

CALIFORNIA COASTAL COMMISSION

455 MARKET STREET, SUITE 300  
SAN FRANCISCO, CA 94105-2219  
FAX (415) 904-5400  
Voice (415) 904-5200



W13a

CD-0003-24 (United States Space Force)  
April 10, 2024

EXHIBITS

EXHIBIT 1 (LOCATION MAP).....2

EXHIBIT 2 (AERIAL OVERVIEW).....3

EXHIBIT 3 (DOWNRANGE LANDING AREA).....4

EXHIBIT 4 (AREA OF VEGETATION MANAGEMENT).....5

EXHIBIT 5 (RESTORATION AREA) .....6

EXHIBIT 6 (SOUND AND SONIC BOOM PROFILES) .....7

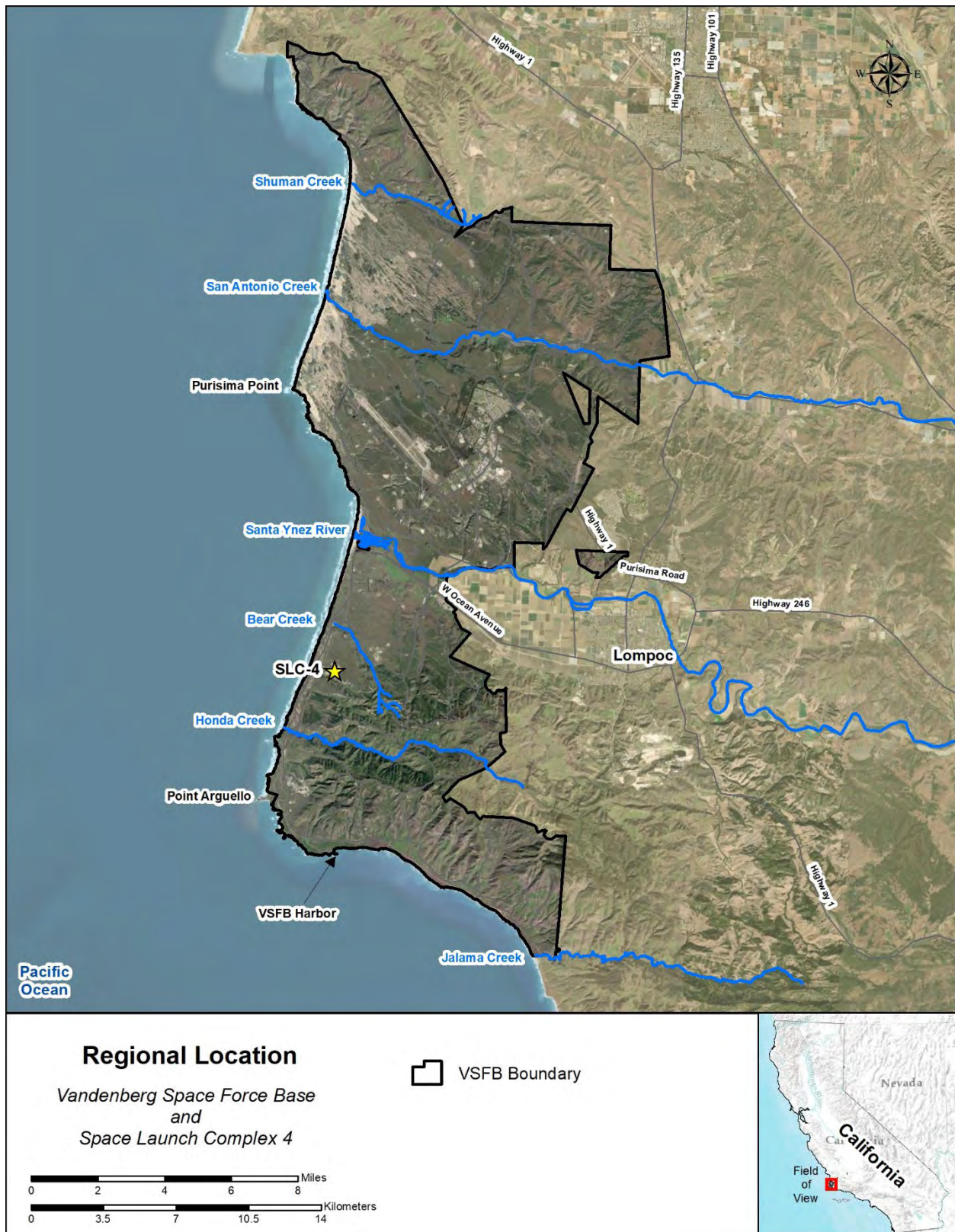
EXHIBIT 7 (CURRENT AND FUTURE ACTIVITY AT VSFB).....18

EXHIBIT 8 (LAUNCH HAZARD AREAS FOR FISHERMEN).....19

EXHIBIT 9 (REMEDIAL ACTION LETTER).....20

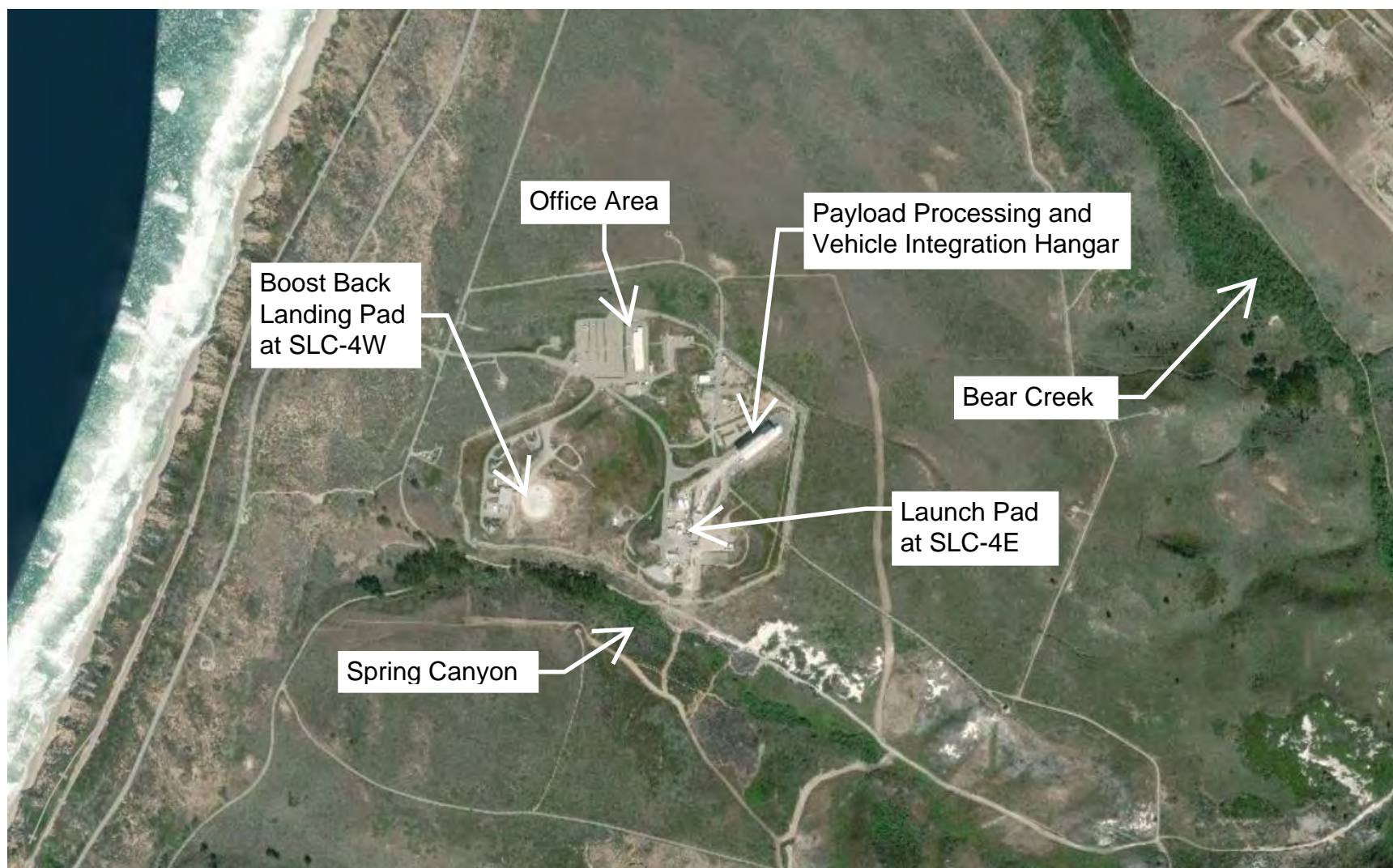
EXHIBIT 10 (EMAIL NOTIFICATIONS TO CAMPERS) .....23

