

DRAFT
ENVIRONMENTAL ASSESSMENT
For
UNITED STATES NAVY RAILHEAD TRANSFER FACILITY
AT KENNEDY SPACE CENTER, FLORIDA

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Abstract

Designation: Environmental Assessment

Title of Proposed Action: United States Navy Railhead Transfer Facility (P110) at Kennedy Space Center, Florida

Lead Agency and Action Proponent: Department of the Navy, Portfolio Acquisition Executive Strategic Systems Programs

Cooperating Agency: National Aeronautics and Space Administration

Affected Region: Kennedy Space Center, Florida

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The United States (U.S.) Department of the Navy (Navy) prepared this Environmental Assessment (EA) to analyze potential environmental effects of constructing and operating a new motor transfer facility and associated railroad and vehicle access infrastructure at the National Aeronautics and Space Administration (NASA) Kennedy Space Center (KSC) in Florida. The purpose of the Proposed Action is to enable rail-to-road transfer and vehicle delivery of motor and component shipments in support of the Navy mission. The action proponent for this EA is Portfolio Acquisition Executive Strategic Systems Programs (PAESSP). NASA participated as a cooperating agency in the preparation of this EA.

This EA was prepared in accordance with the National Environmental Policy Act (NEPA)(42 U.S. Code [U.S.C.] sections 4321, et seq.) and Department of War NEPA Implementing Procedures (April 30, 2026).

This EA evaluates the reasonably foreseeable environmental impacts associated with the Alternative 1, the Proposed Action Alternative, and the No Action Alternative to the following resource areas: water resources, air quality, and terrestrial biological resources. The Proposed Action would result in less than significant impacts to these resources.

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1 Purpose of and Need for the Proposed Action

1.1 Introduction

The United States (U.S.) Department of the Navy (Navy) prepared this Environmental Assessment (EA) to analyze the reasonably foreseeable environmental effects of constructing and operating a new motor transfer facility and associated railway and road infrastructure at the National Aeronautics and Space Administration (NASA) Kennedy Space Center (KSC) in Florida. The proposed facility includes an open-air metal roof structure over a reinforced concrete foundation; a paved laydown/parking area; a new access road and parallel railroad spur and turnouts connecting the facility to existing road and rail lines nearby; and renovation/replacement of portions of existing railroad track located between Schwartz Road and NASA Parkway. The Proposed Action components are described in Chapter 2.

Beginning in early 2030, the completed transfer facility and connecting road/rail infrastructure would provide logistics support for the Navy mission. Specific functions of the proposed facility would consist of receiving shipments of motors and components via rail and transfer to vehicles for final delivery to the nearby Naval Ordnance Test Unit (NOTU), located at Cape Canaveral Space Force Station (CCSFS) in Florida.

The action proponent for this EA is Portfolio Acquisition Executive Strategic Systems Programs. NASA participated as a cooperating agency in the preparation of this EA.

This EA was prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S. Code [U.S.C.] sections 4321, et seq.) and Department of War (DoW) NEPA Implementing Procedures (April 30, 2026).

1.2 Background

The existing KSC rail transit system was first utilized to support the Navy mission in the 1980s. Currently, rail-to-vehicle transfers of active inert missile shipments between KSC and NOTU occur at a locomotive maintenance facility approximately 0.6 miles north of Schwartz Road (see Figure 1-1) and 2.6 rail miles northeast of the proposed new transfer facility site. The current transfer facility can no longer support operational and safety requirements.

1.3 Location

The proposed motor transfer facility would be constructed at KSC and vehicle shipments between the new facility and NOTU would continue to occur on existing roads located within both KSC and CCSFS property. Figure 1-1 shows the proposed location of the transfer facility and the existing road and rail networks within KSC and CCSFS boundaries.

1.4 Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to provide a sufficient and effective railhead transfer facility utilizing the existing railway network at KSC to enable rail-to-road transfer and vehicle delivery of motor and component shipments in support of the Navy mission at NOTU at CCSFS. The Proposed Action is needed to meet operational and safety requirements.

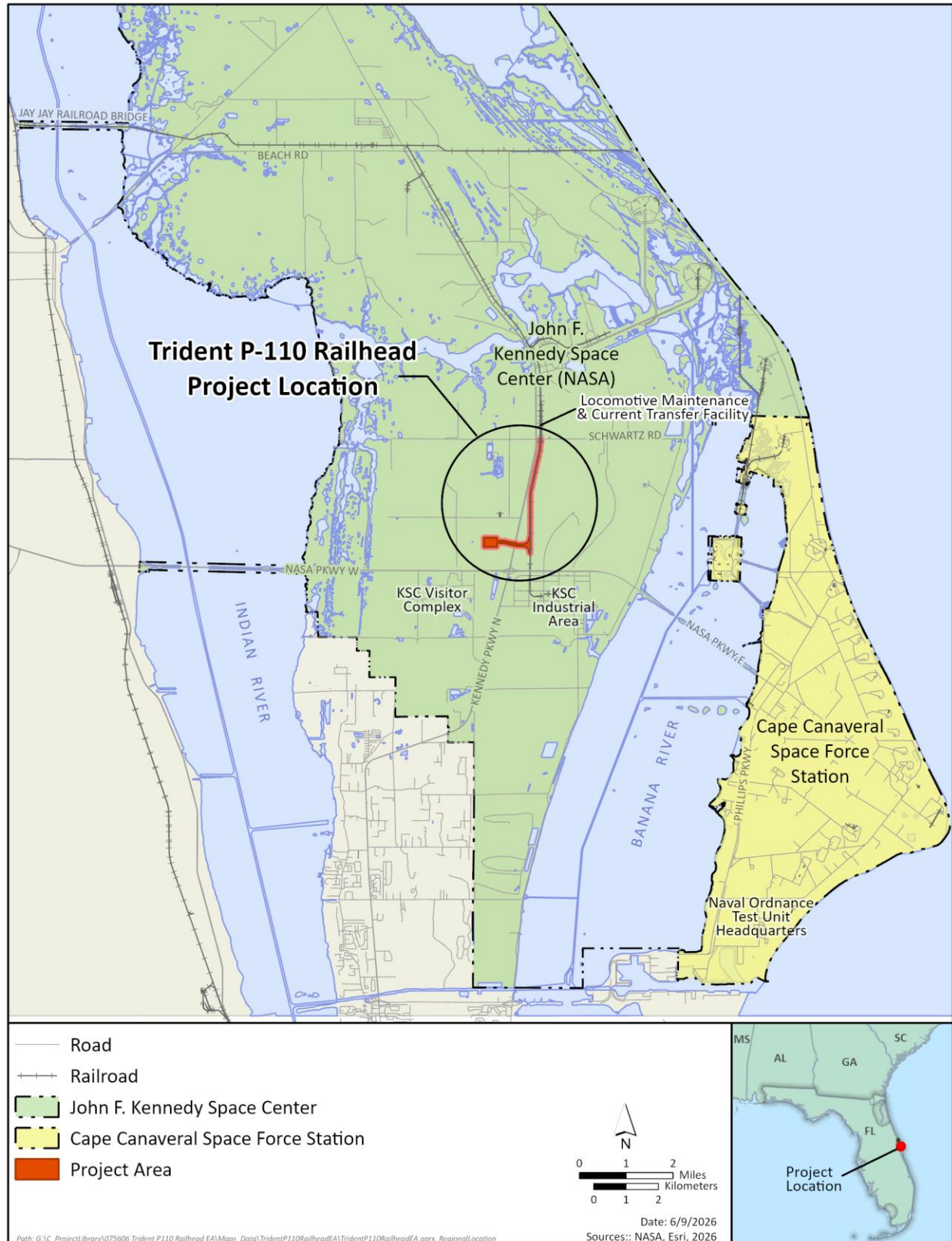


Figure 1-1 Project Location

1.5 Scope of Environmental Analysis

This EA evaluates the reasonably foreseeable environmental effects associated with the Proposed Action, as described in Chapter 2. The No Action Alternative is also evaluated as a requirement of NEPA to serve as a baseline from which to analyze the effects of not implementing the Proposed Action. To provide Navy decision makers with sufficient information to plan and make informed decisions on the Proposed Action, this EA evaluates several environmental resource categories within the affected environments that potentially could be impacted. Chapter 3 describes the affected environment and potential project effects to water resources, air quality, and terrestrial biological resources. Potential effects to the following additional resource areas have been determined to be negligible or nonexistent (as described at the beginning of Chapter 3) and are not carried forward for further analysis in this EA: geological resources, land use, noise, cultural resources, visual resources, utilities/infrastructure, transportation, public health and safety, and socioeconomics.

1.6 Relevant Laws and Regulations

The Navy prepared this EA based on relevant laws, statutes, regulations, and policies pertinent to implementation of the Proposed Action (Appendix B, *Regulatory Setting*).

1.7 Public and Agency Participation and Intergovernmental Coordination

The Navy is soliciting public and agency input regarding the Proposed Action by making the Draft EA available on the Navy's NEPA website at www.nepa.navy.mil/CapeRailhead-EA and on KSC's website at <https://public.ksc.nasa.gov/environmental/nepa-2> for 30 days between September 17 and October 16, 2026, and by publishing a notice of availability of the Draft EA in the local *Florida Today* newspaper (see Appendix G, *Public and Agency Involvement*). The Navy will consider all comments received during the Draft EA public comment period while preparing the Final EA. In addition, all consultations and coordination with the regulatory agencies listed below will be completed prior to preparing the Final EA:

The Navy is coordinating or consulting with federal, state, and local agencies regarding the Proposed Action. At the federal level, this includes the U.S. Fish and Wildlife Service (USFWS) (Appendix H, *Agency Consultation: Endangered Species Act*) and the U.S. Army Corps of Engineers (USACE). At the state level, consultation with the Florida State Historic Preservation Officer (SHPO) was completed on June 5, 2025 (Appendix I, *Agency Consultation: National Historic Preservation Act*). Additional state and local agencies—including the Florida Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission, the St. Johns River Water Management District (SJRWMD), and regional planning councils—are being coordinated with through the Florida State Clearinghouse. Results of these consultations will be presented in an appropriate appendix.

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2 Proposed Action and Alternatives

This chapter includes a description of the Proposed Action, the screening factors used to evaluate reasonable alternatives, the alternatives carried forward for analysis, and any protective measures included in the Proposed Action.

2.1 Proposed Action

The Proposed Action is to construct and operate a dedicated motor component transfer facility and associated infrastructure near the existing rail and road transport networks at KSC to support the Navy mission at NOTU.

The proposed new facility and infrastructure would include the following:

1. **Structure and Paved Laydown/Parking Area:** One low-rise, open-air metal roof canopy over a reinforced concrete foundation (no more than 3,000 square feet [SF]) surrounded by approximately 3 acres of paved laydown/parking area.
2. **Access Road:** One new paved access road connecting the transfer facility to the nearest existing KSC roadway.
3. **Rail Spur and Turnouts:** One new rail spur connecting the new transfer facility (the “Railhead”) to the nearest existing KSC railroad track, two curved sections of connecting track (known as “turnouts”), plus renovation/replacement of existing track as needed (site-specific renovations to existing track may include new railroad ties, track, or both).
4. **Site Preparations:** Site preparations would include site clearing, grading and sediment control measures, and implementation of stormwater control measures as applicable based on project design.
5. **Site Security and Utilities:** These design elements would include features such as security fencing, electrical infrastructure, lightning protection, and fire water supply, along with connections to local service provider networks.

Operation of the proposed facility would be intermittent based on NOTU and would involve up to five motor shipments per year over a 10-year period beginning in 2030. The proposed facility would have no regular onsite staffing during periods when no motor shipments are scheduled.

The estimated implementation schedule for the Proposed Action is as follows:

- Site Preparation and Construction: 2027–2028.
- Outfitting/Activation/Certification: 2029.
- Start of Operations: 2030.

2.2 Alternatives Screening Analysis

NEPA requires an evaluation of a reasonable range of alternatives that are technically and economically feasible and that meet the purpose and need for the Proposed Action. Only alternatives determined to be reasonable and that meet the purpose and need require detailed analysis in the EA.

The Proposed Action must utilize the KSC rail network used for current motor shipments. This network supplies all rail-delivered heavy equipment and other space program materials to KSC. Starting from this foundation, the Navy worked with KSC personnel to identify 11 potential site alternatives at KSC (Sites A–K) and developed screening criteria to compare and evaluate each site for reasonableness and feasibility. The applied screening criteria included considerations related to compatible land use (consistency with the current and future land use in the vicinity of the site), avoidance and/or minimization of environmental impacts (minimize to the extent practicable by identifying and avoiding potential environmental effects), human health and safety (comply with all DoW safety requirements), and operational compatibility with existing KSC programs and missions (avoid or minimize impacts to existing missions, facilities and operations).

The alternatives analysis resulted in 10 of the 11 potential sites being excluded from focused analysis in this EA. One of the 11 sites (Site J) was carried forward for detailed analysis of potential environmental effects. Appendix E (*Alternatives Screening Analysis and Results*) describes the screening criteria NASA and the Navy used to evaluate potential site alternatives and the rationale for why certain site alternatives were not carried forward for detailed analysis in this EA. Figure E-1 in Appendix E shows the location of the 11 potential sites.

2.3 Alternatives Carried Forward for Analysis in this EA

The alternatives analysis determined that only one site alternative (Site J) for the Proposed Action was sufficiently reasonable and feasible to be carried forward for detailed analysis in this EA. That site alternative is described below as Alternative 1.

2.3.1 Alternative 1

Under Alternative 1, the Proposed Action Alternative, the Navy would construct and operate the proposed transfer facility at Site J on KSC, located near the intersection of Kennedy Parkway North and NASA Parkway West (see Figure 2-1). Site-specific characteristics of the Proposed Action at this site would include:

1. **Transfer Facility and Paved Laydown/Parking Area:** The single-story, open-air metal roof canopy and reinforced concrete foundation at this location would cover approximately 2,900 SF, with an additional paved laydown/parking area totaling approximately 130,000 SF (3 acres). The uninsulated standing seam metal roof structure would be supported by steel joists and wide flange beams and columns along continuous footings in the foundation. The laydown area would be constructed with reinforced concrete and the paved parking areas with asphalt.
2. **Access Road:** A two-lane asphalt road approximately 2,200 feet long would be constructed from the new transfer facility heading due east to connect with Kennedy Parkway North. Three reinforced concrete pipe culverts would be installed where the new road would cross a ditch to access the Parkway.

