart 2022, p. 2). This study could help determine whether manual facilitation of California red-legged frog establishment to ensure no-net loss of species abundance is achievable.
6. We recommend that the Space Force continue to coordinate with researchers familiar with study design involving short- and long-term ecological effects of sensory pollutants in the development of the effects monitoring plan for the project. We also recommend that the Space Force implement a basewide monitoring strategy to address the potential for compounding impacts of collective launches across the base.
7. We recommend that the Space Force work with researchers to develop a habitat suitability model that addresses launch disturbance frequency. The Space Force could use a model to inform the number, spacing, and distribution of the collective launch scheduling to make appropriate management decisions to reduce effects. We recommend modeling results incorporate sensitive time windows, such as breeding seasons, and be used to inform launch scheduling to promote recovery goals and adhere to the Space Force's 7(a)(1) obligations.
8. We recommend that proposed southern sea otter monitoring be conducted by a NMFS-approved Protected Species Observer trained in marine mammal science.
9. We recommend that the Space Force coordinate with National Park Service partners to inform them of potential project related impacts to Channel Islands and coordinate

required noise monitoring locations (Recommended Contact - Annie Little, Channel Islands National Park, Supervisory Natural Resource Manager, 1901 Spinnaker Drive Ventura, CA 93001, Office: 805-658-5763, [annie\\_little@nps.gov](mailto:annie_little@nps.gov))

10. We recommend that the Space Force continue to monitor and assess potential effects of project launch and associated boost-back activities on the adjacent western monarch butterfly overwintering site located in Spring Canyon and elsewhere in the near vicinity. We recommend that monitoring of the on-base monarch butterfly populations be conducted in a manner sufficient to assess potential changes in habitat use patterns and population levels. As applicable, we would recommend that the Space Force address observed effects by incorporating management actions that benefit the species. We recommend that the Space Force implement measures outlined in Appendix C.
11. We recommend that the Space Force conduct vegetation and firebreak maintenance around SLC-4 outside of identified southwestern pond turtle nesting and overwintering periods to the maximum degree practicable. These seasons are generally thought to align with early fall (September); however, guidance can vary geographically and by feature type. Consequently, VSNB biologists familiar with the local population of southwestern pond turtle should be consulted to identify the best period to avoid unintentional impacts to aestivating or nesting southwestern pond turtle if suitable habitat is identified within the vicinity of SLC-4.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

#### REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the reinitiation request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, the exemption issued pursuant to section 7(o)(2) may have lapsed and any further take could be a violation of section 4(d) or 9. Consequently, we recommend that any operations causing such take cease pending reinitiation.

October 4, 2024

California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105-2219

Subject: Request for Denial of Consistency Determination No. CD-0007-24 (United States Space Force) Project

Dear Commissioners,

I am writing to request that the California Coastal Commission deny the Consistency Determination No. CD-0007-24, submitted by the United States Space Force for vegetation removal and management around Vandenberg Space Force Base. While I understand and support efforts to manage invasive species and enhance local ecosystems, there are significant concerns that require addressing before approval of this project.

The report accompanying the Consistency Determination outlines plans for the removal of non-native vegetation, particularly around Spring Canyon, and the replacement of this vegetation with native species. In particular, the plan includes a wetland habitat enhancement project to offset the removal of non-native species such as Tasmanian bluegum eucalyptus, proposing a 2:1 ratio of enhancement area to managed area. The project highlights the restoration and enhancement of native vegetation, such as arroyo willow, which will be critical to reestablishing natural habitats and maintaining ecological balance in riparian and coastal wetland areas.

**However, the exact locations of the proposed native vegetation replacement efforts remain insufficiently detailed.** The report states that these efforts will occur within the same watershed, specifically around creeks and riparian habitats classified as environmentally sensitive habitat areas (ESHAs). Without detailed mapping or a comprehensive restoration plan, it is unclear how effectively these enhancements will mitigate the impacts of vegetation removal and protect these sensitive habitats.