Figure 1-1: Regional Location of Proposed Action Area



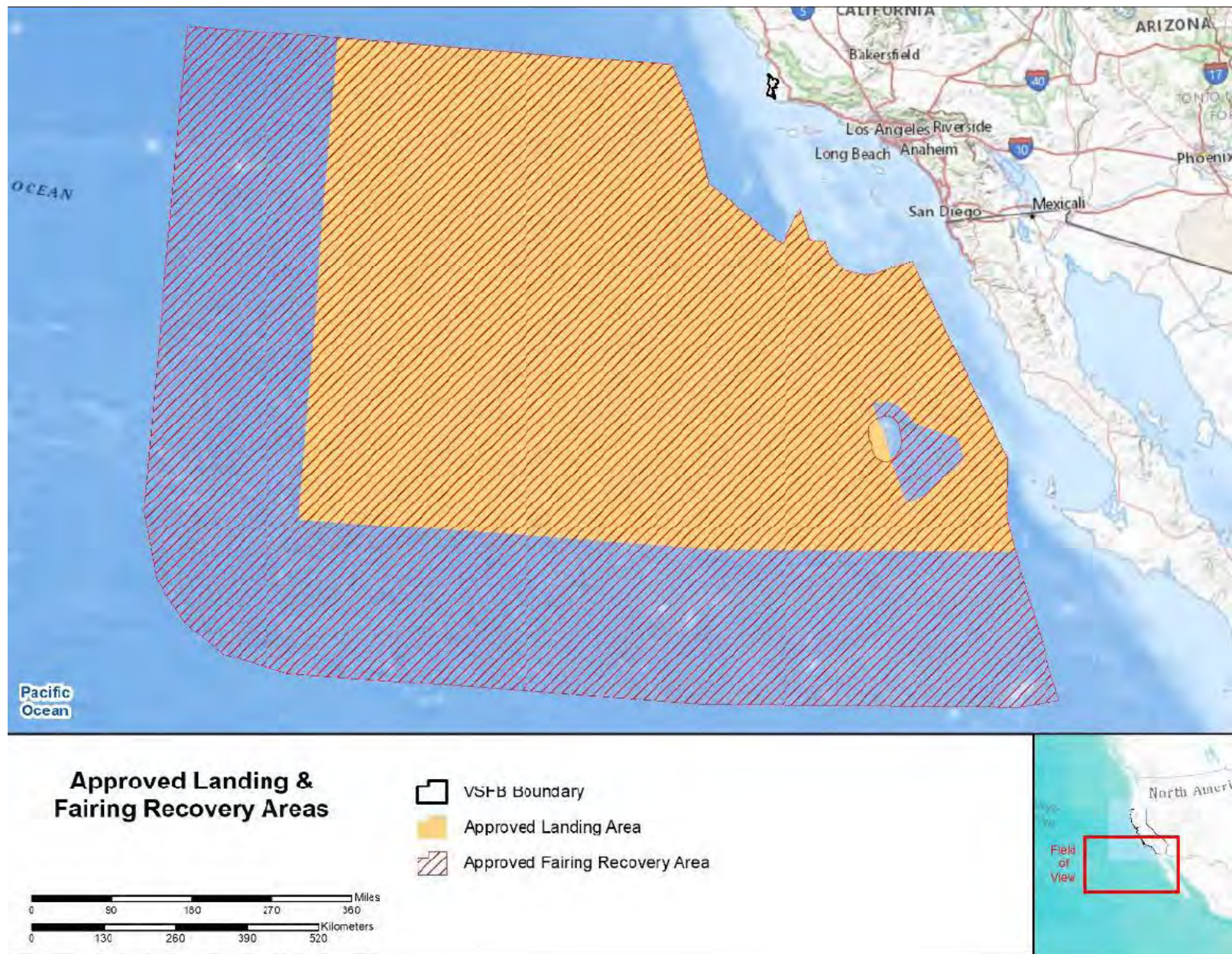
**Exhibit 1**  
CD-0003-24





**Exhibit 2**  
CD-0003-24





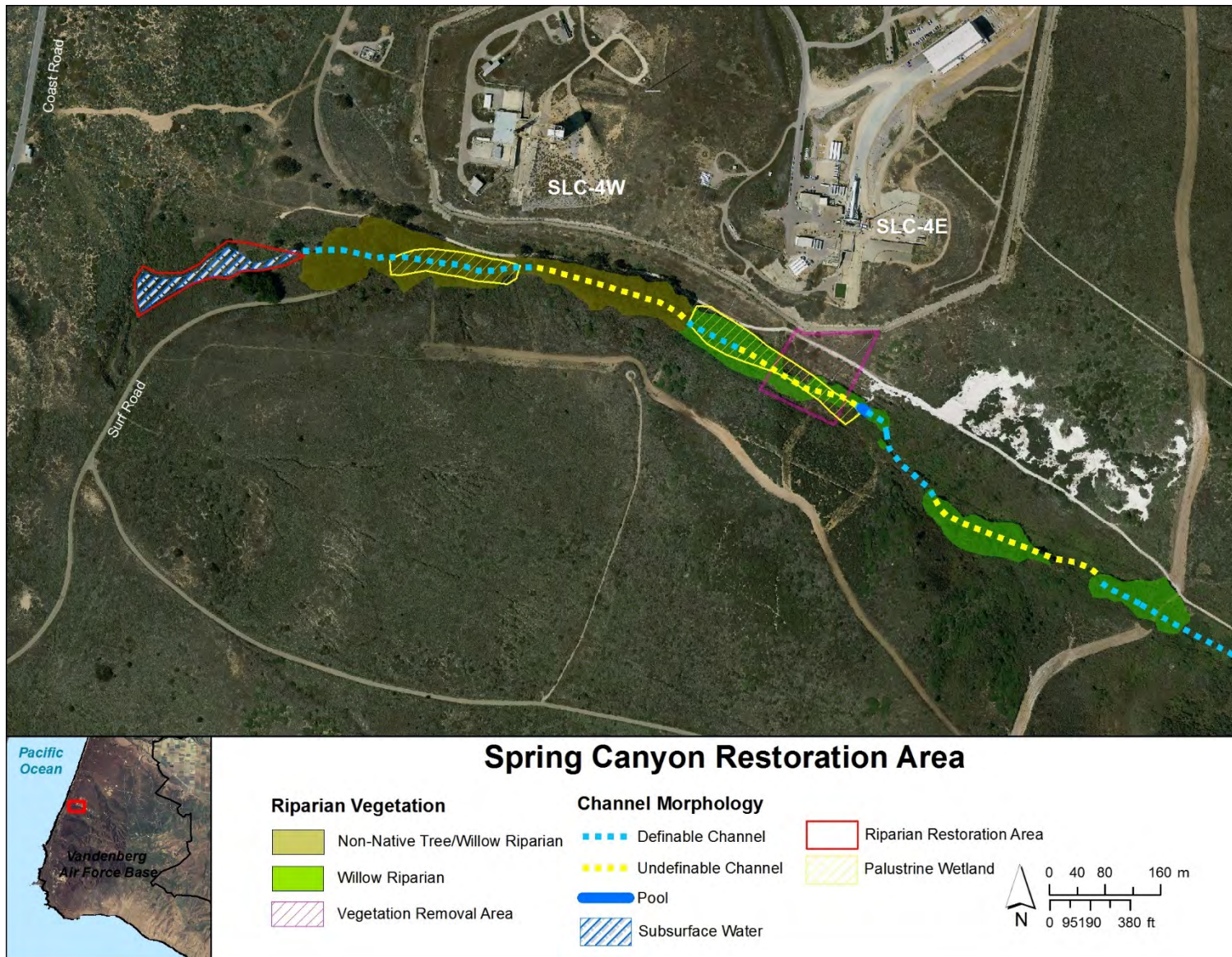
**Exhibit 3**  
CD-0003-24





**Figure 1-2.** Civil Water Diversion Structure and Vegetation Removal Area south of SLC-4 in Spring Canyon.





**Figure 1-3.** Spring Canyon Restoration Area. Note: "Definable" versus "Undefinable" channel were primarily estimated during an assessment performed in 2013 (ManTech SRS Technologies, Inc. 2013).