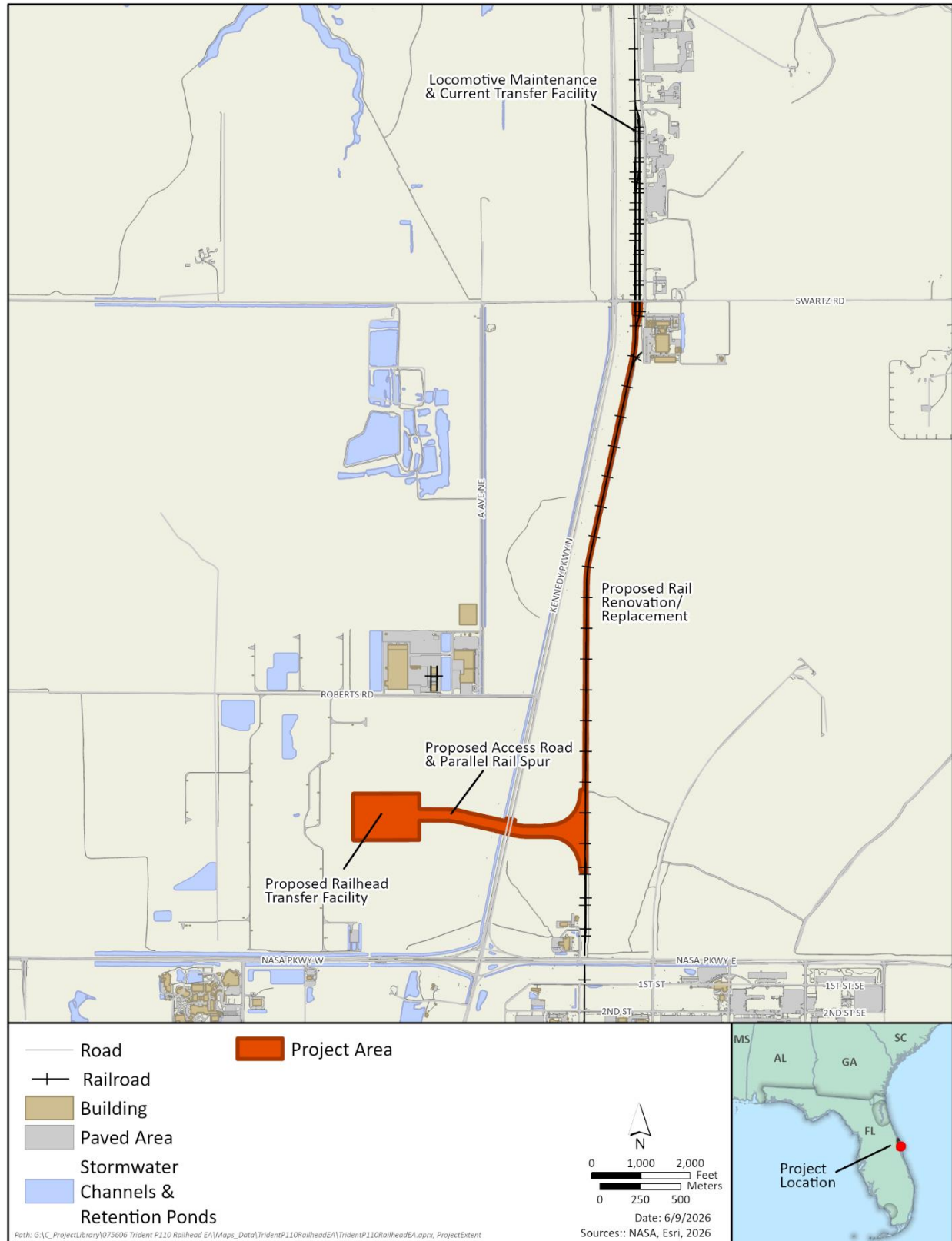


Figure 2-1 Preferred Alternative Site Vicinity

3. **Rail Spur and Turnouts:** A new rail spur (approximately 4,300 feet long) parallel to but extending beyond the end of the new access road segment would be installed to connect the transfer facility (the “railhead”) to the existing KSC railroad track east of Kennedy Parkway North (see Figure 2-1). Two curved turnout sections of new track (northbound and southbound) would be installed to merge the rail spur to the existing track. From the northernmost connection point, approximately 9,400 feet of the existing track to the north would be renovated or replaced. The total length of track (new and renovated/replaced) would be approximately 2.6 miles.
4. **Site Preparations:** Pre-construction site preparations at Site J would include demolition and clearing, grading and sediment control measures, and implementation of stormwater control and sustainable low impact development measures as determined appropriate during project design. During facility and road/rail construction, site improvements would include installation of a storm sewer, pipe culverts, and a retention pond. Rail rehabilitation would occur entirely within existing rail corridor. Waste generated during construction/demolition activities would be sorted and, if necessary, tested to determine whether it is hazardous or non-hazardous. Wastes would be disposed of at an appropriate permitted facility in accordance with solid and hazardous waste regulations.
5. **Site Security and Utilities:** Site security infrastructure would include fencing, gates, guardrails, barriers, and perimeter lighting. Utility infrastructure at the site would include electrical distribution, overhead utility poles, transformers, lightning protection infrastructure, and fire water supply, with all necessary connections to local utility networks.

As described in Section 2.1 (*Proposed Action*), post-construction operations at the Preferred Alternative site would include motor shipments by rail to the new railhead facility in U.S. Department of Transportation (DOT)- and DoW-approved boxcars. The motors would be offloaded to specialized transport vehicles for road transport within KSC and CCSFS for final delivery to NOTU. From the proposed site, the total road distance to NOTU would be approximately 22 miles.

2.3.2 No Action Alternative

NEPA requires inclusion of a No Action Alternative to provide a clear basis for choice among options by the decision-maker. Under the No Action Alternative, the Proposed Action would not occur. Periodic shipments of active inert missile motors would continue to occur by rail and road (approximately 2.6 fewer road miles than the Proposed Action) to NOTU but tactical motor shipments would not be possible because the current transfer facility does not meet operational and safety requirements for tactical motors. Therefore, the No Action Alternative would not meet the purpose and need for the Proposed Action.

2.4 Protective Measures Included in the Proposed Action

Appendix F presents an overview of any best management practices (BMPs) and impact avoidance/minimization measures for protected species that are proactively incorporated into

the Proposed Action to avoid or reduce potential environmental effects. BMPs are distinguished from mitigation measures in the context of NEPA because BMPs are (1) included in the Proposed Action, (2) ongoing, regularly occurring practices, and/or (3) not unique to this Proposed Action. Impact avoidance/minimization measures are actions specific to this Proposed Action that may help to avoid or minimize effects to protected species or habitats.

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3 Affected Environment and Environmental Consequences

This chapter presents a description of the existing environment and a focused analysis of the potential direct and indirect effects of the Proposed Action Alternative and the No Action Alternative to water resources, air quality, and terrestrial biological resources.

For resource topics not carried forward for detailed analysis in this EA, Table 3-1 provides a brief summary of the reason(s) each resource was not evaluated further in this EA.

Table 3-1 Justification for Resource Topics Not Carried Forward for Further Analysis

Resource Topic	Description
Geological Resources	The area is flat overall, with majority sand soil types (NASA, 1990). No topographic features would be modified or otherwise altered. Construction of the railhead facility would require excavation and grading, and implementation of BMPs during construction activities, including those required by stormwater permits, would minimize potential impacts from erosion and sedimentation into receiving water bodies. Therefore, there would be no reasonably foreseeable adverse effects to geological resources from the Proposed Action and this resource is not analyzed further in this EA.
Hazardous Materials and Wastes	Demolition, construction, and rehabilitation activities would result in a short-term increase in the use of hazardous materials and generation of hazardous wastes that would cease at the completion of construction. All hazardous materials would be handled and disposed of per applicable regulations and consistent with other construction projects at KSC. Adherence to applicable best management practices and standard operating procedures during construction would reduce the likelihood and volume of accidental releases, allow for accelerated spill response times, and enable timely implementation of cleanup measures, thereby minimizing potential effects to the environment. Wastes would be sorted and, if necessary, tested to determine whether it is hazardous or non-hazardous. Wastes would then be disposed of at an appropriate permitted facility in accordance with solid and hazardous waste regulations. Transportation of all materials for construction and operations (including motors) would be conducted in compliance with DOT and DoW regulations. Therefore, potential adverse effects associated with hazardous materials/wastes would be negligible and are not analyzed further in this EA.
Land Use	The Proposed Action would require a land use change from Operational Buffer/Conservation to Launch Operations and Support. Land use outside of KSC's secure area would not be affected. The site is currently managed by the USFWS and would be removed from the Merritt Island National Wildlife Refuge's oversight. Prescribed burns currently are conducted in accordance with the <i>Memorandum of Understanding between Space Launch Delta 45, the United States Fish and Wildlife Service, and John F. Kennedy Space Center for Prescribed Burning on Merritt Island National Wildlife Refuge, John F. Kennedy Space Center, and Cape Canaveral Space Force Station, Florida</i> (NASA, 2025), which provides USFWS the flexibility to conduct prescribed burns in coordination with operations. Therefore, potential adverse effects associated with land use would be negligible and are not analyzed further in this EA.
Noise	The Proposed Action would not result in significant impacts from noise. A short-term increase in noise would result from the use of heavy equipment during construction. There are no sensitive noise receptors (residences, schools, hospitals, etc.) in the vicinity of the project site that would be exposed to construction or operational noise. Long-term effects from traffic and daily industrial operations would be consistent with ongoing activities at KSC. Therefore, there would be no reasonably foreseeable adverse effects associated with noise and this resource is not analyzed further in this EA.

Table 3-1 Justification for Resource Topics Not Carried Forward for Further Analysis

Resource Topic	Description
Cultural Resources	The Proposed Action would not result in significant impacts to cultural resources. NHPA Section 106 consultation has been completed for this undertaking. NASA initiated consultation with the SHPO on April 29, 2025, resulting in a formal determination of No Adverse Effect on June 5, 2025 (see Appendix I, <i>Agency Consultation: National Historic Preservation Act</i>). All project activities strictly comply with the stipulations of the existing Programmatic Agreement titled "Programmatic Agreement Among the National Aeronautics and Space Administration, The Advisory Council on Historic Preservation, and The National Conference of State Historic Preservation Officers Regarding the Management of NASA Centers," executed on October 21, 2025 (NASA Programmatic Agreement). The minor construction and operational activities fall squarely within Appendix F of the NASA Programmatic Agreement covering railroad infrastructure maintenance and upgrades. No further archaeological or architectural surveys are required. Standard Inadvertent Discovery Protocols remain in effect. If unexpected cultural materials or human remains were encountered during ground-disturbing activities, all work would cease immediately, and the agency cultural resource specialist would be notified to initiate compliance procedures under the NASA Programmatic Agreement. Because the Proposed Action would not result in adverse effects, cultural resources are not analyzed further in this EA.
Visual Resources	The site is in an area of low viewer sensitivity, and the railhead facility and renovated railroad track would be obscured by vegetation from most observation points. The railhead facility would be most visible to KSC employees while driving on Kennedy Parkway, at the intersection with the proposed rail spur, which would be at grade and not conspicuous from a distance. Because of its low viewer sensitivity location and potential viewers (employees), the Proposed Action would not result in adverse effects and visual resources are not analyzed further in this EA.
Utilities / Infrastructure	The Proposed Action would rehabilitate a section of rail line on KSC, improving rail infrastructure overall. The railhead facility would be connected to local utilities (e.g., electricity, water, etc.). Facility design would adhere to Energy Independence and Security Act requirements to minimize water and energy use. Because the facility would be minimally manned and there would only be up to five deliveries/transfers per year, utility use would be minor, and overall capacities would be negligibly affected. Therefore, there would be no reasonably foreseeable adverse effects associated with utilities and infrastructure, and these are not analyzed further in this EA.
Transportation	The Proposed Action would result in a temporary increase in traffic during construction. Heavy equipment and materials deliveries during construction may result in temporary road closures, including Kennedy Parkway. These closures would be managed with a construction traffic management plan and would be coordinated in advance to address potential affects to KSC traffic. Because there would only be up to five deliveries per year (the same as currently for Active Inert Missile shipments) and the train would not be expected to come to a stop while crossing Kennedy Parkway, operations would be expected to result in negligible affects to road and rail transportation on KSC. There would be no change to off-KSC transportation. Therefore, potential adverse effects associated with transportation are negligible and are not analyzed further in this EA.
Public Health and Safety	There would be negligible impacts to public health and safety associated with construction. Construction activities would be conducted in accordance with established NASA policies for ensuring the health and safety of the general public. Construction would take place entirely within the secured perimeter of KSC, and construction areas would not be accessible by non-construction personnel or the public. Operations would be conducted in accordance with all DOT, DoW, and other requirements and regulations concerning the transportation and handling of motors. Therefore, public health and safety is not analyzed further in this EA.

Table 3-1 Justification for Resource Topics Not Carried Forward for Further Analysis

Resource Topic	Description
Socioeconomics	Proposed Action construction activities would have a minor, temporary economic benefit by supporting the local construction industry. The operational phase of the Proposed Action would have a negligible effect on area socioeconomics. The railhead facility would be minimally staffed for maintenance and receiving deliveries. There would be no expected effects to housing, services, or the greater economy. Therefore, socioeconomics is not analyzed further in this EA.

Key: BMP = best management practice; DOT = Department of Transportation; DoW = Department of War; EA = Environmental Assessment; KSC = Kennedy Space Center; NASA = National Aeronautics and Space Administration; NHPA = National Historic Preservation Act; SHPO = State Historic Preservation Officer; USFWS = United States Fish and Wildlife Service.

3.1 Water Resources

Water resources consist of groundwater, surface water, wetlands, and floodplains.

Groundwater consists of subsurface hydrologic resources, often described in terms of aquifer or well capacity, water quality, and surrounding geologic composition. Surface waters are lakes, rivers, and streams. Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions. Floodplains are areas of low-level ground present along rivers, stream channels, large wetlands, or coastal waters that provide natural water filtration to maintain water quality. Floodplain boundaries are most often referred to by the frequency that they are inundated (i.e., 100-year and 500-year flood). The Federal Emergency Management Agency prepares floodplain maps showing the location of floodplains.

The study area for water resources is KSC, specifically the sub-area of KSC consisting of the proposed railhead facility, connecting railways, access roads, and the corresponding watershed.

3.1.1 Affected Environment

3.1.1.1 Groundwater

There are three aquifer systems underlying KSC: the Surficial Aquifer system, the Intermediate Aquifer system, and the Floridan Aquifer system (NASA, 2022). Of these systems, only the Surficial Aquifer system has the potential to be affected by the Proposed Action. The Proposed Action is located within the West Plain and Dune-Swale aquifer subsystems at KSC. The West Plain subsystem features a shallow water table within 1 meter (3 feet) of the ground surface. Rapid evaporation rates at this depth combine with subsurface saltwater intrusion to create variable water quality (NASA, 1990). The Dune-Swale subsystem includes high ridges with permeable sand that allow for freshwater recharge of deeper layers of the Surficial Aquifer system (NASA, 1990). Nearly all groundwater at KSC originates from direct infiltration of precipitation and none of the aquifer systems in the study area are sources of drinking water (NASA, 2020).

3.1.1.2 Surface Water

KSC is surrounded by the Indian River Lagoon system, which consists of the Indian River to the west and the Mosquito Lagoon and Banana River to the east. Both rivers are classified as shellfish propagation or harvesting waterbodies and are on Florida's Clean Water Act (CWA) Section 303(d) list of impaired waters (FDEP, 2025a). These basins are shallow lagoons with depths averaging 5 feet, with a maximum of 33 feet at KSC, generally restricted to dredged basins and channels such as the Intercoastal Waterway. Surface water movement and flushing around KSC are primarily a function of wind-driven forces, and salinity regimes are primarily influenced by precipitation, upland runoff, evaporation, and groundwater seepage (NASA, 2022).

