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10 **DRAFT**
11 **Environmental Assessment for the**
12 **Naval Small Craft Instruction and**
13 **Technical Training School Facility Expansion,**
14 **John C. Stennis Space Center, Hancock County,**
15 **Mississippi**
16 May 2015

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21 Abstract:
22 The Naval Small Craft Instruction and Technical Training School proposes to expand its
23 operational capabilities by constructing additional support facilities and creating additional
24 riverine training courses. This Environmental Assessment discusses the purpose of and need for
25 the proposed expansion, identifies alternative actions, and examines the potential beneficial and
26 adverse impacts on the human and natural environments that would result from the
27 implementation of the Proposed Action. No significant impacts from implementation of the
28 Proposed Action were identified.

DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

**FINDING OF NO SIGNIFICANT IMPACT FOR THE EXPANSION OF THE NAVAL
SMALL CRAFT INSTRUCTION AND TECHNICAL TRAINING SCHOOL FACILITY
AT THE JOHN C. STENNIS SPACE CENTER, MISSISSIPPI**

Pursuant to Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] parts 1500-1508) implementing the National Environmental Policy Act (NEPA) of 1969 and Department of the Navy (Navy) Regulations for Implementing NEPA (32 CFR 775), the Navy gives notice that an Environmental Assessment (EA) has been prepared and an Environmental Impact Statement (EIS) is not required for the proposed expansion of facilities and riverine training courses at the Naval Small Craft Instruction and Technical Training School (NAVSCIATTS), John C. Stennis Space Center (SSC) in Hancock County, Mississippi.

SUPPLEMENTARY INFORMATION

The mission of the NAVSCIATTS, a Navy training command operating under the Naval Special Warfare Command, is to promote increased levels of operational capabilities and readiness in allied naval and coast guard forces through formal courses of instruction in operation of small craft, including operations, maintenance, and logistic support. NAVSCIATTS trains and educates Foreign Security Forces and other international students on small craft strategy, operations, communications, weapons, maintenance, and instructor development. Course offerings may vary on an annual basis depending upon the needs of the participating nations.

The NAVSCIATTS is located within the Naval Special Warfare (NSW) use area within the Federal City (Fee Area) at SSC, Mississippi. The school is co-located with Naval Special Warfare Group FOUR's Special Boat Team-TWENTY-TWO (SBT-22). The location of the NAVSCIATTS at SSC facilitates the integration of SBT-22's training capabilities and training range assets into the school's classroom and field training curriculum. Specifically, SBT-22 and NAVSCIATTS share the assets of the NSW's SSC Western Maneuver Area training range, which encompasses premier riverine and littoral training areas. Students use facilities within the NSW use area and conduct riverine training on the East Pearl River and its tributaries as well as those of the Western Maneuver Area training range. Training exercises typically include day/night riverine patrol techniques; insertion and extraction; surveillance, concealing, and monitoring techniques; defense maneuvers; and navigation.

PROPOSED ACTION

The Navy proposes to expand the operational and training capabilities and facilities of the NAVSCIATTS within the NSW use area at SSC to support a projected increase of permanent support personnel and student throughput. An additional 44 permanent personnel would be added to NAVSCIATTS and student throughput would increase from approximately 80 students to a maximum of 160 students for each of five annual 8- to 9-week training periods. In addition, two 4-week riverine training courses would be added to the NAVSCIATTS curriculum, which

would increase the Navy's overall operational use of the East Pearl River by 960 hours per year (an increase in river usage of approximately 8 percent).

To accommodate the increased student throughput, the proposed action encompasses a number of construction projects within the NSW use area, including the construction of a small craft operation and maintenance facility, a facility for additional student berthing, a floating pier and boat ramp, a field house with a covered training pad, a student locker/shower facility, an athletic track, and the expansion of the seating capacity at the dining facility. These projects include mechanical, electrical, and communication utilities; security lighting; site clearing and earthwork; access roads and parking; sidewalks; and landscaping. Anti-Terrorism/Force Protection standards would be incorporated into the design, development, and construction of the proposed facilities. The facilities will meet the Leadership in Engineering and Environmental Design Silver rating.

In addition, the Proposed Action would involve the dredging of approximately 12,100 cubic yards of sediment from approximately 1.5 acres of bottomland within the SSC access canal turning basin to provide 10 feet of draft for the NAVSCIATTS boats. Piles would be driven to support the floating pier.

PURPOSE AND NEED

The purpose of the proposed action is to address existing facility space deficiencies to accommodate an increase in partner nation student throughput. The need for the action is to further overarching U.S. defense strategy and policy to build the capabilities and capacity of partner nations in conducting tactical, operational, and strategic missions in riverine and coastal environments. By building these capabilities with partner nations, the U.S. will be fostering basic principles of human rights, promoting understanding of U.S. society, and building relationships with other countries to combat violent extremism and the proliferation of controlled substances.

ALTERNATIVES, INCLUDING THE NO ACTION ALTERNATIVE

This EA considers the No Action Alternative and the Proposed Action.

No Action Alternative: Under the No Action Alternative, the facilities needed for expansion of the NAVSCIATTS operational support and training would not be constructed. No additional riverine training courses would be created. The analysis of the No Action Alternative provides a benchmark of existing conditions, enabling decision makers to compare the magnitude of environmental effects of the proposed action and any other action alternatives.

Alternative Action(s): The NAVSCIATTS was stationed at Naval Station Rodman, Panama, until its temporary relocation to SSC in October 1999. In 2000, the school was permanently located with SBT-22 within the NSW use area at SSC, which facilitates the integration of SBT-22's training capabilities and training range assets into the school's classroom and field training curriculum. The colocation of NAVSCIATTS and SBT-22 was evaluated in a previous EA

(hereinafter, Colocation EA). The Finding of No Significant Impact for this action was signed on June 7, 2000.

