



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### Office of Commercial Space Transportation; Notice of Intent to Prepare an Environmental Impact Statement (EIS), Open a Public Scoping Period, and Hold Public Scoping Meetings

**AGENCY:** The Federal Aviation Administration (FAA), National Aeronautics and Space Administration (NASA), Fish and Wildlife Service (USFWS), National Park Service (NPS), Coast Guard (USCG), and Department of the Air Force (DAF).

**ACTION:** Notice of Intent to prepare an EIS, open a public scoping period, and hold public scoping meetings.

**SUMMARY:** This Notice provides information to Federal, State, and local agencies; Native American tribes; and other interested persons regarding the FAA's intent to prepare an EIS to evaluate the potential environmental impacts of issuing a commercial launch Vehicle Operator License to SpaceX for the Starship-Super Heavy launch vehicle at Launch Complex 39A (LC-39A) at Kennedy Space Center (KSC), Florida. SpaceX proposes to construct launch, landing, and other associated infrastructure at and in proximity to LC-39A. The proposal would also include Starship-Super Heavy launches at LC-39A; recoverable Super Heavy booster and Starship landings at LC-39A or on a droneship; and expendable Super Heavy booster and Starship landings in the ocean. The FAA will prepare the EIS in accordance with the National Environmental Policy Act of 1969, the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, as part of its licensing process. Additional information is available online at: [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship\\_ksc](https://www.faa.gov/space/stakeholder_engagement/spacex_starship_ksc).

**DATES:** The FAA invites interested agencies, organizations, Native American Tribes, and members of the public to submit comments to inform the FAA on the significant issues to be analyzed in depth in the EIS (e.g., range of actions, alternatives, environmental impacts). The public scoping period starts with the publication of this Notice in the *Federal Register*. To ensure sufficient time to consider issues identified during the public scoping period, comments should be submitted by one of the methods listed under "ADDRESSES" no later than **June 24, 2024**. All comments will receive the same attention and consideration in the preparation of the EIS.

**ADDRESSES:** Comments, statements, or questions concerning scoping issues must be identified with the Docket Number **FAA-2024-1395** and may be provided to the FAA as follows:

- Federal E-Rulemaking Portal: <http://www.regulations.gov>. Retrieve the docket by conducting a search for "FAA-2024-1395" and follow the online instructions for submitting comments. Please note that the FAA will post all comments on the Internet without changes, including any personal information provided.
- By U.S. mail to Ms. Eva Long, FAA Environmental Protection Specialist, c/o Leidos, 2877 Guardian Lane, Virginia Beach, VA 23452.

We encourage you to submit comments electronically through the Federal E-Rulemaking Portal. If you submit your comments electronically, it is not necessary to also submit a hard copy. All comments received will be posted without change to <http://www.regulations.gov>. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment – including any personal identifying information you provide – may be publicly available at any time. While you can request in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

When fully operational, SpaceX proposes that the Starship-Super Heavy launch vehicle will offer a heavy lift platform that expands the company's ability to execute the totality of its current and expected future customers' requirements. By providing a reusable launch vehicle, SpaceX proposes that the Starship-Super Heavy would deliver efficient access to space and enable cost-effective delivery of cargo and people to the moon and Mars. Currently, SpaceX is conducting flight tests of the Starship-Super Heavy at Starbase in Boca Chica, Texas, an exclusive use launch site that serves as SpaceX's primary research, development, and flight test launch facility for the vehicle.

In September 2019, NASA completed the *Final Environmental Assessment for the SpaceX Starship and Super Heavy Launch Vehicle at Kennedy Space Center (KSC)* ("2019 EA") to evaluate the potential environmental impacts resulting from construction and operations associated with utilization of LC-39A for the SpaceX Starship-Super Heavy launch vehicle in practical applications. LC-39A is a SpaceX-leased launch site located on northern KSC property, approximately 3 miles east of NASA's Vehicle Assembly Building. LC-39A currently supports SpaceX Falcon 9 and Falcon Heavy launches.

The 2019 EA established the purpose and need for Starship-Super Heavy at KSC and LC-39A, which was to develop and implement formal agreements with SpaceX for use of NASA assets and to provide services and commodities to enable Starship-Super Heavy launches. Commercial use of KSC real property supports NASA's mandate to encourage the fullest commercial use of space, supports the goals of the National Aeronautics and Space Act, and advances the National Space Policy that Federal agencies shall ensure that United States (U.S.) Government space technology and infrastructure is made available for commercial use on a reimbursable, noninterference, and equitable basis. The need for Starship-Super Heavy at KSC aligns with NASA's Commercial Space Launch Act, as amended, which is to support the U.S. goal of encouraging activities by the private sector to strengthen and expand U.S. space transportation infrastructure.