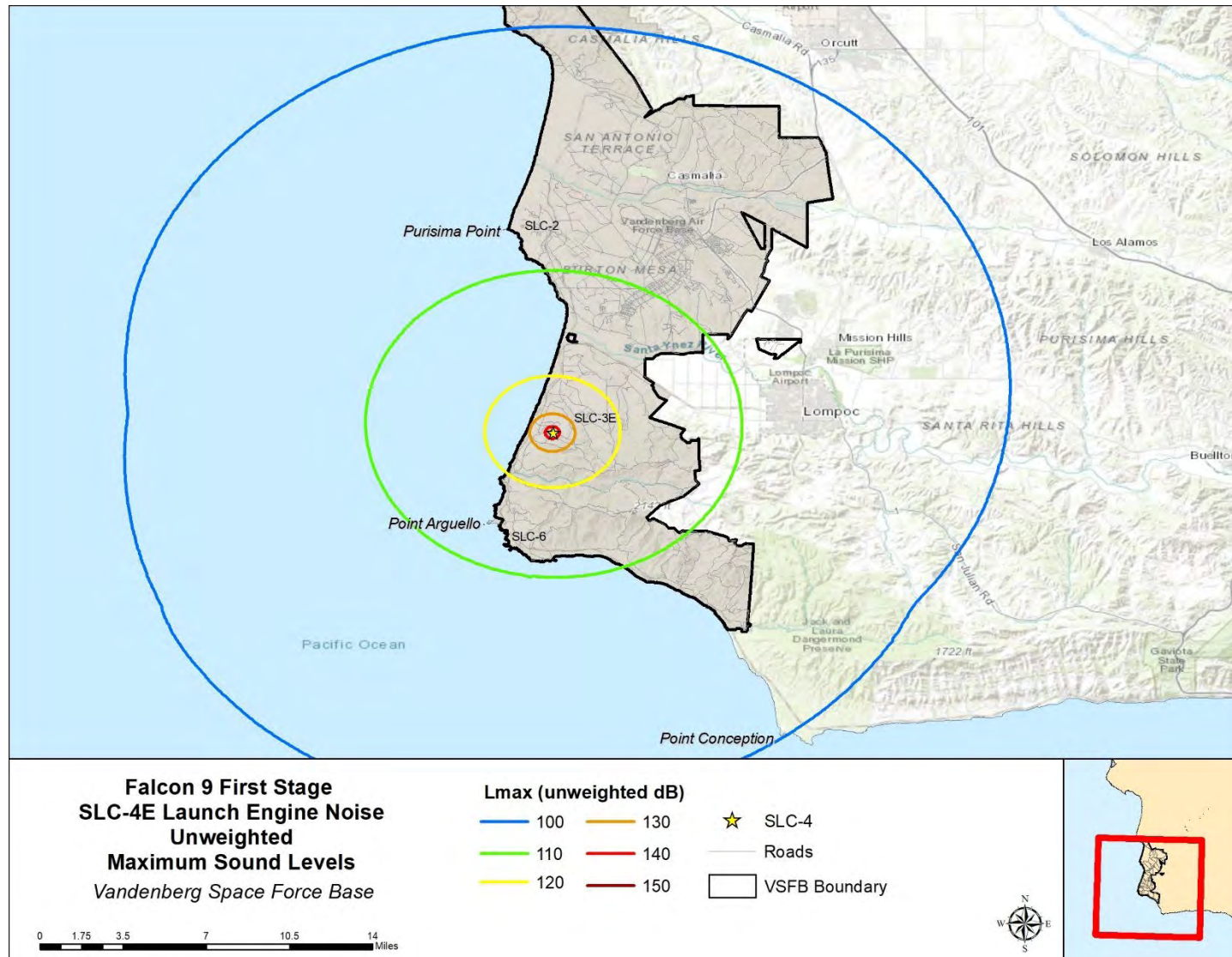


Figure 2.2-2. Maximum Unweighted Engine Noise During Falcon 9 Launch from SLC-4E

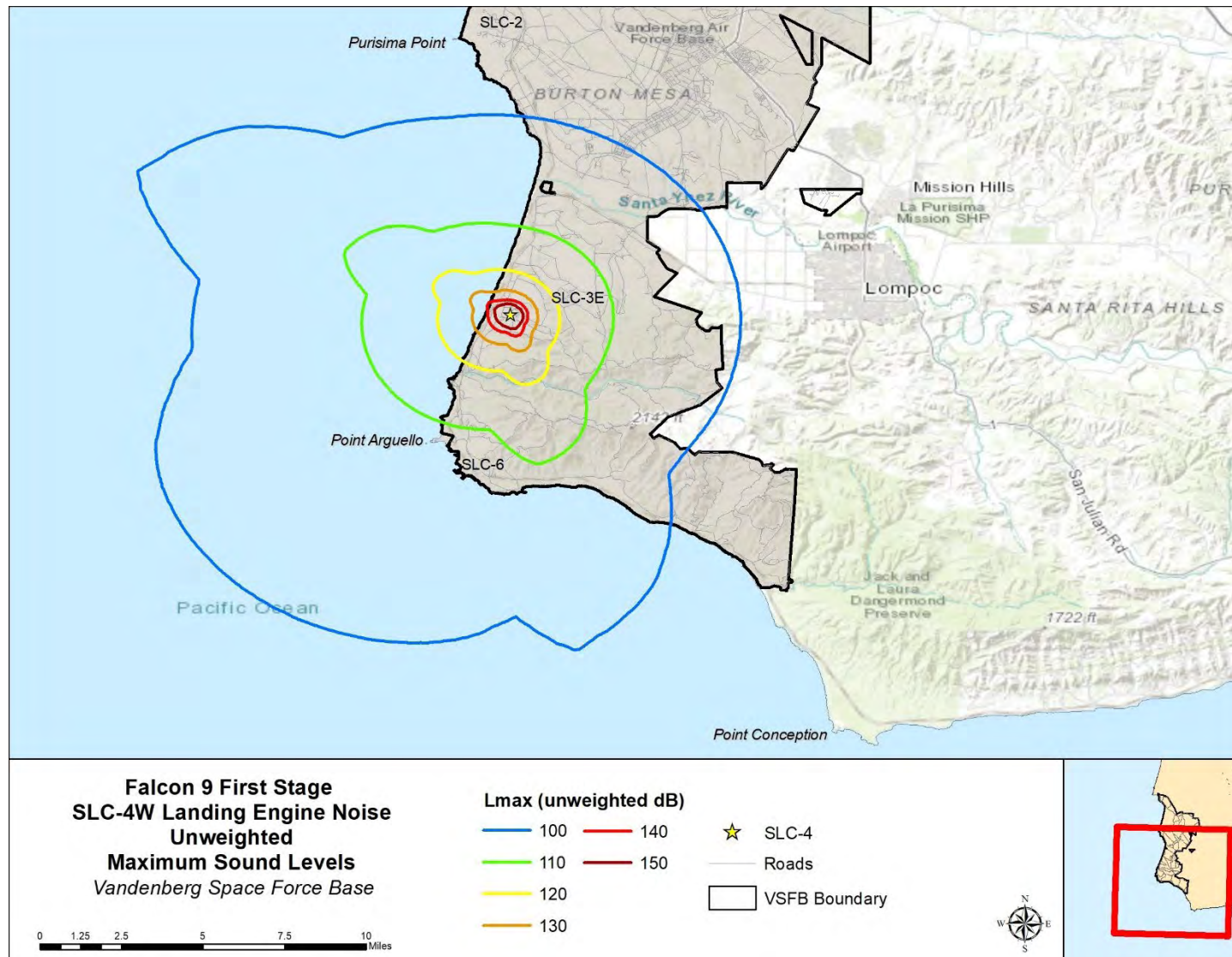


Figure 2.2-3. Maximum Unweighted Engine Noise During Falcon 9 First Stage Landing at SLC-4W



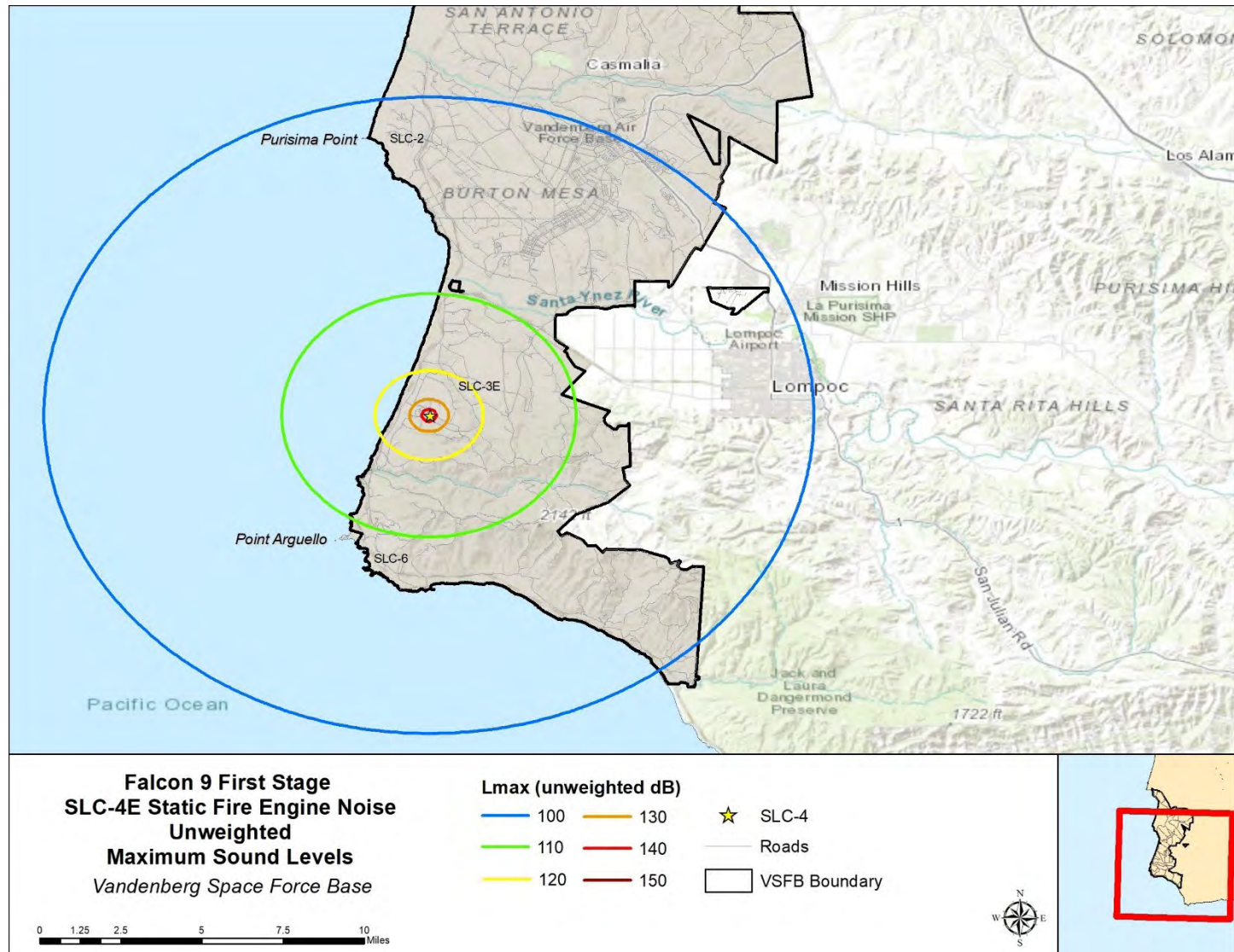
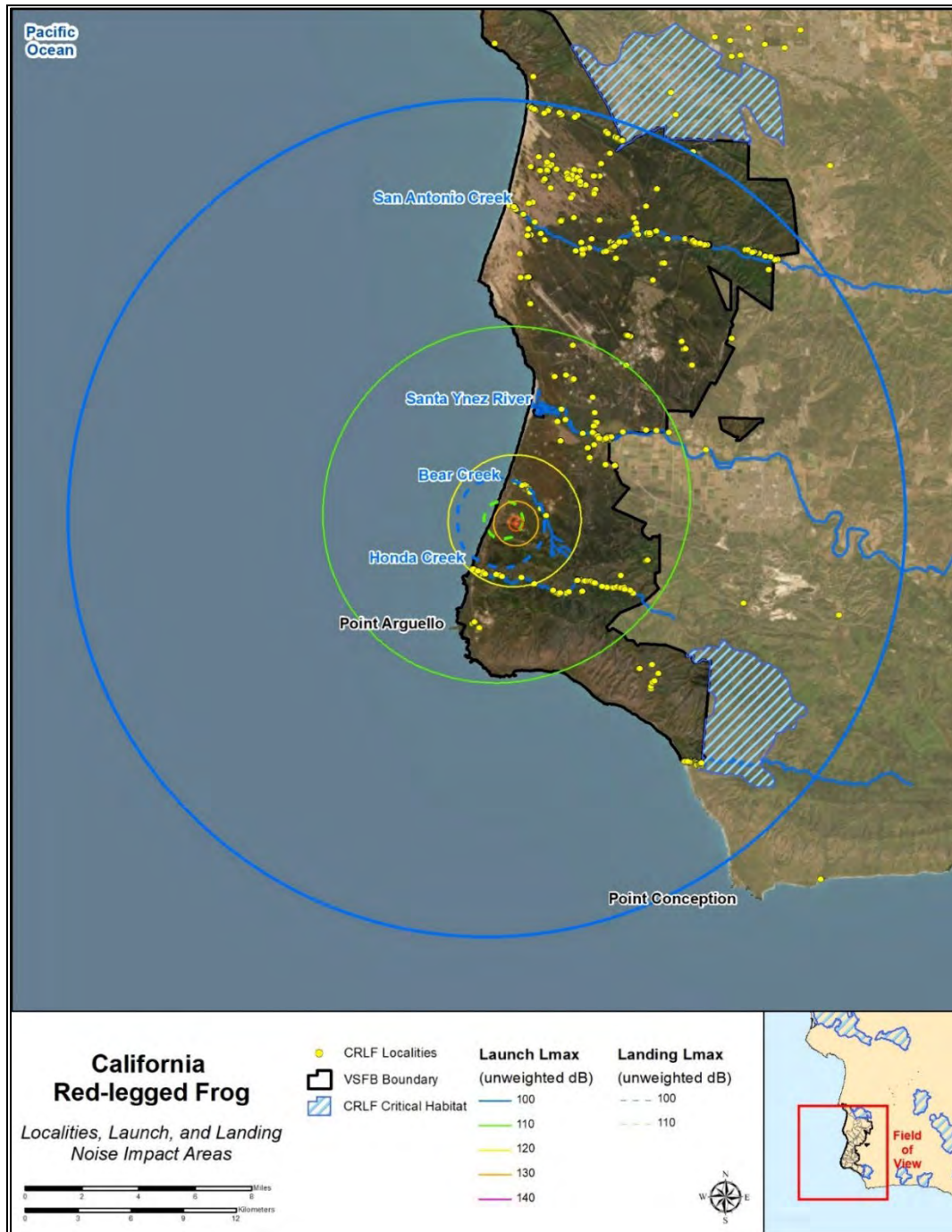