The presence of the federally endangered Gaviota tarplant (*Deinandra increscens ssp. villosa*), found in several locations west and northwest of Lompoc, does not appear to be documented or addressed or mitigated for in the provided project document. It could well occur on the project site.

Another concerning issue is the release of heated water used in the cooling procedures. **It is well known that even a slight increase in water temperature can adversely impact riparian/wetland native plants and other aquatic organisms.**

Given the ecological importance of the site and the potential for significant environmental impacts, I urge the Commission to withhold approval of the project until a thorough vegetation restoration plan is submitted. This plan should include detailed maps of the specific areas targeted for restoration and clear evidence of how the enhancement projects will effectively mitigate the removal of non-native vegetation. Furthermore, it is crucial that Vandenberg Space Force be held accountable for ensuring the long-term success of these efforts, providing adequate proof of mitigation and site restoration measures to the Commission.

The protection of ESHAs is paramount, and any project impacting these areas should be subject to careful consideration and oversight. I request that the Commission require more comprehensive information and hold the project to the highest standards of environmental responsibility.

Thank you for your attention to this matter.

Sincerely,  
California Native Plant Society Channel Islands Chapter

**From:** [ExecutiveStaff@Coastal](mailto:ExecutiveStaff@Coastal)  
**To:** [Horn.Wesley@Coastal](mailto:Horn.Wesley@Coastal)  
**Subject:** FW: Comments on Item 9a for October 10, 2024 by Dolores Howard  
**Date:** Monday, October 7, 2024 4:03:33 PM

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Here's one email...

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**From:** Dolores Howard <thatsnothingnew@gmail.com>  
**Sent:** Friday, October 4, 2024 11:52 AM  
**To:** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>  
**Subject:** Comments on Item 9a for October 10, 2024 by Dolores Howard

Dear Members and Staff of the California Coastal Commission,

In August of this year, I wrote to you and also gave oral comment with my concerns about the proposal then being made for an increase in SpaceX rocket launches. My comments here regarding this new proposal, for even more launches, reiterate some that I made previously and address new issues as well.

- **Sonic boom effects on human and non-human inhabitants in the local area** - the assertion in the staff report for item 9a that "DAF has committed to take steps to further investigate and minimize the spatial extent and magnitude of sonic booms resulting from launches" rings hollow after months of DAF's refusal to admit to the impacts of sonic booms. Increasing the frequency of sonic booms has had and will have an effect on wildlife AND humans; coming late to the discussion should not relieve the DAF from its responsibility for full disclosure and investigation of environmental impacts from the proposed significant increase in launches. The fact that the DAF has recently, very recently, decided to collaborate with the Coastal Commission and other agencies does not provide a track record of what the DAF will do. Vague promises of collaboration do not serve the public or the biodiversity the Commission seeks to protect. Additionally, projects involving restoration of local rivers IS happening throughout California, but those are efforts to reverse historical damages to watersheds and should not be seen as mitigation for new proposed increased launches at VTSB. Such projects should not be the source for piggybacking for DAF on while it harms habitat and humans elsewhere.
- **Chemicals released as satellites burn in the atmosphere leading to damage to Earth's protective ozone layer:** Large amounts of propellants are used in kerosene fuels, releasing particles that can destroy ozone molecules in the stratosphere. After about five years the satellites die and burn up, releasing more than 1,000 tons of aluminum oxide which scientists say may further deplete the ozone layer, our protection from the sun's ultraviolet rays that cause skin cancer, cataracts and impaired immune systems. Allowing increased rocket launches at Vandenberg will show a complete disregard for the sensitivity of the Earth's upper atmosphere. We cannot know the consequences of such an experiment.
- **The effects of rocket crashes on the marine environment are largely unknown:** Concerns about the potential marine impacts of debris falling from rocket launches were first raised at the London Convention and Protocol Scientific Groups meeting in



