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CD-0010-22

June 7, 2023

EXHIBITS

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DEPARTMENT OF THE AIR FORCE
UNITED STATES SPACE FORCE
SPACE LAUNCH DELTA 30

22 May 2023

Beatrice L. Kephart
30 CES/CEI
1028 Iceland Avenue
Vandenberg SFB CA 93437-6010

Mr. Cassidy Teufel
California Coastal Commission
455 Market Street, Suite 228
San Francisco CA 94105-2219

Dear Mr. Teufel

On 23 Nov 2023, the Department of the Air Force (DAF) submitted a Consistency Determination (No. CD-0010-22) for Phantom Space Corporation's Daytona-E and Laguna-E Launch Sites and Operations. Since this time, we have been coordinating with your agency on various aspects of this project to ensure that the Proposed Action is consistent to the maximum extent practicable with the California Coastal Management Plan, pursuant to the requirements of the Coastal Zone Management Act. During these discussions there were additional measures that your staff determined prudent. These are outlined below.

Biological Resources

The DAF commits to enhancing at least 24.54 acres of lemonade berry scrub habitat or similar habitat (e.g. coastal sage scrub habitat) on VSFB for the life of the Phantom project, through invasive species removal, to address the direct impacts to lemonade berry scrub. In 2022, the USAF enhanced approximately 869 acres of similar habitat, and is committed to achieving the required habitat enhancement until the acres of lemonade berry scrub are no longer impacted.

Multiple federally listed species protected under the Endangered Species Act (ESA), potential habitat that supports these listed species, and several state special status species occur within the project vicinity. Pursuant to Section 7 of the ESA, the DAF completed consultation with the United States Fish and Wildlife Service (USFWS) and was issued a Biological Opinion on 24 Apr 2023 (2022-0045260-S7). The DAF has worked with the USFWS to develop the avoidance, minimization, and mitigation measures that are included as part of the Proposed Action to reduce impacts on biological resources. The DAF will implement these measures.

In alignment with the Biological Opinion, the DAF commits to augmenting the existing Western Snowy Plover (SNPL) monitoring program on VSFB, which records habitat use, nesting

efforts, nest fates, fledgling survival, and population size through each breeding season, with geospatial analysis of SNPL nesting and the noise environment. Sound meters will be deployed immediately inland of South Surf Beach and a control site to characterize the noise environment during the breeding season within the noise footprint of Phantom launches. Geospatial analysis will be performed annually as Phantom's launch tempo increases to assess whether patterns of nesting activity, nest fates, or fledgling success are negatively impacted by noise from Phantom operations. If the geospatial analysis shows that a statistically significant decline in breeding effort or nest success over two consecutive years, and that this decline cannot confidently be attributed to other natural or human caused catastrophic factors, the DAF will offset this impact by increasing predator removal efforts on VSFB to include the non-breeding season, particularly focusing on raven removal adjacent to VSFB beaches, with a goal of achieving no net loss of the species.

In alignment with the Biological Opinion, the DAF commits to implement a monitoring program to track California Red-legged Frog (CRLF) habitat occupancy, breeding behaviors (calling), and breeding success (egg mass and tadpole densities) in lower Honda Creek as the frequency of launch and static fire tests under the proposed project gradually increases. Because Phantom intends to slowly ramp up to a full tempo of 48 launches and 48 static fire tests annually over the course of five years, the DAF will be able to assess incremental changes in the acoustic environment and CRLF populations in Honda Creek. The DAF will place passive bioacoustic recorders and conduct CRLF surveys in Honda Creek. The specific threshold criteria for declining CRLF trends would be if surveys detected fewer adult frogs from baseline average two years consecutively, 15% or more decline in egg mass or tadpole densities, or average call-rate changes decrease with increasing disturbance level. The decline will be attributed to the Phantom Project if it cannot confidently be attributed to other natural or human caused factors not related to the Phantom project. The DAF would mitigate for these impacts by creating new CRLF breeding habitat at the San Antonio Creek Oxbow Restoration Area, an established wetland mitigation site that is located outside of areas currently impacted by launch noise and site lighting on VSFB.

Management actions focused on bats are incorporated in Vandenberg's Integrated Natural Resources Management Plan (INRMP). The DAF has been actively monitoring bats on VSFB. In the late 2000's, the DAF worked with regional bat experts Patricia Brown, Dixie Pearson, Drew Stokes and others to assess bat diversity and distribution on VSFB. In 2011, the Central Coast Bat Research Group established acoustic monitoring protocols for studies on VSFB and initial acoustic surveys were completed across VSFB in a variety of habitats. In 2013, in cooperation with Bat Conservation International (BCI) and UC Santa Cruz, the DAF designed and installed an artificial habitat for Townsend's big eared bat, combining suitable roost for a maternity colony as well as overwintering. Recently, DOD has partnered with BCI to fully cooperate in the North American Bat Monitoring Program (NA Bat) at VSFB. This includes deploying many acoustic recording devices each summer (starting 2023). A pilot program was completed in 2022. In 2022 and 2023, VSFB hosted researchers from Humboldt Polytechnic (2022) and BCI/UCLA (2023) investigating bats and communicable diseases, including COVID 19. As part of the Proposed Action, the DAF will augment the current bat monitoring program at VSFB by conducting additional acoustic monitoring within the noise footprint to determine which bat species are present in Honda Canyon and to record and assess their call rates before

and after rocket launches. Monitoring will begin during the first calendar year of launch operations and continue annually as Phantom's program gradually increases over six years to full cadence. The Space Force will discontinue monitoring after concurrence from the Commission if adverse effects attributable to the proposed project are not detected after three years of monitoring once Phantom and all other proposed launch programs impacting Honda Creek reach full or near full tempo.

The DAF would send an annual report to the Commission on all monitoring work conducted for biological resources and outline the data and results collected to date, and any initial conclusions regarding potential effects to the species as a result of the Proposed Action. The report will include the acres of vegetation types and habitat enhanced annually (meets or exceeds 24.54 acres), annual reports prepared for the USFWS for SNPL and CRLF, and bat monitoring.

Coastal Water Resources

Commercial space companies are independently responsible for compliance to provisions of the Clean Water Act and its requirements for development of site-specific Spill Prevention, Contingency, and Countermeasures (SPCC) plan under 40 CFR 112. Inspection and enforcement of each SPCC and any permitted tanks are delegated to the Santa Barbara County Certified Unified Programs Agency. The SPCC requirements for commercial space companies do not fall under the jurisdiction of SLD 30. Under 40 CFR 112, the SPCC would include elements that the Commission considers critical for these plans, including: an oil spill risk and worst-case scenario spill assessment that includes oil spill trajectories and identification of the coastal resources at risk from oil spill impacts, response capability analysis of the equipment, personnel, and strategies (both on-site and under contract) capable of responding to a worst-case spill, including alternative response technologies, oil spill preparedness training and drills, and evidence of financial responsibility demonstrating capability to pay for costs and damages from a worst-case spill. Phantom's secondary containment would be sized to capture all materials contained within any tanks present and the SPCC would include the necessary specifications on the spill response supplies needed at the site during operations.

Marine Debris

Phantom Space would provide contributions to the California Lost Fishing Gear Recovery Project to offset the impacts from unrecoverable debris into State or Federal waters. For every 3 pounds of unrecoverable debris, Phantom Space would make a compensatory donation of $10.00, which is sufficient to recover 1 pound of lost fishing gear. Phantom Space will provide annual reports to the DAF. These data will be included in the 5-year status update.

Overall Launch Increases

The DAF would report back to the Commission 5 years from now with information on how the Phantom project is, or is not, impacting the surrounding special-status species and their habitats.

The DAF will schedule a meeting with the Commission, local governments, state and federal agencies, and stakeholders in late 2023 to discuss increased launch activities at multiple sites on Vandenberg and opportunities and priorities for comprehensive and long-range planning that considers the projected future use scenarios that VSFB is considering. It will be an open

forum where agencies and individuals can learn about and discuss the future of space launch development on VSFB.

If you need additional information, or if you have questions, please do not hesitate to call me at (805) 605-7924 or email me at beatrice.kephart@spaceforce.mil. You can also direct your questions or comments to Tiffany Whitsitt-Odell at tiffany.whitsitt-odell@spaceforce.mil.

Sincerely

5/23/2023

X Beatrice L Kephart

Signed by: KEPHART.BEATRICE.LINDA.1166122291
BEATRICE L. KEPHART
Chief, Installation Management Flight

SLC-5 Department of the Air Force (DAF) Regulations and Advisories

The DAF has adopted numerous regulations, advisories, and standards for Air Force/Space Force Bases that will support space launch programs and the placement and configuration of these launch sites. Vandenberg Space Force Base was identified as a location to launch rockets as the flight paths would work best for human health and safety concerns as they would be over no or low human populations. Further, this location fulfills the need to launch payloads into polar orbit (versus geosynchronous). Federal government payloads are launched by commercial space entities and these actions are federal activities being performed on behalf of a federal agency in exercise of its statutory responsibility (15 CFR 930.31(a)).

DoD/DAF standards exist in the context of the following federal laws and regulations:

Commercial Space Launch Act (CSLA; 1984) permits the use of Government property by launch licensees and states in part that:

> *49 USC app. 2601 Sec 2:*
>
> *(4) the private sector in the United States has the capability of developing and providing private satellite launching and associated services that would complement the launching and associated services now available from the United States Government;*
>
> *(5) the development of commercial launch vehicles and associated services would enable the United States to retain its competitive position internationally, thereby contributing to the national interest and economic well-being of the United States;*
>
> *(6) provision of launch services by the private sector is consistent with the national security interests and foreign policy interests of the United States and would be facilitated by stable, minimal, and appropriate regulatory guidelines that are fairly and expeditiously applied; and,*
>
> *(7): the United States should encourage private sector launches and associated services and, only to the extent necessary, regulate such launches and services in order to ensure compliance with international obligations of the United States and to protect the public health and safety, safety of property, and national security interests and foreign policy interests of the United States.*
>
> *49 USC 2614, Sec 15:*
>
> *(a) The Secretary shall take such actions as may be necessary to facilitate and encourage the acquisition (by lease, sale, transaction in lieu of sale, or otherwise) by the private sector of launch property of the United States which is excess or is otherwise not needed for public use and of launch services, including utilities, of the United States which are otherwise not needed for public use.*

DoD Directive 3230.3 DoD Support for Commercial Space Launch Activities (1986) states in part that:

> *It is DoD policy to:*
>
> *4.1 Encourage the U.S. private sector development of commercial launch operations.*

4.1 Endorse fully and facilitate the commercialization of U.S. Expendable Launch Vehicles (ELVs), consistent with U.S. economic, foreign policy, and national security interests.

Title 51 – National and Commercial Space Programs of the United States Code (U.S.C.) states in part that:

§ 20102. SEC 2. Findings:

(8) the strengthening and expansion of the Nation's space transportation infrastructure, including the enhancement of launch sites and launch site support facilities, are essential to support the full range of the Nation's space-related activities'

§ 20102. Sec 102: Policy

It is declared to be national policy that the United States should – (7) sustain a mixed fleet by utilizing commercial expendable launch vehicle services to the fullest extent practicable

10 U.S.C. § 2276 Commercial Space Launch Cooperation (2013) – Congress authorized the Secretary of Defense to encourage commercial space activities by enabling domestic corporation investment in DoD space transportation infrastructure. Congress also authorized the DoD to maximize private entities using DoD space transportation infrastructure capacity.

This document states in part that:

(a) *Authority – The Secretary of Defense may take such actions as the Secretary considers to be in the best interest of the Federal Government to –*
   (1) *Maximize the use of the capacity of the space transportation infrastructure of the Department of Defense by the private sector in the United States;*
   (2) *Maximize the effectiveness and efficiency of the space transportation infrastructure of the Department of Defense;*
   (3) *Reduce the cost of services provided by the Department of Defense related to space transportation infrastructure at launch support facilities and space recovery support facilities;*
   (4) *Encourage commercial space activities by enabling investment by covered entities in the space transportation infrastructure of the Department of Defense; and*
   (5) *Foster cooperation between the Department of Defense and covered entities.*

Determining the location of a Space Launch Complex (SLC) on VSFB. There are several major planning constraints for future development on VSFB, including existing space and missile launch sites and flight hazard zones, Explosive Safety Quantity-Distance Arcs, utility corridors, natural and cultural resources.

SLC-5 is currently the only unused previous launch site on Vandenberg SFB. This location maximizes re-use of previously disturbed land from the Scout operation. Any other locations on VSFB would be previously unused for launch. Potential locations would be green field sites or areas were a portion of the site is previously paved but would not account for the entirety of the program requirement. These sites would also require the appropriate utilities and infrastructure developments, which would further increase impacts to coastal resources. Other locations that were considered for the Phantom Space program include Lompoc Terrace (Consistency Determination for Blue Origin at SLC-9 in progress), Building 330 [Figure 1 (CD for Relativity at SLC-11 in preparation)], the former General Electric Radio Tracking Station (GERTS) site demolished in 2006 (Figures 2 and 3), and Vina Terrace (Figures 4 and 5).

The specific configuration of SLC-5 was developed in coordination with VSFB ground safety inputs for explosive site planning to minimize impact in case of anomaly or mishap; VSFB range safety for overflight paths in case of anomaly or mishap; and, in compliance with the VSFB Wildland Fire Management Plan (WFMP).

The Environmental Planning Function at VSFB provided inputs for avoidance during the initial planning phase, thus there are no graphics showing earlier iterations as these factors were taken into consideration early in the process. The layout was specifically designed to minimize impacts to natural and cultural resources, specifically associated with Honda Creek. The flame bucket configuration was rotated to ensure the exhaust plume was directed away from Honda Creek to reduce potential impacts. The fire breaks and fuel management areas are configured to account for the direction of the exhaust plume and potential for fire ignition sources. The fuel management and firebreaks would have typically been larger but were restricted due to topography in this area.

Further, the lighting plan was developed to reduce impacts to natural resources. The lighting will be pole-mounted, bug-friendly, T24 compliant light-emitting diode (LED) flood lights. Except when necessary for safety or performance of launch operations, or maintenance, artificial lighting at SLC-5 will be minimized during the hours of darkness. The lighting plan would be designed such that lights are directed away from Honda Canyon and would be shielded to reduce scatter into undeveloped areas. Lighting plan design will minimize illumination of Honda Canyon such that that lighting levels of 1-foot candle would not extend beyond the SLC-5 facility.