In the Colocation EA, the Navy considered five alternatives for permanent relocation of NAVSCIATTS from Panama. These alternatives were considered primarily because of their proximity to coastal and riverine environments that are similar to the operational environments of the Latin American, Caribbean, and Southeast Asian forces trained by NAVSCIATTS. The alternatives locations examined were:

- Naval Construction Battalion Center (NCBC) Gulfport, Mississippi
- Naval Station Pascagoula, Mississippi
- Naval Weapons Station Charleston, South Carolina
- Marine Corps Base, Camp Lejeune, North Carolina
- SSC, Mississippi

After applying a series of six screening criteria to the five geographic alternative locations, the Navy determined that collocating NAVSCIATTS with SBT-22 at SSC, with personnel support services provided by NCBC Gulfport, was the preferred alternative.

The EA also examined the potential environmental impacts of two site alternatives at SSC for the permanent facilities for SBT-22 and NAVSCIATTS: (1) a site within the Mississippi Army Ammunition Plant compound; and (2) a site adjacent to the Main Canal. Based on the analysis in the Colocation EA, the site adjacent to the Main Canal was selected for implementation of the proposed action.

As previously stated, the purpose of the proposed action is to address existing facility space deficiencies at the NAVSCIATTS to accommodate an increase in partner nation student throughput. In turn, this proposed action will meet U.S. defense strategy and policy. Since the existing location of the NAVSCIATTS facilitates the integration of the training range assets and capabilities of SBT-22 into the school's classroom and field training curriculum, a critical capability, there are no viable alternative actions that would meet the purpose and need of the proposed action. Moreover, the NAVSCIATTS site has been identified by NASA as a training area in SSC and is included in the NASA Master Plan.

ENVIRONMENTAL IMPACTS

Implementation of the proposed action would result in negligible to minimal impacts on the physical, biological, and socioeconomic environments. The following resources would not be affected by the proposed action and were not carried forward for analysis in the EA: airspace, geology, land use, radio frequency and spectrum use, and Wild and Scenic Rivers. The following summary identifies the potential environmental consequences of implementing the proposed action for the remaining resources assessed in the EA.

Soils: Implementation of the proposed action would result in the permanent disturbance of soils in 12 acres at the proposed facility sites but would not adversely affect prime or unique

farmlands. Impacts on shoreline erosion from additional boat traffic in the East Pearl River and its tributaries would be negligible as the riverbank is highly vegetated and the soil types are not considered very erodible. The potential for soil erosion during construction activities would be controlled through the application of Best Management Practices (BMPs) as required by the SSC Stormwater Pollution Prevention Plan (SWPPP) and comply with Section 438 of the Energy Independence and Security Act (EISA) of 2007, which directs Federal agencies to "use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate," for any project with a footprint that exceeds 5,000 square feet.

Water Resources: The mechanical dredging of approximately 12,100 cubic feet of sediment in the SSC access canal turning basin and construction of the floating pier and boat launch would temporarily increase turbidity, which would return to normal after construction activities are completed. Sediment curtains would be placed downstream of the disturbed area to prevent sedimentation from the turning basin into the East Pearl River. Permits authorizing work within the SSC access canal would be obtained through the joint Mississippi Department of Marine Resources (MDMR), Mississippi Department of Environmental Quality (MDEQ), and U.S. Army Corps of Engineers (USACE) permit process prior to implementation of dredging and construction activities within the SSC access canal turning basin.

In addition, the implementation of the proposed action would create additional impervious surfaces and alter current surface drainage and runoff characteristics in the NSW use area. However, impacts on water resources would be minor to negligible with implementation of a site-specific SWPPP following the guidance provided in the SSC SWPPP. All wash water used for the cleaning of vehicles and boats at the proposed Small Craft Operation and Maintenance Facility would be processed through an oil-water separator before discharge and the effect of minor leaks or spills of fuel on surface waters from boat operations would be negligible. Any major spill would be managed in accordance with guidelines of the Navy "Hazardous Waste Management Plan for NSW Group FOUR" and "Pollution Prevention Management Plan for NSW Group FOUR".

Impacts on the floodplain of the East Pearl River and its tributaries would be minimal, as no inhabitable or aboveground structures would be built in the floodplain and dredged materials would not be placed in the floodplain. The loss of vegetation due to the construction of the proposed boat ramp, floating pier, road, and parking and turnaround areas would not impact flood storage capacity or increase flood elevations, velocity, duration, or frequency.

Wetlands: There would be minor, permanent impacts on wetlands and drainages from the construction of the proposed boat ramp and associated infrastructure. Approximately 2.25 acres of wetlands and approximately 900 linear feet of drainage would be affected. The disturbance of wetlands within SSC will be conducted in accordance with the requirements of existing USACE General Permit 53 issued by the Vicksburg District. NASA mitigates the unavoidable impacts on wetlands from activities within the Federal City in accordance with its "Special Area Management Plan for Potential Wetland Mitigation Areas at John C. Stennis Space Center, Mississippi".

Federal Consistency with the Coastal Zone Management Act: The Navy determined that the proposed action would have effects on coastal uses and resources in the Mississippi coastal zone. Therefore, the Navy submitted a Coastal Consistency Determination to the MDMR, Office of Coastal Zone Management on February 27, 2015. Concurrence with the Navy's determination was received from Mississippi on (DATE).

Noise: Facility construction noise would be intermittent, temporary, and primarily limited to daylight hours. No noise generated by construction activities would be heard beyond SSC boundaries due to the extensive buffer area surrounding the SSC Fee Area.

There would be temporary but negligible underwater noise disturbance of fish and riverine wildlife from the in-water installation of piles to support the floating pier. The extent of the disturbance would depend upon the method of installation. However, sediment curtains would be placed downstream of the dredge area to prevent sedimentation into the East Pearl River and to inhibit a Gulf sturgeon (*Acipenser oxyrinchus desotoi*), or other riverine wildlife from straying into the dredge area. Additionally, pile installation would be undertaken in the winter months (November through April), when cold water temperatures make it unlikely that a Gulf sturgeon would be present. In addition, the bucket drop procedure developed by the U.S. Fish and Wildlife Service will be employed to encourage any fish or riverine wildlife in the vicinity to leave the dredge area.