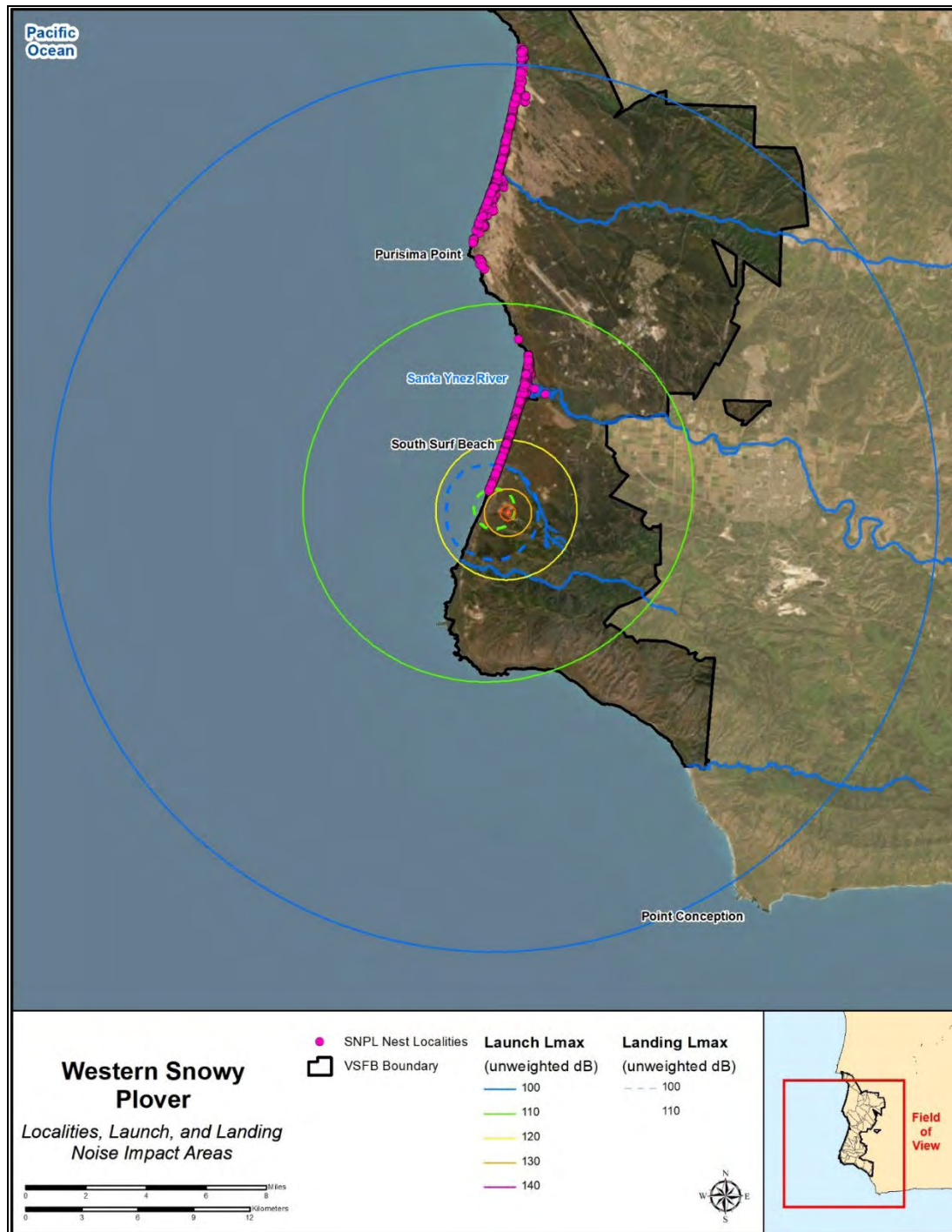
Figure 2.2-4. Maximum Unweighted Engine Noise During Falcon 9 Static Fire at SLC-4W