The location of fire breaks and fuel management zones were developed in compliance with the VSFB Wildland Fire Management Plan (WFMP). The WFMP was prepared in accordance with regulations, standards, and procedures of DoDI 6055.06, DoD Fire and Emergency Services Certification Program, and AFMAN 32-7003 (previously AFI 32-7064).

DoD/DAF Wildland Fire Policy standards exist in the context of the following instruction and guidance:

DoDI 6055.06 states in part that:

> *5.1. The Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) shall:*
>
> *5.1.4. Provide criteria, guidance, and instructions to incorporate fire suppression, fire prevention, and emergency service elements in appropriate DoD program and budget documents.*
>
> *5.5. The Heads of the DoD Components maintaining organized F&ES programs shall:*
>
> *5.5.3. Emphasize prevention as a means to enhance the total F&ES effort and other fire prevention techniques to eliminate the causes of fires and to prevent death, injuries, and property damage if fire occurs.*

Air Force Manual 32-7003 Environmental Conservation [previously Air Force Instruction (AFI) 32-7064]. Section 3P – Wildland Fire Management states in part that:

> *3.80 Wildland Fire Management Plans. All Air Force installations with burnable acreage are required to have a current WFMP.*

3.80.1. Purpose. The purpose of the installation WFMP is to reduce wildfire potential, protect and enhance valuable infrastructure and natural resources, and implement ecosystem resiliency goals and objectives on Air Force-managed properties. The WFMP will directly support the Air Force mission and be consistent with the installation INRMP.

Vandenberg Space Force Base [previously Vandenberg Air Force Base (VAFB)] Wildland Fire Management Plan (WFMP) helps further guide the size, location, and configuration of fuel management zones and firebreaks and states in part that:

Section 3.9: Missile Launch Facilities and Rocket Launch Complex/Areas

Launch operations are one of the highest sources of ignitions for wildfires on VAFB (Type III Risk Assessment, 2018). Combined with wind activity, year-round low humidity, extremely volatile fuel beds throughout the 99K acres and the hazardous/combustive nature of launch operations, fire/fuel breaks are required for each launch facility and launch complex/area. The using organization must ensure fuel/fire breaks are established prior to mission commencement and maintained. This requirement is to not only protect our launch facilities from wildfires, but also to protect the rest of the installation from fires created by launch operations. Launch operations are inherently dangerous. Nominal launches not only cause spot fires, they also generate hazardous byproducts that prevent firefighters from immediately responding to the launch site until the localized atmosphere is safe. These delays can last up to 30 minutes. During this response delay, fire/fuel breaks are the only thing preventing spot fires from spreading into heavy fuel beds and developing into catastrophic wildfire events. Specifications for fuel/fire breaks are site specific and in general will comply with the VFMP (Appendix 3.7) and best management practices for Access Road and Fire Break Maintenance and Restoration (Appendix 3.8). Development of specifications shall be done in coordination and approval of F&ES Fire Prevention personnel.

Section 3.11 Fire and Fuel Break System Maintenance Plan
Firebreaks provide strategic locations for indirect attack of wildfires on VAFB, which in turn greatly reduces the need for direct attack with heavy ground-disturbing equipment which can result in significant resource damage. Approximately 50 miles of existing firebreaks are currently in place at VAFB, particularly along the installation boundary and adjacent to critical infrastructure. Fire breaks are generally wide, about 16 to 32 feet or 2 to 4 blade widths of a dozer, and contain little to no vegetation. Fire breaks must be constructed and maintained, or rehabilitated, to prevent soil erosion. Fire breaks are maintained through mechanical treatment, such as discing or grading.

Section 3.12 Asset and Infrastructure Protection Plan
F&ES developed a facility risk assessment based on NFPA 1144 guidance. A Wildland Threat Assessment (WTA) is maintained on facilities in the interface zone. Based on the WTA a hazard reduction action plan is in place. The 30th Space Wing Instruction 32-2001 Fire Prevention program includes instructions on establishing and maintaining clearance within the ignition zone around facilities, a minimum of 100 feet. In some instances for mission critical or high hazard facilities the clearance may be increased through assessment by the Fire Prevention Office. This area allows Firefighters a Safety Zone to take defensive actions protecting the facility. Without this zone firefighters will not remain

at the building if conditions get too severe and life safety is in jeopardy. Defensible space is located around the perimeter of each facility identified in the WTA and mapped out (see Appendix 3.9). Buildings and facilities are prioritized where initial clearance work needs to be accomplished. A masticator or other equipment will be used except in areas with NR/CR concerns or the use of equipment is limited, then clearing is done by hand with chainsaws/brush cutters and disposed of by chipping. Annual maintenance of the defensible space will be conducted by mower or other equipment if required.

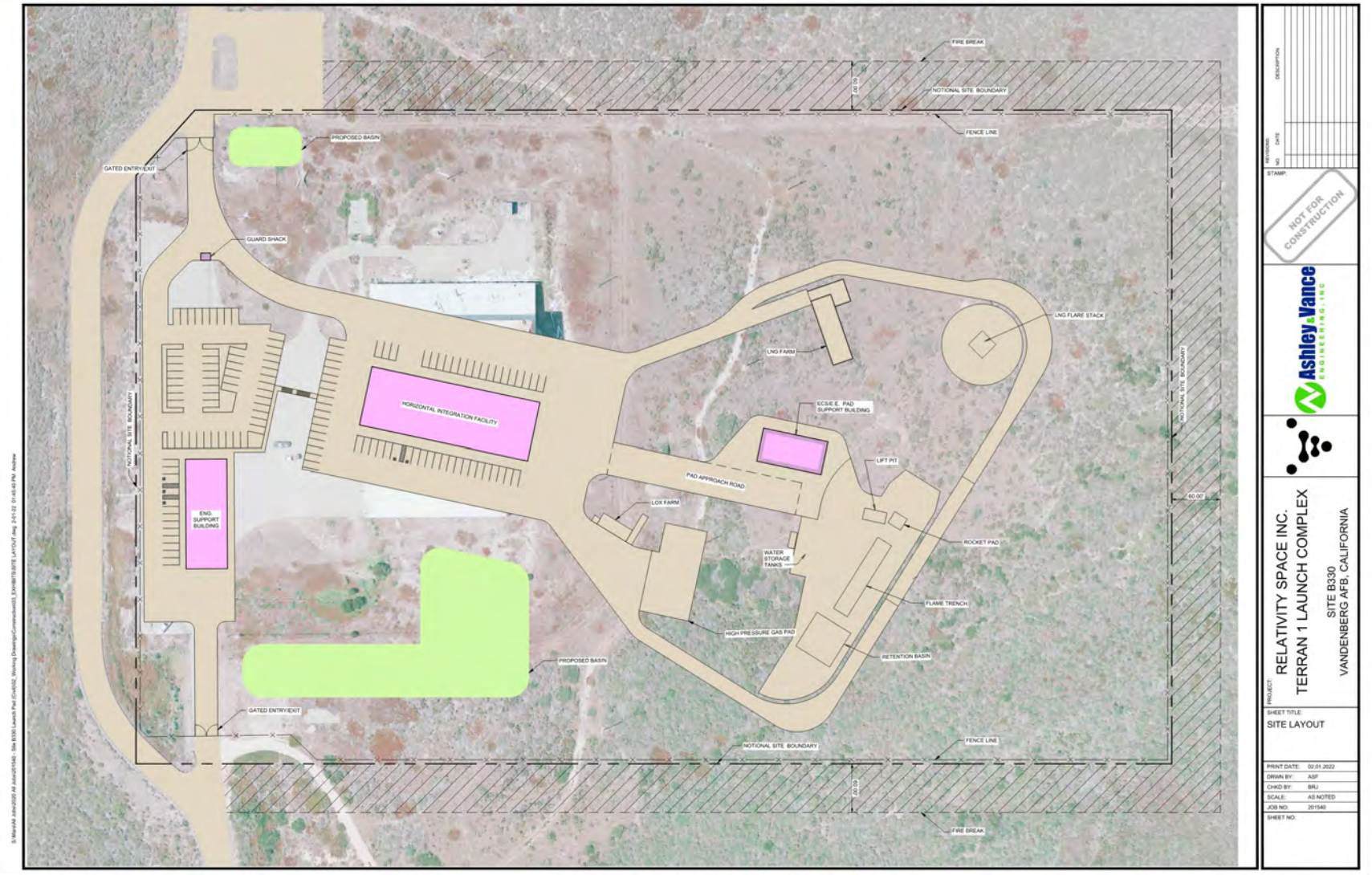


Figure 1 - Relativity at SLC-11. Existing infrastructure is visible in aerial photo beneath new infrastructure improvements. New footprint is approximately twice the size as existing.

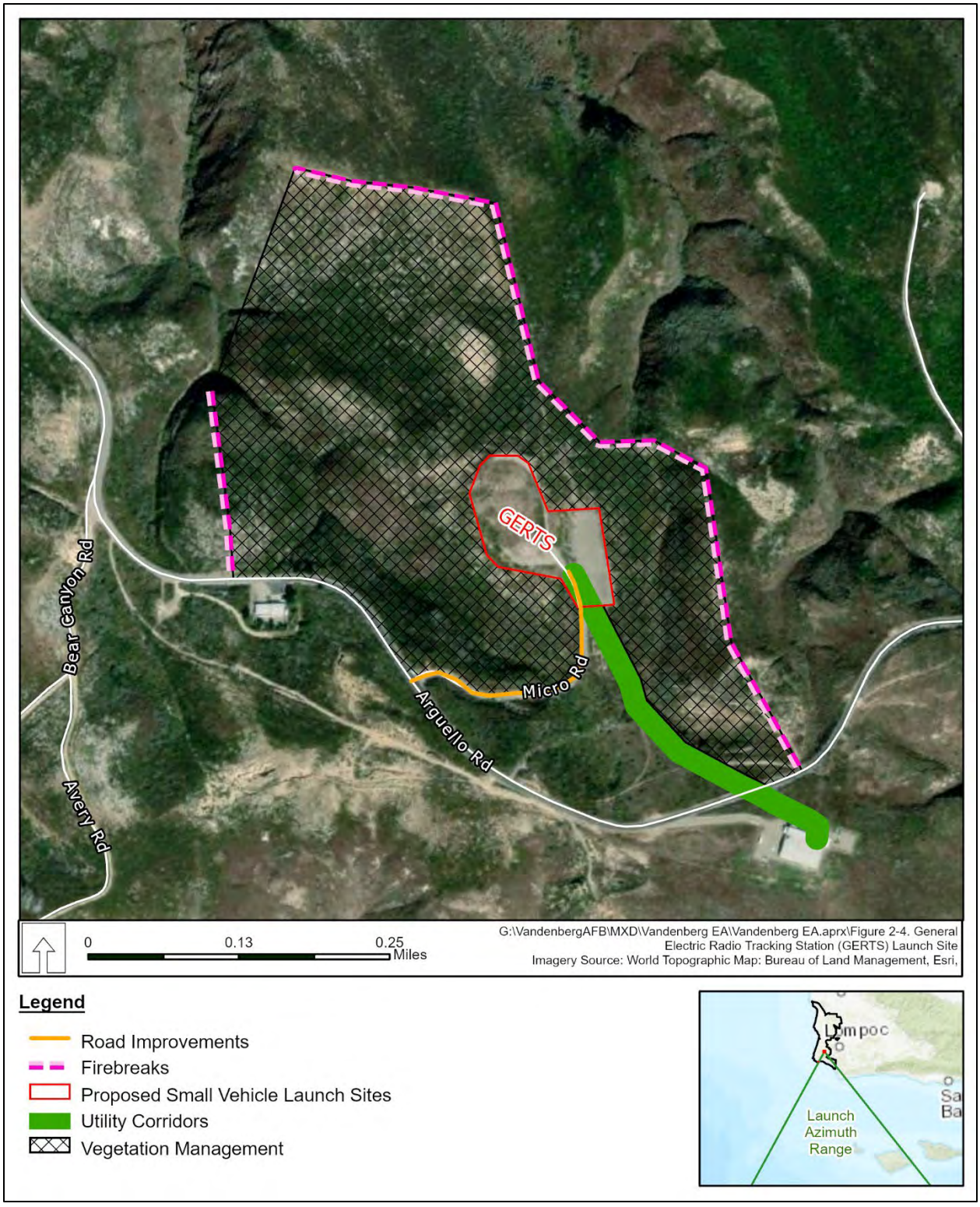


Figure 2 – GERTS launch site footprint.