2018. These include:

- Potential impacts on the marine environment arising from such debris
  - Physical disturbance of seabed/organisms
  - Input of toxic substances
  - Input of litter
  - Input of anthropogenic underwater noise
  - Collision risk
- 
- **California needs to be a good neighbor on our one planet** - The impacts on not only our local coastlines, but also in the coastal areas of Baja California (which is, after all, in name and geography, Lower California) and also on land as a result of these launches, landings and transport of equipment should be of concern to Commissioners.
  - **Lack of baseline data on environmental impacts** - The staff report makes reference to an “anticipated short duration before the Commission will be able to again consider this activity due to the expected submittal of another consistency determination for a further increase in launches to 100 per year” and the “absence of robust data demonstrating that substantially more or different adverse impacts to coastal resources would occur with the proposed launch increase despite implementation of the protective measures previously required by the Commission and accepted by DAF.” In addition, the USFWS stated previously that “although the project has the potential to significantly contribute to the collective effects of the existing launch disturbance baseline and result in long term population level effects, until the novel effects of the project activity are studied, we are unable to anticipate the specific response at this time.” It would be irresponsible to increase the number of launches without the launch impacts data needed. Please let’s not allow forgetfulness on the **issues with the ongoing biological monitoring program at VSFB, including loss of data, lack of analysis, equipment failures, etc.**

Additionally, I must register my skepticism with the claim by the DAF that commercial space launches are critical to national defense. **The project should not be characterized as a federal agency activity, as it involves commercial space launch activities carried out by SpaceX.** It is no coincidence that SpaceX representatives have chosen not to face questions at the Coastal Commission hearings. Again, I ask as I did in August, that Commissioners take no action on this item except to ask staff to research the legal path toward removing it from the federal consistency process and returning it to your commission as a direct permitting (or denying) matter.

This proposal by SpaceX is part of an extensive endeavor to expand, at an alarming rate, the militarization and commercialization of space using the lands, space and waters of California and beyond. In the name of “national defense”, we are swiftly being led down a path of billionaire space travel, greater citizen surveillance, and destruction of natural and human resources within and outside of the borders of the US., all while enriching the 1%. Billions of dollars are being spent on weapons that destroy, and on surveillance tools that harm, when we need funds committed to jobs

in California that help us mitigate for climate change, restore biodiversity and create and re-create a beautiful world. How much does the US need to spend of taxpayer dollars on environmental harm, weapons and surveillance, even as Hurricane Helen victims hear the Federal Emergency Management Agency (FEMA) announcement of a \$9 billion shortfall in funds for recovery?

Commissioners, does the wildlife in the waters off Baja California, or hurricane victims or people being bombed in far off countries have anything to do with you and the decision before you in October 2024? I submit to you that when you consider the proposal for increased rocket launches by SpaceX, you are looking at a bigger picture as well. The Commission mission which states that “the Commission is committed to protecting and enhancing California’s coast and ocean for present and future generations”, you have a moral responsibility to consider how future generations will view the impacts of your decisions on people, climate and biodiversity that will be felt both within and outside of present day political boundaries.

Thank you for reading my comments.

Sincerely,

Dolores Howard  
Paso Robles, California

**From:** [ExecutiveStaff@Coastal](mailto:ExecutiveStaff@Coastal)  
**To:** [Horn\\_Wesley@Coastal](mailto:Horn_Wesley@Coastal)  
**Subject:** FW: Comments by Eric Greening on Item 9a for Thursday, October 10th  
**Date:** Monday, October 7, 2024 4:04:03 PM

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And here's the second one...

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**From:** Eric Greening <dancingsilverowl@gmail.com>  
**Sent:** Thursday, October 3, 2024 11:59 AM  
**To:** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>  
**Subject:** Comments by Eric Greening on Item 9a for Thursday, October 10th

The staff report for this item correctly insists that this private project should not be processed using the federal consistency process; nonetheless, the recommendation for a finding of consistency is made. I believe this would lead to the wrong outcome via the wrong process.

The supposed justification for the finding of consistency is the limited progress that appears to have been made relative to certain local issues, and the hope that further progress can be made. There is no evidence of any attempt to understand, much less mitigate, the GLOBAL issues raised by multiple commenters when this massive increase in launches was before you in August. The public comments made at that time are still relevant, and I would ask that the public comment file for the August hearing be added to the correspondence that comes in for this month's hearing so that it is all in front of the commissioners without the need for us to repeat ourselves. At the very least, I would request that my own written comments from that occasion, with the references to studies on global impacts, be added to the present file, so that it will be presently before the commissioners as they make their decision next Thursday. Failing that, I would encourage the commissioners, staff, and public to go back and read those comments, in addition to those that are presently coming in.