## APPENDIX A

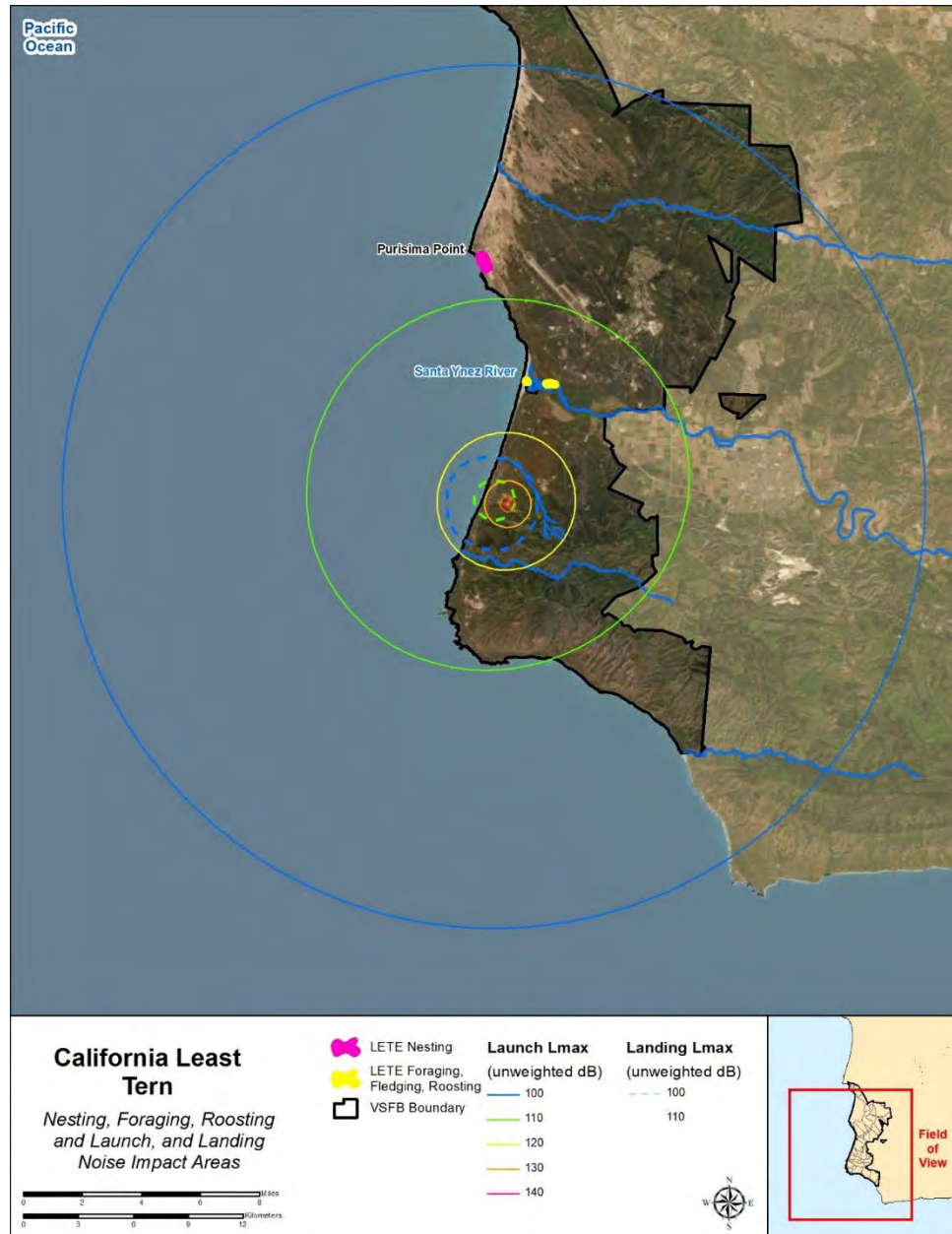


**Figure 1a.** California red-legged frog occurrences and the projected Launch Noise Effect Area.



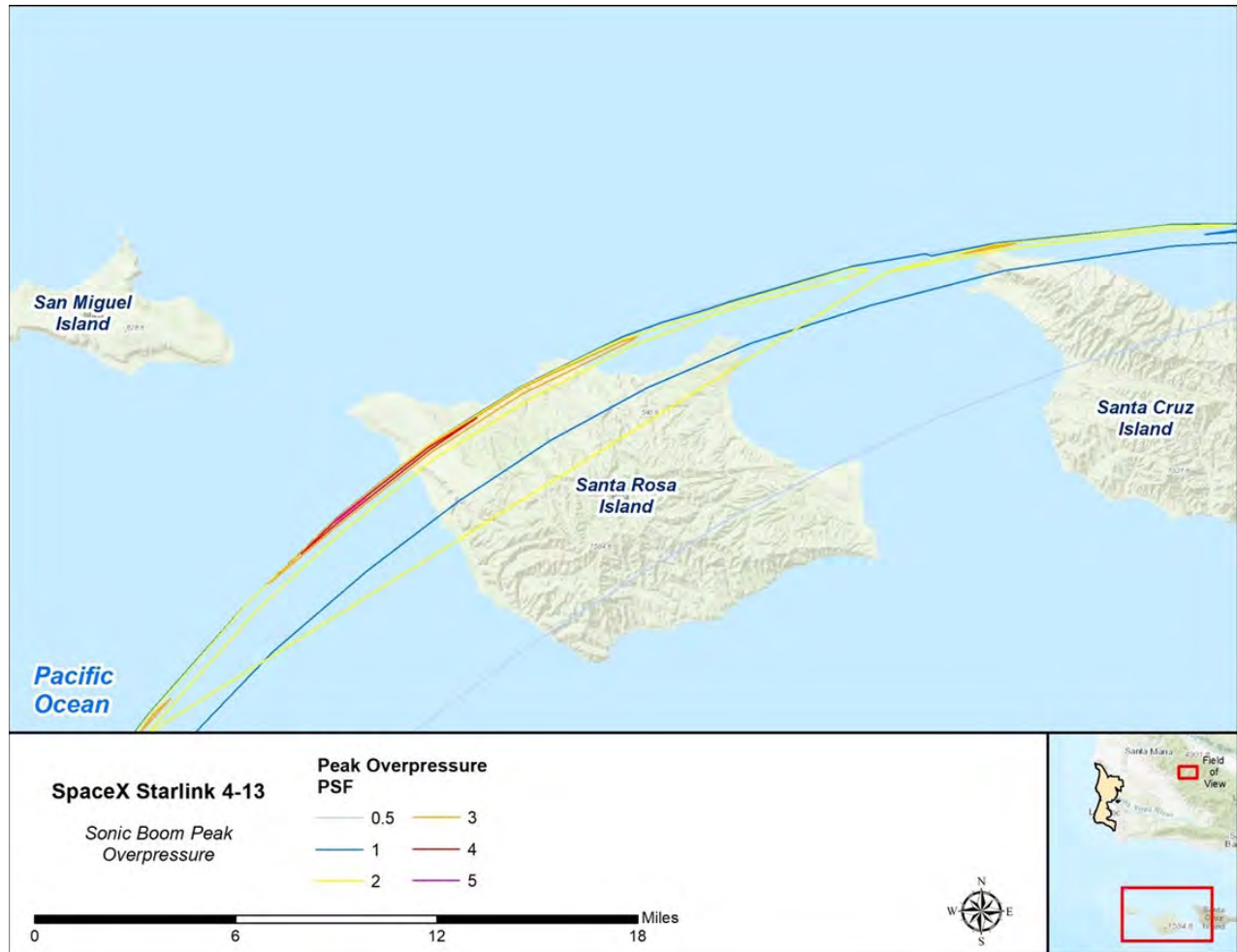


**Figure 1b.** Western snowy plover nesting occurrences and the projected Launch Noise Effect Area.

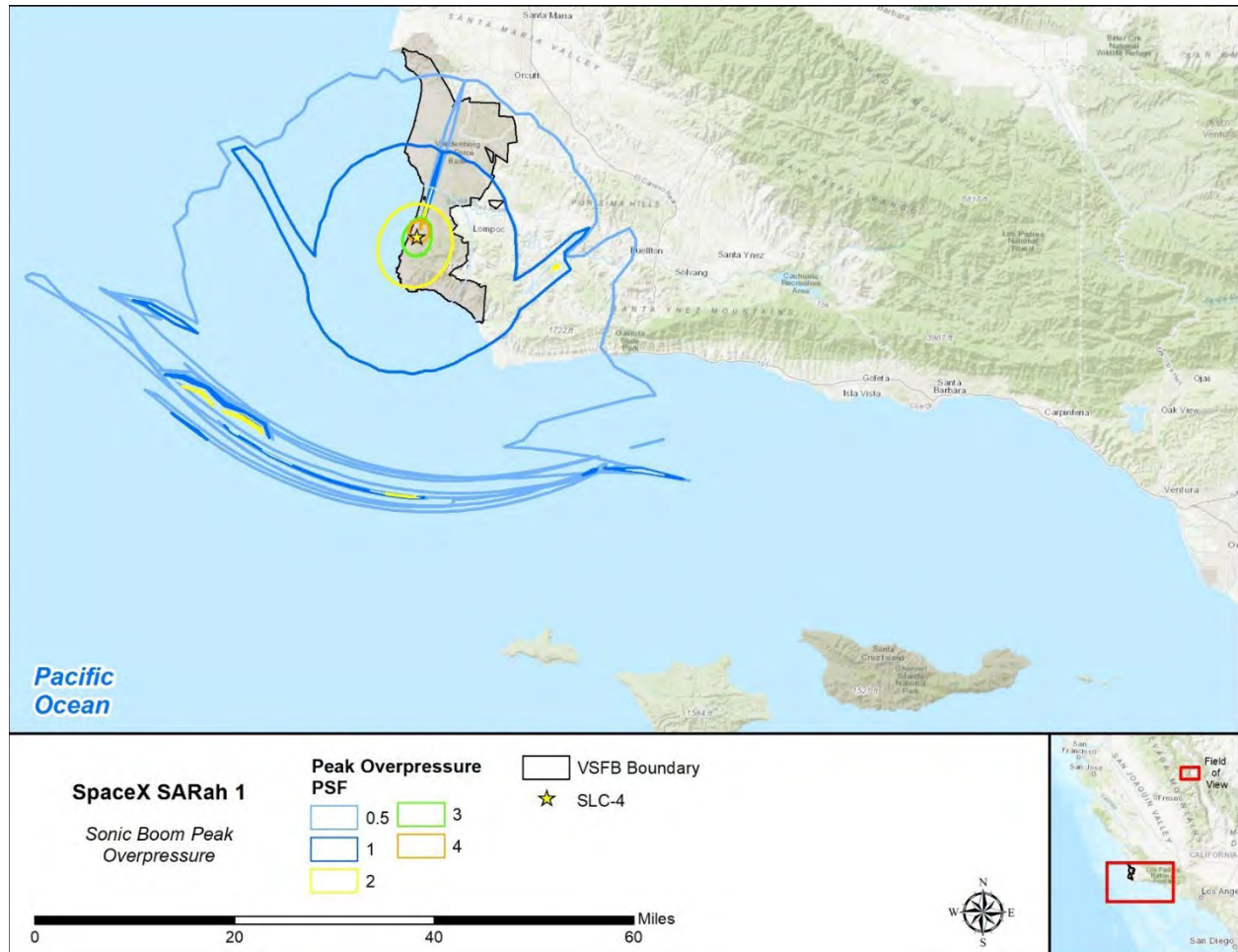


**Figure 1c.** California least tern nesting occurrences and the projected Launch Noise Effect Area.



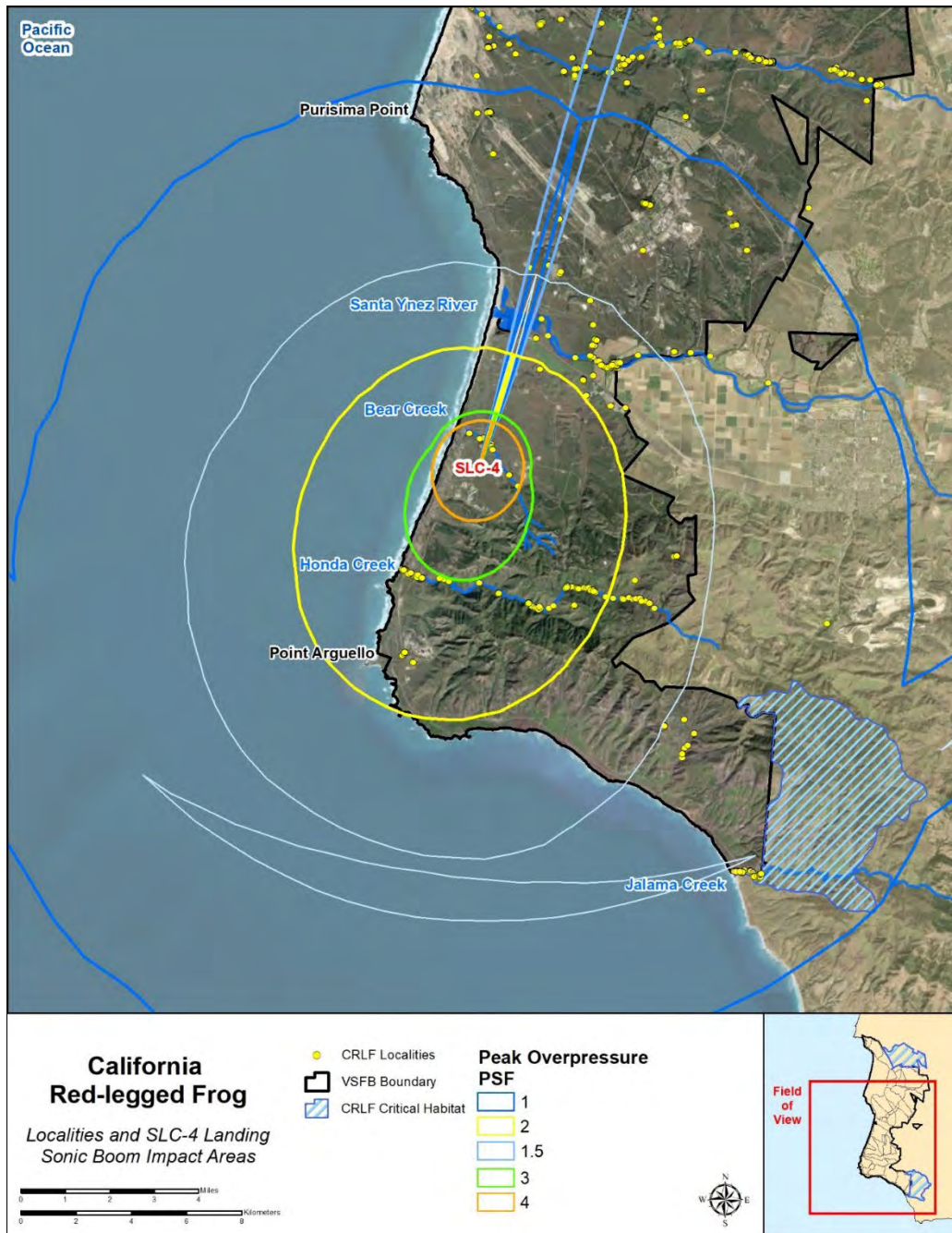


**Figure 2a.** Portion of the Sonic Boom Overpressure Effect Area impacting the Northern Channel Islands during launch ascent.