A delineation survey for the study area was conducted in June 2025. A total of approximately 19 acres of Federal and state jurisdictional surface waters were identified within the 96.5-acre survey area (NAVFAC Southeast, 2025). These waters primarily consisted of constructed canals and ditches used to historically drain surface water from the landscape or are currently used to manage roadway runoff as a stormwater conveyance. Only two of the seven identified surface water segments connect to other surface water conveyances offsite and were considered federally jurisdictional. The remaining five units are not hydrologically connected to other offsite surface water conveyances, wetlands, or other federally jurisdictional waters (NAVFAC Southeast, 2025).

3.1.1.3 Wetlands

Wetlands cover approximately 76 percent (over 106,000 acres) of KSC and include freshwater marshes, hardwood and mixed swamps, estuarine and Palustrine Scrub-Shrub (PSS) wetlands, saltwater marshes, and mangrove swamps (NASA, 2022). During the 2025 wetland delineation survey, a total of 6.57 acres of Federal and state jurisdictional wetlands were identified within the 96.5-acre survey area (NAVFAC Southeast, 2025). The Cowardin classification (Cowardin et al., 1979) of these wetlands were Palustrine Forested (PFO) (3.53 acres), PSS (2.76 acres), and PSS/Palustrine Emergent (0.28 acres) (NAVFAC Southeast, 2025) (Figure 3-1).

3.1.1.4 Floodplains

The majority of KSC lies within the 100-year floodplain. The project footprint contains 15.2 acres of Flood Zone AE (1 percent annual chance of flood [i.e., the 100-year floodplain]) and less than 0.01 acres of Flood Zone X (0.2 percent annual chance flood hazard [i.e., the 500-year floodplain]) (Figure 3-1). There are no regulatory floodways within the study area.

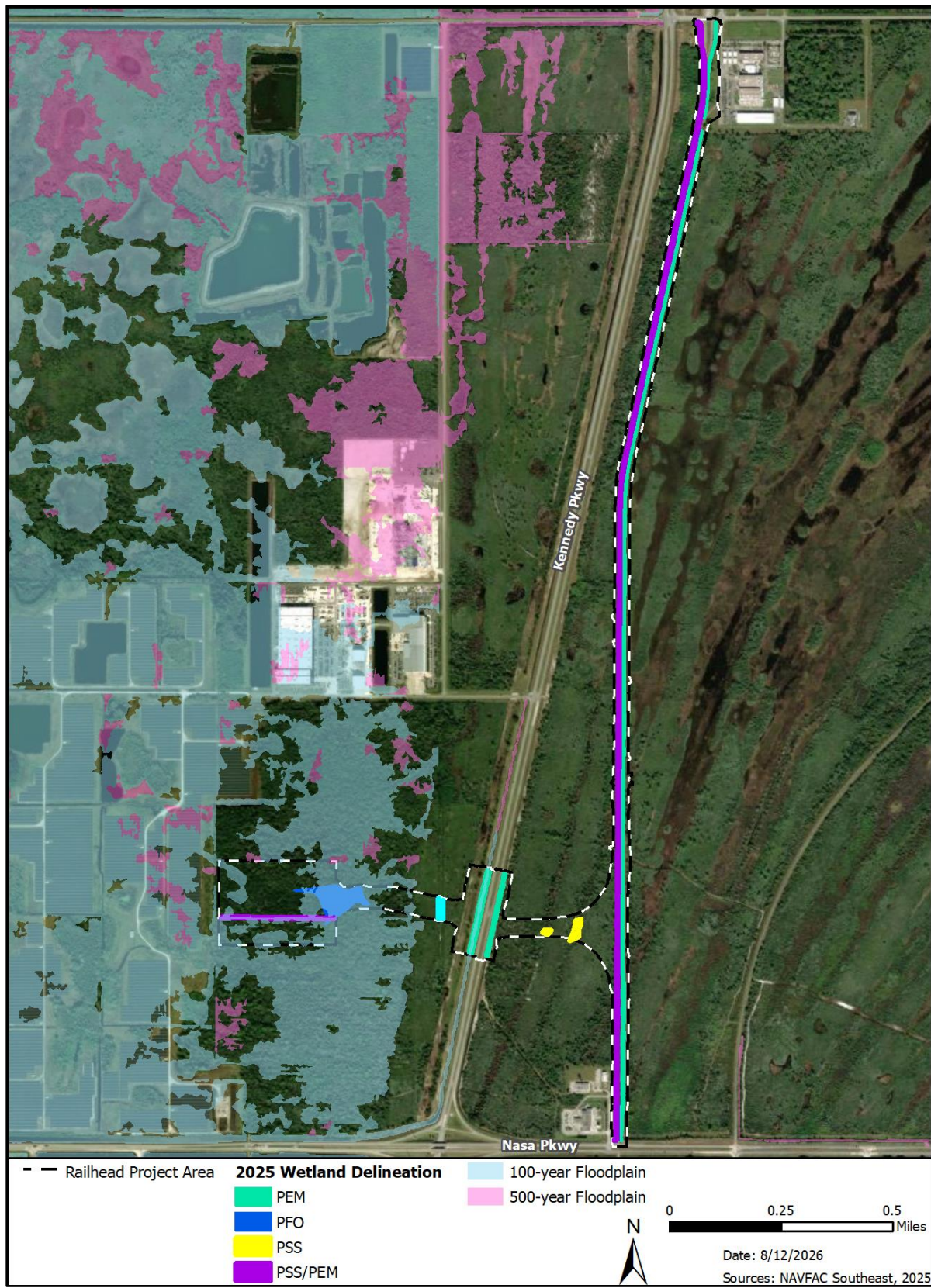


Figure 3-1

Water Resources

3.1.2 Environmental Consequences

Groundwater analysis focuses on the potential for effects to the quality, quantity, and accessibility of groundwater. The surface water analyses focus on the potential for effects to improve or degrade current water quality. The assessment of wetlands considers the potential for effects that may change the local hydrology, soils, or vegetation that support a wetland. The analysis of floodplains considers if any new construction is proposed within a floodplain or may impede the functions of floodplains in conveying floodwaters. The analysis also addresses the extent or degree to which the Proposed Action:

- Reduces the availability of, or accessibility to, one or more beneficial uses of a water resource.
- Results in noncompliance with any regulatory standard.

3.1.2.1 No Action Alternative

Under the No Action Alternative, the development of a new motor component transfer facility/railhead to support the Navy mission would not occur, and there would be no change to water resources. For these reasons, the No Action Alternative would result in less than significant effects to water resources.

3.1.2.2 Proposed Action Alternative

Construction

Construction of the railway transfer facility, parking area, access road, and new rail spur section would create approximately 14.7 acres of impervious surface. This increase of impervious surface would result in increased volumes of runoff. Therefore, construction under the Proposed Action Alternative would require a Florida National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharge from Large and Small Construction Activities. Permit requirements include the preparation and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) to manage stormwater discharges and control erosion during and after construction until the area is stabilized. An Environmental Resource Permit for stormwater management would also be required from SJRWMD.

Due to the high-water table of the Surficial Aquifer system, groundwater may be encountered during construction activities. Some dewatering of groundwater may be required. Prior to dewatering, groundwater and soil conditions would be evaluated based on available site history and field observations to identify any potential contamination; should contamination be identified or suspected, dewatering would be conducted in accordance with the applicable permit and BMPs for the contaminant type, which may include treatment prior to discharge. However, the amount of short-term dewatering would not have an overall effect on groundwater levels because they would return to normal once construction is complete. The SWPPP developed for the NPDES permit would include BMPs to address and prevent spills that could potentially enter the Surficial Aquifer. Thus, there would be short-term, minor, localized impacts to groundwater, which would not be significant. Due to the depths and the confining

layers between the Surficial Aquifer and the surrounding Intermediate and Floridan systems, there would be no effects to deeper aquifers.

To ensure minimal impacts on surface water quality, the Navy would conduct regular compliance inspections of the SWPPP and implement BMPs. BMPs would be project specific but may include the use of silt fences, covering soil stockpiles, using secondary containment for hazardous materials, and revegetating the site in a timely manner. Because a SWPPP and BMPs would be employed during construction of the transfer facility, significant impacts to surface waters due to runoff and/or inadvertent discharge would not be expected from construction activities.

The Indian River and Banana River are impaired water sources and are on Florida's CWA Section 303(d) list. Proposed Action Alternative construction activities are subject to nutrient loading requirements as described in the 2025 North Indian River Lagoon Basin Management Action Plan (FDEP, 2025b) and the 2025 Banana River Lagoon Basin Management Action Plan (FDEP, 2025c). KSC received a nutrient reduction allocation of 12,153 pounds per year of total nitrogen and 1,775 pounds per year of total phosphorus for the North Indian River Lagoon Basin. For the Banana River Lagoon Basin, KSC received a nutrient reduction allocation of 8,023 pounds per year of total nitrogen and 1,112 pounds per year of total phosphorus. Under Environmental Resource Permit criteria, the Proposed Action Alternative would demonstrate net improvement in total nitrogen, total phosphorus, and total suspended solids loading relative to pre-development conditions. The Navy would meet the nitrogen, phosphorus, and total suspended solids loading requirements using BMPs and other stormwater treatment methods specifically designed for the Proposed Action Alternative site's hydrologic characteristics. Accordingly, potential impacts to the Indian River and Banana River would be negligible.

Approximately 2.63 acres of wetlands would be permanently disturbed under the Proposed Action Alternative (NAVFAC Southeast, 2025). This represents 0.002 percent of the total wetlands at KSC. Specifically, three of the nine identified wetlands from the June 2025 delineation (W-1, W-2, and W-3) would be filled from constructing the railhead connector and access road including PFO and PSS wetland areas. The remaining identified wetlands occur adjacent to the existing railroad track that would be renovated or replaced, but they would not be filled. Potential effects from filling wetlands include increased sedimentation to surrounding surface waters, wetland fragmentation, loss of groundwater recharge, flooding, degraded water filtration, and alteration of local drainage patterns including reduced floodwater storage. While the three wetland areas that would be filled are connected to surface water units identified during the June 2025 delineation, none of them are hydrologically connected to offsite surface waters, wetlands, or other federally jurisdictional waters. Therefore, potential effects would be localized to the immediate study area.

Given the above evaluation, the Proposed Action Alternative would result in unavoidable impacts to wetlands. Prior to implementing the Proposed Action Alternative, the Navy would consult with USACE and SJRWMD and acquire and adhere to permit and mitigation requirements. Compensatory mitigation would be required as part of the permitting process. Compensatory mitigation is the restoration, creation, enhancement, and/or preservation of aquatic resources to offset unavoidable adverse impacts to wetlands and other aquatic

resources that remain after all appropriate and practicable avoidance and minimization measures have been achieved. The Navy proposes use of mitigation bank credits to offset unavoidable impacts to wetlands. If credits are not available, other compensatory mitigation options will be evaluated during the wetland permitting process. Measures would be taken to minimize harm to surrounding, non-filled wetlands, including implementing BMPs and adherence to permit conditions. Accordingly, there would be adverse, direct, long-term, localized impacts to wetlands due to construction.

The Proposed Action Alternative's new railhead, spur rail, and access road project area includes approximately 15 acres within the 100-year floodplain and less than 0.01 acre within the 500-year floodplain. Development in a floodplain can obstruct or divert floodwater to other areas, alter flood dynamics, flood adjacent areas, and increase flood duration. Measures to minimize floodplain impacts include siting construction activities to avoid or limit development within the floodplain, creating compensatory storage (excavating material within or adjacent to the same floodplain to be used as fill), or designing the facility, parking lot, access road, and new railway to allow for dispersal of floodwaters. However, the area of floodplains potentially impacted is small compared to the remaining floodplain areas on KSC. Construction in the floodplain would be elevated or otherwise floodproofed per NASA floodplain construction requirements. The Proposed Action Alternative would have short-term, moderate, localized impacts to floodplains and no significant, long-term, major, adverse impacts to floodplains. There would be no floodplain or flooding impacts to areas outside of KSC.

The Navy would ensure that the Proposed Actions comply with Executive Order (EO) 11990, *Protection of Wetlands*, and EO 11988, *Floodplain Management*, to the extent practicable. To fulfill the public notice requirements for both EOs, this EA serves as the primary mechanism for facilitating the required review for both the Navy, as lead agency and NASA, as the cooperating agency and landowner.

In summary, the Proposed Action Alternative construction would result in less than significant effects to water resources.

Operations

Surface water runoff during operations may result in indirect, long-term, minor impacts on groundwater, surface waters, wetlands, and floodplains immediately surrounding the railhead facility. However, the implementation of BMPs that account for the site's specific hydrology, including low impact development as required by Section 438 of the Energy Independence and Security Act, would minimize runoff and restore the site's predevelopment hydrology.

Overall, the Proposed Action Alternative operations would result in less than significant effects to water resources.

3.2 Air Quality

The U.S. Environmental Protection Agency (EPA) defines air quality as the presence of substances in the atmosphere that can prevent natural processes and cause health or environmental harm. To determine air quality, EPA sets National Ambient Air Quality Standards (NAAQS) for specific criteria pollutants. For the analysis in this EA, air quality effects are

assessed against criteria pollutants, hazardous air pollutants (HAPs), and greenhouse gas (GHG) emissions. These elements are summarized below:

- **Criteria Pollutants.** Criteria pollutants consist of the following: carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ground-level ozone (O₃), particulate matter less than or equal to 10 (PM₁₀) and 2.5 (PM_{2.5}) microns in diameter, and lead (Pb).
- **HAPs.** HAPs are pollutants regulated under the Federal Clean Air Act (CAA) due to their potentially adverse effects on human health and the environment.
- **GHGs.** GHGs are gases that trap heat in the atmosphere. The most common GHG pollutants are carbon dioxide (CO₂), methane, and nitrous oxide, which primarily result from the combustion of fossil fuels.

The study area for air quality is the Proposed Action area and surrounding vicinity in Brevard County, Florida, where construction and operational emissions associated with the Proposed Action could affect local air quality conditions.

3.2.1 Affected Environment

3.2.1.1 Criteria Pollutants

The CAA is the primary Federal statute governing air quality in the United States. Under the CAA, the EPA has established NAAQS for six criteria pollutants to protect public health and welfare: CO, SO₂, NO₂, O₃, PM₁₀, PM_{2.5}, and Pb.

Areas in compliance with the NAAQS are designated as attainment areas. Areas that do not meet the NAAQS are designated nonattainment areas, while areas that have transitioned from nonattainment to attainment are designated maintenance areas.

The Proposed Action is located at KSC in Brevard County, Florida, with associated road transport occurring between KSC and NOTU at CCSFS. Brevard County is currently designated attainment/unclassifiable for all criteria pollutants and is therefore considered in compliance with applicable Federal air quality standards.

Air pollutant emissions in the region originate from a combination of mobile and stationary sources, including on-road vehicles, construction equipment, rail operations, marine vessels, aircraft, industrial facilities, utility operations, and launch-related activities, as well as natural sources such as wildfires.

Because the Proposed Action would occur in an area designated attainment/unclassifiable for all criteria pollutants, the EPA General Conformity Rule does not apply.

3.2.1.2 HAPs

HAPs are pollutants regulated under Section 112 of the CAA due to their potential to cause cancer or other serious health and environmental effects. Unlike criteria pollutants, HAPs are not regulated through ambient air quality standards such as the NAAQS.