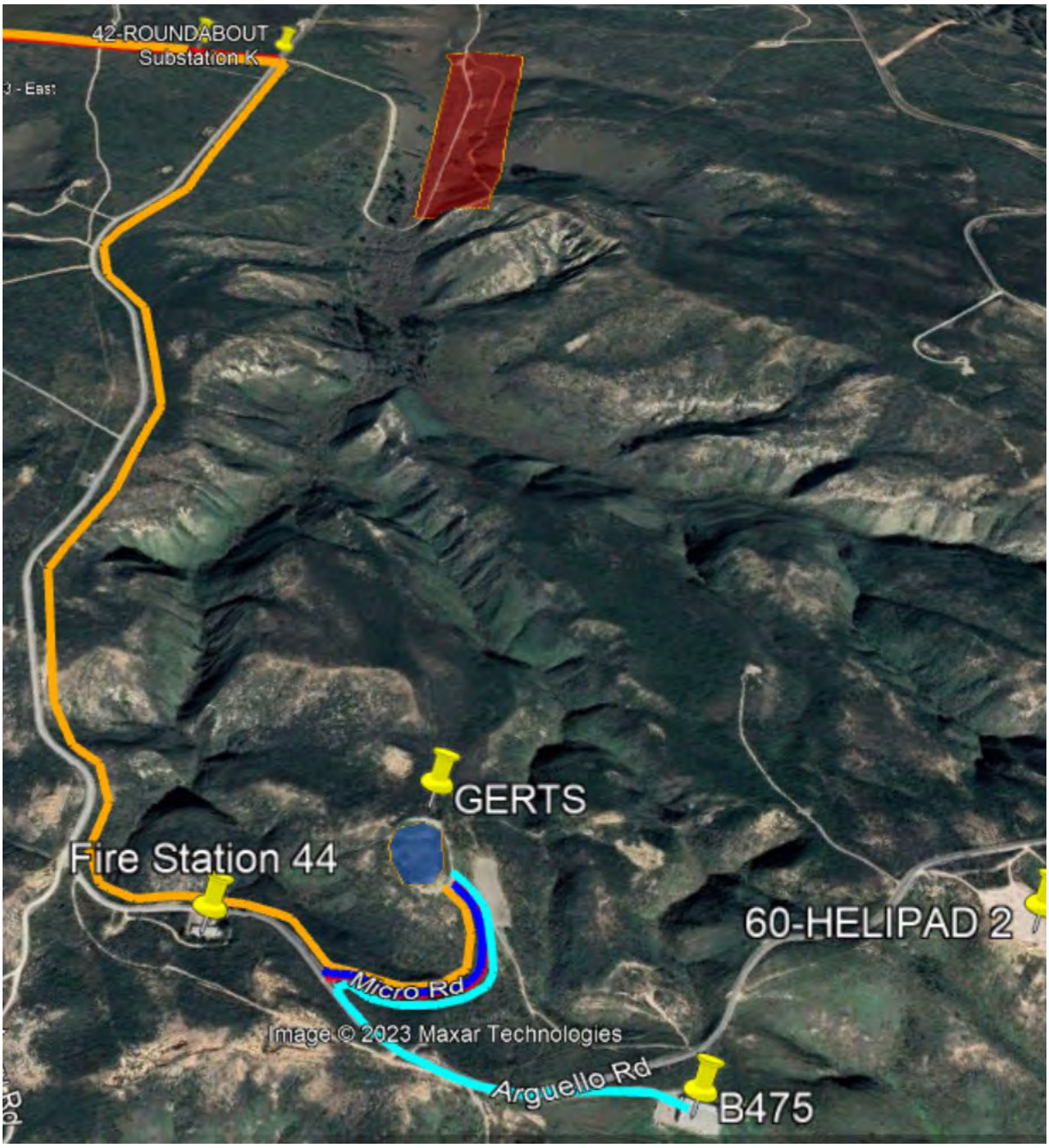


Figure 3 – Revised GERTS utility corridors including electrical (orange), communications and water (blues).

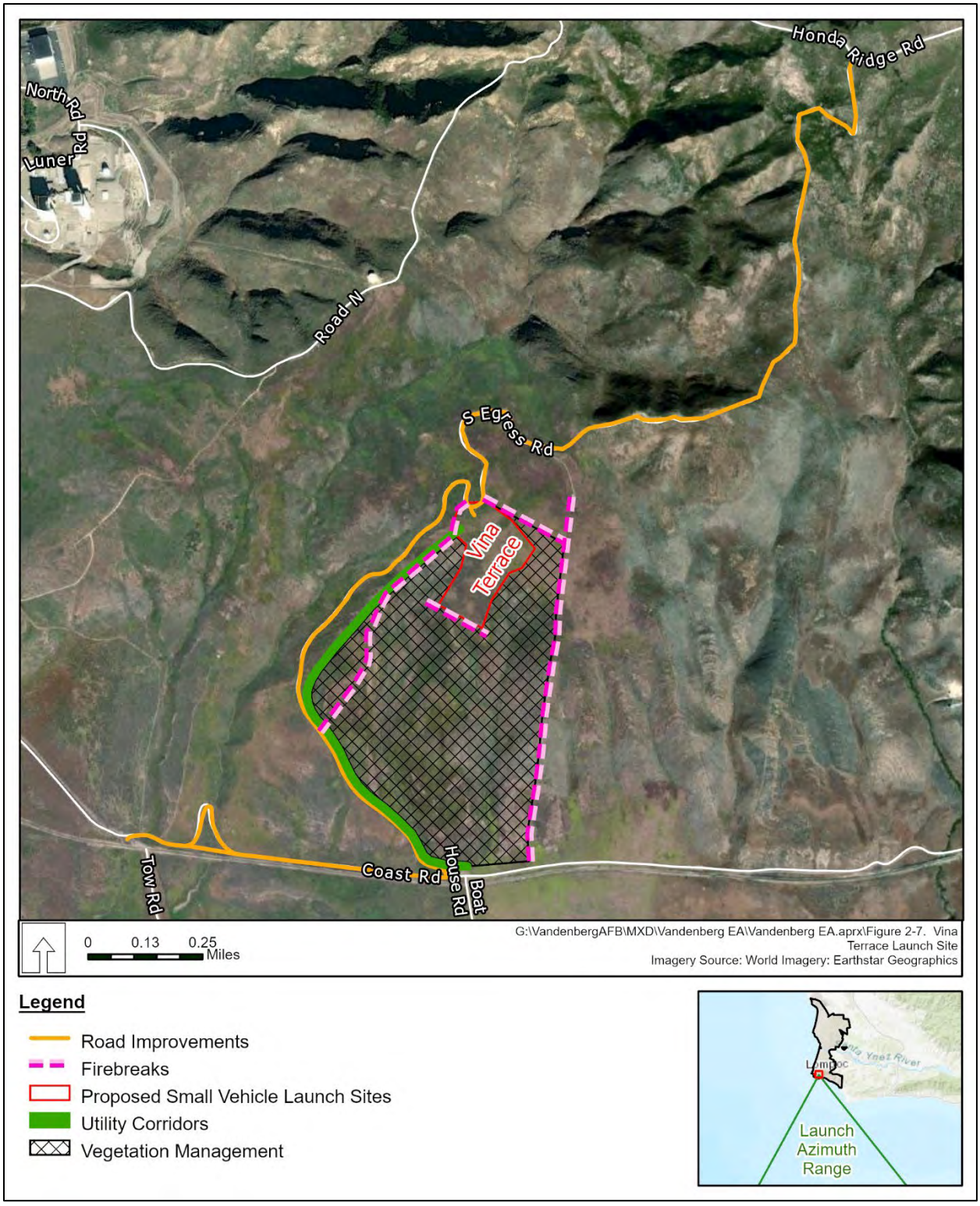


Figure 4 - Vina Terrace launch site footprint.

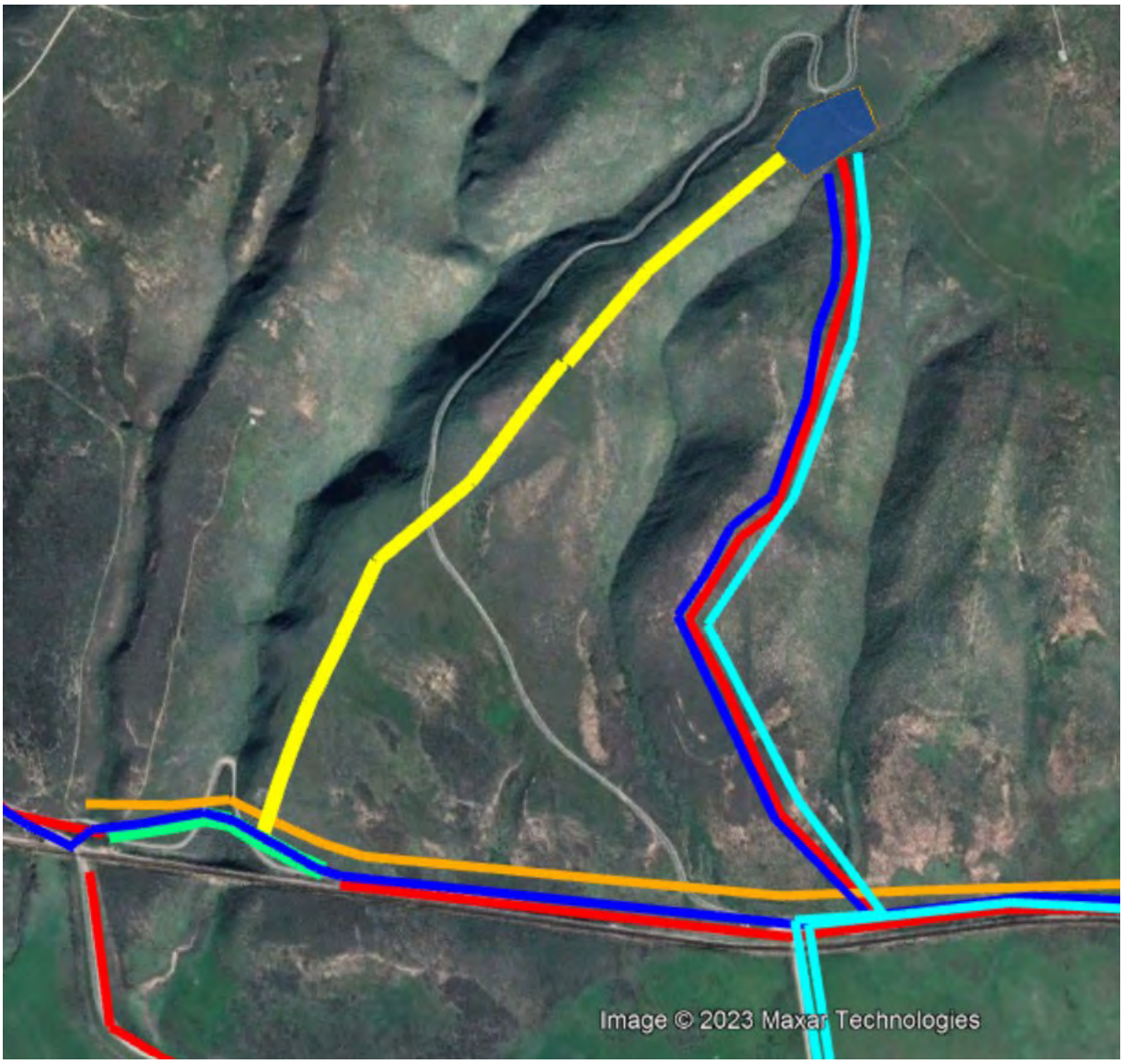


Figure 5 – Revised Vina Terrace access roads (green and yellow) and utilities (blues and red).