The proposed increase in NAVSCIATTS boat training hours on the East Pearl River would have negligible impact on ambient noise levels within the adjacent Louisiana Pearl River State Wildlife Management Area since the associated boat noise would be temporary, fleeting, and spread out over the length of the river within the project area.

Air Quality: Temporary and minor increases in air pollution emissions would occur from construction worker commutes, use of construction equipment (combustion emissions), and the disturbance of soils (fugitive dust). The air quality effects of commuter traffic and construction activities would be minimal and last only during the construction period. Best management practices, such as wetting of disturbed areas, covering aggregate trucks and stockpiled dirt, prevention of dirt carryover to paved roads, and the use of erosion barriers, would be used to reduce fugitive dust during construction activities. In addition, proper and routine maintenance of all vehicles and construction equipment would be implemented to ensure that emissions are within design standards of the equipment and not cause a violation or change in attainment status.

Additionally, the increase in operational support personnel, student throughput, and boat hour operations at NAVSCIATTS would slightly increase the generation of Green House Gas emissions at SSC but this increase would be negligible.

Hazardous Materials and Waste: Hazardous materials or solid waste generated as a result of the construction or operation of the proposed facilities would be managed by adherence to the management procedures identified in the Navy's "Hazardous Waste Management Plan for NSW Group FOUR".

Utilities and Infrastructure: Implementation of the proposed action would result in an increase in usage of potable water, natural gas, electricity, and sanitary waste generation. Any improvements to existing infrastructure or the installation of new infrastructure to support the proposed facilities would occur within existing utility corridors, previously disturbed and developed areas, or within the proposed clearing and grubbing area. Therefore, the upgrade or installation of new infrastructure associated with the proposed action would not result in significant adverse impacts.

Cultural Resources: No impacts on cultural resources are expected with implementation of the proposed action. On December 3, 2014, the Mississippi Department of Archives and History (MDAH) determined that no cultural resources are likely to be affected by implementation of the proposed action, completing the consultation under Section 106 of the National Historic Preservation Act. Should archaeological features or human remains be inadvertently discovered during construction activities, all work would be halted and the NASA Historic Preservation Officer and the MDAH, Historic Preservation Division, would be contacted. Appropriate measures would be implemented to mitigate adverse impacts.

Biological Resources: The proposed action would result in the removal of approximately 12 acres of mixed pine-hardwood forest, but this vegetative community is common at the SSC and the impacts would be negligible to minor. To avoid the spread of noxious weeds, any additional soil necessary to level a construction area will be obtained from approved NASA sources. All clearing and grubbing would be done outside the nesting season, or nesting bird surveys would be carried out prior to site preparation and any active nests protected until the young have fledged. Construction of any overhead electrical lines to serve the facilities would be accomplished in accordance with avian protection guidelines.

The Navy determined that implementation of the proposed action may affect, but is not likely to adversely affect the Gulf sturgeon, the ringed map turtle (*Graptemys oculifera*), and the Louisiana black bear (*Ursus americanus luteolus*). As a result, the Navy initiated consultation with the U.S. Fish and Wildlife Service (USFWS) on March 10, 2015. The USFWS concluded the consultation on (DATE) and found (INSERT RESULTS OF CONSULTATION WHEN COMPLETE).

Socioeconomics: The proposed action would have temporary and minor but beneficial socioeconomic impacts.

Environmental Justice and Protection of Children: Implementation of the proposed action would not result in disproportionately high or adverse human health or environmental effects on minority populations and low-income populations nor environmental health risks and safety risks that may disproportionately affect children.

Cumulative Effects: Soils, water resources and wetlands, noise, air quality, utilities and infrastructure, biological resources, and cultural resources may be potentially affected by the various projects implemented at SSC. BMPs are in place at SSC that would result in the avoidance of significant environmental impacts and most would be temporary. Therefore, the

analysis of the potential cumulative effects of the proposed action in combination with other past, present, or reasonably foreseeable future actions were found not to be significant.

MITIGATION MEASURES

The Navy will implement best management practices and standard operating procedures to minimize or avoid the potential to cause adverse environmental impacts to water quality, soils, biological resources, and cultural resources. In addition, the Navy will employ the following specific mitigation measures:

- To avoid potential adverse effects on migratory birds, site preparation activities will occur outside of the bird nesting season (mid-February through September) or the area will be surveyed for nesting birds prior to site preparation activities. If active nests are encountered, the nests will be protected until the young have fledged.
- Dredging and construction activities within the SSC access canal turning basin will be carried out in the winter months (November through April) when the presence of the Gulf sturgeon is unlikely. The bucket drop procedure developed by the USFWS will be employed to encourage any fish or riverine wildlife in the vicinity to leave the dredge area. Sediment curtains will be placed downstream of the dredge area to prevent sedimentation into the East Pearl River and discourage fish and riverine wildlife from entering the construction area.

FINDING

Based on the analysis presented in the EA and coordination with the USFWS, USACE, MDMR, MDEQ, and the MDAH the Navy finds that the implementation of the proposed action will not significantly impact the quality of the human or natural environment and an EIS is not required.

The EA prepared by the Navy addressing this action is on file and interested parties may obtain a copy by written request to: Commanding Officer, NAVFAC Southeast, Attn: Ms. Emily Detrich, NEPA Compliance Section (EV21), Box 30A, Building 903, Jacksonville, FL 32212-0030.