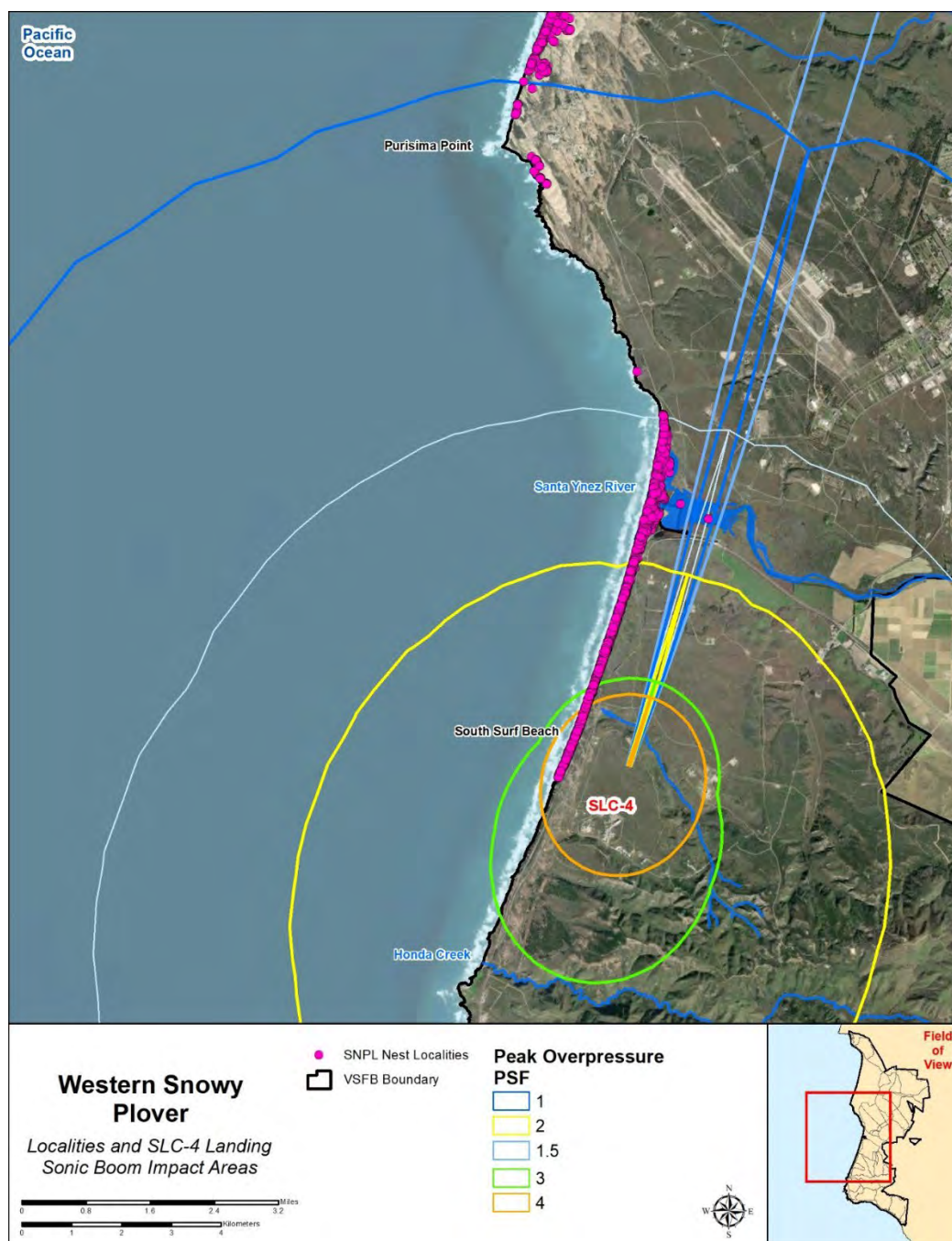


**Figure 2b.** The Sonic Boom Overpressure Effect Area impacting VSFB during launch descent to SLC-4.



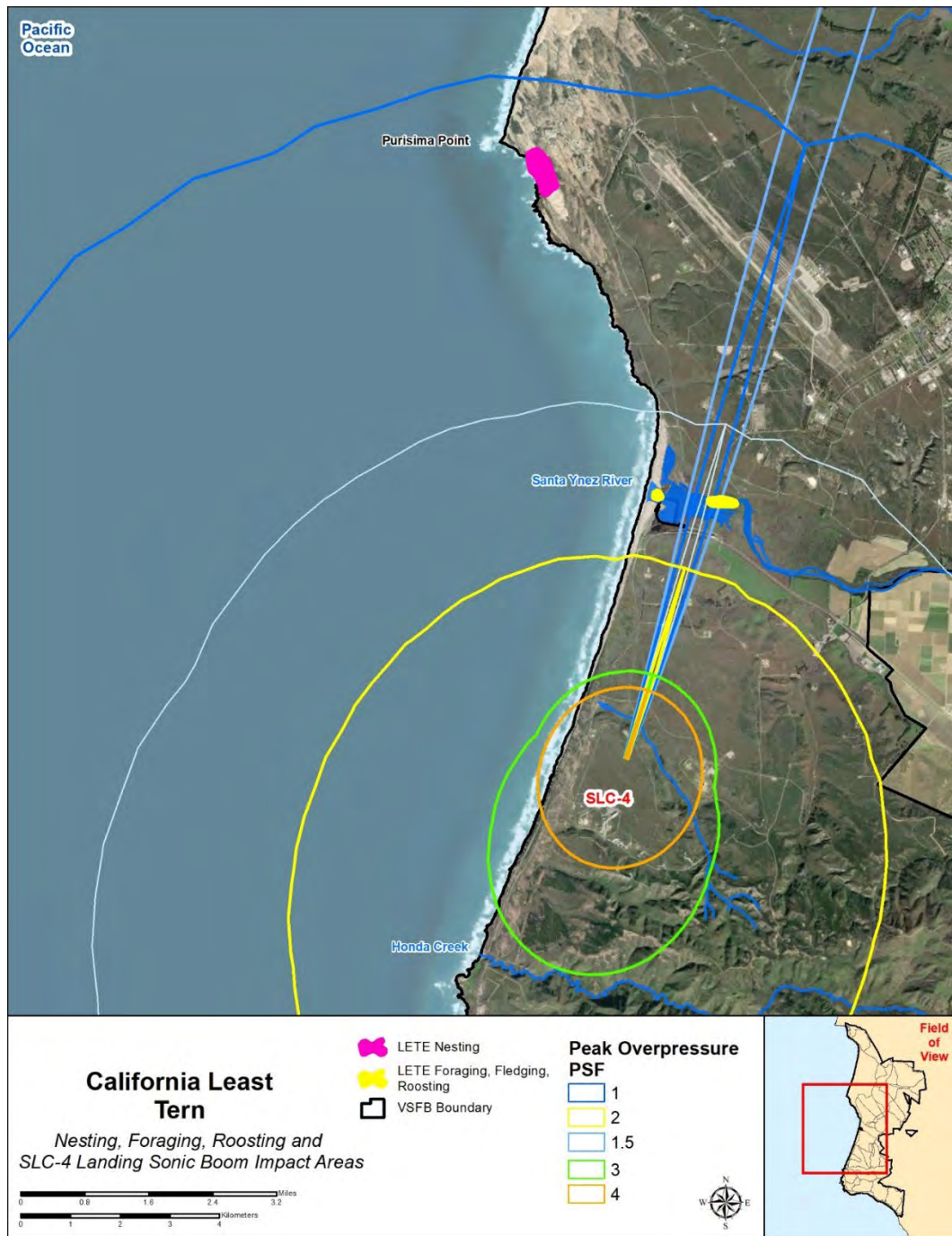


**Figure 2c.** California red-legged frog occurrences and the projected Sonic Boom Overpressure Effect Area produced during vehicle landing at SLC-4.