Exhibit 3: Vandenberg Map

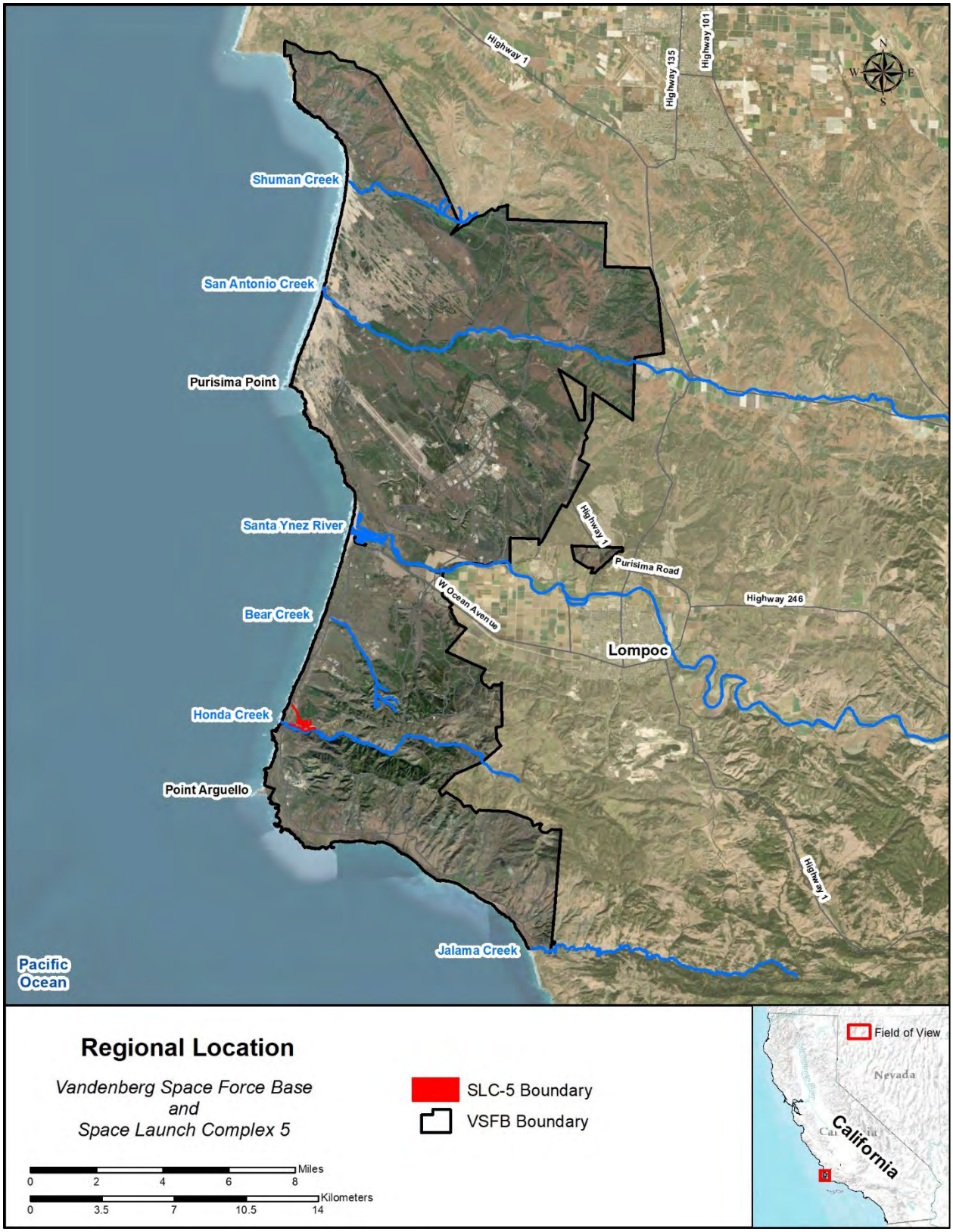


Figure 1-1: Regional location of Proposed Action Area

Exhibit 4: Site Plan

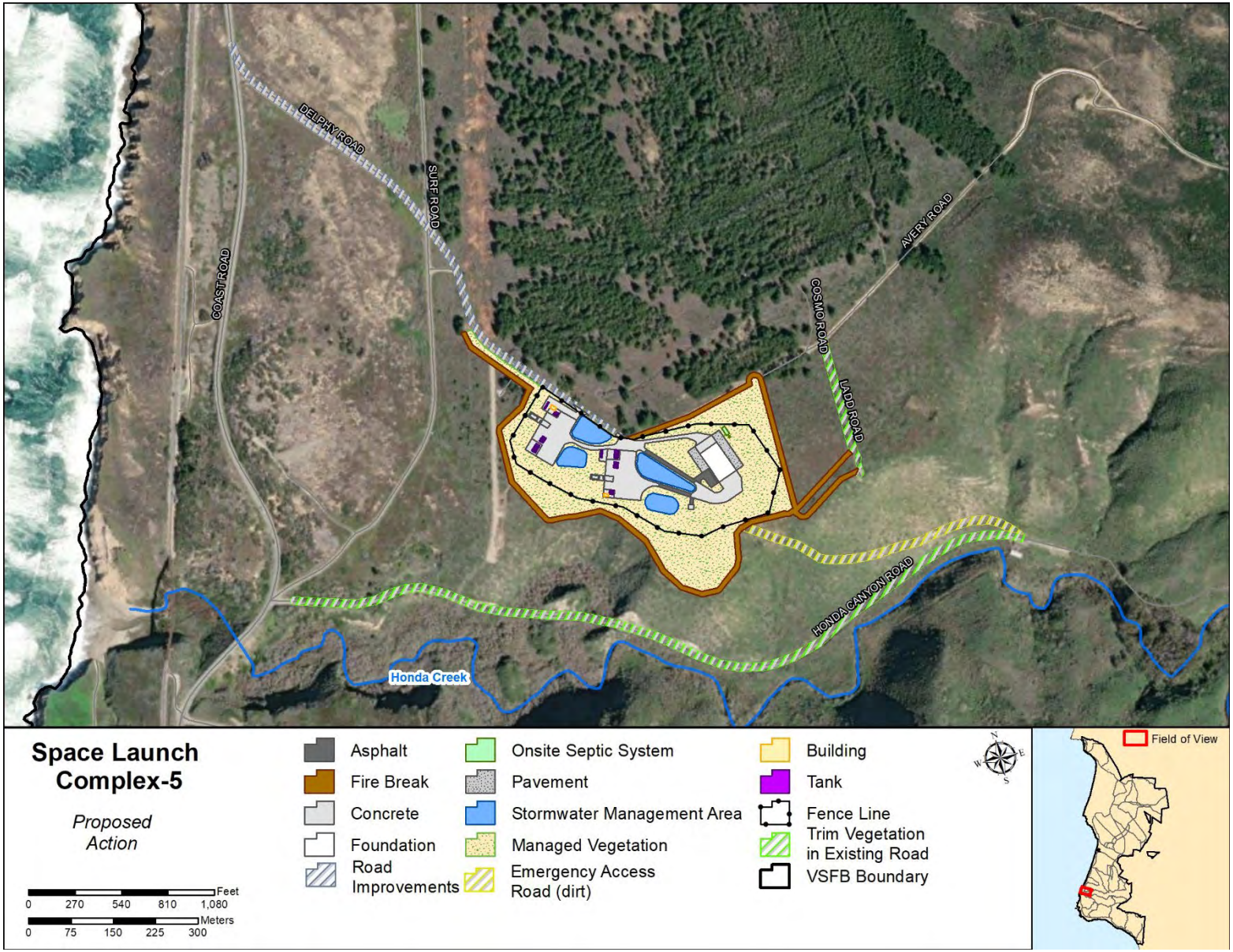


Figure 5. Site disturbances under the Proposed Action.

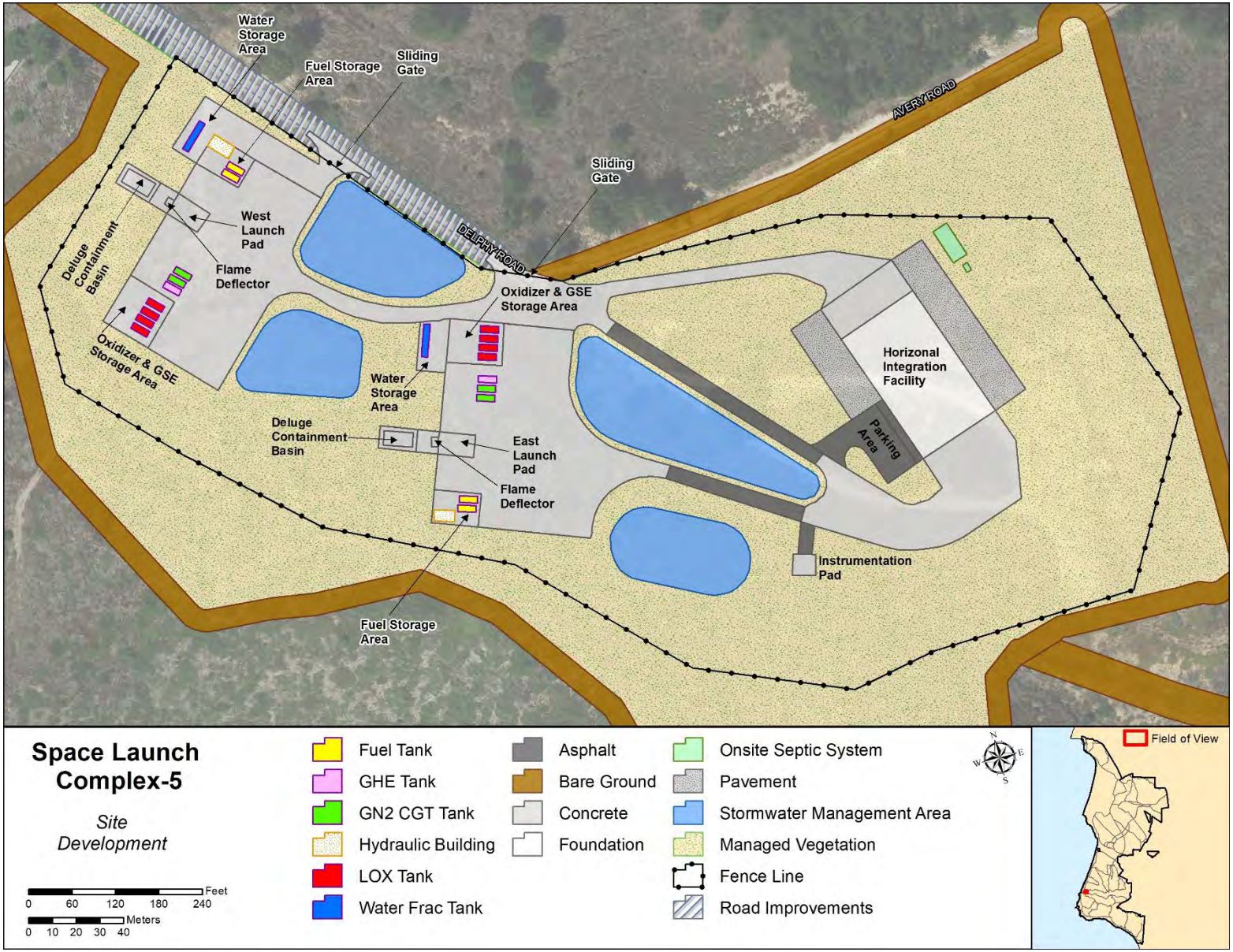
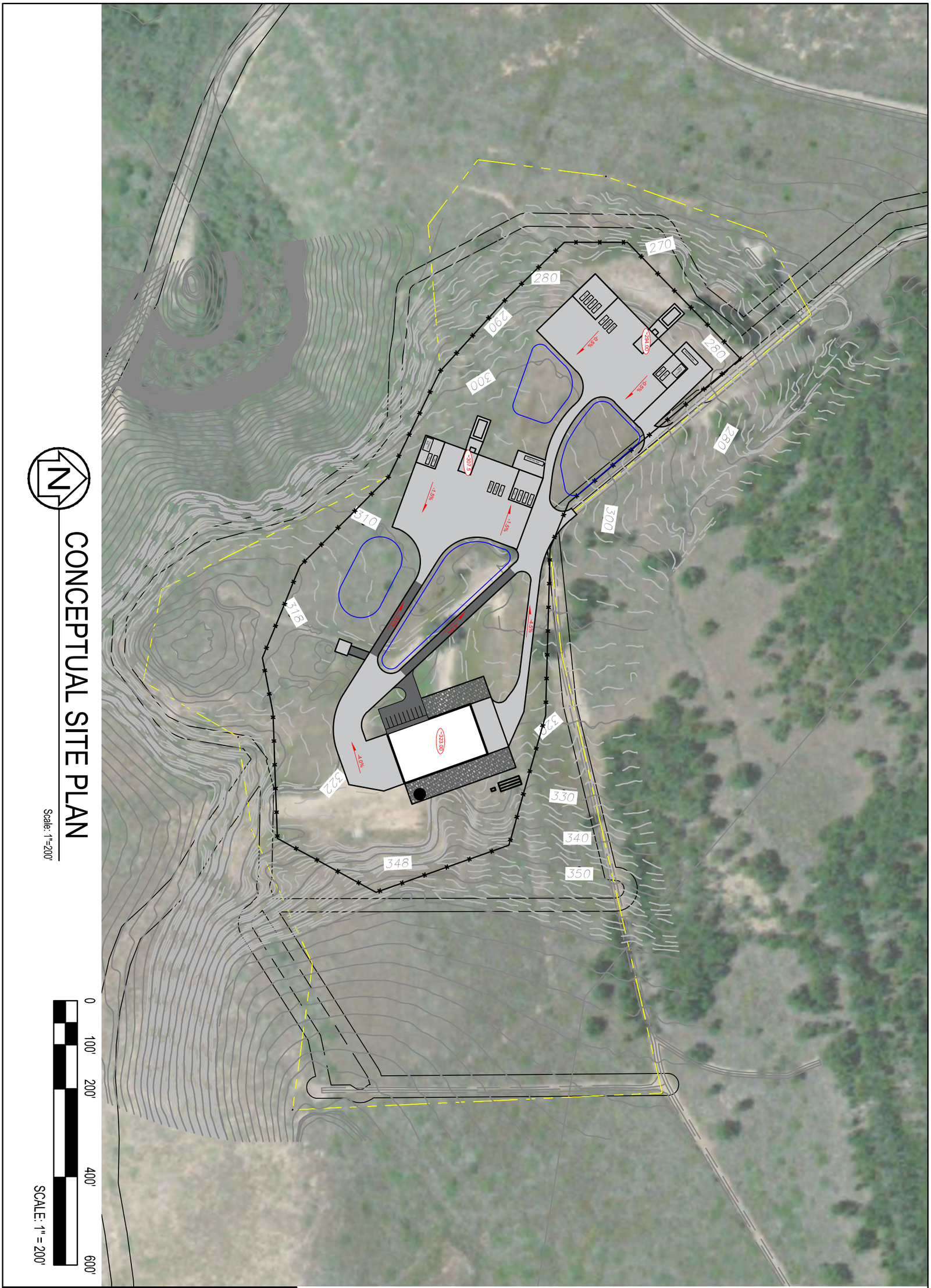


Figure 15. SLC-5 site plan.



CONCEPTUAL SITE PLAN

Scale: 1"=200'

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PHANTOM SLC-5 E & W
VAFB, CALIFORNIA
PHANTOM SPACE CORPORATION

CONCEPTUAL SITE LAYOUT - SITE ELEVATIONS

Exhibit 5: Historical and Proposed Development

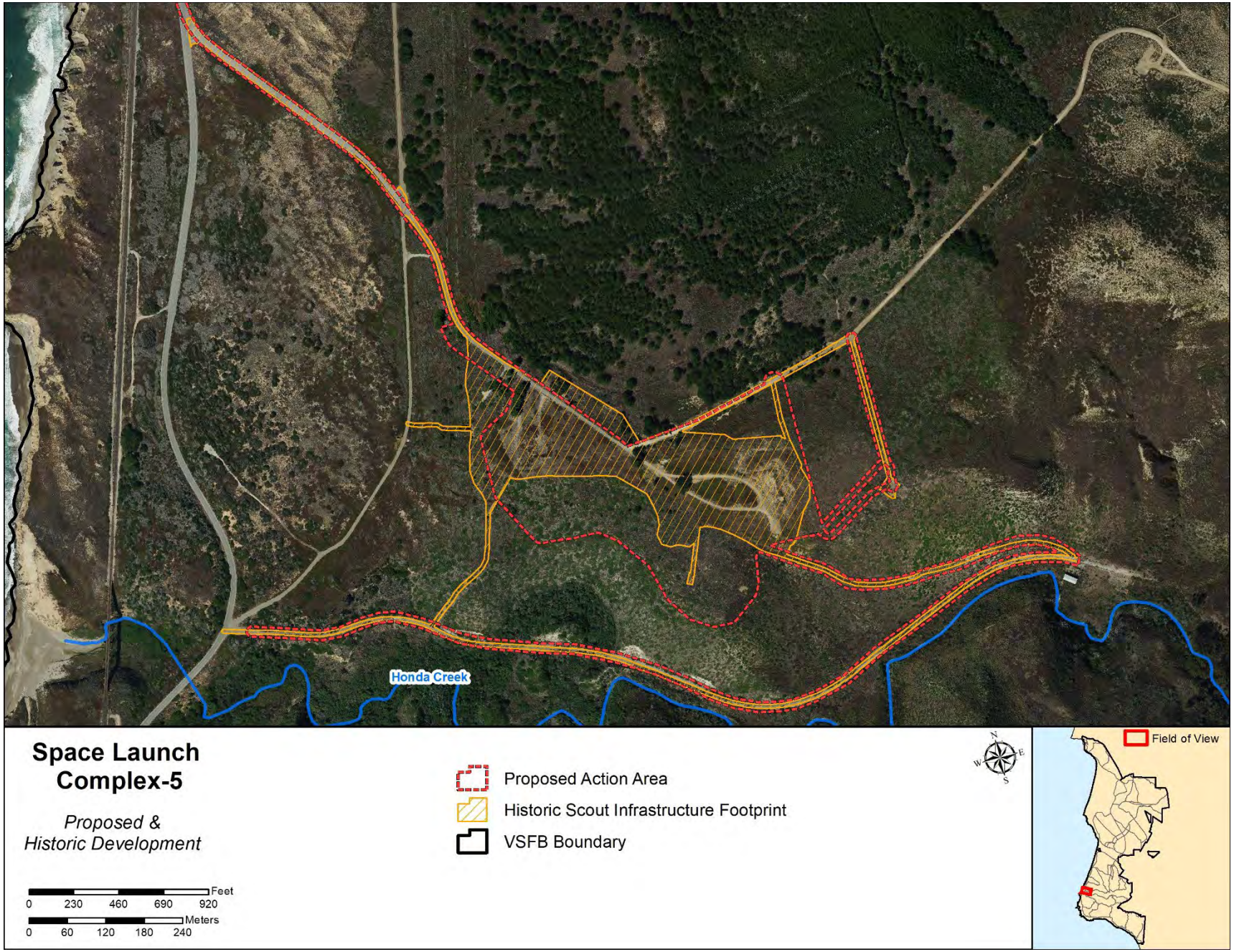

Figure 3. Overlay of historic infrastructure footprint and Proposed Action Area.