NASA is seeking the support of the Starship-Super Heavy at KSC in its continued mission to expand commercial uses of space and the space industry by facilitating SpaceX efforts to strengthen U.S. space transportation and launch infrastructure and providing greater mission capability to NASA and SpaceX by continuing the development of ever evolving next generation launch vehicles and spacecraft. Additionally, NASA is seeking the support of the Starship-Super

Heavy in meeting the U.S. goal of near-term lunar exploration, such as the NASA Artemis and Human Landing System (HLS) programs.

SpaceX proposes that the Starship-Super Heavy at KSC serves to increase the company's operational portfolio diversity (i.e., the ability to support multiple customer missions at different locations) and capabilities through multiple Starship-Super Heavy launch sites, reduce space transportation costs (including within the Artemis and HLS programs), enhance exploration, support national leadership in space, and make space access more affordable.

Within the context of the 2019 EA, the scope of the Proposed Action was defined as infrastructure development and Starship-Super Heavy operations. Infrastructure development included construction of a launch mount for the Starship and Super Heavy Booster, a liquid methane farm, transport road leading from the pad entrance gate to the launch mount, high-pressure gaseous commodity lines, a deluge water system, and a landing zone (including pad). The 2019 EA assessed approximately 24 Starship-Super Heavy launches per year, including lunar and Mars missions, satellite payload missions, and human spaceflight. Starship design at the time of the 2019 EA consisted of seven raptor engines, while the Super Heavy booster consisted of 31 Raptor engines. Starship landing locations included Landing Zone 1 at Cape Canaveral Space Force Station (CCSFS), downrange on a dronship (converted barge), and a new landing pad at LC-39A. Landings for Super Heavy, the first stage booster, were proposed to occur downrange on a dronship. Super Heavy booster returns to LC-39A were not considered in the 2019 EA. NASA's resultant Finding of No Significant Impact (FONSI) issued on September 19, 2019, concluded that the environmental impacts associated with Starship-Super Heavy infrastructure development and operations, within the scope of the 2019 EA, would not individually or cumulatively have a significant impact on the quality of the biological or physical environment.

Since 2019, SpaceX has undertaken infrastructure improvements at LC-39A (e.g., construction of a launch mount) consistent with the scope of the 2019 EA. However, while the purpose and need for Starship-Super Heavy at LC-39A have not changed, the Starship-Super Heavy concept of operations has evolved from the original 2019 EA scope. SpaceX now proposes to construct additional launch infrastructure not previously contemplated in the 2019 EA: a Super Heavy booster catch tower, a natural gas liquefaction system and air separation unit for propellant generation, and stormwater/deluge ponds. SpaceX also proposes to launch an advanced design of the Starship and Super Heavy vehicle (up to nine raptor engines for Starship and up to 35 raptor engines for the Super Heavy booster), operate at a projected higher launch tempo (up to 44 launches per year), and land the Super Heavy booster at LC-39A in support of its reusability concept. Starship landings are no longer proposed to occur at Landing Zone 1 at CCSFS.

In order to conduct Starship-Super Heavy launch and landing operations from LC-39A, SpaceX must obtain a Vehicle Operator License from the FAA. Issuing a Vehicle Operator License and approving associated airspace closures is considered a major Federal action under NEPA. In consideration of SpaceX's revised proposal, NASA, as the land management agency, and FAA, as the licensing agency, have determined that an EIS is the appropriate level of NEPA analysis to address the adjusted scope of Starship-Super Heavy at LC-39A. SpaceX will prepare this EIS under the supervision of the FAA which will serve as the lead agency at NASA's request (see 40 CFR 1506.5).

The EIS will consider the potential environmental impacts of the Proposed Action and the No Action Alternative. The successful completion of the environmental review process does not guarantee that the FAA would issue a Vehicle Operator License. The project must also meet all FAA safety, risk, and indemnification requirements for the appropriate license.

### **Proposed Action**

The FAA's Federal Action would include 1) issuing a Vehicle Operator License to SpaceX, as well as potential future renewals or modifications to the Vehicle Operator License for operations that would be within the scope analyzed in the EIS; and 2) developing one or more formal agreements with SpaceX to outline notification procedures prior to, during, and after an operation including Notice to Air Missions (NOTAM), as well as issuing temporary airspace closures to ensure public safety in accordance with FAA Order 7400.2M, *Procedures for Handling Airspace Matters*.

SpaceX's Proposed Action within the context of this EIS consists of the totality of Starship-Super Heavy infrastructure improvements and operations, to include those identified in the 2019 EA, as well as those adjusted scope elements described previously. This includes up to 44 Starship-Super Heavy launches per year. Launches may occur during the day or at night. Each Starship-Super Heavy orbital launch would include either landing the Super Heavy booster at LC-39A or downrange in the Atlantic Ocean on a droneship or expending the booster in the Atlantic Ocean, no closer than approximately 5 nautical miles off the coast. Starship could also land at LC-39A or on a droneship or be expended in the high seas between 55 degrees south latitude and 55 degrees north latitudes. SpaceX would continue to launch Falcon 9 and Falcon Heavy missions at LC-39A while Starship-Super Heavy is operational.