Date

K.R. Slates
Rear Admiral, U.S. Navy
Director, Energy and Environmental
Readiness Division (OPNAV N45)

1 **Executive Summary**

2 **Environmental Assessment for Naval Small Craft Instruction and Technical** 3 **Training School Facility Expansion, John C. Stennis SpaceCenter, Hancock** 4 **County, Mississippi**

5 **Introduction**

6 The Naval Small Craft Instruction and Technical Training School (NAVSCIATTS) is a
7 Department of the Navy (Navy) Training Command operating under the Naval Special Warfare
8 Command located within the National Aeronautics and Space Administration's (NASA) John C.
9 Stennis Space Center (SSC) in Hancock County, Mississippi. NAVSCIATTS's mission is to
10 promote increased levels of operational capabilities and readiness in allied naval and coast guard
11 forces through formal courses of instruction in operation of small craft, including operations,
12 maintenance, and logistic support. NAVSCIATTS trains and educates Foreign Security Forces
13 and other international students on small craft strategy, operations, communications, weapons,
14 maintenance, and instructor development. Course offerings may vary on an annual basis
15 depending upon the needs of the participating nations.

16 The purpose of the Proposed Action is to address existing facility space deficiencies to
17 accommodate an increase in partner nation student throughput. The need for the action is to
18 further overarching United States (U.S.) defense strategy and policy to build the capabilities and
19 capacity of partner nations in conducting tactical, operational, and strategic missions in riverine
20 and coastal environments. In building these capabilities, the U.S. will be fostering basic
21 principles of human rights, promoting understanding of U.S. society, and building relationships
22 with other countries to combat violent extremism and the proliferation of controlled substances.
23

24 **Proposed Action**

25 The Proposed Action is to expand NAVSCIATTS's training capabilities to provide sufficient
26 accommodations to support an increase in permanent support personnel and student throughput.
27 An additional 44 permanent personnel would be added to NAVSCIATTS, and student
28 throughput would increase from approximately 80 students to a maximum of 160 students for
29 each of five annual 8- to 9-week training periods under the Proposed Action. In addition, two 4-
30 week riverine training courses would be added to the NAVSCIATTS curriculum.

31 The Proposed Action encompasses a number of construction projects within the Naval Special
32 Warfare (NSW) use area, including the construction of a small craft operation and maintenance
33 facility, a facility for additional student berthing, a field house with a covered training pad, a
34 student locker/shower facility, and an athletic track, as well as an expansion of the dining facility
35 seating capacity. Additionally a floating pier and a boat launch would be constructed within the

1 turning basin of the SSC access canal. The floating pier would be similar in design to the
2 existing pier for Special Boat Team–22. These projects include mechanical, electrical, and
3 communication utilities; security lighting and fencing; site clearing and earthwork; access roads
4 and parking; sidewalks; and landscaping. Anti-Terrorism/Force Protection standards would be
5 incorporated into the design, development, and construction of the proposed facilities. All of the
6 proposed facilities would meet the Leadership in Engineering and Environmental Design Silver
7 rating.

8 The proposed operations and maintenance facility, student berthing facility, field house and
9 covered training pad, boat launch, and access road and parking pads would be located in areas
10 containing trees and shrubs. The locations for the proposed student locker/shower facility and
11 the athletic track have been previously disturbed and are currently open, maintained turf areas.
12 The athletic track would be located around the perimeter of the existing soccer field. The
13 existing dining facility would be expanded to enclose the covered, exterior sidewalk around the
14 perimeter of the building so no permanent disturbance of the surrounding turf would occur.
15 Approximately 12 acres of vegetation, 2.25 acres of wetlands, 900 linear feet of drainages, and
16 3.7 acres of floodplain would be impacted by the Proposed Action. Additionally, approximately
17 12,100 cubic yards of sediment would be dredged from approximately 1.5 acres of bottomland
18 from the SSC access canal turning basin.

19 The Proposed Action also includes the addition of two 4-week riverine training courses. These
20 courses would increase the number of boat hours on the East Pearl River by NAVSCIATTS by
21 960 per year. The majority of NAVSCIATTS riverine training is carried out on the East Pearl
22 River within the Stennis Western Maneuver Area (WMA) located on the east side of the East
23 Pearl River within SSC’s noise buffer zone adjacent to the northwest side of SSC. Training
24 exercises typically include day/night riverine patrol techniques; insertion and extraction;
25 surveillance, concealing, and monitoring techniques; defense maneuvers; and navigation.

26 The project area can generally be defined as the NSW use area, the SSC access canal and turning
27 basin, and the East Pearl River from the SSC access canal north to the northern boundary of the
28 WMA. The NSW use area is approximately 150 acres in size and triangular in shape. It is
29 bounded on the south by the access canal and to the east by the old rail road corridor adjacent to
30 Trent Lott Parkway. The northern and western boundaries are Lower Gainesville Road and
31 Endeavour Boulevard, respectively.

32 **Alternatives Considered**

33 **No Action Alternative:** Under the No Action Alternative, the Navy would not construct the
34 facilities needed to adequately accommodate the increase in student throughput, training courses,
35 and additional support personnel that have been anticipated for NAVSCIATTS. There would be
36 no additional riverine training courses. The analysis of the No Action Alternative is required by
37 CEQ and Navy regulations and provides a baseline of existing conditions, enabling decision

1 makers to compare the magnitude of environmental effects of the Proposed Action and any other
2 action alternatives.

3 **Alternative Action(s):** There are no viable alternative actions that would meet the purpose and
4 need of the Proposed Action. The NAVSCIATTS was stationed at Naval Station (NS) Rodman,
5 Panama, until its temporary relocation at SSC in October 1999. In 2000, the school was
6 permanently collocated with SBT-22 within the Naval Special Warfare (NSW) lease area at SSC.
7 The collocation of NAVSCIATTS and SBT-22 was evaluated in the *Environmental Assessment*
8 *for the Permanent Collocation of Naval Special Boat Unit 22 (SBU-22) and Naval Small Craft*
9 *Instruction and Technical Training School (NAVSCIATTS Stennis Space Center, Mississippi,*
10 *January 2000* (Colocation EA). The FONSI for this action was signed on June 7, 2000.