Exhibit 6: Vegetation Alliance Map and Plant Community Impacts

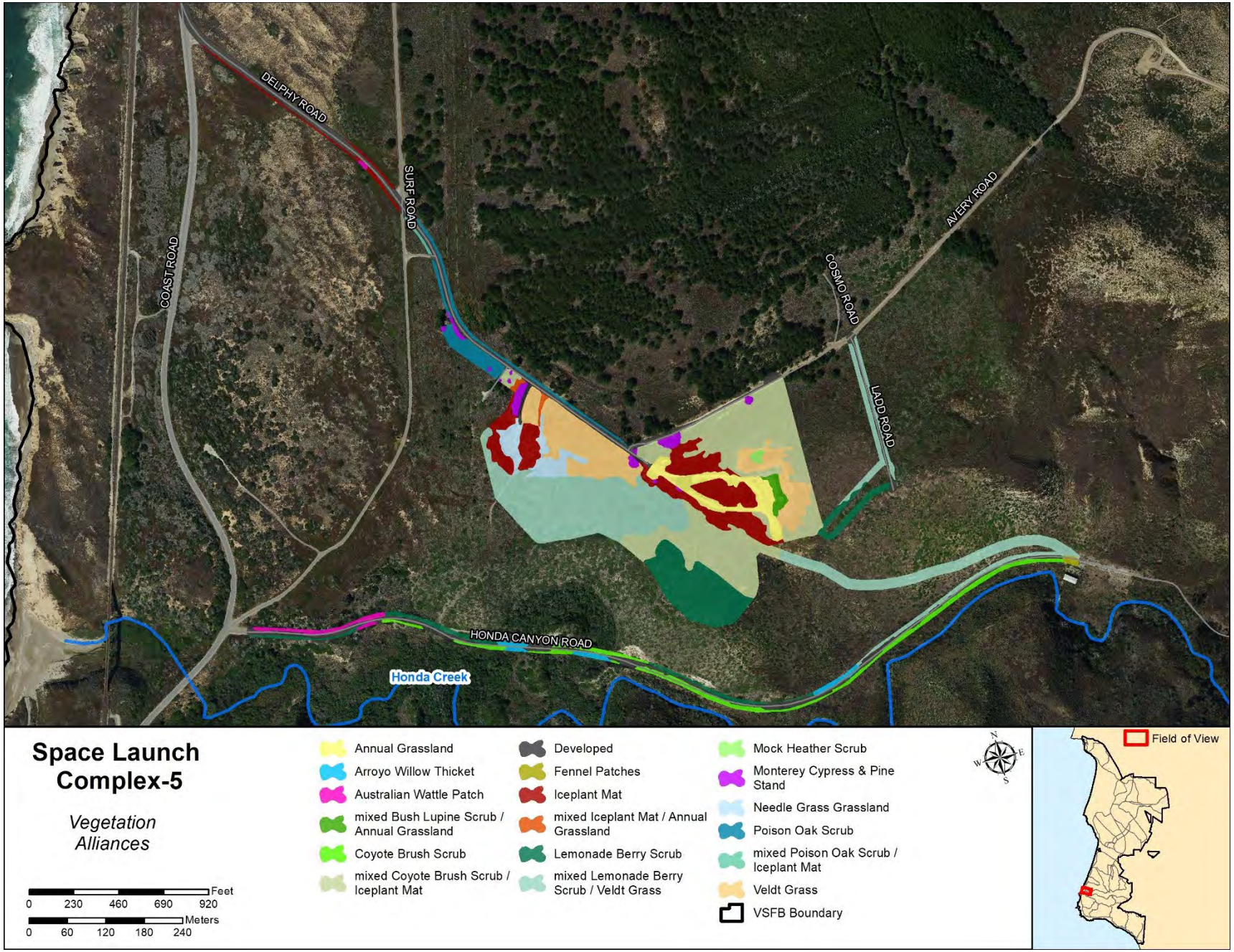

Figure 4. Vegetation alliances following Manual of California Vegetation Second Edition (Sawyer et al. 2009).

Direct Plant Community and Land Cover Impacts of the Phantom Space Company Project

Common Name	Alliance Name (from the Manual of California Vegetation II)	Acres impacted
Annual Grassland	*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance	1.45 ac
Arroyo Willow Thicket	*Salix lasiolepis* Shrubland Alliance	0.35 ac
Australian Wattle Patch	*Acacia* spp. - *Grevillea* spp. - *Leptospermum laevigatum* Shrubland Semi-natural Alliance	0.31 ac
Mixed Bush Lupine Scrub/Annual Grassland*	mixed *Lupinus arboreus* Shrubland Alliance and *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance	0.27 ac
Coyote Brush Scrub	*Baccharis pilularis* Alliance	1.27 ac
Mixed Coyote Brush Scrub / Iceplant Mat	mixed *Baccharis pilularis* Alliance and *Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance	7.78 ac
Fennel Patches	*Conium maculatum* - *Foeniculum vulgare* Herbaceous Semi- Natural Alliance	0.07 ac
Iceplant Mat	*Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance	4.12 ac
Mixed Iceplant Mat / Annual Grassland	Mixed *Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance and *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance	0.12 ac
Lemonade Berry Scrub	*Rhus integrifolia* Shrubland Alliance	4.09 ac
Mixed Lemonade Berry Scrub / Veldt Grass	mixed *Rhus integrifolia* Shrubland Alliance and *Ehrharta calycina*	9.50 ac
Monterey Cypress and Pine Stand	*Hesperocyparis macrocarpa* - *Pinus radiata* Forest & Woodland Semi-Natural Alliance	0.57 ac
Mock Heather Scrub*	*Lupinus chamissonis* - *Ericameria ericoides* alliance	0.07 ac
Needle Grass Grassland	*Nassella* spp. - *Melica* spp. Herbaceous Alliance	1.10 ac
Poison Oak Scrub	*Toxicodendron diversilobum* Shrubland Alliance	1.24 ac

Mixed Poison Oak Scrub / Iceplant Mat	mixed *Toxicodendron diversilobum* Shrubland Alliance and *Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance	0.07 ac
Veldt Grass	*Ehrharta calycina* Undescribed Alliance	4.41 ac
Developed	Developed – unvegetated	4.99 ac

* The Commission's ecologist, upon reviewing the materials submitted by the USAF, identified that areas marked as mixed bush lupine scrub/annual grassland and mock heather scrub both meet the criteria in the California Manual of Vegetation to be considered sliver dune lupine-mock heather scrub.

Exhibit 7: Adjacent Habitats and Sound Impacts

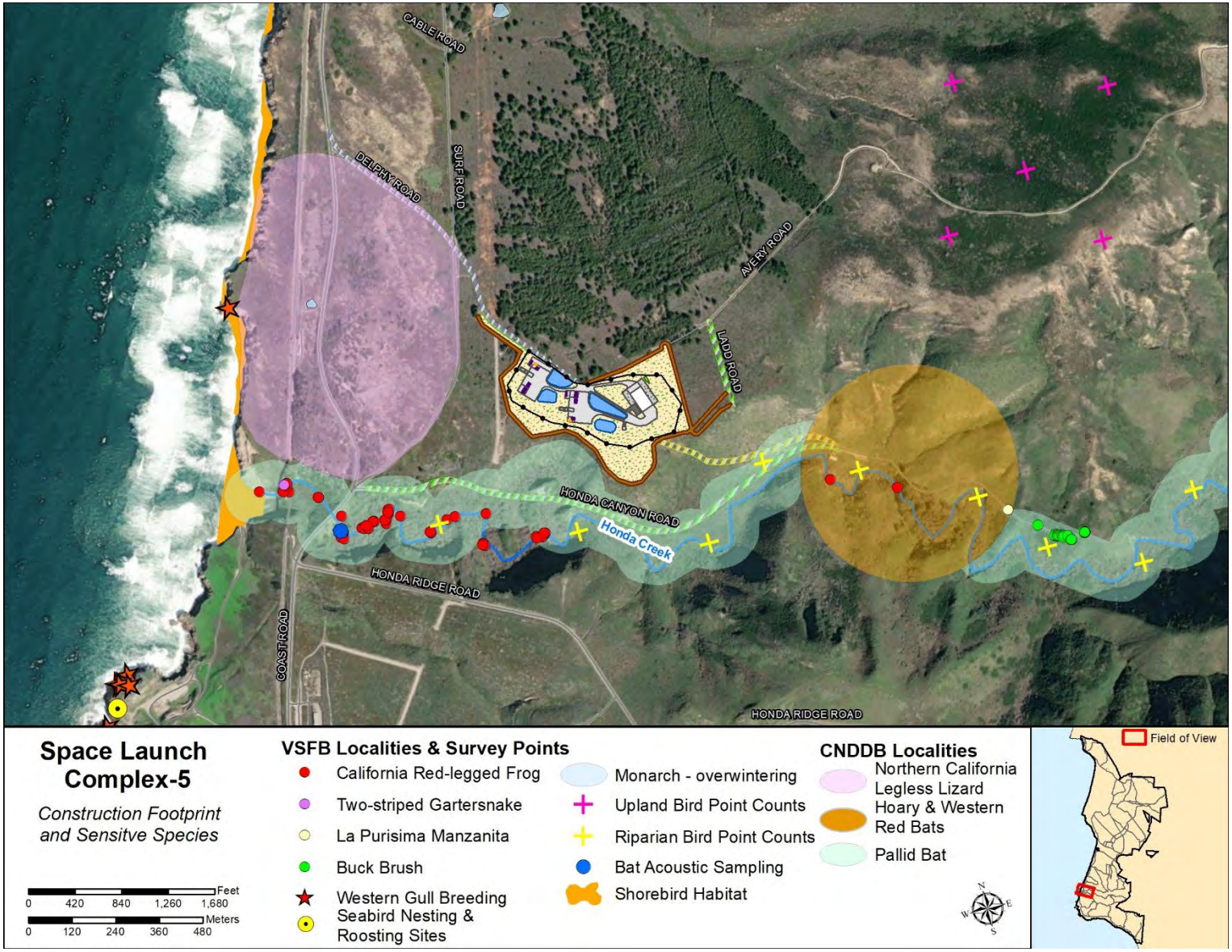

Figure 6. Special status species localities and survey points in the vicinity of the SLC-5 construction footprint.

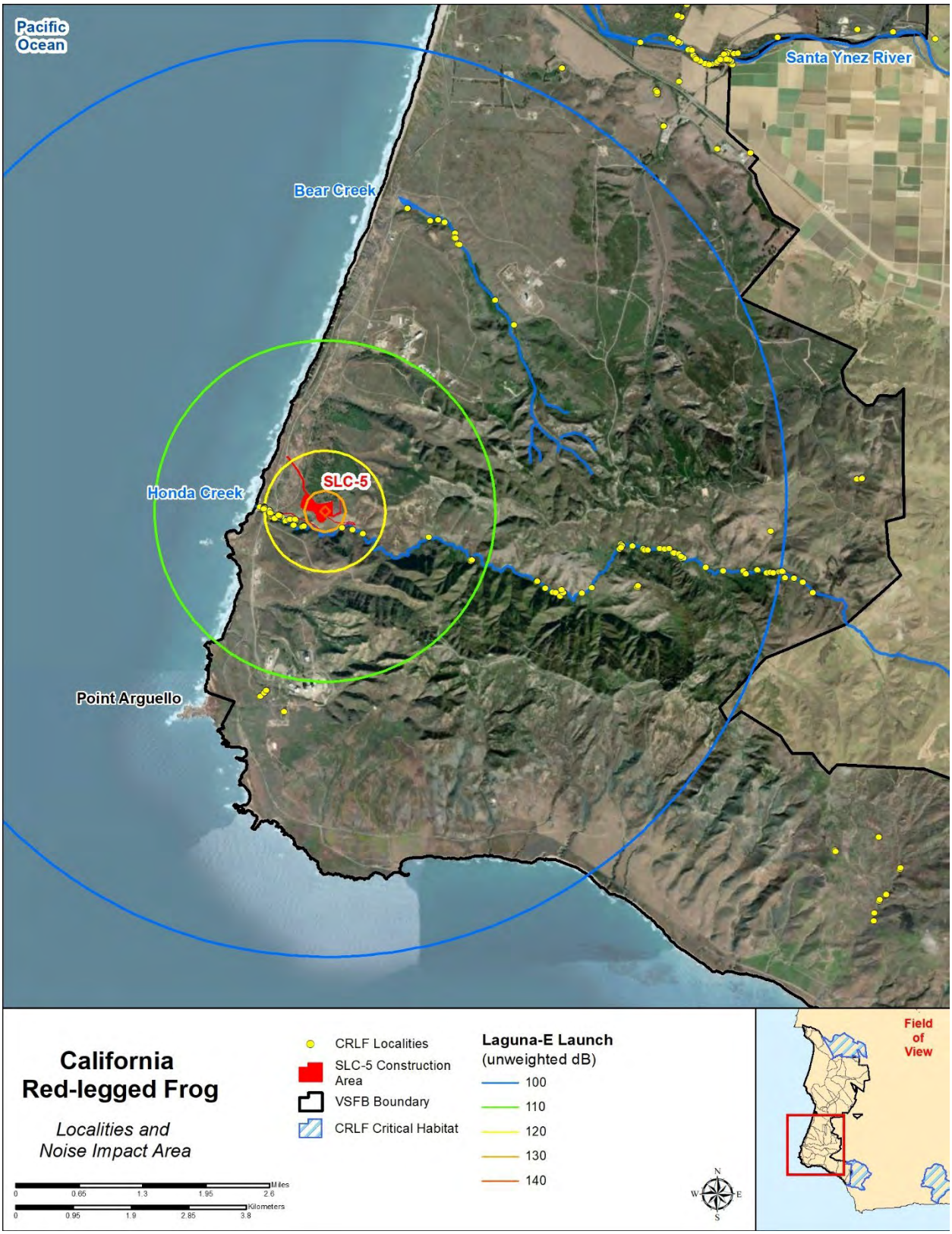

Figure 7. California red-legged frog localities within the Laguna-E noise footprint (Source: DAF long term annual surveys and monitoring).