The impacts of the proposal before you give you a responsibility not only to residents of California's Coastal Zone, but to people and creatures worldwide. The proliferation of electromagnetically emissive satellites, including toxic materials, in low Earth orbit, subject to collisions and to orbital decay and re-entry through the ionosphere into the Earth's biosphere, in the thousands leading to tens of thousands leading to hundreds of thousands, constitute a massive experiment to which most of the people and other life-forms placed at risk have not given informed consent. Until a process for obtaining such consent is devised (no idea what it could look like, especially relative to non-human subjects of the experiment), the LACK of consent must be assumed, and you have a moral responsibility to act accordingly, even if it means testing the limit of your powers.

The consequences of failing to rise to this moral challenge could be dire and irreversible.

Thank you, Eric Greening, Atascadero CA

**From:** [Felicia Bander](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Elon Musk's space launches  
**Date:** Thursday, October 3, 2024 7:54:07 PM

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I do not feel that Elon Musk's space launches should be allowed. He is usurping public coastal areas which should be open to all and he is causing pollution and destruction which goes against the public good. This coastal environment should be protected, not allowed to be abused for the private benefit of one of the world's wealthiest men. Please do your job to protect this coastal area for the benefit of the public and the wildlife that inhabit the area.

Sincerely,

Felicia Bander

5810 Ross Branch Rd.

Sebastopol, CA 95472

310 560 6509

**From:** [Phil McKenna](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Public Comment on October 2024 Agenda Item Thursday 9a - Consistency Determination No. CD-0007-24 (United States Space Force).  
**Date:** Thursday, October 3, 2024 4:55:20 PM

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Commissioners,

Ready, shoot, aim; the bullet flies thoughtlessly.

Do not approve 50 launches by year-end until the biological impact of the current launch rate (36) is understood and mitigated. While I am heartened to read in the staff report that the DAF is responsive and collaborative in discussions with the CCC, I fear that the “rush to judgment” is not needed to secure our national security, but rather to bolster SpaceX’s income statement.

The mission creep is excessive; 36/yr. current launches to 50/yr. launches by year-end followed by the expected requested of 100 launches next year. This says nothing of the developing capacity to accommodate re-entry boosters and their cascading BOOM.

The staff report, in its summary on page 3, concludes that “...the simple fact remains that it [SpaceX] is a privately owned company rather than a public federal agency and should therefore be regulated accordingly.”

You said it. Please act appropriately.

Phil McKenna

Sent from [Mail](#) for Windows

**From:** [Keith Tadler](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Agenda item no. Th.9.a (Consistency Determination No. CD-0007-24)  
**Date:** Thursday, October 3, 2024 3:40:39 PM

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No more launches beyond the 36 annual launches already agreed to! Thank you.

Keith Tadler  
842 Maple Street  
Pacific Grove, CA 93950  
831-656-9528  
[keithtadler@sbcglobal.net](mailto:keithtadler@sbcglobal.net)

**From:** [Marina Lenney](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Against additional Space X launches  
**Date:** Thursday, October 3, 2024 9:21:40 AM

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Hello

I am against additional Space X launches due to the environmental impacts on people & animals.

Marina Lenney  
Architect



**From:** [Lynne Kelly](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Agenda Item no. Th.9.a Comment  
**Date:** Thursday, October 3, 2024 8:47:46 AM

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To Coastal Commission Hearing on Thursday October 10, 2024

I am asking the Commission to OBJECT to SpaceX's proposed increase. The environmental effects of 36 annual SpaceX launches must be studied and understood before any additional increases are considered.