11 In the Colocation EA, the Navy considered five alternatives for permanent relocation of
12 NAVSCIATTS from Panama. These alternatives were considered primarily because of their
13 proximity to coastal and riverine environments that are similar to the operational environments
14 of the Latin American, Caribbean, and Southeast Asian forces trained by NAVSCIATTS. The
15 alternatives locations included the following:

- 16 • Naval Construction Battalion Center (NCBC) Gulfport, Mississippi
- 17 • Naval Station Pascagoula, Mississippi
- 18 • Naval Weapons Station Charleston, South Carolina
- 19 • Marine Corps Base, Camp Lejeune, North Carolina
- 20 • SSC, Mississippi

21 After applying a series of screening criteria to the five geographic alternative locations, the Navy
22 determined that collocating NAVSCIATTS with SBT-22 at SSC with personnel support services
23 provided by NCBC Gulfport was the preferred alternative.

24 The Colocation EA also examined the potential environmental impacts of two site alternatives at
25 SSC for the permanent facilities for SBT-22 and NAVSCIATTS: a site within the Mississippi
26 Army Ammunition Plant compound at SSC, and a site adjacent to the Main Canal. Based on the
27 analysis in the Colocation EA, the site adjacent to the Main Canal was selected for
28 implementation of the Proposed Action.

29 As previously stated, the purpose of the Proposed Action is to address existing facility space
30 deficiencies at the NAVSCIATTS to accommodate an increase in partner nation student
31 throughput. In turn, this proposed action will meet U.S. defense strategy and policy. Since the
32 existing location of the NAVSCIATTS facilitates the integration of the training range assets and
33 capabilities of SBT-22 into the school's classroom and field training curriculum, a critical
34 capability, there are no viable alternative actions that would meet the purpose and need of the
35 proposed action. Moreover, the NAVSCIATTS site has been identified by NASA as a training
36 area in SSC and is included in the NASA Master Plan.

1 **Environmental Consequences**

2 The Proposed Action would have no significant impacts on the physical environment, biological
3 environment, and socioeconomic environment. Per Navy guidance, all applicable consultations,
4 coordination, and authorizations must be completed before a Finding of No Significant Impact
5 may be signed and the Proposed Action may be implemented. Additionally, all applicable state
6 and Federal permits would be obtained prior to site preparation activities. All site preparation
7 activities would follow Best Management Practices per the *John C. Stennis Space Center Storm*
8 *Water Pollution Prevention Plan* and comply with Section 438 of the Energy Independence and
9 Security Act to prevent erosion. To help avoid the spread of noxious weeds, any additional soil
10 necessary to level a construction area would be obtained from approved NASA sources. All
11 clearing and grubbing would be done outside the bird nesting season or nesting bird surveys
12 would be carried out prior to site preparation and any active nests protected until the young have
13 fledged. Construction of any overhead electrical lines to serve the facilities would be done in
14 accordance with avian protection guidelines. Mitigation for unavoidable impacts on wetlands
15 from the proposed construction projects would be undertaken in accordance with NASA's
16 *Special Area Management Plan for Potential Wetland Mitigation Areas John C. Stennis Space*
17 *Center, Mississippi* and outlined in NASA's General Permit 53. Dredging and construction
18 activities within the SSC access canal turning basin would be conducted in the winter months
19 (November through April) when the presence of the Gulf sturgeon in the Project Area is
20 unlikely. The bucket drop procedure developed by the United States Fish and Wildlife Service
21 (USFWS) would be employed to encourage any fish or riverine wildlife in the vicinity to leave
22 the dredge area. Sediment curtains would be placed downstream of the dredge area to prevent
23 sedimentation into the East Pearl River and discourage fish and riverine wildlife from entering
24 the construction area.

1	Table of Contents	
2	Executive Summary	ES-1
3	List of Figures	iv
4	List of Tables	iv
5	List of Appendices	iv
6	1.0 Introduction.....	1-1
7	1.1 Proposed Action	1-1
8	1.2 Purpose and Need for Action	1-1
9	1.3 Regulatory Framework, Agency Coordination, and Public Involvement.....	1-3
10	1.3.1 Regulatory Framework	1-3
11	1.3.2 Interagency and Intergovernmental Coordination	1-3
12	1.3.3 Public Participation.....	1-4
13	2.0 Proposed Action and Alternatives	2-1
14	2.1 Description of Proposed Action	2-1
15	2.2 Description of Alternatives	2-5
16	2.2.1 No Action Alternative.....	2-5
17	2.2.2 Alternative Action(s)	2-5
18	2.3 Alternatives Considered but Eliminated from Further Analysis	2-6
19	3.0 Affected Environment.....	3-1
20	3.1 Physical Environment	3-1
21	3.1.1 Soils.....	3-1
22	3.1.2 Water Resources	3-5
23	3.1.2.1 Surface Water	3-5
24	3.1.2.2 Floodplain.....	3-7
25	3.1.2.3 Wetlands and Coastal Zone Management.....	3-7
26	3.1.3 Noise	3-7
27	3.1.4 Air Quality	3-9
28	3.1.4.1 National Air Quality Standards	3-9
29	3.1.4.2 Greenhouse Gas (GHG) and Climate Change.....	3-10
30	3.1.5 Hazardous Materials and Waste Management.....	3-10