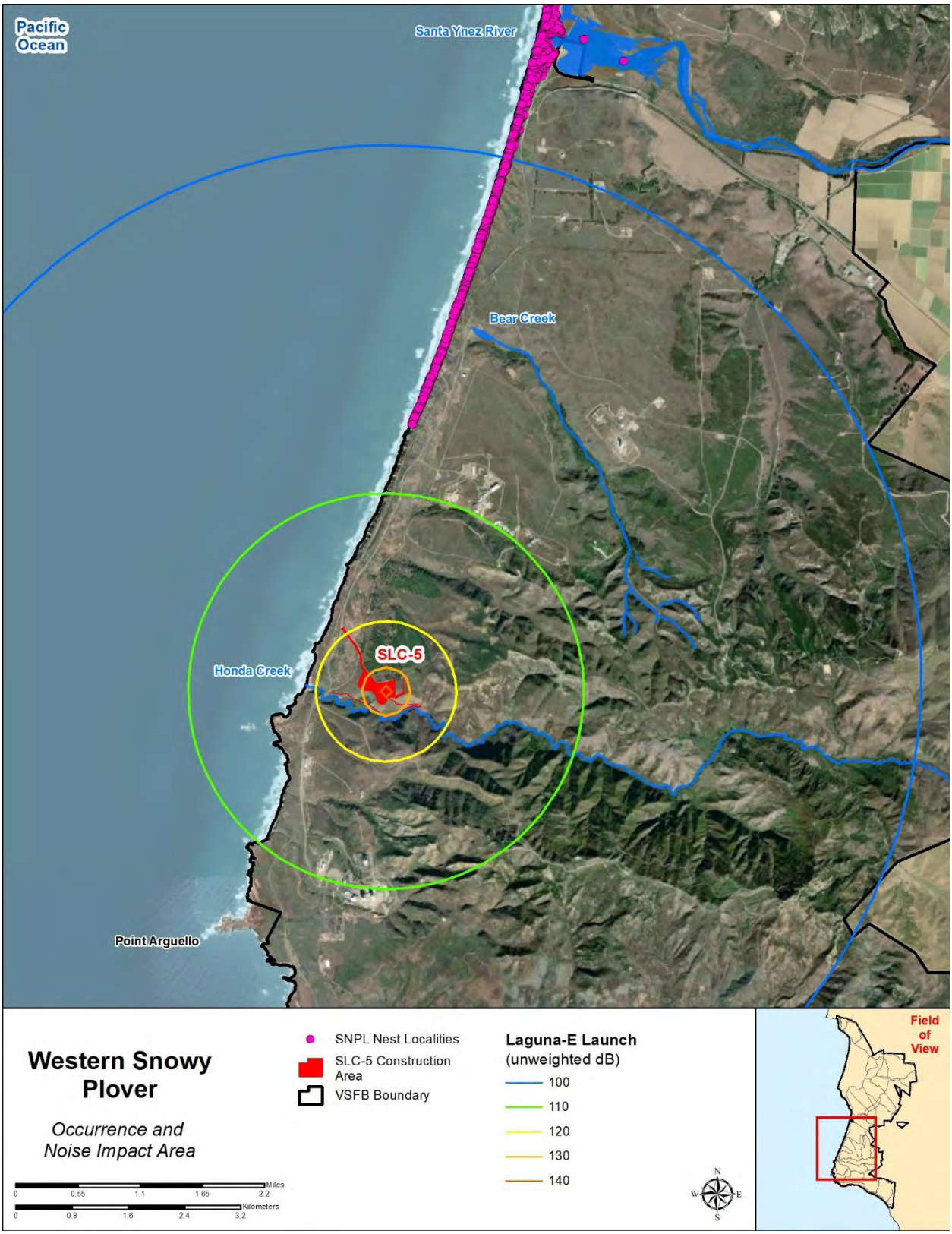

Figure 8. Western snowy plover nest localities within the Laguna-E noise footprint (Source: DAF long term annual surveys and monitoring).

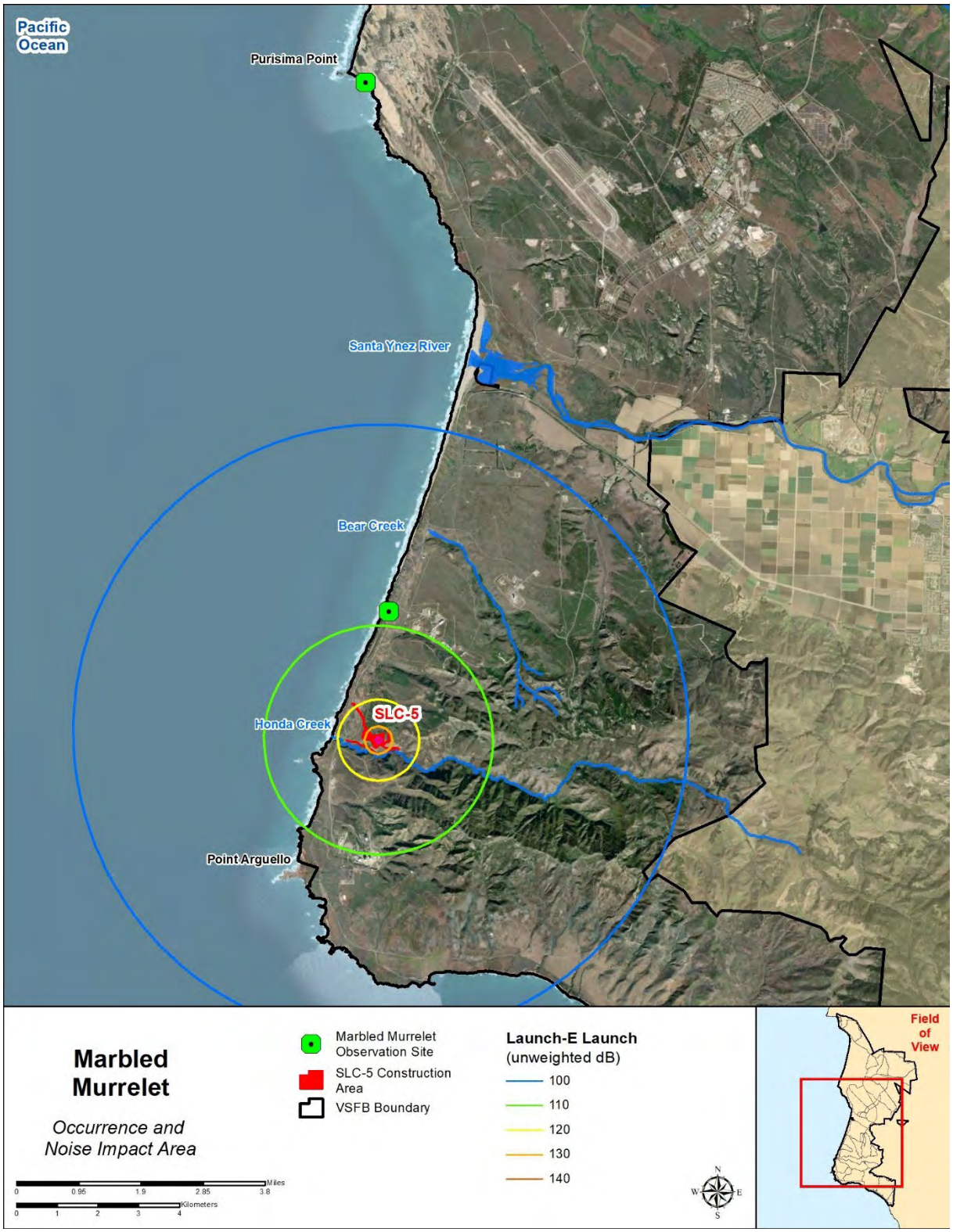

Figure 9. Marbled murrelet observation sites within the Laguna-E noise footprint. (Note: the observation sites represent the location of the surveyor; the birds were observed in the ocean hundreds to thousands of feet offshore; Source: eBird 2022)

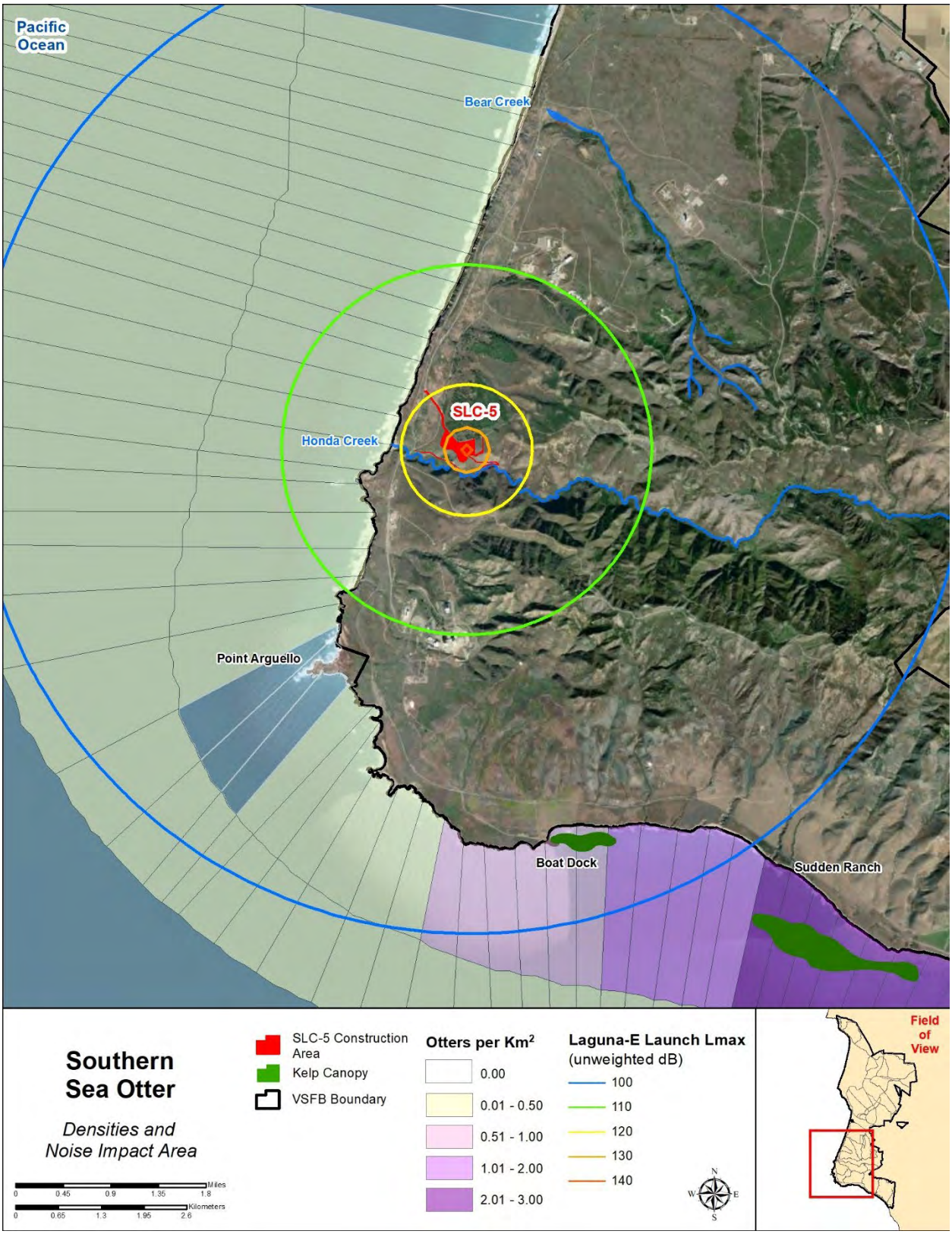

Figure 10. Southern sea otter densities offshore within the Laguna-E noise footprint (Source: USGS 2019).

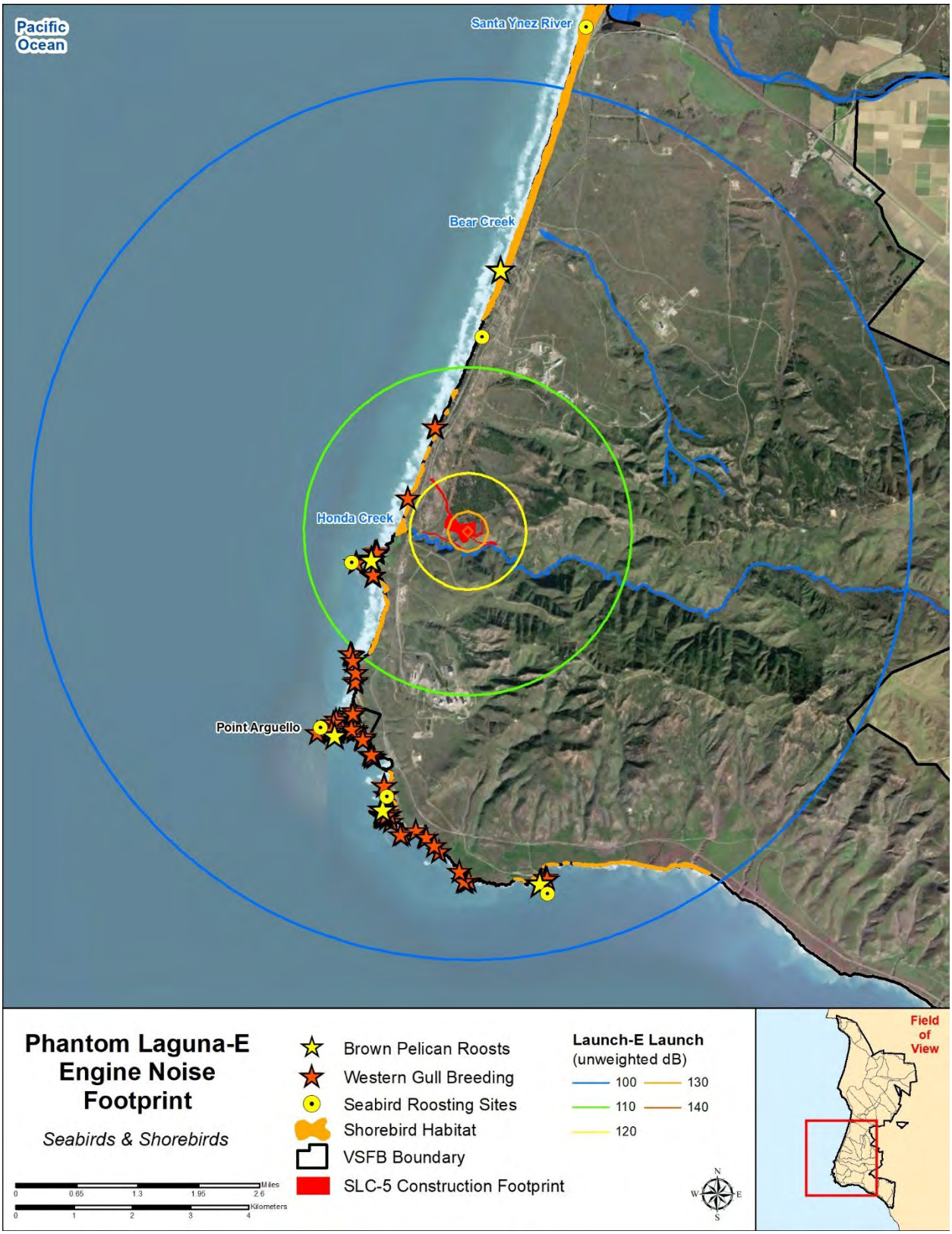

Figure 11. Seabird roosting and breeding areas and shorebird habitat within the Laguna-E noise footprint (Source: DAF long term annual surveys and monitoring).