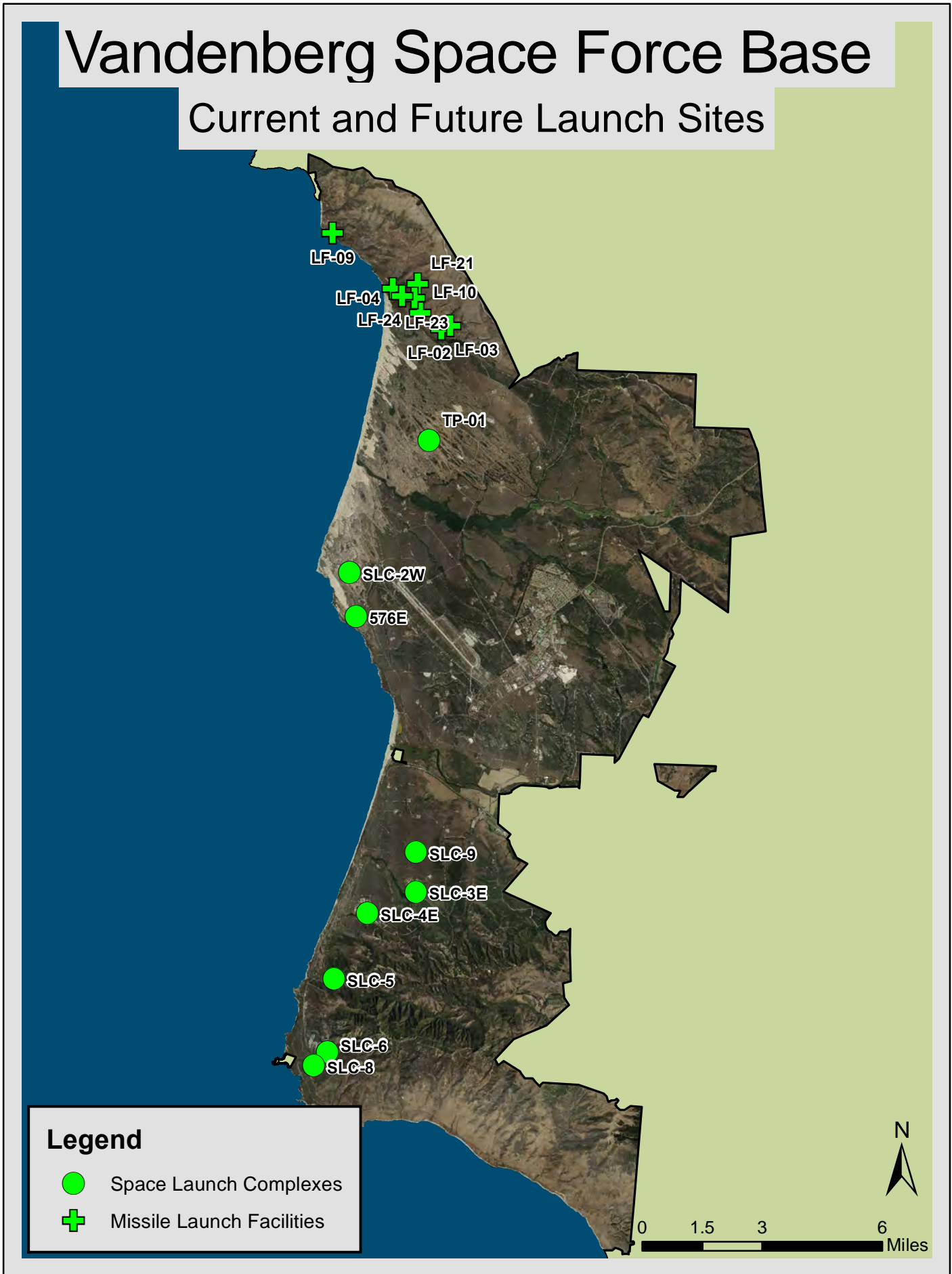


**Figure 2d.** Western snowy plover occurrences and the projected Sonic Boom Overpressure Effect Area produced during vehicle landing at SLC-4.





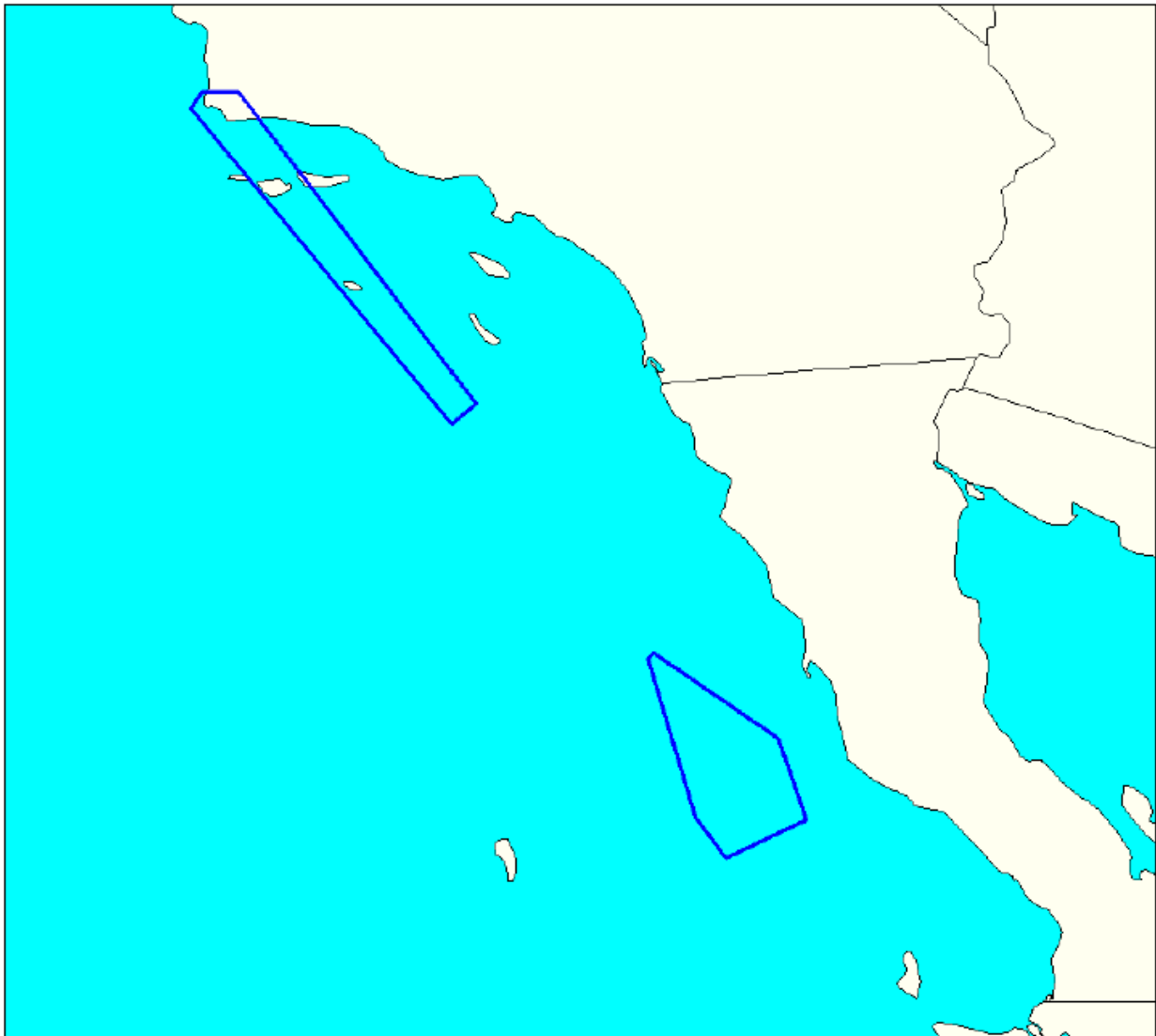
**Figure 2e.** California least tern occurrences and the projected Sonic Boom Overpressure Effect Area produced during vehicle landing at SLC-4.



Note: SLC-5 and SLC-9 are proposed and not yet constructed, all other space launch and missile launch facilities are constructed and operational.

**Exhibit 7**  
CD-0003-24





**Exhibit 8**  
CD-0003-24

**CALIFORNIA COASTAL COMMISSION**

ENERGY, OCEAN RESOURCES AND FEDERAL CONSISTENCY  
455 MARKET STREET, SUITE 300  
SAN FRANCISCO, CA 94105-2421  
VOICE (415) 904-5200  
FAX (415) 904-5400



February 16, 2024

Beatrice L. Kephart  
United States Space Force  
30 CES/CEI  
1028 Iceland Avenue  
Vandenberg SFB, CA 93437-6010

**Re: Remedial Action Proposal – SpaceX Falcon 9 Space Launch Activities**

Dear Chief Kephart,

The purpose of this letter is to provide notification and supporting information regarding the determination by the California Coastal Commission (Commission) that the project to expand the Space Exploration Technologies (SpaceX) Falcon 9 space launch and landing program at Vandenberg Space Force Base (VSFB), for which the U.S. Space Force submitted to the Commission a negative determination (no. ND-0009-23), is being conducted and is having effects on coastal uses and resources substantially different than originally described and as a result, is affecting coastal uses and resources and is not consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program (CCMP). This letter further proposes several remedial actions for the U.S. Space Force to take to address the situation.

Commission staff appreciates the close communications with your staff over the past several months to better understand the history, need, and process for Falcon 9 space launch and landing operations at VSFB. We also appreciate your efforts to work with us to identify a pathway to address the inconsistency of those operations with the CCMP. We look forward to continuing this coordination.

**Subject Negative Determination**

On May 5, 2023, the Commission's Executive Director concurred with negative determination no. ND-0009-23 by the U.S. Space Force for an expansion of the SpaceX Falcon 9 program at VSFB from six to 36 annual launches from the existing SLC-4E launch complex as well as the addition of offshore landing locations in the Pacific Ocean and associated activities such as payload processing. The launches serve the primary purpose of placing into Earth orbit small satellites for SpaceX's "Starlink" commercial satellite internet business.

As detailed further in the November 30, 2023, staff report<sup>1</sup> prepared for the Commission's consideration, the U.S. Space Force described in its negative determination that for public safety, SpaceX launches may require short-duration (between four and eight hours)

---

<sup>1</sup> Available at <https://documents.coastal.ca.gov/reports/2023/12/F8c/F8c-12-2023-report.pdf>



closures and evacuations of Jalama Beach and Jalama Beach County Park and Campground (Jalama) outside of VSFB but that the number of such closures would not exceed 12 per year. With the addition and implementation of a variety of measures to minimize adverse impacts to public coastal access and recreation, both of which are coastal uses and resources protected by enforceable policies of the CCMP, the Commission previously found in 1998 its concurrence with the U.S. Air Force's Consistency Determination No. CD-049-98 for an earlier space program that this level of temporary beach closures would not be inconsistent with the relevant enforceable policies of the CCMP.