1	3.1.6	Infrastructure.....	3-11
2	3.1.6.1	Transportation	3-11
3	3.1.6.2	Potable Water	3-11
4	3.1.6.3	Wastewater Treatment.....	3-11
5	3.1.6.4	Energy	3-13
6	3.1.6.5	Natural Gas.....	3-13
7	3.1.6.6	Communications.....	3-13
8	3.1.7	Cultural Resources	3-13
9	3.2	Biological Environment	3-14
10	3.2.1	Vegetation	3-14
11	3.2.2	Wildlife	3-14
12	3.2.3	Threatened and Endangered Species and Critical Habitat.....	3-15
13	3.3	Socioeconomic Environment	3-17
14	3.3.1	Socioeconomics	3-17
15	3.3.2	Recreation	3-19
16	3.3.3	Environmental Justice and Protection of Children	3-19
17	3.3.3.1	Environmental Justice	3-19
18	3.3.3.2	Protection of Children	3-20
19	4.0	Environmental Consequences.....	4-1
20	4.1	Physical Environment	4-1
21	4.1.1	Soils.....	4-1
22	4.1.1.1	Proposed Action	4-1
23	4.1.1.2	No Action Alternative	4-2
24	4.1.2	Water Resources	4-2
25	4.1.2.1	Proposed Action	4-2
26	4.1.2.2	No Action Alternative	4-4
27	4.1.3	Noise	4-4
28	4.1.3.1	Proposed Action	4-4
29	4.1.3.2	No Action Alternative	4-5
30	4.1.4	Air Quality, Greenhouse Gases, and Climate Change.....	4-5
31	4.1.4.1	Proposed Action	4-5

1	4.1.4.2	No Action Alternative	4-5
2	4.1.5	Hazardous Materials and Waste.....	4-6
3	4.1.5.1	Proposed Action	4-6
4	4.1.5.2	No Action Alternative	4-6
5	4.1.6	Infrastructure.....	4-7
6	4.1.6.1	Proposed Action	4-7
7	4.1.6.2	No Action Alternative	4-7
8	4.1.7	Cultural Resources	4-7
9	4.1.7.1	Proposed Action	4-7
10	4.1.7.2	No Action Alternative	4-8
11	4.2	Biological Resources.....	4-8
12	4.2.1	Vegetation.....	4-8
13	4.2.1.1	Proposed Action	4-8
14	4.2.1.2	No Action Alternative	4-8
15	4.2.2	Wildlife	4-8
16	4.2.2.1	Proposed Action	4-8
17	4.2.2.2	No Action Alternative	4-9
18	4.2.3	Threatened and Endangered Species and Critical Habitat.....	4-9
19	4.2.3.1	Proposed Action	4-9
20	4.2.3.2	No Action Alternative	4-10
21	4.3	Socioeconomic Environment	4-10
22	4.3.1	Socioeconomics	4-10
23	4.3.1.1	Proposed Action	4-10
24	4.3.1.2	No Action Alternative	4-11
25	4.3.2	Environmental Justice and Protection of Children	4-11
26	4.3.2.1	Proposed Action	4-11
27	4.3.2.2	No Action Alternative	4-11
28	4.4	Cumulative Effects.....	4-12
29	5.0	Permits and Minimization and Mitigation Measures.....	5-1
30	5.1	Permits.....	5-1
31	5.2	Minimization and Mitigation Measures	5-1

1	6.0	List of Agencies and Persons Consulted.....	6-1
2	7.0	List of Preparers.....	7-1
3	8.0	References.....	8-1
4			
5		List of Figures	
6	Figure 1-1.	Vicinity Map.....	1-2
7	Figure 2-1.	Proposed Facilities Map.....	2-2
8	Figure 3-1.	Project Area Map.....	3-2
9	Figure 3-2.	Soils Map.....	3-4
10	Figure 3-3.	Floodplain Map.....	3-6
11	Figure 3-4.	Wetland Map.....	3-8
12	Figure 3-5.	Utility Infrastructure within the NSW Use area.....	3-12
13			
14		List of Tables	
15	Table 3-1.	Soil Units within the NSW Use Area.....	3-3
16	Table 3-2.	Federally Listed Threatened and Endangered Species and Critical Habitat Known	
17		to Occur in St. Tammany Parish, LA, and Hancock County, MS.....	3-15
18	Table 3-3.	Stennis Personnel Place of Residence.....	3-18
19	Table 3-4.	Population, Income, Labor Force, and Unemployment.....	3-19
20	Table 3-5.	Minority and Poverty.....	3-20
21			
22		List of Appendices	
23	Appendix A.	Correspondence	

1 **Acronyms and Abbreviations**

2	APLIC.....	<i>Avian Power Line Interaction Committee</i>
3	BMPs.....	<i>Best Management Practices</i>
4	CEQ.....	<i>Council on Environmental Quality</i>
5	CFC.....	<i>Chlorofluorocarbons</i>
6	CFR.....	<i>Code of Federal Regulations</i>
7	CH ₄	<i>Methane</i>
8	CO.....	<i>Carbon Monoxide</i>
9	CO ₂	<i>Carbon Dioxide</i>
10	CWA.....	<i>Clean Water Act</i>
11	CZMA.....	<i>Coastal Zone Management Act</i>
12	EA.....	<i>Environmental Assessment</i>
13	EISA.....	<i>Energy Independence and Security Act</i>
14	EO.....	<i>Executive Order</i>
15	ESA.....	<i>Endangered Species Act</i>
16	FEMA.....	<i>Federal Emergency Management Agency</i>
17	FONSI.....	<i>Finding of No Significant Impact</i>
18	FPPA.....	<i>Farmland Protection Policy Act</i>
19	GHG.....	<i>Greenhouse Gas</i>
20	HWAF.....	<i>Hazardous Waste Accumulation Facility</i>
21	HAZMAT.....	<i>Hazardous Material</i>
22	HFC.....	<i>Hydrochlorofluorocarbons</i>
23	kV.....	<i>Kilovolts</i>
24	LDNR.....	<i>Louisiana Department of Natural Resources</i>
25	LDWF.....	<i>Louisiana Department of Wildlife and Fisheries</i>