While infrastructure improvements consistent with the 2019 EA are already underway, additional infrastructure improvements at LC-39A associated with the evolved Starship-Super Heavy program to be addressed in this EIS include, but are not limited to, a Super-Heavy catch tower; onsite facilities for propellant generation and propellant storage (e.g., natural gas pretreatment system and methane liquefier); cooling tower; air separation unit; and deluge system.

The potential environmental impacts of all proposed construction and operational activities, including those from launch and landing, will be analyzed in the EIS. The EIS will evaluate the potential environmental impacts associated with air quality; biological resources (including fish, wildlife, and plants); climate; coastal resources; Department of Transportation Act, Section 4(f); farmlands; hazardous materials, solid waste, and pollution prevention; historical, architectural, archeological and cultural resources; land use; natural resources and energy supply; noise and noise-compatible land use; socioeconomic, environmental justice, and children's health and safety risks; visual effects; and water resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers). This analysis will consist of an evaluation of potential direct and indirect impacts and will account for cumulative impacts from other relevant activities in the vicinity of the action.

Concurrent with the NEPA process, the FAA is initiating National Historic Preservation Act section 106 Consultation to determine the potential effects of the Proposed Action on historic properties. Additionally, the FAA is consulting with the USFWS under section 7 of the

Endangered Species Act (ESA) regarding potential impacts on federally listed threatened and endangered species. The FAA is also consulting with the National Marine Fisheries Service under section 7 of the ESA and the Marine Mammal Protection Act for potential impacts on protected marine species. Pursuant to the U.S. Department of Transportation Act of 1966, this EIS will comply with the requirements of section 4(f) of the Act, as applicable.

## **Alternatives**

The Council on Environmental Quality defines “reasonable alternatives” as those “that are technically and economically feasible and meet the purpose and need for the proposed action.” (40 CFR 1508.1(z)). Through an alternative screening process based on Starship-Super Heavy requirements and the purpose and need, the 2019 EA established LC-39A as the approved location for Starship-Super Heavy operations, and infrastructure development based on NASA’s 2019 FONSI is already underway. LC-39A could provide time-critical mission capability to NASA and commercial pursuits via the Starship-Super Heavy. In addition to existing launch infrastructure, LC-39A could provide launch site diversity for Starship-Super Heavy to meet the purpose and need for near-term lunar exploration under the NASA Artemis and HLS programs.

Given the above, the only alternative to the Proposed Action as described in this EIS is the No Action Alternative. Under the No Action Alternative, FAA would not issue a Vehicle Operator License for Starship-Super Heavy operations at LC-39A. SpaceX would not implement further improvements or launch Starship-Super Heavy from LC-39A. Potential impacts associated with the No Action Alternative will be analyzed in this EIS.

## **Scoping Meetings**

FAA will hold three IN-PERSON scoping meetings and one VIRTUAL public scoping meeting. The meetings will allow the public to receive information on the Proposed Action, meet lead and cooperating agency representatives, and provide comments to the record.

The IN-PERSON meetings will be held on June 12, 2024, and June 13, 2024. The June 12, 2024, meetings will be held from 2pm – 4pm and 6pm – 8pm (Eastern) at the Radisson Cape Canaveral, 8701 Astronaut Blvd, Cape Canaveral, Florida 32920. The June 13, 2024, meeting will be held from 6pm – 8pm (Eastern) at the Kennedy Space Center Visitor Complex, Space Commerce Way, Merritt Island, Florida 32953. All meetings will consist of an open house information-station format wherein the FAA will provide information describing the purpose of the scoping meetings, project schedule, opportunities for public involvement, Proposed Action and alternatives summary, and environmental resource area summary. Fact sheets will be made available containing similar information. At any time during the meetings, the public will have the opportunity to provide verbal comments to a court reporter or written comments via a written comment form at one of several commenting stations. English-Spanish translation services will be provided at the in-person meetings.

The VIRTUAL meeting will be held on June 17, 2024; 6pm – 8pm (Eastern); the URL and call-in number for the meeting will be provided in advance on the FAA’s project website [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship\\_ksc](https://www.faa.gov/space/stakeholder_engagement/spacex_starship_ksc). The virtual meeting will consist of a closed-captioned auto-run presentation describing the purpose of the scoping meetings, project schedule, opportunities for public involvement, Proposed Action and alternatives summary, and environmental resource area summary. Presentations will be run at

the beginning of each hour. Members of the public may provide written comments via the chat function during the presentation and for the remainder of each hour. Verbal comments up to three minutes can be given after the completion of each presentation. A moderator will facilitate verbal comments. English-Spanish translation services for verbal comments will be provided. Both English and Spanish versions of the presentation will be made available to the public on FAA's project website.

More information regarding the scoping meetings, along with any published scoping materials, is available on FAA's project website at [https://www.faa.gov/space/stakeholder\\_engagement/spacex\\_starship\\_ksc](https://www.faa.gov/space/stakeholder_engagement/spacex_starship_ksc)

Issued in Washington, DC.

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