3.2.1.3 GHGs

GHGs are atmospheric gases generated through natural processes and human activities, including fossil fuel combustion. Common GHGs include CO₂, methane, and nitrous oxide. GHG emissions associated with the Proposed Action Alternative would primarily result from construction equipment, worker commute vehicles, rail operations, road transport between KSC and NOTU, and facility operations. GHG emissions are evaluated as part of the overall emissions inventory for the Proposed Action Alternative in terms of carbon dioxide equivalent, which compiles the potential for environmental effect of each emitted GHG.

3.2.2 Environmental Consequences

The air quality analysis addresses emissions from the Proposed Action Alternative in relation to Federal and local air pollution standards and regulations. Effects are analyzed based on the potential for proposed emissions to contribute to an exceedance of a NAAQS or other applicable air quality standard. The analysis compared proposed emissions to current county emissions. Brevard County is currently in attainment for all NAAQS. The analysis also estimates potential GHG emissions.

3.2.2.1 No Action Alternative

Under the No Action Alternative, the development of a new motor component transfer facility/railhead would not occur, and there would be no change to air quality. Existing rail-to-road transfer operations would continue at the current transfer location used for Active Inert Missile shipments, and no construction related emissions associated with the Alternative would occur. For these reasons, the No Action Alternative would result in less than significant effects to air quality.

3.2.2.2 Proposed Action Alternative

Construction

Air quality effects associated with construction of the Proposed Action Alternative would result from (1) combustive emissions associated with the use of fossil-fuel-powered construction equipment and worker vehicles and (2) fugitive dust emissions (PM₁₀ and PM_{2.5}) from the operation of equipment on exposed soil. Construction activities evaluated for the Proposed Action Alternative include demolition and clearing, site grading, construction of the proposed transfer facility, paved laydown/parking area, access road, railhead connector and associated track improvements, stormwater infrastructure, site security features, and utility infrastructure.

Proposed construction activities would implement standard practices to minimize fugitive dust emissions and to comply with Rule 62-296.320(4)(c) of the Florida Administrative Code, Unconfined Emissions of Particulate Matter, which requires the use of reasonable precautions to prevent particulate matter from becoming airborne. Such measures include paving and maintaining roads, applying water or chemical dust suppressants during grading and land clearing, and promptly removing material tracked onto paved surfaces.

Construction activity data for the Proposed Action Alternative were developed to estimate construction equipment usages and areas of disturbed ground for use as inputs to the Department of the Air Force Air Conformity Applicability Model (ACAM), version 5.0.24a (Solutio Environmental, 2026; Williams, 2026).

Table 3-2 presents the estimated annual construction emissions associated with the Proposed Action Alternative. As shown, annual construction emissions would represent a tiny fraction of annual area emissions. For these reasons, construction associated with the Proposed Action Alternative would result in less than significant effects to air quality.

Table 3-2 The Proposed Action Alternative Emissions

Source/Year	Annual Emissions (tons) ^(a)						
	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOCs	CO _{2e}
Construction Emissions	1.63	1.31	7.41	0.05	0.00	0.16	358
Operations							
Rail Emissions	0.007	0.005	0.001	0.001	0.000	0.001	1.80
Road Emissions	0.000	0.000	0.000	0.000	0.000	0.000	0.04
Total Operations Emissions	0.007	0.005	0.001	0.001	0.000	0.001	1.84
Brevard County Total Annual Emissions ^(b)	89,676	8,868	6,407	3,997	333	33,352	7,672,594
<i>The Proposed Action Alternative Percentage of County Total Annual Emissions</i>	0.00%	0.01%	0.12%	0.00%	0.00%	0.00%	0.00%

Key: % = percent; CO = carbon monoxide; CO_{2e} = carbon dioxide equivalent; NO_x = nitrogen oxides; PM₁₀ = particulate matter with a diameter of 10 microns or less; PM_{2.5} = particulate matter with a diameter of 2.5 microns or less; SO_x = sulfur oxides; VOCs = volatile organic compounds.

Notes:

(a) Construction emissions would occur from 2027 to 2028 and operational emissions would begin in 2030.

(b) EPA (2026), National Emissions Inventory 2020 for County Level Emissions

Construction activities would also generate small quantities of HAPs from fuel combustion associated with construction equipment and worker vehicles. These emissions would be minor, intermittent, and dispersed and would not result in significant adverse health effects.

Operations

Operational air quality effects associated with the Proposed Action Alternative would result from the delivery of motor components by rail to the proposed railhead facility and subsequent transfer of those components by specialized transport vehicle to NOTU. Operations are expected to involve up to five motor shipments per year over the operational life of the project.

Operational emissions were evaluated for rail and road transport activities associated with these deliveries. Rail emissions were estimated using locomotive emission factors based on EPA locomotive emission standards and projected line-haul and idling activity for up to five annual rail deliveries. For analysis purposes, each rail delivery was assumed to include a 5.2-mile round trip (2.6 miles one way) between the proposed railhead and the existing rail network, plus 1 hour of idling per round trip. Road emissions were estimated using heavy-duty diesel vehicle

emission factors from the ACAM. Road transport was assumed to involve approximately 2.6 miles one way (5.2 miles round trip) per shipment, between the proposed transfer facility and NOTU.

Table 3-2 presents the estimated annual operational emissions associated with the Proposed Action Alternative. As shown, annual operational emissions from rail and road transport activities would be minimal and would remain well below applicable air quality insignificance indicators for all evaluated pollutants. For these reasons, the operations associated with the Proposed Action Alternative would result in less than significant effects to air quality.

Operational activities would also generate small quantities of HAPs from locomotive and heavy-duty diesel vehicle exhaust. Given the limited frequency of operations, these emissions would be minor, intermittent, and dispersed and would not result in significant adverse health effects.

3.3 Biological Resources

Biological resources consist of plant and animal species and their habitats. Plant associations are referred to generally as vegetation, and animal species are referred to generally as wildlife. This includes sensitive resources such as federally listed species under the Endangered Species Act (ESA). Habitat consists of the resources and conditions present in an area that support plants or wildlife. The primary Federal laws and regulations applicable to biological resources include the ESA, Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA).

3.3.1 Affected Environment

To account for potential effects from artificial light, the study area includes the entirety of KSC (Figure 1-1). Analyses for other stressors focus on the proposed transfer facility, roads, and railways (Figure 2-1) plus a 0.5-mile buffer where species may be affected by ground disturbance, vegetation removal, noise, visual disturbance, vibrations, and strikes from construction, operations, and maintenance activities.

3.3.1.1 Wildlife and Habitats

The western portion of the study area generally consists of cabbage palm hammock and mixed hardwood wetlands. The remainder of the study area consists of scrub and ridge swale habitat. The existing railroad tracks are underscored by deep hard packed rocks (HSG, 2026b). Invasive non-native plant species (INPS) such as Brazilian pepper (*Schinus terebinthifolius*) are also present.

Habitats at KSC support a great diversity of wildlife, including hundreds of combined mammal, bird, reptile, and amphibian species, some of which are special status species. The study area is expected to support species typical of scrub and wetland habitats. See the KSC Environmental Resources Document for additional information on these habitats and associated species (NASA, 2020).

3.3.1.2 Federally Listed Species

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online system was accessed to obtain a list of the USFWS ESA-listed and proposed species, as well as their proposed and designated critical habitat, that may occur within the study area (Table 3-3). The Biological and Conference Assessment for U.S. Navy Railhead Transfer Facility at Kennedy Space Center, Florida (Appendix H, *Agency Consultation: Endangered Species Act*) provides additional information on each species listed in Table 3-3. Surveys conducted in December 2025 within the study area documented the presence of the federally threatened Florida scrub-jay (*Aphelocoma coerulescens*) and state-listed gopher tortoise (*Gopherus polyphemus*) (see the *Biological and Conference Assessment for U.S. Navy Railhead Transfer Facility at Kennedy Space Center, Florida* located in Appendix H); gopher tortoise burrows may serve as refugia for the federally threatened eastern indigo snake.

Table 3-3 Threatened and Endangered Species with the Potential to Occur in the Study Area

Common Name (Scientific Name)	Federal Status
Birds	
Audubon's crested caracara (<i>Caracara plancus audubonii</i>) [Florida DPS]	Threatened
Eastern black rail (<i>Laterallus jamaicensis jamaicensis</i>)	Threatened
Everglade snail kite (<i>Rostrhamus sociabilis plumbeus</i>)	Endangered
Florida scrub-jay (<i>Aphelocoma coerulescens</i>)	Threatened
Piping plover (<i>Charadrius melodus</i>)	Threatened
Rufa red knot (<i>Calidris canutus rufa</i>)	Threatened
Insects	
Monarch butterfly (<i>Danaus plexippus</i>)	Proposed Threatened
Mammals	
Southeastern beach mouse (<i>Peromyscus polionotus niveiventris</i>)	Threatened
Tricolored bat (<i>Perimyotis subflavus</i>)	Proposed Endangered
West Indian manatee (<i>Trichechus manatus</i>)	Threatened
Plants	
Carter's mustard (<i>Warea carteri</i>)	Endangered
Lewton's polygala (<i>Polygala lewtonii</i>)	Endangered
Reptiles	
Atlantic salt marsh snake (<i>Nerodia clarkia taeniata</i>)	Threatened
Eastern indigo snake (<i>Drymarchon couperi</i>)	Threatened
Green sea turtle (<i>Chelonia mydas</i>) [North Atlantic Ocean DPS]	Threatened
Hawksbill sea turtle (<i>Eretmochelys imbricata</i>)	Endangered
Kemp's ridley sea turtle (<i>Lepidochelys kempii</i>)	Endangered
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	Endangered
Loggerhead sea turtle (<i>Caretta caretta</i>) [Northwest Atlantic Ocean DPS]	Threatened
Critical Habitat	
Rufa red knot	Proposed
West Indian manatee	Final and Proposed
Green sea turtle	Proposed
Loggerhead sea turtle	Final

Source: See Appendix H, *Agency Consultation: Endangered Species Act*.

Key: DPS = distinct population segment; IPaC = Information for Planning and Consultation.

3.3.1.3 Migratory Birds and Bald Eagles

Migratory birds and bald eagles are protected under the MBTA and BGEPA. The term *migratory birds* include almost all wild native birds found in the United States excluding resident game birds and non-native species. The study area is situated along the Atlantic Flyway for migratory birds and thus supports a wide variety of migratory birds. Various songbirds, wading birds, and other types of migratory birds utilize the wetland and upland habitats typical of the study area for foraging, nesting, and roosting (e.g., sparrows, warblers, herons, woodpeckers). The study area is within Bird Conservation Region 31 (Peninsular Florida). The *Birds of Conservation Concern 2021, Migratory Bird Program* report provides a map and full list of the Birds of Conservation Concern within this region (USFWS, 2021). Bald eagle nests have been recorded in the study area. Only one nest is within 660 feet (the buffer distance requiring specific management) of the study area (HSG, 2026a) (Figure 3-2).

3.3.1.4 State-Protected Species

State-protected plant and animal species potentially found at KSC are listed in the KSC Environmental Resources Document (NASA, 2020). Many of these species are also federally protected. The species that are only state-listed include the gopher tortoise (*Gopherus polyphemus*), Florida pine snake (*Pituophis melanoleucus mugitus*), four species of herons/egrets—little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), snowy egret (*Egretta thula*), and reddish egret (*Egretta rufescens*)—roseate spoonbill (*Platalea ajaja*), Southeastern American kestrel (*Falco sparverius paulus*), white ibis (*Eudocimus albus*), Florida sandhill crane (*Antigone canadensis pratensis*), American oystercatcher (*Haematopus palliatus*), least tern (*Sternula antillarum*), and black skimmer (*Rynchops niger*). Of these, the herons/egrets, roseate spoonbill, white ibis, and Florida sandhill crane are the ones most likely to be found in freshwater wetlands, while the gopher tortoise, Florida pine snake, and Southeastern American kestrel are the species associated with upland scrub habitats; the American oystercatcher, least tern, and black skimmer, by contrast, are primarily coastal/beach-nesting species. Surveys conducted in December 2025 documented the presence of the state-listed gopher tortoise within the study area (HSG, 2026b). The Florida Fish and Wildlife Conservation Commission Imperiled Species website (<https://myfwc.com/wildlifehabitats/wildlife/>) provides species profiles for imperiled fish and wildlife species in Florida. The Florida Natural Areas Inventory website for Florida Rare Species Field Guides (<https://www.fnai.org/species-communities/species-guides/field-guides-main>) includes rare plant and animal species descriptions and habitat information.



Figure 3-2 Bald Eagle Nest and Buffers

3.3.2 Environmental Consequences

The biological resources analysis considers: (1) the species and habitats at risk, their abundance, and value; (2) the proportion of the resource that would be affected relative to its occurrence in the region; (3) the sensitivity of the resource to proposed activities; and (4) the duration of the effect(s). The analysis addresses the extent to which the Proposed Action would result in the following:

- Reduction of populations or distribution of special status species to include behavior alteration, survival, or reproductive ability.
- Restriction of migratory or wildlife corridors between habitats.
- Habitat fragmentation or degradation especially designated critical habitat of federally listed species.
- Increase of invasive species (plant or animal) prevalence or populations.

3.3.2.1 No Action Alternative

Under the No Action Alternative, the development of a new motor component transfer facility/railhead to support the U.S. Navy mission would not occur and there would be no changes to existing biological resources. Therefore, the No Action Alternative would result in less than significant effects to biological resources.

3.3.2.2 Proposed Action Alternative

Stressors and potential effects to biological resources associated with the Proposed Action are summarized in Table 3-4.

Table 3-4 Stressors Associated with the Proposed Action

<i>Stressor</i>	<i>Description</i>
Habitat Loss/Degradation	Land-clearing activities that remove habitat features reduce the areas available for cover, forage, roosting, and breeding. Invasive non-native plant species may spread and outcompete native species in disturbed areas, degrading forage resources. When habitat loss/degradation impairs essential behaviors (e.g., breeding, feeding, sheltering), individuals may be injured or damaged, reducing the abundance of the species. Habitat loss/degradation also can alter the local distribution of a species.
Noise and Visual Disturbance	Animals are expected to exhibit a wide variety of responses to equipment, vehicle, and train noise, and visual stimuli, with the degree of disturbance influenced by the type of noise generated, proximity to the noise source, duration of the sound, frequency of events, co-occurrence with other stressors, and the history of exposure. Noise effects on wildlife are classified as direct (e.g., masking, physiological changes to the auditory system), non-auditory (e.g., stress, hypertension, behavioral changes, interference with reproduction, feeding, sheltering), or the result of other effects (e.g., population decline). Noise may also interfere with predator/prey detection and cause animals to avoid the area.
Vibrations	Factors that may affect an animal's reaction to equipment and train vibrations include the duration of the activity, proximity to the activity, frequency of previous exposures, and what other stressors occur simultaneously.

Table 3-4 Stressors Associated with the Proposed Action

Stressor	Description
Strikes/Collisions	Strikes by equipment, vehicles, and trains, which may cause physical harm to wildlife, are possible.
Artificial Lighting	Security and operations lighting at night have the potential to disorient or disturb animals, including temporary or permanent abandonment of nesting, roosting, and foraging areas. Some species may suffer from increased predation due to this lighting, while others may more easily locate their prey.