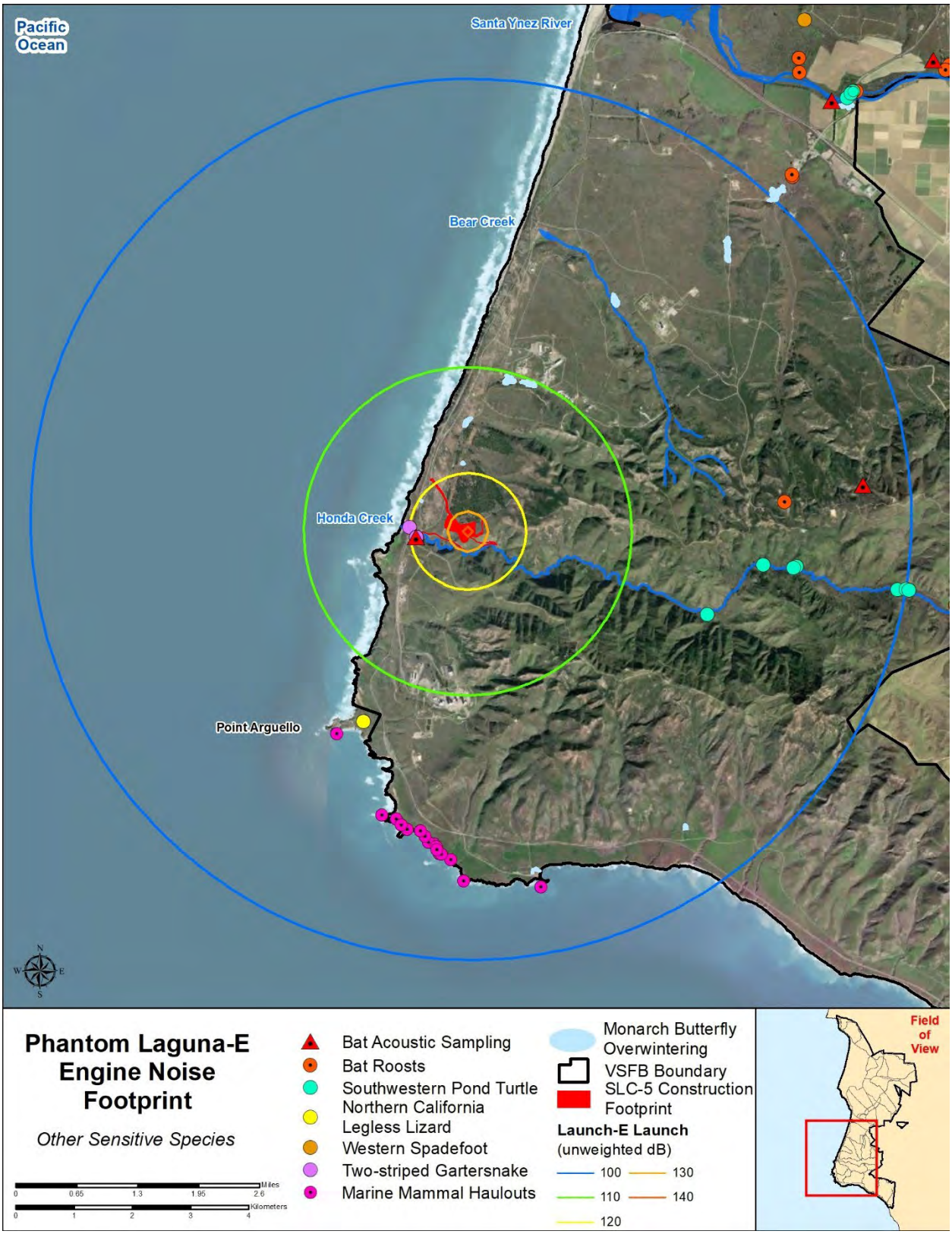

Figure 12. Other special status species within the Laguna-E noise footprint (Source: DAF long term annual surveys and monitoring).

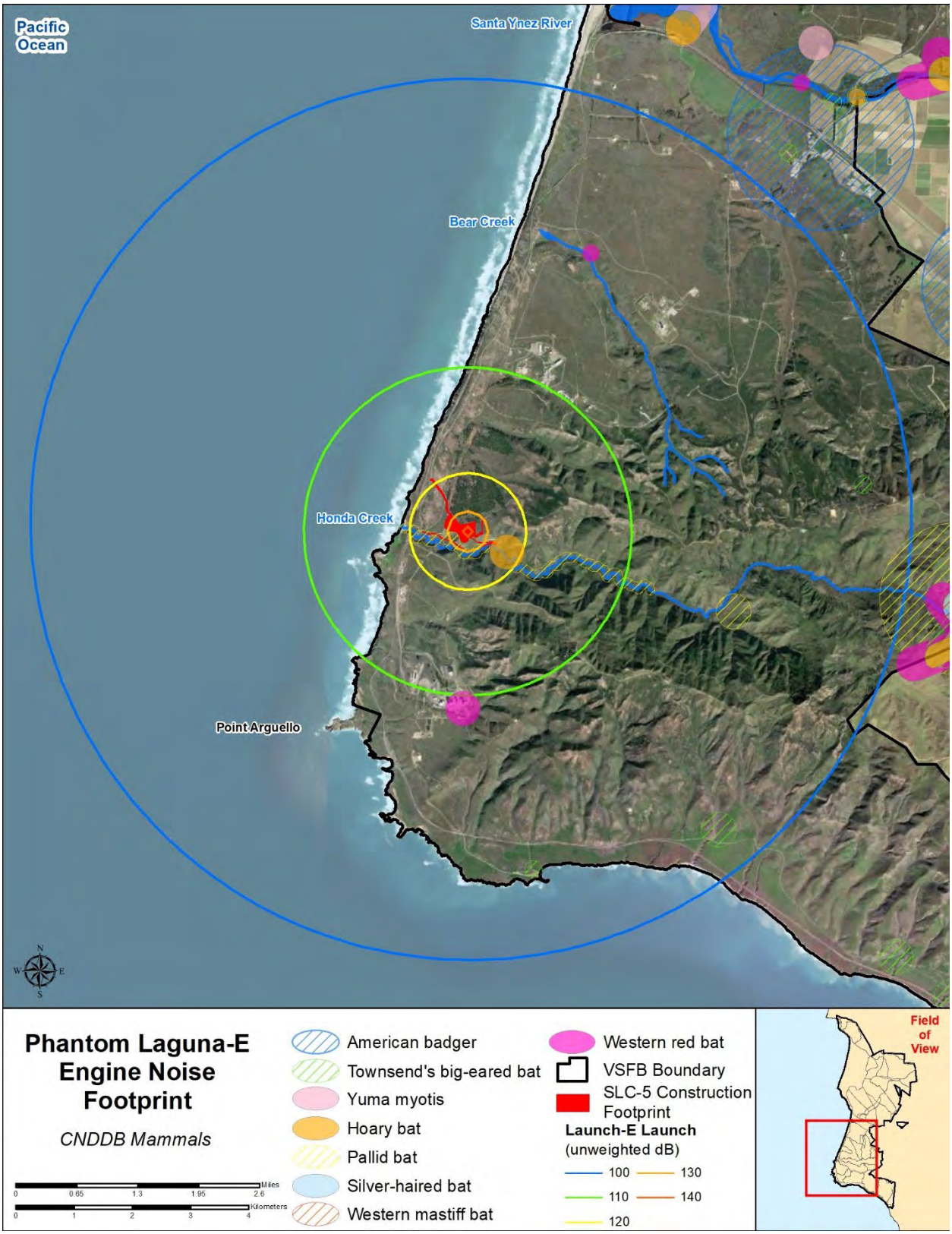

Figure 13. Special status mammal CNDDB localities within the Laguna-E noise footprint.

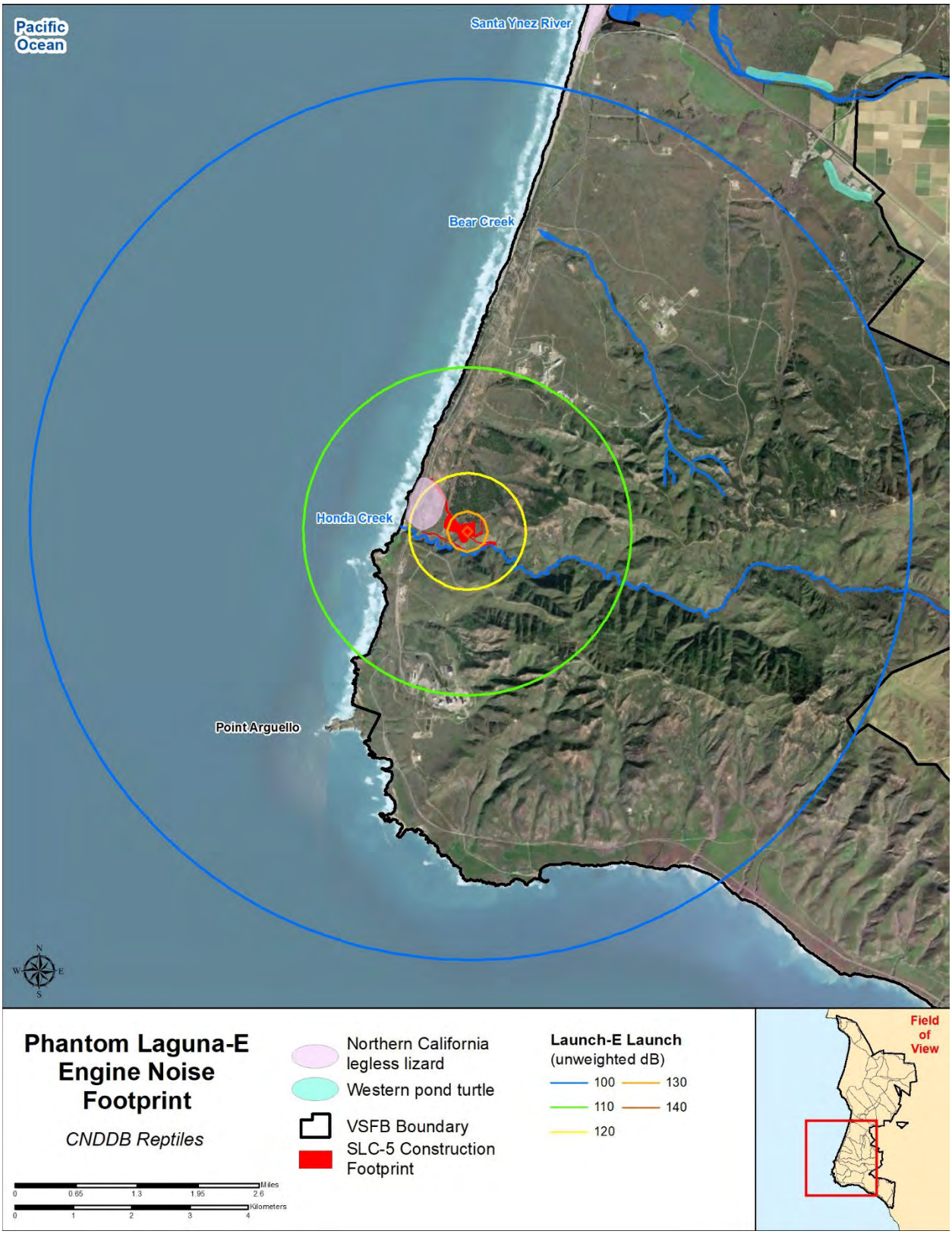

Figure 14. Special status reptile CNDDB localities within the Laguna-E noise footprint.