1	LEED	Leadership in Engineering and Environmental Design
2	LQG	Large Quantity Generator
3	MBTA	Migratory Bird Treaty Act
4	MDAH	Mississippi Department of Archives and History
5	MDEQ	Mississippi Department of Environmental Quality
6	MDMR	Mississippi Department of Marine Resources
7	MDWFP	Mississippi Department of Wildlife, Fisheries, and Parks
8	NAAQS	National Ambient Air Quality Standards
9	NASA	National Aeronautics and Space Administration
10	NAVFAC	Naval Facilities Engineering Command
11	NAVO	Naval Oceanographic Office
12	NAVSCIATTS	Naval Small Craft Instruction and Technical Training School
13	Navy	United States Department of the Navy
14	NCBC	Naval Construction Battalion Center
15	NEPA	National Environmental Policy Act
16	N ₂ O	Nitrous Oxide
17	NO ₂	Nitrogen Dioxide
18	NOI	Notice of Intent
19	NRCS	National Resources Conservation Service
20	NSW	Naval Special Warfare
21	O ₃	Ozone
22	PL	Public Law
23	RCRA	Resource Conservation and Recovery Act
24	P2MP	Pollution Prevention Management Plan
25	ROI	Region of Influence

1	PM-2.5	<i>Particulate Matter measuring less than 2.5 microns</i>
2	PM-10	<i>Particulate Matter measuring less than 10 microns</i>
3	SBU.....	<i>Special Boat Unit</i>
4	SBT	<i>Special Boat Team</i>
5	SO ₂	<i>Sulfur Dioxide</i>
6	sq. ft.....	<i>Square Feet</i>
7	SQG.....	<i>Small-Quantity Generator</i>
8	SSC	<i>Stennis Space Center</i>
9	SWPPP	<i>Stormwater Pollution Prevention Plan</i>
10	U.S.	<i>United States</i>
11	USACE	<i>United States Army Corps of Engineers</i>
12	U.S.C.....	<i>United States Code</i>
13	USEPA	<i>United States Environmental Protection Agency</i>
14	USFWS	<i>United States Fish and Wildlife Service</i>
15	VOCs.....	<i>Volatile Organic Compounds</i>
16	WMA	<i>Stennis Western Maneuver Area</i>

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1.0 INTRODUCTION

The Naval Small Craft Instruction and Technical Training School (NAVSCIATTS) is a Department of the Navy (Navy) Training Command operating under the Naval Special Warfare Command located within the National Aeronautics and Space Administration's (NASA) John C. Stennis Space Center (SSC) in Hancock County, Mississippi (Figure 1-1). NAVSCIATTS's mission is to promote increased levels of operational capabilities and readiness in allied naval and coast guard forces through formal courses of instruction in operation of small craft, including operations, maintenance, and logistic support. NAVSCIATTS trains and educates Foreign Security Forces and other international students on small craft strategy, operations, communications, weapons, maintenance, and instructor development. Course offerings may vary on an annual basis depending upon the needs of the participating nations.

NAVSCIATTS proposes to expand its training capabilities by constructing additional support facilities and adding additional students, staff, and riverine training courses. The original construction of NAVSCIATTS facilities, as well as training at SSC, was addressed in the Environmental Assessment (EA): *Environmental Assessment for the Permanent Colocation of Naval Special Boat Unit 22 (SBU-22) and Naval Small Craft Instruction and Technical Training School (NAVSCIATTS) Stennis Space Center, Mississippi, January 2000* (Colocation EA). The Finding of No Significant Impact (FONSI) was signed on June 7, 2000. The EA covered the colocation of facilities for SBU-22 (now known as Special Boat Team [SBT]-22) and NAVSCIATTS at SSC. However, due to the difference in the scope and footprint of this Proposed Action, the Navy has decided to pursue a new EA to assess the environmental impacts of the proposed expansion and training.

1.1 Proposed Action

The Proposed Action is to expand NAVSCIATTS's training capabilities by constructing and operating additional facilities for training and quality of life support, increasing the number of riverine training courses, increasing the permanent support staff, and doubling the current student throughput. The additional riverine training would increase the Navy's overall training use on the East Pearl River by approximately 8 percent.

1.2 Purpose and Need for Action

The purpose of the proposed action is to address existing facility space deficiencies to accommodate an increase in partner nation student throughput. The need for the action is to further overarching United States (U.S.) defense strategy and policy to build the capabilities and capacity of partner nations in conducting tactical, operational, and strategic missions in riverine and coastal environments. In building these capabilities, the U.S. will be fostering basic