Wildlife and Habitats

Construction

Construction activities would result in the disturbance of approximately 29 acres (8 temporarily and 21 permanently, of which 2.63 acres would be wetlands and 7.5 acres would be new impervious surface). In addition, approximately 7.4 acres of overgrowth would be cleared for right-of-way areas during track rehabilitation. INPS could be introduced and spread to native vegetative communities by equipment and fill and landscaping materials during construction. All equipment would be cleaned before and after entering the project area to reduce the spread of INPS; fill and landscaping materials would be certified weed-free. Mitigation to compensate for wetland and scrub habitat loss, avoidance and minimization measures, implementation of Federal and state permit requirements, and adherence to the SWPPP and the Spill Prevention, Control, and Countermeasures Plan would minimize effects to surrounding wetlands (Section 3.1, *Water Resources*) and other native habitats.

Approximately 29 acres of scrub and wetland habitat would be disturbed (21 acres permanently) by the Proposed Action, displacing the wildlife species in these areas. Prior to land-clearing activities, pre-construction surveys would be conducted to identify special status species, burrows, and nests for avoidance or relocation, thus avoiding direct impacts to these animals (see discussions below for federally listed species, migratory birds and bald eagles, and state-listed species). The increased level of human activity and noise associated with land-clearing activities would likely prompt most animals to move to surrounding areas with similar suitable habitat, but some smaller or less mobile individual animals may be unable to move and may perish or be injured. Areas that would be temporarily disturbed include staging areas, laydown yards, access roads, and construction easements that clear vegetation but are restored/revegetated post-construction.

After land clearing has been completed, the limitation of construction to daylight hours would minimize the potential for animal strikes by vehicles and equipment. As previously mentioned, animals are likely to avoid the area due to noise, vibrations, and visual disturbance, which may disrupt feeding, breeding, or resting. However, these effects are expected to be localized, temporary, and not of sufficient intensity to have significant, long-term effects on local wildlife populations. Similarly, any lighting required for the security of construction equipment would be directed downward in a very small area, with minimal effects.

Operations

Potential effects to wildlife from the operation of the railhead transfer facility and rail lines would include behavioral changes, injury, or damage due to noise, visual stimuli, lighting, vibrations, and strikes. Wildlife present within or transiting through the study area during operations could be struck by the train, onsite vehicles, or maintenance equipment including tractors and other vehicles used for routine facility and rail line upkeep. These effects would be most likely for less mobile species or wildlife traversing through the study area during active operations and maintenance. However, railhead operations would occur infrequently (up to five times per year), maintenance activities would be temporary and localized, and wildlife would continue to have access to adjacent habitat; therefore, the potential for injury or mortality would be limited.

Wildlife at KSC, including mammals, birds, and reptiles, may be affected by elevated noise and vibration levels during railhead operations and maintenance activities. Elevated noise and vibrations have the potential to startle wildlife and temporarily alter foraging, roosting, or reproductive activities. However, these effects would be localized, temporary, and not of sufficient intensity to have significant, long-term effects on local wildlife populations.

Operation of the railhead transfer facility would involve nighttime lighting that may disrupt wildlife foraging and transit in the study area. However, railhead operations would occur infrequently (up to five times per year) and any nighttime lighting associated with operations would be intermittent. Additionally, lighting-related effects would be minimized through the development and implementation of a Lighting Operations Plan for the railhead transfer facility.

Wildlife and Habitats Summary

With the implementation of conservation measures, mitigation, and permit and ESA section 7 consultation, the Navy has not identified any reasonably foreseeable significant adverse effects to wildlife or habitats as a result of construction or operations associated with the Proposed Action.

Federally Listed Species

Construction and Operations

In general, effects to federally listed species would be similar to those listed in Table 3-4 and described for wildlife and habitats. Table 3-5 summarizes the applicable stressors to each species from construction and operations. NASA is consulting with the USFWS on the Navy's behalf and has submitted the U.S. Navy Railhead Transfer Facility Biological and Conference Assessment (Appendix H, *Agency Consultation: Endangered Species Act*). Once complete, the results of the consultation will be summarized here and included in Appendix H.

Table 3-5 Stressors Associated with the Proposed Action and Species Potentially Affected

<i>Stressor</i>	<i>Sources</i>	<i>Species Potentially Affected</i>
Habitat loss/degradation	Vegetation clearing Construction of facilities, roads, tracks Vegetation maintenance Invasive non-native species	Florida scrub-jay Monarch butterfly Tricolored bat Indigo snake
Noise/visual disturbance	Construction equipment Maintenance equipment Transfer facility equipment Vehicles Train	Audubon's crested caracara Eastern black rail Everglade snail kite Florida scrub-jay Tricolored bat Indigo snake
Vibrations	Construction equipment Train	Audubon's crested caracara Eastern black rail Everglade snail kite Florida scrub-jay Tricolored bat Indigo snake
Artificial lighting	Security lighting for facility, parking lot, and perimeter Facility lighting during nighttime operations	Florida scrub-jay Tricolored bat Sea turtles
Strikes/crushing	Construction equipment Maintenance equipment Vehicles Train	Florida scrub-jay Monarch butterfly Tricolored bat Indigo snake

Table 3-6 summarizes NASA's species effect determinations under the ESA that are documented in the Biological and Conference Assessment.

Table 3-6 Endangered Species Act Species Effect Determinations

Common Name (Scientific Name)	Effect Determination
Birds	
Audubon's crested caracara (<i>Caracara plancus audubonii</i>) [Florida DPS]	May affect, not likely to adversely affect
Eastern black rail (<i>Laterallus jamaicensis jamaicensis</i>)	May affect, not likely to adversely affect
Everglade snail kite (<i>Rostrhamus sociabilis plumbeus</i>)	May affect, not likely to adversely affect
Florida scrub-jay (<i>Apelocoma coerulescens</i>)	May affect, likely to adversely affect
Piping plover (<i>Charadrius melodus</i>)	No effect
Rufa red knot (<i>Calidris canutus rufa</i>)	No effect
Insects	
Monarch butterfly (<i>Danaus plexippus</i>)	Proposed Threatened
Mammals	
Southeastern beach mouse (<i>Peromyscus polionotus niveiventris</i>)	No effect
Tricolored bat (<i>Perimyotis subflavus</i>)	May affect, not likely to adversely affect
West Indian manatee (<i>Trichechus manatus</i>)	No effect
Plants	
Carter's mustard (<i>Warea carteri</i>)	No effect
Lewton's polygala (<i>Polygala lewtonii</i>)	No effect
Reptiles	
Atlantic salt marsh snake (<i>Nerodia clarkia taeniata</i>)	No effect
Eastern indigo snake (<i>Drymarchon couperi</i>)	May affect, not likely to adversely affect
Green sea turtle (<i>Chelonia mydas</i>) [North Atlantic Ocean DPS]	May affect, not likely to adversely affect
Hawksbill sea turtle (<i>Eretmochelys imbricata</i>)	May affect, not likely to adversely affect
Kemp's ridley sea turtle (<i>Lepidochelys kempii</i>)	May affect, not likely to adversely affect
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	May affect, not likely to adversely affect
Loggerhead sea turtle (<i>Caretta caretta</i>) [Northwest Atlantic Ocean DPS]	May affect, not likely to adversely affect
Critical Habitat	
Rufa red knot	No effect
West Indian manatee	No effect
Green sea turtle	Proposed
Loggerhead sea turtle	Final

Source: See Appendix H, Agency Consultation: Endangered Species Act.

Key: DPS = distinct population segment.

Migratory Birds and Bald Eagles

Construction

The potential effects associated with construction described in Table 3-4 and the U.S. Navy Railhead Facility Biological and Conference Assessment in Appendix H, would generally apply to migratory birds and bald eagles as well (e.g., habitat loss, behavioral changes). However, with migratory birds and eagles, there is additional concern regarding the potential for take of an individual, nest, egg, or part (e.g., feather). Currently, the closest eagle nest is approximately 580 feet from a section of rail to be rehabilitated. All other nests are outside of the USFWS 660-foot buffer guideline distance for eagle disturbance. Prior to land clearing,

surveys would be conducted to identify special status species, including migratory and bald eagle nests. If any nests were discovered, requirements of the MBTA and BGEPA would be followed (e.g., avoidance, permit acquisition). With the implementation of avoidance and minimization measures, the Proposed Action would avoid the take of migratory birds, their active nests, or eggs.

Effects to the known eagle nest would not be expected as the rail rehabilitation would not be visible from the nest due to dense intervening vegetation and clearing noise would be reduced by distance as well as the vegetation to a level that would not be expected to affect eagles. However, as a precaution the Navy would conduct all loud and intrusive work that is within 660 feet of the nest outside of breeding season to ensure that eagles are not disturbed. Thus, the Navy has not identified any reasonably foreseeable significant adverse effects to bald eagles and other migratory bird species as a result of construction associated with the Proposed Action.

Operations

Migratory birds and bald eagles may be affected by operations and associated noise, visual stimuli, vibrations, lighting, and strikes. The types of potential effects associated with operations described in Section 3.3.1.1, *Wildlife and Habitats*. Table 3-4 would generally apply to migratory birds and bald eagles as well. However, with migratory birds and eagles, there is the potential for take of an individual, nest, egg, or part (e.g., feather). If a bald eagle or migratory bird were to establish a nest in a location that would interfere with operations and require removal, the Navy would notify NASA personnel to coordinate NASA removal as well as the acquisition of appropriate permits. Due to the limited lighting at this small facility and the implementation of a Lighting Operations Plan, disorientation effects would not be anticipated. With the implementation of avoidance and minimization measures, Proposed Action facility maintenance operations (e.g., mowing) would avoid the take of migratory birds, their active nests, or eggs and would not result in significant adverse impacts to migratory bird populations or cause a violation of the MBTA. Thus, the Navy has not identified any reasonably foreseeable significant adverse effects to bald eagles and other migratory bird species as a result of operations associated with the Proposed Action.

Migratory Birds and Bald Eagles Summary

Proposed Action construction would not result in significant adverse impacts to migratory bird populations or cause a violation of the MBTA. The Proposed Action qualifies as a "military readiness activity," as defined under 50 C.F.R. section 21.6 (Migratory Bird Permit - Definitions) and consistent with section 315(f) of the National Defense Authorization Act for Fiscal Year 2003. Incidental take of migratory birds resulting from these operations is authorized under 50 C.F.R. section 21.42 (Incidental Take of Migratory Birds by the Armed Forces) and complies with the MBTA. Proposed Action operations would not result in unauthorized take of migratory birds or result in significant adverse effects on a population of a migratory bird species. Because the Proposed Action construction and operations are not anticipated to injure an eagle and would not substantially interfere with normal behaviors or cause nest abandonment, the Proposed Action would not result in take of bald eagles as defined by the BGEPA.

State-Protected Species

Construction

State-listed species and their habitats may be affected by noise, visual stimuli, vibrations, lighting, and strikes from Proposed Action construction. The potential effects associated with construction described in Section 3.3.1.1, *Wildlife and Habitats*, would generally apply to state-protected species as well (e.g., habitat loss, behavioral changes). Prior to vegetation clearing and ground disturbance, pre-construction surveys would be conducted to identify active and inactive burrows and determine the presence of tortoises. Any discovered tortoises, eggs, and associated species using the burrows would be relocated to an approved recipient site in accordance with NASA protocols.

Operations

State-listed species may be affected by operations activities and associated noise, visual stimuli, vibrations, lighting, and strikes. The potential effects associated with operations described in Section 3.3.1.1, *Wildlife and Habitats*, would generally apply to state-protected species as well. Gopher tortoises would be relocated away from the railhead transfer facility prior to land clearing and would not be expected to occur again within the fenced portion of the site. Gopher tortoises that reestablish within right-of-way areas could be a risk for a strike, but it is unlikely as there would be only up to five operations a year and only occasional maintenance activities.

State-Listed Species Summary

The Proposed Action would not result in any species extirpation, substantial habitat effects, or adverse population-level effects. As a result, the Navy has not identified any reasonably foreseeable significant adverse effects to state-protected species as a result of construction or operations associated with the Proposed Action.

4 Other Considerations Required by the National Environmental Policy Act

4.1 Consistency with Other Federal, State, and Local Laws, Plans, Policies, and Regulations

In accordance with 40 Code of Federal Regulations section 1502.16(a)(5), analysis of environmental consequences shall include discussion of possible conflicts between the Proposed Action and the objectives of federal, regional, state, and local land use plans, policies, and controls. Table 4-1 identifies the principal federal and state laws and regulations that are applicable to the Proposed Action and describes briefly how compliance with these laws and regulations would be accomplished.

Table 4-1 Principal Federal and State Laws Applicable to the Proposed Action

<i>Federal, State, Local, and Regional Land Use Plans, Policies, and Controls</i>	<i>Status of Compliance</i>
NEPA, as well as DoW, Navy, and NASA procedures for implementing NEPA.	Compliant. This document in combination with public participation and review are being conducted in compliance with NEPA and agency procedures.
Clean Air Act	Compliant. The impact analysis is discussed in Section 3.2, <i>Air Quality</i> . Air emissions would be negligible, and because the area is in attainment for all NAAQS, the Proposed Action is exempt from General Conformity requirements. Supporting information is contained in Appendix K, <i>Air Quality</i> .
Clean Water Act	Compliant. The impact analysis is discussed in Section 3.1, <i>Water Resources</i> . Prior to implementing the Proposed Action, the Navy would obtain the necessary permits (i.e., Florida NPDES General Permit for Stormwater Discharge from Large and Small Construction Activities, SJRWMD Environmental Resource Permit, and Sections 404 and 401 of the Clean Water Act permits) and adhere to all permit conditions. Due to DoW and DOT operational and safety requirements the Proposed Action location is the Least Environmentally Damaging Practicable Alternative.
Coastal Zone Management Act	Compliant. The Navy has determined, based on similar past actions and on the analysis presented in this EA, that the proposed federal agency action may affect a coastal use or resource of the Florida's coastal zone and would be consistent to the maximum extent practicable with the applicable enforceable policies of the Florida Coastal Zone Management Program. The Navy's analysis of Florida's enforceable policies is contained in Appendix J, Agency Consultation: <i>Coastal Zone Management Act</i> . Consultation is ongoing.