Sincerely,  
Lynne Kelly

**From:** [Kathy Yaeger](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Gaviota Coast  
**Date:** Thursday, October 3, 2024 8:04:00 AM

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Please let me one of many voices for the voiceless inhabitants of the Gaviota coast. Please do not approve any further private sector launches until all studies have determined the effects on wildlife.

It is your drop to protect our voiceless wildlife!

Thank you!

**From:** [Smith\\_Joshua@Coastal](mailto:Smith_Joshua@Coastal)  
**To:** [Horn\\_Wesley@Coastal](mailto:Horn_Wesley@Coastal)  
**Subject:** Fw: Sonic Booms from SpaceX rocket launches  
**Date:** Monday, September 30, 2024 3:20:54 PM  
**Attachments:** [Outlook-qujbtepi.png](#)

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fyi ...



Joshua Smith  
California Coastal Commission  
Public Information Officer  
[joshua.smith@coastal.ca.gov](mailto:joshua.smith@coastal.ca.gov)

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**From:** shanna taylor <[shannashannashanna@hotmail.com](mailto:shannashannashanna@hotmail.com)>  
**Sent:** Saturday, September 28, 2024 8:08 AM  
**To:** Smith, Joshua@Coastal <[Joshua.Smith@coastal.ca.gov](mailto:Joshua.Smith@coastal.ca.gov)>; [tiffany.whitsitt-odell@spaceforce.mil](mailto:tiffany.whitsitt-odell@spaceforce.mil)  
<[tiffany.whitsitt-odell@spaceforce.mil](mailto:tiffany.whitsitt-odell@spaceforce.mil)>  
**Subject:** Sonic Booms from SpaceX rocket launches

September 28, 2024 Input to Coastal Commission and the Center for Environmental Management of Military Lands at Vandenberg Air Force Base.

Joshua,

I am glad to hear that you, as a Coastal Commission Public Information Officer, are working on collecting feedback about impacts of VAFB launches and associated sonic booms, and folks can reach you at [joshua.smith@coastal.ca.gov](mailto:joshua.smith@coastal.ca.gov).

Tiffany,

I understand that the government is inviting public comment through October 17 on the proposal to INCREASE sonic boom producing launches via email to you at [tiffany.whitsitt-odell@spaceforce.mil](mailto:tiffany.whitsitt-odell@spaceforce.mil). Tiffany, I am glad you have been a Wildlife Biologist at Center for Environmental Management of Military Lands at Vandenberg Air Force Base for the last 8 years.

Joshua and Tiffany,

The impact of sonic booms on people in Ventura County is real. VAFB's position that there is no significant impact on the public is not accurate. **I ask that the launches be adjusted so that sonic booms are reduced significantly within Ventura County and the impact on people and wildlife is reduced.**

SpaceX has applied to increase the number of rocket launches from Vandenberg to 50 per year. At that proposed number, launches will occur on average once a week. Many of these launches will produce the sonic boom that we experience in Ventura County. A further increase to 100 launches per year is also being considered. The government's draft assessment is that there will be No Significant Impact (i.e. approve it).

**These proposed increase in rocket launches have a significant impact on Ventura County people and wildlife. They should be reduced, not increased. I would like to see the results of studies done about the impact of these launches on buildings, wildlife and people. I would like to see the science behind the “no significant impact” government draft assessment. Where can I read that? I might feel safer knowing the science, as my 100-year-old home, a designated historic landmark in Ventura, rattles during the launches.**

These are my basic understandings, that inform my input. If I have any of this wrong, please to explain where I am off:

- The increased sonic booms over Ventura County are related to SpaceX, a private company, that is part of, but not 100% of, what is on these launches.
- SpaceX business needs drive the recent increase in launches and the proposal for future increased launches.
- The trajectories of these launches and the resulting sonic booms over Ventura County could be changed, to avoid the sonic booms over Ventura County.
- The SpaceX business produces an income stream for the government.
- The increased sonics booms over Ventura County are NOT related to an immediate specific public safety or defense need. From what I understand, we are not asked to endure these startling and home-shaking sonic booms at all hours because of a short term national security issue.
- Increasing sonic booms over Ventura County and declaring them as having no significant impact, is a business decision of VAFB.
- The impact on the residents of Ventura County is not significant to VAFB considering the economic value of the SpaceX contract.