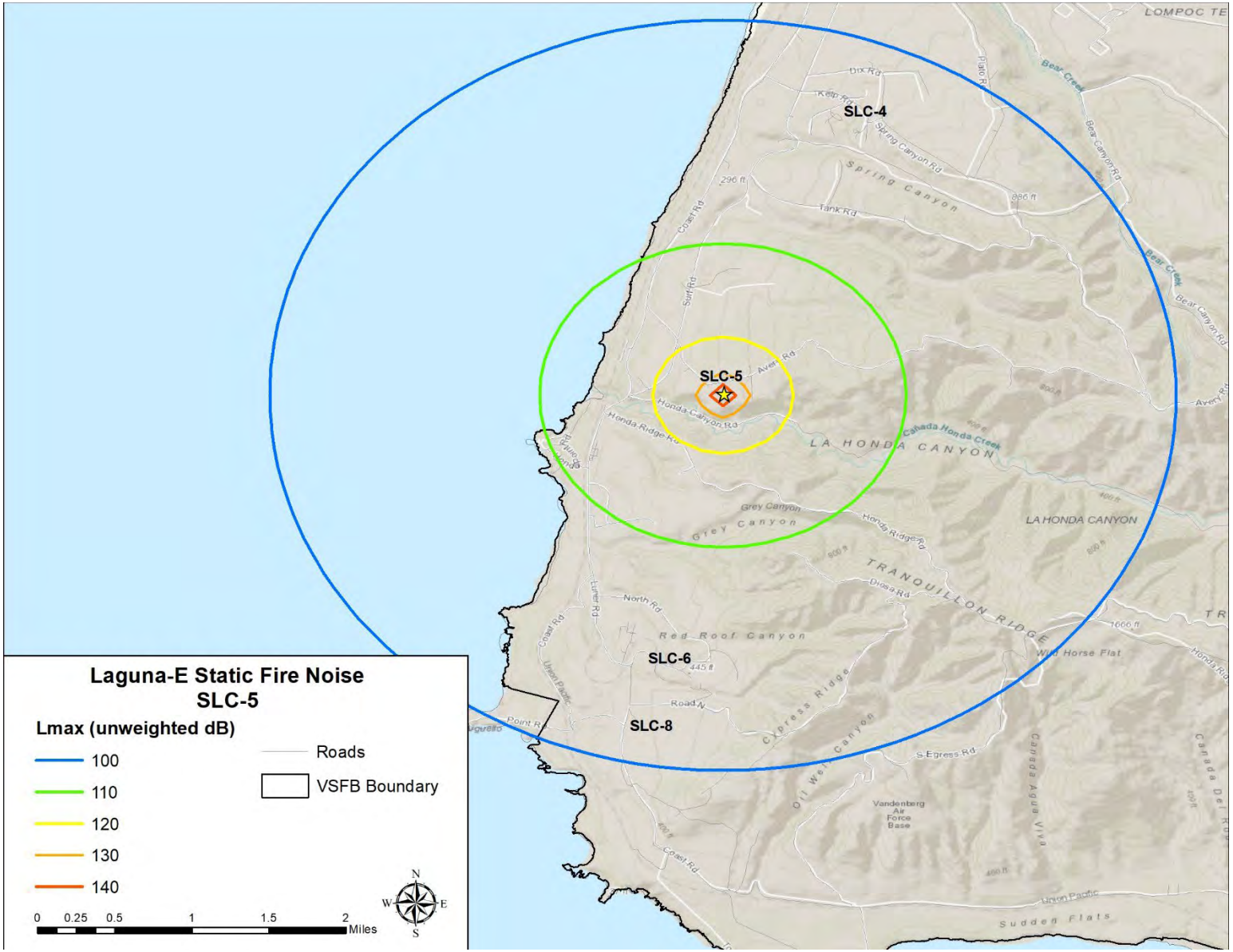

Figure 2-14: Maximum Engine Noise Distribution During Laguna-E Static Fire

Exhibit 8: Artificial Lighting Plan

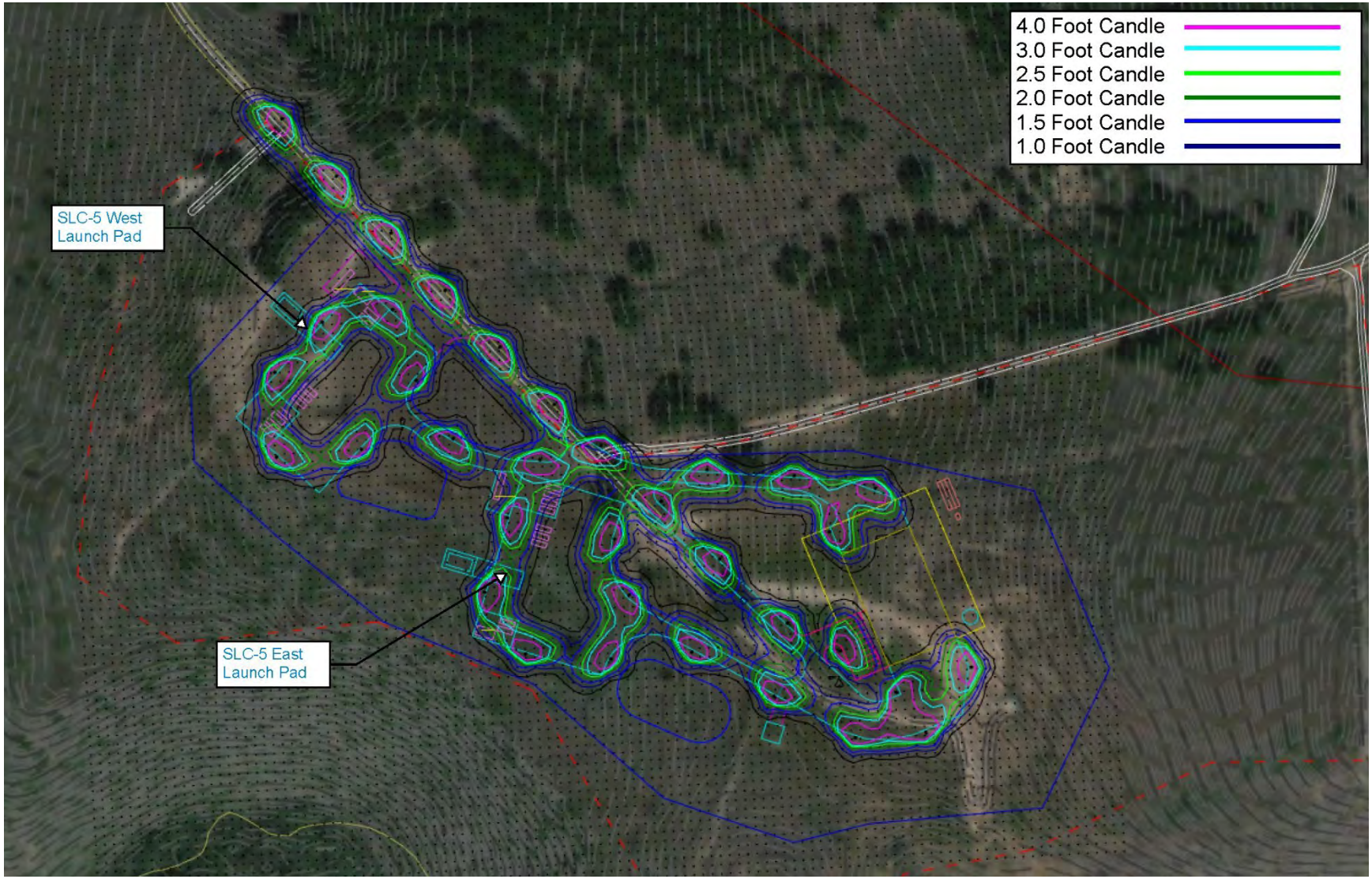

Figure 2-7: Preliminary Lighting Plan

Exhibit 9: First Stage Splashdown Zone

Figure 2-17: Daytona-E and Laguna-E First Stage Spashdown Zone in Broad Ocean Area

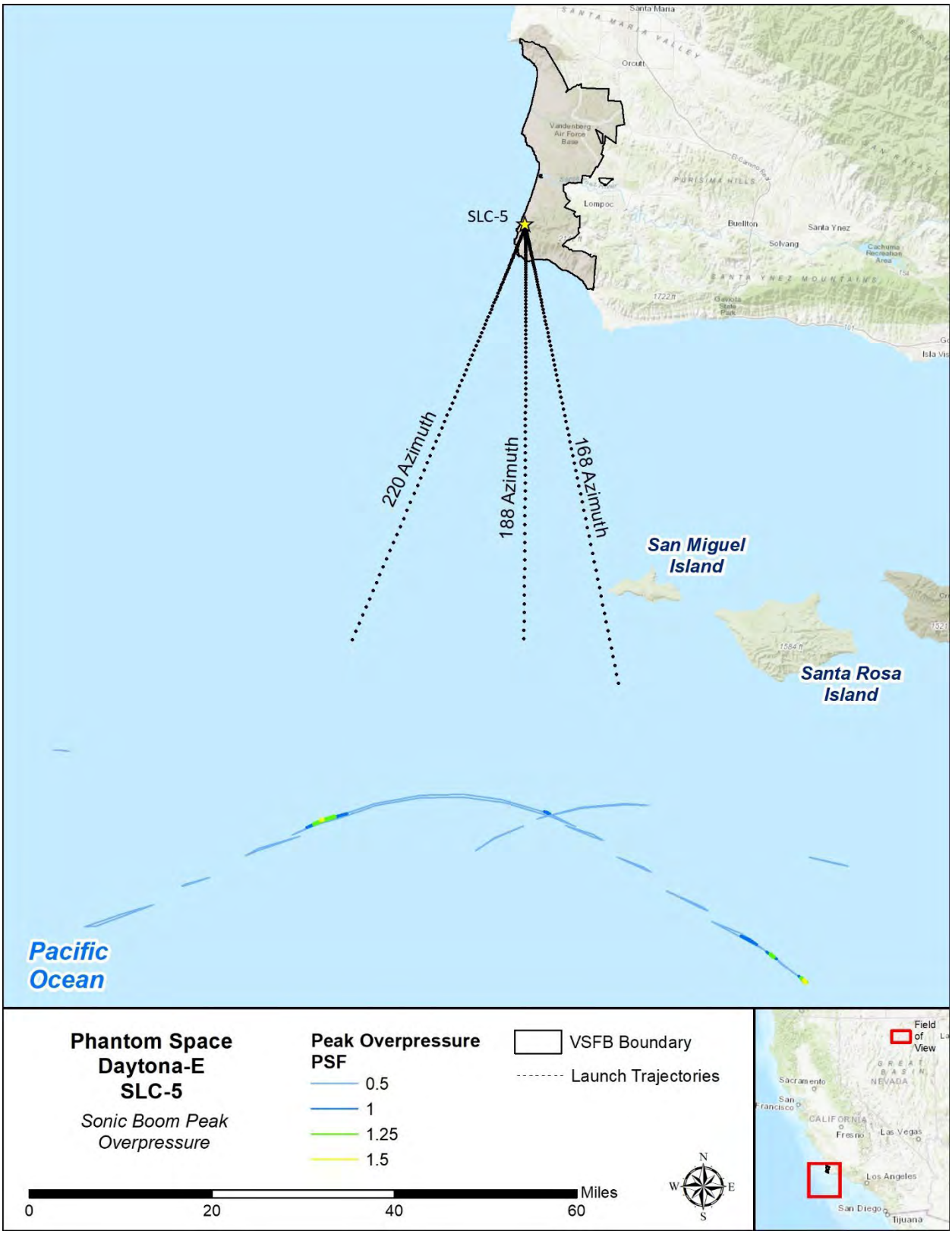

Figure 2-9: Predicted Sonic Boom Footprint for Daytona-E

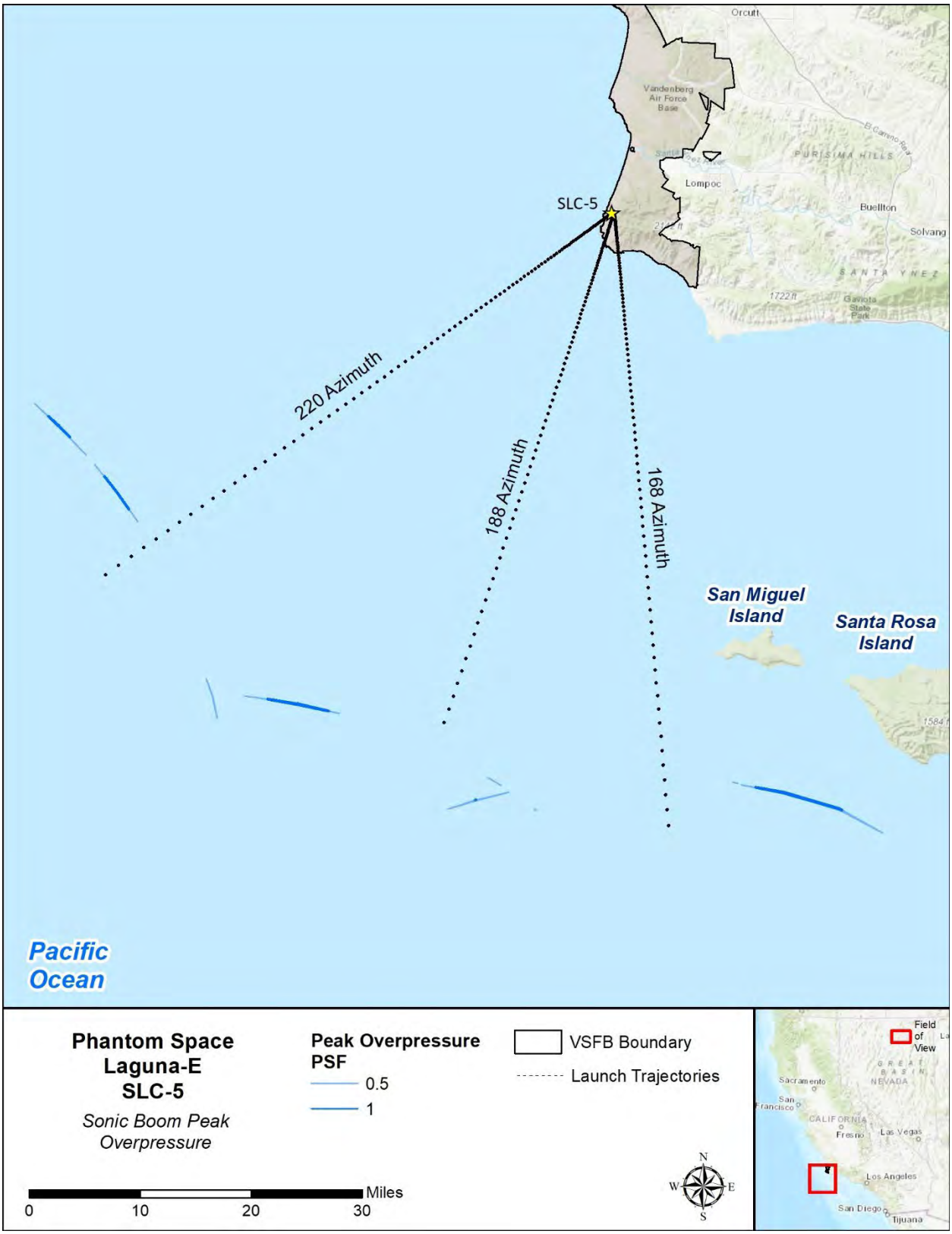

Figure 2-10: Predicted Sonic Boom Footprint for Laguna-E