Table 4-1 Principal Federal and State Laws Applicable to the Proposed Action

<i>Federal, State, Local, and Regional Land Use Plans, Policies, and Controls</i>	<i>Status of Compliance</i>
National Historic Preservation Act	Compliant. In compliance with Section 106 of the NHPA, NASA consulted with the Florida Department of Historic Resources, which acts as the SHPO. NASA initiated consultation with the SHPO on April 29, 2025, resulting in a formal determination of No Adverse Effect on June 5, 2025 (see Appendix I, <i>Agency Consultation: National Historic Preservation Act</i>). All project activities strictly comply with the stipulations of the existing Programmatic Agreement titled “Programmatic Agreement Among the National Aeronautics and Space Administration, The Advisory Council on Historic Preservation, and The National Conference of State Historic Preservation Officers Regarding the Management of NASA Centers,” executed on October 21, 2025.
Endangered Species Act	Compliant. The applicable impact analysis is discussed in Section 3.3, <i>Biological Resources</i> . NASA is formally consulting with the USFWS regarding potential impacts to the tricolored bat, Audubon’s crested caracara, eastern black rail, everglade snail kite, Florida scrub jay, Monarch butterfly, and eastern indigo snake. Results of the consultation will be inserted into Appendix H, <i>Agency Consultation: Endangered Species Act</i>).
Migratory Bird Treaty Act	Compliant. The applicable impact analysis is discussed in Section 3.3, <i>Biological Resources</i> . With implementation of avoidance and minimization measures, Proposed Action construction resulting in takes of migratory birds is considered highly unlikely; however, consistent with 50 CFR 21.42, if such takes were to occur, they would not result in a significant adverse effect on the population of a migratory bird species. Proposed Action operations constitute a “military readiness activity” as defined at 50 C.F.R. 21.6. Accordingly, incidental take of migratory birds resulting from these operations is authorized under 50 CFR 21.42 and is in compliance with the Migratory Bird Treaty Act.
Bald and Golden Eagle Protection Act	Compliant. The applicable regulatory setting and impact analysis is discussed in Section 3.3, <i>Biological Resources</i> . Pursuant to the Bald and Golden Eagle Protection Act and implementing guidance, prohibited take of an eagle is unlikely. One nest is within 660 feet of Proposed Action railroad rehabilitation. Due to the nest being 580 feet from the rehabilitation and because there is visual and auditory screening from vegetation, the eagles at the nest are unlikely to be disturbed. However, as a precaution the Navy will conduct all loud and intrusive work that is within 660 feet of the nest outside of breeding season to ensure that eagles are not disturbed.

Table 4-1 Principal Federal and State Laws Applicable to the Proposed Action

<i>Federal, State, Local, and Regional Land Use Plans, Policies, and Controls</i>	<i>Status of Compliance</i>
Comprehensive Environmental Response, Compensation, and Liability Act	Compliant. The Proposed Action would occur outside of known contaminated sites. There are no CERCLA sites at KSC.
Emergency Planning and Community Right-to-Know Act	Compliant. Any releases of toxic chemicals resulting from the Proposed Action or storage of hazardous chemicals meeting storage quantity thresholds resulting from the Proposed Action will be reported per Emergency Planning and Community Right-to-Know Act reporting requirements. The Navy and NASA tracks the use and storage of all toxic and hazardous chemicals and reports this information, as required, to the EPA, which makes the data publicly available.
Resource Conservation and Recovery Act	Compliant. All hazardous and non-hazardous wastes generated by the Proposed Action will be properly characterized, containerized, stored, labeled, manifested, shipped, and disposed of by the Navy's construction contractor in full regulatory compliance. If applicable, hazardous wastes generated by this activity will be manifested, shipped, and disposed of under an EPA identification number for the premises procured by the construction contractor.
Toxic Substances Control Act	Compliant. Toxic substances include a number of manufactured chemicals, as well as naturally occurring heavy metals and other materials. Management and use of any listed chemicals would be conducted in accordance with the Toxic Substances Control Act.
Executive Order 11988, <i>Floodplain Management</i> and Executive Order 11990, <i>Protection of Wetlands</i>	Compliant. Due to critical safety requirements and operational constraints, there is no practicable alternative but to locate the Proposed Action within the 100-year floodplain and associated wetlands. To ensure full compliance with Executive Order 11990, <i>Protection of Wetlands</i> , and Executive Order 11988, <i>Floodplain Management</i> , the project design and footprint were specifically sited, engineered, and minimized to reduce environmental impacts to the maximum extent practicable.
Executive Order 12088, <i>Federal Compliance with Pollution Control Standards</i>	Compliant. The applicable impact analysis is discussed in Section 3.1, <i>Water Resources</i> and Section 3.2, <i>Air Quality</i> , and Appendix K, <i>Air Quality</i> . Compliance with the NPDES Construction General Permit, Florida Environmental Resource Permit, and CWA Section 404 and 401 permits satisfies this EO by ensuring the federal agency meets specific federal and state pollution control mandates regarding stormwater, water quality, and wetlands. Air emissions would be <i>de minimis</i> , and the Proposed Action is exempt from General Conformity requirements. The Proposed Action would not exceed NAAQS established by the EPA under the CAA. Therefore, the Proposed Action would comply with Executive Order 12088.
Executive Order 13045, <i>Protection of Children from Environmental Health Risks and Safety Risks</i>	Compliant. The Proposed Action occurs entirely on KSC, a secured facility in an area where there are no children. The location was specifically chosen to satisfy DoW and DOT

Table 4-1 Principal Federal and State Laws Applicable to the Proposed Action

<i>Federal, State, Local, and Regional Land Use Plans, Policies, and Controls</i>	<i>Status of Compliance</i>
	operational and safety requirements. KSC's strict security perimeter, access controls, and visitor protocols ensure that any transient minors who may visit KSC are protected by ensuring that children cannot wander into hazardous operational areas. The Proposed Action would not result in environmental health risks or safety risks that may disproportionately affect children.
<i>Executive Order 13175, Consultation and Coordination with Indian Tribal Governments</i>	Compliant. The Proposed Action will not affect any known traditional cultural properties; therefore, no consultations were conducted.

Key: CAA = Clean Air Act; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; DOT = Department of Transportation; DoW = Department of War; EA = Environmental Assessment; EPA = United States Environmental Protection Agency; KSC = Kennedy Space Center; NAAQS = National Ambient Air Quality Standards; NASA = National Aeronautical and Space Administration; NEPA = National Environmental Policy Act; NHPA = National Historic Preservation Act; NPDES = National Pollutant Discharge Elimination System; SHPO = State Historic Preservation Officer; U.S. = United States; U.S.C. = United States Code.

4.2 Relationship Between Short-Term Use of the Environment and Long-Term Productivity

NEPA requires an analysis of the relationship between a project's short-term impacts on the environment and the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. This refers to the possibility that choosing one development site reduces future flexibility in pursuing other options, or that using a parcel of land or other resources often eliminates the possibility of other uses at that site.

The Proposed Action short-term use of the environment provides some socioeconomic gains, infrastructure modernization, and short-term economic productivity during construction. The Proposed Action would cause some degradation of long-term ecological productivity. Filling wetlands and development in floodplains reduces natural flood storage, decreases groundwater recharge, and impairs water filtration, which may lead to heightened downstream flood risks and degraded water quality. Furthermore, activities in special status species habitat cause fragmentation, risking localized displacement. However, through the use of BMPs and adherence to permit and agency consultation requirements, the Proposed Action would not result in impacts that would significantly reduce environmental productivity or permanently narrow the range of beneficial uses of the environment.

Appendices

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Appendix A

Acronyms and Abbreviations

Acronym	Definition
ACAM	Air Conformity Applicability Model
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
CAA	Clean Air Act
CCSFS	Cape Canaveral Space Force Station
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CWA	Clean Water Act
DOT	Department of Transportation
DoW	Department of War
EA	Environmental Assessment
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
GHG	greenhouse gas
HAP	hazardous air pollutant
INPS	invasive non-native plant species
KSC	Kennedy Space Center
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NO ₂	nitrogen dioxide
NOTU	Naval Ordnance Test Unit
NPDES	National Pollutant Discharge Elimination System
O ₃	ozone

Pb	lead
PFO	Palustrine-Forested
PM ₁₀	particulate matter less than or equal to 10 microns in diameter
PM _{2.5}	particulate matter less than or equal to 2.5 microns in diameter
PSS	Palustrine Scrub-Shrub
SF	square feet
SHPO	State Historic Preservation Officer
SJRWMD	St. Johns River Water Management District
SO ₂	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
TBD	to be determined
U.S.	United States
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

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Appendix B

Regulatory Setting

The Navy has prepared this Environmental Assessment (EA) based upon the following Federal laws, statutes, regulations, policies and key documents:

- Archeological and Historic Preservation Act (54 United States Code [U.S.C.] sections 312501–312508)
- Archaeological Resources Protection Act (16 U.S.C sections 470aa–470mm)
- Clean Air Act (42 U.S.C. sections 7401–7671q)
- Clean Water Act (33 U.S.C. sections 1251-1387)
- Coastal Zone Management Act (16 U.S.C. sections 1451-1466)
- Endangered Species Act (16 U.S.C. sections 1531-1544)
- Executive Order (EO) 11988, *Floodplain Management* (42 Federal Register 26951)
- EO 11990, *Protection of Wetlands* (42 Federal Register 26961)
- EO 12088 as amended, Federal Compliance with Pollution Control Standards (43 Federal Register 47707)
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (62 Federal Register 19885)
- EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* (66 Federal Register 3853)
- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* (72 Federal Register 3919)
- Migratory Bird Treaty Act (16 U.S.C. sections 703-712.)
- Migratory Bird Permits (50 Code of Federal Regulations [CFR] section 21)
- National Environmental Policy Act, 42 U.S.C. sections 4321-4370h
- National Historic Preservation Act of 1966, as amended (54 U.S.C. sections 300101-307108)
- Native American Graves Protection and Repatriation Act (25 U.S.C. sections 3001-3013)
- Noise Control Act (42 U.S.C. sections 4901-4918)
- Protection of Historic Properties (36 CFR Part 800)
- Resource Conservation and Recovery Act (42 U.S.C. sections 6901–6992k)
- Safe Drinking Water Act (42 U.S.C. sections 300f–300j-26)

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Appendix C

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Appendix D

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Appendix E

Alternatives Screening Analysis and Results

NEPA guidelines require evaluation of a reasonable range of alternatives that are technically and economically feasible. Only those alternatives determined to be reasonable and that meet the purpose of and need for the Proposed Action (see Section 1.4) require detailed analysis.

Because the use of the existing DOT- and DoW-approved rail network at KSC is essential to the operational feasibility of the proposed motor transfer facility, the only viable alternatives are different building sites located within the boundaries of KSC. The Navy worked with KSC planners and installation leadership to identify 11 potential site alternatives for the Proposed Action at KSC (Site ALTs A-K). Figure E-1 shows the location of each alternative site considered. The Navy then developed and applied specific screening criteria to compare and evaluate each site alternative for reasonableness and feasibility.

E.1 Screening Criteria to Evaluate Alternatives

The following screening criteria were identified by the Navy and applied to evaluate potential site alternatives for meeting program requirements:

- **Compatible Land Use** – Sites should be consistent with the current and planned future land use in the vicinity of the site. The need for a Land Use change/modification would need to be evaluated by the host installation for approval.
- **Avoidance/Minimization of Environmental Impacts** – Sites should minimize environmental impacts to the extent practicable with impacts to safety/human health being prioritized.
- **Safety/Human Health Effects** – Sites must have no impacts to safety/human health. All DoW safety requirements must be met.
- **Operational Compatibility** – Sites should avoid or minimize operational impacts (e.g., operational shutdown, facility closure, scheduling conflicts, road closures, inability to complete routine and/or recurring activities, etc.) to existing facilities and current routine operations. Viable alternative sites should maximize the use of existing rail and allow for the use of specialized transport equipment on current roadways.

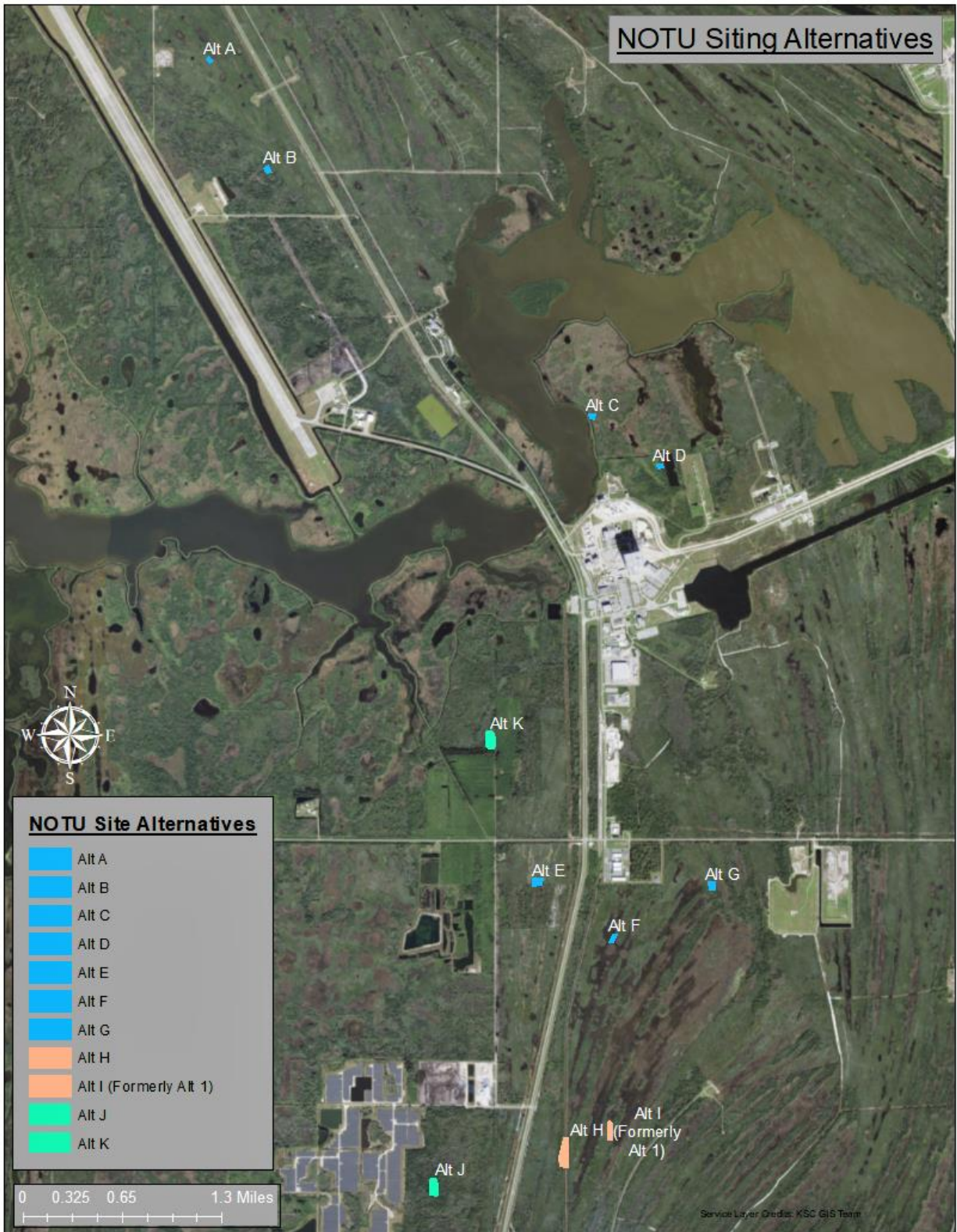


Figure E-1 Candidate Sites for Alternatives Screening Analysis

E.2 Site Alternatives Considered but Not Carried Forward for EA Analysis

Table E-1 presents a site-specific summary of the results of the analysis using the screening criteria above to evaluate the 11 potential site alternatives. Alternative sites not carried forward for further analysis in this EA did not meet the purpose and need for the project and/or did not satisfy the alternatives screening criteria presented in Section E.1.