Here is some further info from local media, including details on SpaceX's refusal to address the impact of sonic booms on both people and wildlife:

<https://www.independent.com/2024/09/17/falcon-9-launch-cadence-increase-environmental-assessment/>

<https://amigos805.com/bilingual-report-falcon-9-launch-cadence-increate-environmental-assessment/>

<https://lompocrecord.com/news/local/military/vandenberg/increased-vsfb-launch-assessment-finds-no-significant-impact-public-comment-period-opens->

[tuesday/article\\_ab4ecdcb-2a27-5939-a541-9d7d27a8a290.html](https://santamariatimes.com/news/local/military/vandenberg/increased-vsfb-launch-assessment-finds-no-significant-impact-public-comment-period-opens-tuesday/article_ab4ecdcb-2a27-5939-a541-9d7d27a8a290.html)

[https://santamariatimes.com/news/local/military/vandenberg/increased-vsfb-launch-assessment-finds-no-significant-impact-public-comment-period-opens-tuesday/article\\_2fc7ebde-7479-11ef-9111-0f2126fdded3b.html](https://santamariatimes.com/news/local/military/vandenberg/increased-vsfb-launch-assessment-finds-no-significant-impact-public-comment-period-opens-tuesday/article_2fc7ebde-7479-11ef-9111-0f2126fdded3b.html)

Shanna Wasson Taylor

Ventura CA

**From:** [Smith\\_Joshua@Coastal](mailto:Smith_Joshua@Coastal)  
**To:** [Horn\\_Wesley@Coastal](mailto:Horn_Wesley@Coastal)  
**Subject:** Fw: FEEDBACK - Sonic Booms  
**Date:** Monday, September 30, 2024 3:16:36 PM  
**Attachments:** [Outlook-nbsvldsw.png](#)

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fyi ...



Joshua Smith  
California Coastal Commission  
Public Information Officer  
[joshua.smith@coastal.ca.gov](mailto:joshua.smith@coastal.ca.gov)

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**From:** Chris K <[cketvirtis@gmail.com](mailto:cketvirtis@gmail.com)>  
**Sent:** Sunday, September 29, 2024 5:00 AM  
**To:** [tiffany.whitsitt-odell@spaceforce.mil](mailto:tiffany.whitsitt-odell@spaceforce.mil) <[tiffany.whitsitt-odell@spaceforce.mil](mailto:tiffany.whitsitt-odell@spaceforce.mil)>; Smith, Joshua@Coastal <[Joshua.Smith@coastal.ca.gov](mailto:Joshua.Smith@coastal.ca.gov)>  
**Subject:** FEEDBACK - Sonic Booms

Hello -

I understand that SpaceX has applied to increase the number of rocket launches from Vandenberg to 50 per year. And that the government's draft assessment is that there will be No Significant Impact locally. This is not true!

I'm a resident of the city of Ventura and disagree with this assessment! The last loud sonic boom about a week ago was very startling and my wall shook! The impact of sonic booms on both people and wildlife are harmful. Personally, I find them very nerve racking and that is bad for my health!

I vote that any increase in the amount of sonic booms be DENIED! Thank you,  
Christine Ketvirtis

**From:** [Kelly Griffin](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Public Comment on October 2024 Agenda Item Thursday 9a - Consistency Determination No. CD-0007-24 (United States Space Force).  
**Date:** Saturday, September 28, 2024 3:43:47 PM

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Hello,

I live in Santa Barbara and I am opposed to increasing the number of launches from Vandenburg. It is bad for the marine life and irresponsible to junk up the night sky.

Thank you,  
-Kelly Griffin

**From:** [Ashley Griffin](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Public Comment on October 2024 Agenda Item Thursday 9a - Consistency Determination No. CD-0007-24 (United States Space Force).  
**Date:** Saturday, September 28, 2024 8:30:36 AM

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Hello,

I live in Goleta and can see the rocket launches from my house. They used to be rare, exciting events! We would run outside and watch the trail of the rocket and wait for the sonic boom. Now, however, they occur so frequently that we no longer bother going outside to look at them, and the sonic boom is just another noise to deal with.