Shortly after the Executive Director's concurrence with negative determination no. ND-0009-23, however, Commission staff learned through discussions with staff from Santa Barbara County's Parks and Recreation Department that the number of temporary closures and evacuations of the beach and campground at Jalama due to SpaceX launches within the first seven months of 2023 had already surpassed the annual maximum of 12 that the U.S. Space Force committed not to exceed in its negative determination. Further, Commission staff learned that public coastal access and recreation at Jalama was being affected by SpaceX launch activities in more ways than just the temporary closure and evacuation of the beach and campground. Specifically, public coastal access and recreation is also adversely affected through (1) closures of the 14 mile long road between Highway 1 and Jalama Beach to incoming traffic in advance of scheduled SpaceX launches, even when a full closure and evacuation does not occur; (2) email notices of possible closure and evacuation to those holding campground reservations during the time of a scheduled SpaceX launch; and (3) website notices of possible closure and evacuation to those seeking to secure a campsite reservation during the time of a scheduled SpaceX launch. These launch activities limit and prevent coastal access and recreation, result in cancellations of campsite reservations and limit the number of reservations secured.

None of these adverse impacts to public coastal access and recreation were acknowledged or discussed by Space Force in its negative determination. Accordingly, they were also not considered by the Executive Director before issuing her concurrence. Following Commission staff's identification of this issue, U.S. Space Force staff confirmed that its understanding of coordination and communication between SpaceX and Santa Barbara County staff was incomplete and that a wider range of adverse impacts were occurring as a result of launch activities than it had described in its negative determination. Commission staff also visited the SpaceX launch facility on VSFB in September 2023 and met with SpaceX staff who acknowledged the public access and recreation impacts associated with its launch activities.

In addition, as noted by Space Force in its negative determination and confirmed through review of publicly available SpaceX launch records by Commission staff, SpaceX carried out at least 13 launches from VSFB in 2022, more than double the six previously considered and concurred with by the Executive Director in August of 2015 through review of negative determination no. ND-0027-15 from the U.S. Air Force.

As a result of the Commission's enhanced understanding of SpaceX's space launch activities carried out under ND-0009-23, it determined on December 12, 2023, that the activities are being conducted and are having effects on coastal uses and resources substantially different than originally described by the U.S. Space Force in its negative

determination. In addition, because these effects exceed those which the Commission has previously determined to be consistent with the public coastal access and recreation policies of the CCMP, the Commission also determined that the substantially different effects from the SpaceX launch activities are not consistent to the maximum extent practicable with the enforceable policies of the CCMP. Feasible alternatives are available which would avoid or significantly reduce the adverse impacts of SpaceX's launch activities and mitigation measures may also be available to offset them. Further supporting information regarding the Commission's determinations is available in the previously referenced November 30, 2023, staff report considered and adopted by the Commission.

### **Remedial Action**

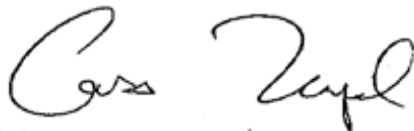
On December 15, 2023, the Commission approved a resolution<sup>2</sup> authorizing its Executive Director to prepare and send a letter to the U.S. Space Force proposing the following remedial actions to resolve this situation and ensure space launch and landing activities by SpaceX are carried out consistent with the enforceable policies of the CCMP:

1. U.S. Space Force should prepare and submit a consistency determination (CD) for the expansion of SpaceX Falcon 9 space launch and landing activities at VSFB from six per year to 36, with a complete evaluation of conformance with the enforceable policies of the CCMP. This should include analysis of effects to public coastal access and recreation that integrates currently available information regarding the various manners in which these coastal resources and uses are affected and a proposal to provide compensatory mitigation for those impacts that have already occurred, and will continue to occur, due to continuing Falcon 9 space launch and landing activities.
2. Until that CD has been submitted and considered by the Commission, U.S. Space Force should limit SpaceX launch azimuths and scheduling in order to avoid further adverse impacts to public coastal access and recreation at Jalama.

### **Conclusion**

We look forward to U.S. Space Force's timely consideration of the information in this letter and implementation of the identified remedial actions. If you have any questions or would like to discuss implementation of the remedial actions please contact Cassidy Teufel at [Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov).

Sincerely,



Cassidy Teufel  
Director  
Energy, Ocean Resources and Federal Consistency Division.

---

<sup>2</sup> <https://documents.coastal.ca.gov/reports/2023/12/F8c/F8c-12-2023-report.pdf>



# Contingency Evacuation Email: Updated Protocols

**From:** [Santa Barbara County Parks Reservations](#)  
**To:** [Santa Barbara County Parks Reservations](#)  
**Subject:** IMPORTANT INFORMATION REGARDING YOUR JALAMA BEACH RESERVATION (November 16)

---

Dear Valued Jalama Beach County Park Visitor,

Vandenberg Space Force Base and SpaceX has scheduled a launch for **Thursday, November 16, 2023**. The launch window is from **11:38 pm to 3:30 am the early morning of the 17<sup>th</sup>**.

At this time **Jalama Beach is not subject to an evacuation** order due to the estimated number of overnight visitors being below the population threshold set by Space Force Launch Control, Safety Office, and the Federal Aviation Administration (FAA). **However, as the launch date/time approaches, if the estimated population threshold is exceeded, there will be a need to evacuate the campground from 3-hrs prior am/pm on November 16<sup>th</sup> until an all-clear status is issued by Space Force.**

While we **do not** anticipate the need to evacuate the campground at this time, please note the following:

- If an evacuation order is issued you will be notified in a subsequent email and all campers will be evacuated to the end of Jalama Road on to Highway 1. If you will be in mid-stay, you do not have to break down your campsite, and large camping gear may be left behind; however, we do recommend you take your valuables with you.
- While the campground is not currently subject to evacuation, if you do stay overnight in the park, please be advised while highly unlikely, there is a small risk of launch vehicle failure which could cause debris to fall on the campground.
- If you would like to move your check-in date or shorten your stay, depending on availability, please submit a reservation change form by visiting [www.sbparks.org/support](http://www.sbparks.org/support) or contact our Call Center at (805) 568-2460. All changes will be made at no additional charge, and any shortened stays will be partially refunded.
- You may move your stay the evening of the launch to Cachuma Lake Recreation Area, depending on availability, which is approximately 50 miles from Jalama Beach. Please submit a reservation change form by visiting [www.sbparks.org/support](http://www.sbparks.org/support) or contact our Call Center at (805) 568-2460 for availability at Cachuma Lake.
- If you would like to completely cancel the reservation, please submit a reservation change form by visiting [www.sbparks.org/support](http://www.sbparks.org/support) or contact our Call Center (805) 568-2460. You must contact the Call Center by web form or phone to receive a full refund for your cancellation. Remember to disclose the "Jalama Safety Relocation" as the reason for your cancellation. Alternatively, please be advised that cancellations and refund requests initiated through the website will only include the site fee.

Please note that there is always a possibility that the launch may be cancelled or postponed to a later time. **Backup dates are November 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup>.**

We sincerely apologize for any inconvenience this may have caused, and hope this notification will

help you make any necessary adjustments to your plans. Please let us know if you have any questions or concerns regarding this launch, and thank you for camping at Jalama Beach Park.



**Evacuation Email:** Sent by SBC for all launches with early 2023 Protocols. Now only used if SLD 30 issues a full evacuation notice.

**From:** [Santa Barbara County Parks Reservations](#)  
**To:** [Santa Barbara County Parks Reservations](#)  
**Subject:** IMPORTANT INFORMATION REGARDING YOUR JALAMA BEACH RESERVATION (Jan 28)

---

Dear Valued Jalama Beach County Park Visitor,

Santa Barbara County Parks has just been notified by Vandenberg Space Force Base of a launch scheduled for **Sunday, January 29. from 5:30 AM to approximately 1:06 PM**, or until Park Staff receives an approval from the base to re-enter. All campers at Jalama Beach will be mandatorily evacuated during this window for safety reasons. All business should return to normal outside the relocation window and campers may return to Jalama Beach as soon as an all-clear status is received.

You are being contacted because you currently have a camping reservation that may conflict with this mandatory safety evacuation window, and we wanted to take the time to notify you of this occurrence so that you may make any changes to your travel plans accordingly. Please review the following options:

- If you are scheduled to camp on **Saturday, January 28<sup>th</sup>**, you may do so, but please be advised that you will be forced to evacuate the site **5:30 AM**. All campers will be evacuated to the end of Jalama Road on to Highway 1. If you will be in mid-stay, you do not have to break down your campsite, and large camping gear may be left behind; however, we do recommend you take your valuables with you.
- If you would like to move your check-in date or shorten your stay, depending on availability, please submit a reservation change form by visiting [www.sbparks.org/support](http://www.sbparks.org/support) or contact our Call Center at (805) 568-2460. All changes will be made at no additional charge, and any shortened stays will be partially refunded.
- You may move your stay the evening before the launch to Cachuma Lake Recreation Area, depending on availability, which is approximately 50 miles from Jalama Beach. Please submit a reservation change form by visiting [www.sbparks.org/support](http://www.sbparks.org/support) or contact our Call Center at (805) 568-2460 for availability at Cachuma Lake.
- If you would like to completely cancel the reservation, please submit a reservation change form by visiting [www.sbparks.org/support](http://www.sbparks.org/support) or contact our Call Center (805) 568-2460. You must contact the Call Center by web form or phone to receive a full refund for your cancellation. Remember to disclose the "Jalama Safety Relocation" as the reason for your cancellation. Alternatively, please be advised that cancellations and refund requests initiated through the website will only include the site fee.

Please note that there is always a possibility that the event may be cancelled or postponed to a later time. **The backup date is Monday, January 30<sup>th</sup>.**

We sincerely apologize for any inconvenience this may have caused, and hope this notification will help you make any necessary adjustments to your plans. Please let us know if you have any questions or concerns regarding the mandatory safety relocation, and thank you for camping at Jalama Beach Park.

## Santa Barbara County Parks

123 E Anapamu Street, 2<sup>nd</sup> Floor

Santa Barbara, CA 93101

Phone: (805) 568-2460

Email: [Reservations@sbparks.org](mailto:Reservations@sbparks.org)

Parks-County-0