The following bullets provide a criteria-specific overview of how the site alternatives fared in the screening evaluation:

- **Land Use** – Of the 11 sites evaluated, four—ALT C, ALT D, ALT H, and ALT I—would not require land use changes. While the other sites are located within or near to industrial areas, only ALT H had previously been used as a rail facility. Land use change for all sites has been approved by the host installation.
- **Environmental Impacts** – Each of the 11 sites would result in environmental impacts. Sites that posed manageable impacts to wetlands and endangered species were considered for further evaluation.
- **Safety/Human Health** – Four sites—ALT C, ALT I, ALT J, and ALT K—met the criteria for having no impacts to safety/human health. There were no DoW safety requirement issues with inhabited buildings and/or public transportation routes associated with these sites.
- **Operational Considerations** – Only two sites, ALT H and ALT J, had no operational conflicts. Two sites, ALT E and ALT I, were located within a prescribed burn unit and would cause an inability to complete routine and/or recurring activities. An inability to perform prescribed burns and maintain the units poses an increased risk for wildfires.

E.3 Site Alternatives Carried Forward for EA Analysis

ALT J satisfied the screening criteria and was selected as the preferred site. At this proposed site, land use change approval would be required, overall environmental impacts would be manageable, there would be no impacts to safety/human health, DoW safety requirements would be met, and there would be no operational impacts to existing facilities. The ability to satisfy the purpose of and need for the Proposed Action with no impacts to safety/human health was the determining factor in selection of this site alternative.

Table E-1 Summary of Alternative Sites Analysis

<i>Site Identifier</i>	<i>Land Use</i>	<i>Environmental Impacts</i>	<i>Safety/Human Health</i>	<i>Operational Considerations</i>	<i>Recommendation</i>
ALT A	Operational Buffer/ Conservation Measures required. Would require Land Use modification.	Florida scrub-jay habitat impacts require mitigation.	DoW-required safety minimum distance from inhabited building not met.	New facility operations present major impacts to current operations. Allows use of existing rail. Requires new rail across public transportation route.	Not Carried Forward
ALT B	Operational Buffer/ Conservation Measures required. Would require Land Use modification.	Florida scrub-jay habitat impacts require mitigation.	DoW-required safety minimum distance from inhabited building and public transportation route not met.	New facility operations present major impacts to current operations. Allows use of existing rail. Requires new rail across public transportation route.	Not Carried Forward
ALT C	Within Launch Operations and Support area. No Land Use modification required.	Major wetland impacts require mitigation.	No safety issues.	New facility operations present major impacts to current operations. Requires extensive rail addition.	Not Carried Forward
ALT D	Within Launch Operations and Support area. No Land Use modification required.	Major wetland impacts require mitigation.	DoW-required safety minimum distance from inhabited building and public transportation route not met.	New facility operations present major impacts to current operations. Requires extensive rail addition.	Not Carried Forward
ALT E	Operational Buffer/ Conservation Measures required. Would require Land Use modification.	Florida scrub-jay habitat impacts require mitigation.	DoW-required safety minimum distance from inhabited building and public transportation route not met.	New facility operations present major impacts to current operations. Allows use of existing rail. Requires new rail across public transportation route. Located within a prescribed burn unit.	Not Carried Forward

Table E-1 Summary of Alternative Sites Analysis

<i>Site Identifier</i>	<i>Land Use</i>	<i>Environmental Impacts</i>	<i>Safety/Human Health</i>	<i>Operational Considerations</i>	<i>Recommendation</i>
ALT F	Operational Buffer/ Conservation Measures required. Would require Land Use modification.	Major wetland impacts require mitigation. Florida scrub-jay habitat impacts require mitigation.	DoW-required safety minimum distance from inhabited building and public transportation route not met.	New facility operations present major impacts to current operations. Allows use of existing rail.	Not Carried Forward
ALT G	Operational Buffer/ Conservation Measures required. Would require Land Use modification.	Major wetland impacts require mitigation. Florida scrub-jay habitat impacts require mitigation.	DoW-required safety minimum distance from inhabited building and public transportation route not met.	New facility operations present major impacts to current operations. Allows use of existing rail. Requires new rail across public transportation route.	Not Carried Forward
ALT H	Operational Buffer/ Conservation Measures required. No Land Use modification required.	Minor wetland impacts require mitigation. Florida scrub-jay habitat impacts require mitigation.	DoW-required safety minimum distance from inhabited building and public transportation route not met.	No operational conflicts. Allows use of existing rail.	Not Carried Forward
ALT I	Operational Buffer/ Conservation Measures required. No Land Use modification required.	Major wetland impacts require mitigation. Florida scrub-jay habitat impacts require mitigation.	No safety issues.	Allows use of existing rail. Located within the prescribed burn unit.	Not Carried Forward
ALT J	Operational Buffer/ Conservation Measures required. Would require Land Use modification.	Minor wetland impacts require mitigation Florida scrub-jay habitat impacts require mitigation.	No safety issues.	No operational conflicts. Allows use of existing rail. Requires new rail across public transportation route.	Carried Forward as Preferred Site

Table E-1 Summary of Alternative Sites Analysis

<i>Site Identifier</i>	<i>Land Use</i>	<i>Environmental Impacts</i>	<i>Safety/Human Health</i>	<i>Operational Considerations</i>	<i>Recommendation</i>
ALT K	Would require Land Use modification.	Florida scrub-jay habitat impacts require mitigation.	No safety issues.	New facility operations present major impacts to future operations. Allows use of existing rail. Requires new rail across public transportation route.	Not Carried Forward

Key: DoW = Department of War.

Appendix F

Best Management Practices

Standard impact avoidance and best management practices are presented in Table F-1. Minimization measures for protected species are provided in Table F-2.

Table F-1 Environmental Impacts Avoidance and Best Management Practices

<i>Applicable Resource Area</i>	<i>Impacts Avoidance/Minimization Measures</i>	<i>Anticipated Benefit/Evaluating Effectiveness</i>	<i>Responsibility</i>	<i>Compliance Schedule</i>	<i>Verification of Compliance</i>
Biological Resources	All vehicles, equipment, and footwear would be cleaned of dirt, debris, seeds, mud, and visible plant material prior to being brought onto and before leaving the project area. Vehicles would also be cleaned after construction prior to being used elsewhere on KSC. Any weeds removed would be placed in bags or dumpsters and hauled away.	Prevent the introduction and spread of invasive non-native species.	Construction contractor	During construction	NASA
Water Resources	Implement appropriate construction management BMPs, such as requiring all construction equipment to be in good condition and properly maintained to avoid the potential for spills and leaks.	Minimize potential impacts to water quality from inadvertent spills and leaks from equipment during construction.	Construction contractor	During construction	NASA
Water Resources	Obtain authorization under the Florida NPDES General Permit for Stormwater Discharge from Large and Small Construction Activities from the FDEP before starting construction activities. The permit requires that the permittee develop a SWPPP to minimize water quality degradation through establishing project-specific BMPs, including implementing a Spill Prevention Control and Countermeasure plan. The construction contractor would be required to implement all appropriate BMPs for erosion and sediment as outlined in the SWPPP. Construction-related erosion control measures could include, but not be limited to, erosion control blankets, soil stabilizers, silt fencing, sandbags, and storm drain inlet protection devices.	Minimize impacts to water resources during construction.	Construction contractor	Prior to construction	NASA
Water Resources	Incorporate proper post-construction stormwater management features into the project planning and site design to ensure compliance with the Energy Independence and Security Act (Section 438), DON LID Policy, and FDEP and SJWMD laws and regulations.	Minimize impacts to water resources from proposed facilities.	Project proponent	During facility design	Navy/NASA

Table F-1 Environmental Impacts Avoidance and Best Management Practices

<i>Applicable Resource Area</i>	<i>Impacts Avoidance/Minimization Measures</i>	<i>Anticipated Benefit/Evaluating Effectiveness</i>	<i>Responsibility</i>	<i>Compliance Schedule</i>	<i>Verification of Compliance</i>
Air Quality	Covering or watering piles and/or access roads, limiting the speed of grading and earth-moving equipment to 15 miles per hour or less, operating water trucks for stabilization of surfaces under windy conditions, installing wind fencing, and phasing grading operations.	Reduce PM ₁₀ emissions during construction.	Construction contractor	During construction	NASA

Key: BMP = best management practice; DON = Department of the Navy; FDEP = Florida Department of Environmental Protection; KSC = Kennedy Space Center; LID – low impact development; NASA = National Aeronautical and Space Administration; NPDES = National Pollutant Discharge Elimination System; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SWPPP = Stormwater Pollution Prevention Plan; SJWMD = St. Johns Water Management District.

Table F-2 Minimization Measures for Protected Species

<i>Species</i>	<i>Impacts Avoidance/Minimization Measures</i>	<i>Anticipated Benefit/Evaluating Effectiveness</i>	<i>Responsibility</i>	<i>Compliance Schedule</i>	<i>Verification of Compliance</i>
TBD pending consultations.					

Key: TBD = to be determined.

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Appendix G

Public and Agency Involvement

Preparer's Note: this appendix is currently incomplete pending public and agency review of the Draft EA. The content below is intended to provide reviewers of this Draft EA with a preview of the organizational structure and prospective content that will appear in the Final EA, and includes highlighted placeholders to show where relevant information will be added following public and agency involvement in the NEPA process.

G.1 Draft Environmental Assessment Public and Agency Review

The DON solicited public and agency input regarding the Proposed Action by making the Draft EA available on the Navy's NEPA website at www.nepa.navy.mil/CapeRailhead-EA and on KSC's website at <https://public.ksc.nasa.gov/environmental/nepa-2> for 30 days between September 17 and October 16, 2026, and by publishing the following notice of availability of the Draft EA in the local *Florida Today* newspaper in editions published on September 17-19, 2026.

DEPARTMENT OF THE NAVY
PORTFOLIO ACQUISITION EXECUTIVE
STRATEGIC SYSTEMS PROGRAMS

NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL ASSESSMENT (EA)
FOR A U.S. NAVY RAILHEAD TRANSFER FACILITY
AT KENNEDY SPACE CENTER (KSC), FLORIDA

The United States Navy invites public review and comments on the Draft EA for the Railhead Transfer Facility (P110). The Navy proposes to construct and operate a new motor transfer facility with associated rail and vehicle access infrastructure in the southcentral portion of KSC.

The National Aeronautics and Space Administration is a cooperating agency in the preparation of the EA.

Public Comment Period

The Draft EA is available for review and comment on the internet at:
www.nepa.navy.mil/CapeRailhead-EA/

The Navy is accepting written comments from **September 17–October 16, 2026**. Comments must be postmarked or submitted electronically on or before 11:59 p.m. EST on **October 16, 2026**, to be considered in the development of the Final EA.

Submit written comments electronically via the website above or by mail to:

Environmental Program Manager/SP2521
PAE Strategic Systems Programs
1250 10th Street SE, Bldg. 200, Suite 3600
Washington Navy Yard, DC 20374-5127



G.2 Overview of Comments and Responses

G.2.1 Timing and Methods of Comment Submittal

The 30-day public comment period provided an opportunity for government agencies, interest groups, and the public to comment on the Draft Environmental Assessment (EA) for the proposed construction of a new motor component transfer facility/railhead at Kennedy Space Center. Written comments could be submitted by mail or by email.

The Navy published a Notice of Availability for the review of the Draft EA in the *Florida Today* newspaper in editions published on September 17-20, 2026. The public had 30 days to comment on the EA. This appendix contains all comments received during the public comment period. All received comments were assessed and considered individually and collectively during development of the Final EA. Based on the comments, clarifications and improvements were made in the Final EA. Written responses were prepared for all comments and are included in this appendix.

G.2.2 Comment Response Process

The Navy implemented the following process for reviewing and responding to all comments received during the public comment period for the Draft EA:

- The Navy reviewed all comments and assigned a unique identifier to each. Comment letters for which distinct and separable points could be identified and addressed were delineated and, where appropriate, subdivided into numbered “sub-comments.” In certain cases, the commenter subdivided their own letter into sub-paragraphs.
- Resource specialists considered all comments and prepared written responses.
- As a result of the comments, where applicable, the Navy modified the Final EA to improve or clarify the analysis presented in the Draft EA.

G.2.3 Summary of Draft EA Public Comments

A total of XX comments were received in response to the Draft EA. Table G-1 shows a breakdown of the number of comments received by agency, organization, and the public.

Table G-1 Number of Comments Received During Public Review of the Draft EA

<i>Commenter</i>	<i>Number of Comments Received</i>
Agency	XX
Organization	XX
General Public	XX
Total	XX

Key: EA = Environmental Assessment.

G.2.4 Summary of Revisions to the Final EA in Response to Public Comments

The main revisions to the Final EA in response to public comments are summarized below.

- List to be provided

G.2.5 Responses to Public Comments

Table G-2 presents responses to the public comments received on the Draft EA. The full original comment letters and emails are included after the table (To be provided in Final EA). The original comment letters that follow Table G-2 cannot be made compliant with Section 508 of the Rehabilitation Act of 1973 and therefore are not processed by assistive technologies used by people with physical, sensory, or cognitive disabilities. The comments and excerpted portions of longer letters and emails included in Table G-2 are fully compliant with Section 508 and assistive technologies.

Table G-2 Responses to Public Comments (To Be Provided)

<i>Comment Number</i>	<i>Name</i>	<i>Comment*</i>	<i>Response</i>

Appendix H

Agency Consultation: Endangered Species Act

Preparer's Note: this appendix to be completed on completion of consultation. Contents would include Biological and Conference Assessment, Natural Resources Survey Report (as an appendix within the Biological and Conference Assessment) and the Biological Opinion.

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Appendix I

Agency Consultation: National Historic Preservation Act

Preparer's Note: the PDF of the next version of the EA will contain the completed consultation documents (Phase 1 Survey, 106 Consultation letter, and State Historic Preservation Officer Concurrence letter).

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Appendix J

Agency Consultation: Coastal Zone Management Act

The Navy has determined that the proposed Federal agency action is reasonably likely to affect a resource or use of Florida's coastal zone. However, as discussed in the next section, the Navy would conduct the proposed activity in a manner that would be fully consistent with the applicable enforceable policies of the Florida Coastal Management Program.

In general, rehabilitation/construction, and operation of the rail line, rail spur, access road, and railhead facility could potentially affect water quality and coastal terrestrial wildlife. Effects to coastal resources would include loss of habitat, loss of wetland and floodplain functions and reduction in water quality.

Analysis of Enforceable Policies

Table J-1 provides an analysis of the Proposed Action's consistency with the enforceable policies of the Florida Coastal Management Program.

Table J-1 Florida Coastal Management Program Consistency Review

Statute	Scope	Consistency Assessment
Chapter 161, <i>Beach and Shore Preservation</i>	This statute provides policy for the regulation of planning, funding, and construction activities for projects located in or affecting the coastal system including beaches, dunes, inlets, and coastal waters.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action does not occur on and would not adversely affect beaches and shores.
Chapter 163, <i>Part II, Intergovernmental Programs: Growth Policy; County and Municipal Planning; Land Development Regulation</i>	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.	This enforceable policy is not applicable to the Proposed Action. Brevard County has adopted a comprehensive plan; however, KSC is not included in the plan and operates under its own masterplan.
Chapter 186, <i>State and Regional Planning</i>	Relevant to community and comprehensive planning activities conducted by the State to deliver governmental services.	Proposed Action development would occur on federal property. Planning at KSC is conducted in coordination with area stakeholders, including state and regional planning organizations. The site of the Proposed Action is located in the Space Commerce District, as identified by the NASA KSC Vision Plan, but is outside of and does not conflict with the Space Commerce District Area Development Plan or with state and regional planning. Therefore, the Proposed Action is consistent with this enforceable policy.
Chapter 252, <i>Emergency Management</i>	Provides for planning and implementation of the state's response to, efforts to recover from, and the mitigation of natural and man-made disasters.	The Proposed Action would not increase the state's vulnerability to natural disasters. KSC operates under a CEMP. The CEMP establishes requirements and responsibilities for response to major emergencies where multiple emergency response forces and supporting agencies are involved. NOTU, as a partner organization under the plan, must ensure that all applicable operations, activities, equipment, and facilities follow all Federal, State of Florida, and local emergency preparedness, mitigation, and response and recovery statutes, regulations, and ordinances. Because KSC operates under the CEMP and coordinates with state and local emergency organizations, the Proposed Action is consistent with this enforceable policy.
Chapter 253, <i>State Lands</i>	Addresses the state's administration of public lands and property. Provides direction regarding the acquisition, administration, management, control, enforcement, conservation, protection, and disposal of State lands.	This enforceable policy is not applicable to the Proposed Action. Proposed Action activities would not occur on state lands.