Please do **not** increase the number of launches that SpaceX is allowed! I would prefer they be decreased or eliminated.

When I go camping, it is terrifying to look at the beautiful night sky and see it marred by the Starlink satellites marching across in a seemingly unending line. Not to mention all of the other satellites blinking and negatively impacting the night sky. Furthermore, *Wired* magazine published an article last year about the dangers of space junk. The more satellites SpaceX puts in the sky, the more future space junk there is to fall back to Earth.

Most importantly, I recently learned that the sonic booms from the rocket launches negatively impact our underwater wildlife off the Santa Barbara coast. It is unacceptable that SpaceX's rocket launches could be killing whales in or near the Channel Islands National Marine Sanctuary.

Once again, I urge you NOT to increase SpaceX's annual rocket launch allowances.

-Ashley

*(pronouns: she/her/hers)*



**From:** [Lynn Arneill-Brown](#)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Public Comment on October 2024 Agenda Item Thursday 9a - Consistency Determination No. CD-0007-24 (United States Space Force).  
**Date:** Friday, September 27, 2024 11:33:57 AM

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Many people in S. California do not want to see an increase in launches at Vandenberg AFB, primarily due to the number of sonic booms occurring at various levels throughout the State.

Since the many complaints started pouring into the Coastal Commission...Space X actually managed the landings so we did not get any sonic booms in Ventura for 6 months. Now we have had 3 significant sonic booms in September. Specifically the 12 around 6:48 pm, 9/20 and 9/24 at 9:08pm.

The complaints and people plain scared out of their minds have risen on the Nextdoor App for our area 20 fold this month. I have no idea what damage this is doing to our houses.

Space X and the Government can not be trusted to care about us. The Government should not increase their launches at Vandenberg.

Sincerely,

Lynn Arneill-Brown

**From:** [Melanja Jones](mailto:Melanja_Jones@coastal.ca.gov)  
**To:** [Energy@Coastal](mailto:Energy@Coastal)  
**Subject:** Re: FW: Hearing Notice - United States Space Force Consistency Determination No. CD-0003-24  
**Date:** Thursday, September 26, 2024 8:24:36 AM

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Following up on the hearing notice regarding SpaceX.

The sonic boom from the launch on Tuesday for Starlink shook my apartment and rattled windows the windows. I live on Carpinteria a mile from the seal sanctuary. If it was that loud in Carp I can only imagine how loud it was closer to Vandenberg. SpaceX needs to show a little more accountability for the effects of its private enterprise before increasing the launch schedule. The previous report listed all sorts of monitoring and remediation measures but they arent off to a great start.

Thank you for your consideration

Best regards

Melanja Jones  
9702317426

On Fri, Jul 26, 2024, 7:05 PM Melanja Jones <[melanjaj@gmail.com](mailto:melanjaj@gmail.com)> wrote:

Thank you for the notice

I am actually very impressed by the work the coastal commission has done on this.

My specific interest lies with the sonic booms in the Santa Barbara south county, especially affecting the seal rookery in Carpinteria. From what I can tell in this report they are working on a plan to limit the effects of those on the mama and baby seals which is positive.

Reading further down the report I still have a lot of concerns about the ever increasing number of launches and urge the Coastal Commission to continue to monitor and limit the effect of pollution from the launches.

On Fri, Jul 26, 2024 at 11:00 AM Energy@Coastal <[EORFC@coastal.ca.gov](mailto:EORFC@coastal.ca.gov)> wrote:

Dear Interested Parties,

Attached please find the August 8<sup>th</sup> agenda notice for the Coastal Commission's August 2024 Meeting when the Commission will hear the consistency determination by the United States Space Force to increase Space Exploration Technologies' (SpaceX) Falcon 9 launch and landing activities at Vandenberg Space Force Base (VSFB) from six to 36 per year as well as the addition of offshore landing locations in the Pacific Ocean Vandenberg Space Force Base, Santa Barbara County.