Table J-1 Florida Coastal Management Program Consistency Review

Statute	Scope	Consistency Assessment
Chapter 258, <i>State Parks and Preserves</i>	Relevant for any activities on or affecting Florida-held state parks, aquatic preserves, and recreation areas.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action would not affect or occur on any Florida-held state parks, aquatic preserves, or recreation areas.
Chapter 259, <i>Land Acquisitions for Conservation or Recreation</i>	Includes the Florida Forever Act, which provides for the public acquisition and protection of lands for conservation or recreation.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action does not entail the acquisitions of lands by the state for conservation or recreation.
Chapter 267, <i>Historical Resources</i>	Addresses activities that will, or may have, a direct or indirect effect on the state's archaeological and historical resources.	National Historic Preservation Act Section 106 consultations were initiated on April 29, 2025, and resulted in a formal determination of No Adverse Effect on June 5, 2025. Tribal consultations were not conducted as no tribal resources were identified during the archaeological survey. KSC manages historical resources under a Cultural Resources Management Plan. All Proposed Action activities would be conducted in accordance with the plan. Therefore, the Proposed Action is consistent with this enforceable policy.
Chapter 288, <i>Commercial Development and Capital Improvements</i>	Relates to the reuse of closed Federal military base lands or installations.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action would not use closed federal military base lands.
Chapter 339, <i>Transportation Finance and Planning</i>	Relates to surface transportation projects and activities in urban areas and junkyard, scrap, and automotive graveyard facilities.	This enforceable policy is not applicable to the Proposed Action. The proposed project would have no effect on the finance and planning needs of Florida's transportation system or junkyard/scrap facilities.
Chapter 373, <i>Water Resources</i>	Addresses the state's policy of management, protection, conservation, and preservation of water resources.	All Proposed Action construction would occur on Federal lands; however, stormwater run-off from construction and operations could potentially reach state waters. Under the Proposed Action, construction resulting in ground disturbance over 1 acre would occur. In addition, portions of the Proposed Action would occur in wetlands and the 100- and 500-year floodplains. Prior to implementing the Proposed Action, the Navy, to protect water quality and water resources, would obtain, as necessary, any required permits, including a Florida NPDES Construction General Permit and an Environmental Resource Permit from FDEP, a Section 404 CWA permit from USACE, and any others as needed. The Navy would adhere to the requirement of those permits. Because the Navy would obtain, update, and abide by required permits, thereby protecting water resources, the Proposed Action is consistent with this enforceable policy.

Table J-1 Florida Coastal Management Program Consistency Review

<i>Statute</i>	<i>Scope</i>	<i>Consistency Assessment</i>
Chapter 375, <i>Outdoor Recreation and Conservation Lands</i>	Develops comprehensive multipurpose outdoor recreation plans to document recreational supply and demand, describe current recreational opportunities, estimate need for additional recreational opportunities, and propose means to meet the identified needs.	This enforceable policy is not applicable to the Proposed Action. Opportunities for recreation on state lands would not be affected.
Chapter 376, <i>Pollutant Discharge Prevention and Removal</i>	Regulates transfer, storage, and transportation of pollutants, and cleanup of pollutant discharges.	During construction, the Proposed Action would require the storage and use of hazardous materials (such as various paints, solvents, oils, lubricants, various fuels, etc.), the generation of hazardous wastes, as well as the discharge of industrial wastewater to groundwater. An incident with these materials could potentially result in the discharge of pollutants to coastal resources. KSC maintains and operates under a Hazardous Materials Emergency Response Plan. The plan integrates Federal, state, and local emergency planning and response requirements. By planning for, reducing the likelihood of, and preparing for releases prior to their occurrence, risks to public health and the environment are minimized. The plan provides site-specific and logistical information regarding the storage, handling, and response to spills at KSC. Navy is responsible for preparing its own Emergency Response Plan in accordance with the KSC Hazardous Materials Emergency Response Plan. To address potential pollutants from industrial wastewater discharge, the Navy would obtain and abide by permits discussed for Chapter 373, <i>Water Resources</i>. Because the Navy would abide by requirements found in these plans and permits for the Proposed Action, the Proposed Action is consistent with this enforceable policy.
Chapter 377, <i>Energy Resources</i>	Relevant to energy projects and activities that explore, extract, and develop oil, gas, and natural gas, as well as alternative and renewable fuel sources.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action is not an energy project.
Chapter 379, <i>Fish and Wildlife Conservation</i>	Addresses conservation management of fresh and marine fisheries resources including endangered and threatened species, and promotes hunting, fishing, and game opportunities in the state. Also includes harmful algal bloom management.	Prior to implementing the Proposed Action, the Navy and NASA would enter into ESA Section 7 consultation with the USFWS, to ensure that effects would not jeopardize the continued existence of Federal-listed species. NASA, in partnership with the Merritt Island National Wildlife Refuge and Canaveral National Shoreline, manages natural habitats to sustain and restore natural resources on KSC. Because of the natural resources management undertaken at KSC and because the Navy and

Table J-1 Florida Coastal Management Program Consistency Review

Statute	Scope	Consistency Assessment
		NASA will consult as necessary on federally listed species regarding the Proposed Action, the Proposed Action is consistent with this enforceable policy.
Chapter 380, <i>Land and Water Management</i>	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action's land development would occur on federally owned lands. Areas of Critical State Concern or areas with approved state resource management plans such as the Northwest Florida Coast would not be affected. Changes to coastal infrastructure such as bridge construction, capacity increases of existing coastal infrastructure, or use of state funds for infrastructure planning, designing, or construction would not occur.
Chapter 381, <i>Public Health: General Provisions</i>	Relates to the Department of Health including environmental health and onsite sewage treatment and disposal systems.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action does not involve the construction of an on-site sewage treatment and disposal system.
Chapter 388, <i>Mosquito Control</i>	Addresses mosquito control efforts in conjunction with environmental land protection in the state.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action would not affect mosquito control efforts.
Chapter 403, <i>Environmental Control</i>	Relevant to projects and activities that affect or may affect underground, surface, water quality, and air quality.	All Proposed Action activities would occur on federal lands. Because the Proposed Action would occur in an area that is in attainment for all criteria air pollutants and there would only be a relatively small amount of construction and only up to five deliveries per year, the Proposed Action would not be expected to result in impacts to air quality. See the consistency assessment for Chapter 373, <i>Water Resources</i> , for water pollution controls. See consistency assessment for Chapter 376, <i>Pollutant Discharge Prevention and Removal</i> , for hazardous materials management controls. See the consistency assessment for Chapter 379, <i>Fish and Wildlife Conservation</i> , for ecosystem management controls. See the consistency assessment for Chapter 381, <i>Public Health: General Provisions</i> , for drinking water protection and pollution prevention (sewage treatment) controls. By incorporating the controls specified in the above-referenced consistency assessments, the Proposed Action would be consistent with this enforceable policy.
Chapter 553, <i>Building Construction Standards</i>	Establishes the Florida Building Code and associated building permit applications and construction inspections.	This enforceable policy is not applicable to the Proposed Action. All activities would occur on Federal property. Construction would meet all NASA, Navy and Unified Facilities Criteria requirements. Unified Facility Criteria are DoW-wide technical design and construction standards, jointly maintained by the Army, Navy, and Air Force, that set the mandatory requirements military construction projects must follow throughout planning, design, and execution.

Table J-1 Florida Coastal Management Program Consistency Review

<i>Statute</i>	<i>Scope</i>	<i>Consistency Assessment</i>
Chapter 582, <i>Soil and Water Conservation</i>	Relevant to projects and activities that affect or may affect a Soil and Water Conservation District.	The Proposed Action occurs on Federal property within Brevard County. As a Federal facility, KSC is not subject to the Brevard County Soil and Water Conservation District; however, stormwater runoff could potentially reach state waters. Under the Proposed Action, construction resulting in ground disturbance over 1 acre would occur. Permits and actions detailed in the consistency assessment for Chapter 373, <i>Water Resources</i> , would be obtained and employed. A condition of the NPDES Construction General Permit is the development of a SWPPP, which would include controls for erosion and sedimentation that would minimize soil erosion and sediment damage. In addition, the facility design will follow Section 438 of the Energy Independence and Security Act and incorporate LID features to reduce stormwater flow and volume to predevelopment conditions. Therefore, the Proposed Action would be consistent with this enforceable policy.
Chapter 597, <i>Aquaculture</i>	Relates to aquaculture projects and activities.	This enforceable policy is not applicable to the Proposed Action. The Proposed Action would not affect aquaculture efforts.

Key: CEMP = Comprehensive Emergency Management; CWA = Clean Water Act; DoW = Department of War; ESA = Endangered Species Act; FDEP = Florida Department of Environmental Protection; KSC = Kennedy Space Center; LID = low impact development; NASA = National Aeronautics and Space Administration; NPDES = National Pollutant Discharge Elimination System; SWPPP = Stormwater Pollution Prevention Plan; USACE = United States Army Corps of Engineers; USFWS = United States Fish and Wildlife Service.

Appendix K

Air Quality

K.1: ACAM Construction Emissions

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: Kennedy Space Center

State: Florida

County(s): Brevard

Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: U.S. Navy Railhead Transfer Facility at Kennedy Space Center, Florida

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 6 / 2027

e. Action Description:

The proposed action consists of constructing and operating a dedicated motor transfer facility and supporting infrastructure at NASA Kennedy Space Center. Proposed components include an open-air transfer structure, approximately 3 acres of paved laydown and parking area, a new access road, a new railhead connector, renovation or replacement of existing rail infrastructure, site preparation activities, utility installation, and security infrastructure. Operations would involve intermittent transfer of up to five motor shipments per year over a 10-year period beginning in 2030.

The No Action Alternative assumes the proposed facility would not be constructed, existing shipments would continue at the current transfer location, and future shipments would not occur because the existing facility cannot support the operational and safety requirements.

f. Point of Contact:

Name: Allison Williams
Title: Environmental Scientist
Organization: Leidos Corporation
Email: allison.williams@gmail.com
Phone Number: (719) 470 9579

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the GCR are:

_____ applicable
 X not applicable

Total reasonably foreseeable net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “steady state” (cCba.e., no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the *USAF Air Emissions Guide for Air Force Stationary Sources*, the *USAF Air Emissions Guide for Air Force Mobile Sources*, the *USAF Air Emissions Guide for Air Force Transitory Sources*, and the *Detail Air Conformity Applicability Model Report* (Williams, 2026).

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (cCba.e., not exceeding any National Ambient Air Quality Standard (NAAQS)). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators and are summarized below.

Analysis Summary:**2027**

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.156	250	No
NOx	1.309	250	No
CO	1.633	250	No

SO_x	0.003	250	No
PM 10	7.408	250	No
PM 2.5	0.051	250	No
Pb	0.000	25	No
NH₃	0.008	250	No

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No

None of the estimated annual net emissions associated with this action are above the insignificance indicators; therefore, the action will not cause or contribute to an exceedance of one or more NAAQSs and will have an insignificant impact on air quality. No further air assessment is needed.

Allison Williams, Environmental Scientist

May 20 2026

Name, Title**Date**

K.2: Rail Emissions

Table X: Annual Locomotive Equipment Usage for Proposed Rail Deliveries

<i>Equipment Type</i>	<i>Hp</i>	<i>Load Factor</i>	<i>Number Active</i>	<i>Hourly Hp-Hr</i>	<i>Hours/Trip</i>	<i>Trips/Year</i>	<i>Total Hp-Hrs</i>
Haul Line Locomotive - Road Haul	4,400	0.27	2	2,357	0.210	5.0	2,475
Haul Line Locomotive - Idle	4,400	0.05	2	440	1.0	5.0	2,200

Note: Each delivery was assumed to include approximately 5.2 miles of additional rail travel per round trip.

Table Y: Line Haul Locomotive Emissions Factors Used for Rail Delivery Emissions Calculations

<i>Equipment Type</i>	<i>Emission Factors (Gm/Hp-Hr)</i>							<i>References</i>
	<i>VOC</i>	<i>CO</i>	<i>NOx</i>	<i>SOx</i>	<i>PM10</i>	<i>PM2.5</i>	<i>CO2</i>	
Line Haul Locomotive	0.26	1.28	1.00	0.001	0.18	0.17	350.18	(1)

Notes: (1) = Tier 4 for NOx and Tier 2 for all other pollutants (EPA 2009), except PM2.5 = 0.92 of PM10. Also CO2 for dual-fueled unit (95% natural gas and 5% diesel fuel), as presented in AP-42 Section 3.4, Table 3.4-1 (EPA, 2025)

Table Z: Annual Locomotive Emissions from Proposed Rail Deliveries

<i>Train Activity</i>	<i>Tons per Year</i>						
	<i>VOC</i>	<i>CO</i>	<i>NOx</i>	<i>SOx</i>	<i>PM10</i>	<i>PM2.5</i>	<i>CO2</i>
Line Haul Locomotive - Road Haul	0.00	0.00	0.00	0.000	0.00	0.00	0.96
Line Haul Locomotive - Idle	0.00	0.00	0.00	0.000	0.00	0.00	0.85
Total Tons per Year	0.00	0.01	0.01	0.000	0.00	0.00	1.80

K.3: Specialized Transport Vehicle Emissions

Table X: Heavy-Duty Truck Activity for Proposed Motor Component Deliveries

<i>Activity</i>	<i>One-Way Distance within Brevard County</i>	<i>Round-Trip Distance</i>	<i>Trips/Year</i>	<i>Annual VMT</i>
Heavy-duty truck transport	1.30	5.20	5	26

Note: Each delivery was assumed to include approximately 5.2 miles of additional vehicle travel per round trip.

Table Y: Heavy-Duty Diesel Vehicle Emissions Factors (grams/mile)

<i>Vehicle Type</i>	<i>CO</i>	<i>NO_x</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>SOX</i>	<i>VOCs</i>	<i>CO_{2e}</i>
HDDV	1.6	2.4	0.2	0.1	0.0	0.1	1,297

Table Z: Annual Heavy-Duty Diesel Truck Emissions

<i>Vehicle Type</i>	<i>CO</i>	<i>NOX</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>SOX</i>	<i>VOCs</i>	<i>CO_{2e}</i>
HDDV	0.00	0.00	0.00	0.00	0.00	0.00	0.04