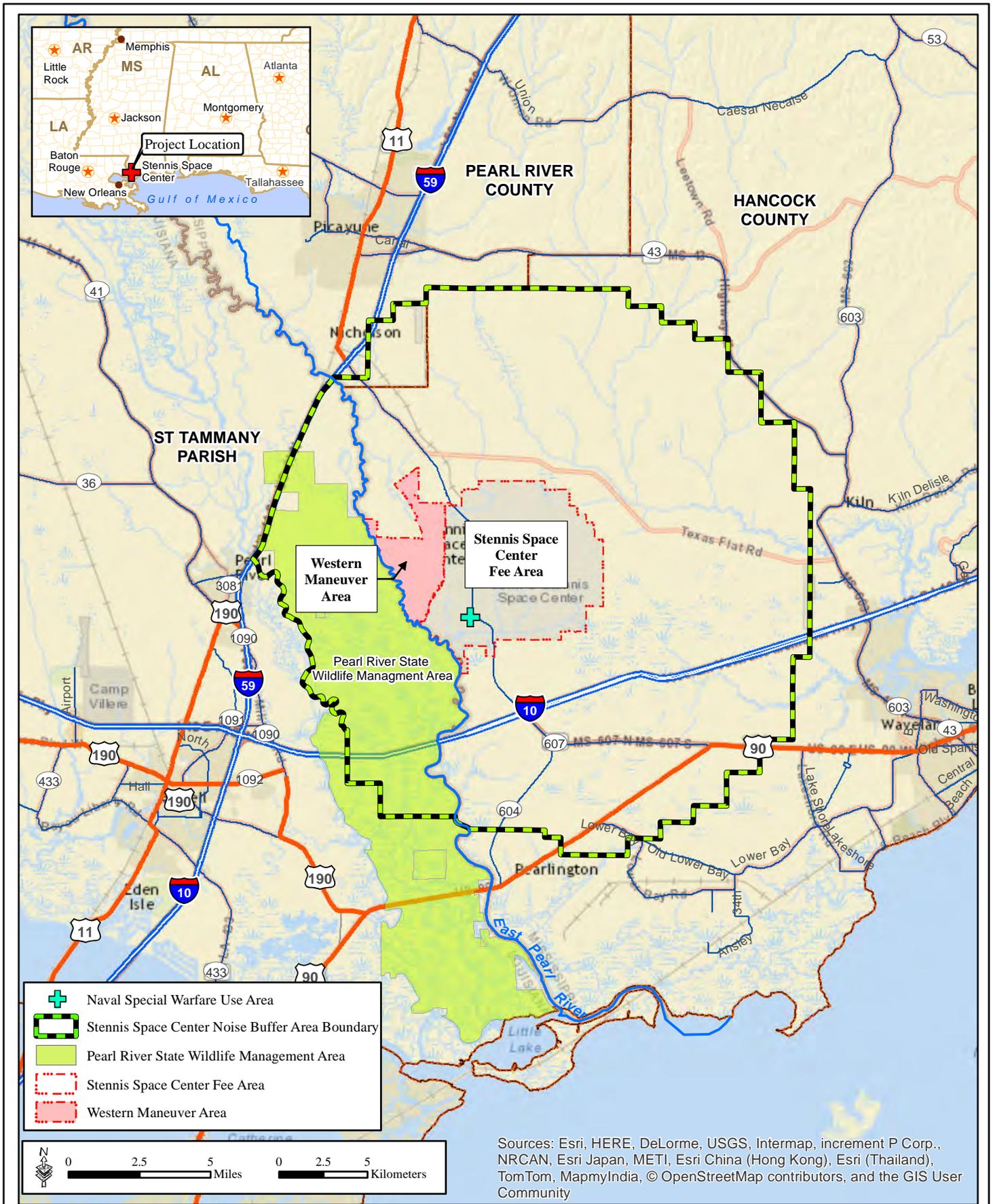


Figure 1-1. Vicinity Map



1 principles of human rights, promoting understanding of U.S. society, and building relationships
2 with other countries to combat violent extremism and the proliferation of controlled substances.

3 **1.3 Regulatory Framework, Agency Coordination, and Public** 4 **Involvement**

5 **1.3.1 Regulatory Framework**

6 The EA complies with the National Environmental Policy Act (NEPA) of 1969 (Public Law [PL]
7 91-190). Preparation of the EA follows Navy's instructions established in 32 Code of Federal
8 Regulations (CFR) Part 775 *Procedures for Implementing the National Environmental Policy*
9 *Act*; Council on Environmental Quality (CEQ) regulations 40 CFR, Part 1500-1508; and all
10 applicable Executive Orders (EOs). The NEPA requires Federal agencies to integrate
11 environmental values into their decision making processes by considering the environmental
12 impacts of their proposed actions and reasonable alternatives to those actions.

13 The EA will consider all applicable laws and regulations, including but not limited to, the
14 following:

- 15 • Clean Water Act (CWA) (Federal Water Pollution Control Act), as amended (33 United
16 States Code [U.S.C.] § 1251 et seq.)
- 17 • Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 et seq.)
- 18 • Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. § 703)
- 19 • Clean Air Act of 1970, as amended (42 U.S.C. § 7401 et seq.)
- 20 • National Historic Preservation Act (NHPA) (16 U.S.C. § 470[f])
- 21 • Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. § 1451 et seq.)
- 22 • Marine Mammal Protection Act of 1972 (16 U.S.C. § 1361 et seq.)
- 23 • Wild and Scenic Rivers Act (16 U.S.C. § 1271-1287)
- 24 • Energy Independence and Security Act (EISA) (PL 110-140)
- 25 • Farmland Protection Policy Act (FPPA) of 1981 (7 U.S.C. § 9601)
- 26 • EO 11990, *Protection of Wetlands*, dated May 24, 1977
- 27 • EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations*
28 *and Low-Income Populations*, dated February 11, 1994
- 29 • EO 11988, *Floodplain Management*, dated May 24, 1977
- 30 • EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*,
31 dated April 21, 1997

32 **1.3.2 Interagency and Intergovernmental Coordination**

33 NASA is a host agency for this action, as the Proposed Action is located within the SSC Fee
34 Area and NAVSCIATTS is a tenant of NASA. NASA is not a joint action proponent and will
35 not be co-signing the FONSI (if applicable). NASA has reviewed the proposed construction

1 activities at SSC and has provided Records of Environmental Consideration in response to the
2 NAVSCIATTS submittal of Preliminary Environmental Surveys (NASA 2014e).

3 Other Federal, state, and local agencies that would have jurisdiction over the Proposed Action
4 were notified or consulted by the Navy during the preparation of this EA. These agencies
5 include the following:

- 6 • U.S. Army Corps of Engineers (USACE)
- 7 • U.S. Environmental Protection Agency (USEPA)
- 8 • U.S. Fish and Wildlife Service (USFWS)
- 9 • Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP)
- 10 • Mississippi Department of Marine Resources (MDMR)
- 11 • Mississippi Department of Archives and History (MDAH)
- 12 • Mississippi Department of Environmental Quality (MDEQ)
- 13 • Louisiana Department of Natural Resources (LDNR)
- 14 • Louisiana Department of Wildlife and Fisheries (LDWF)
- 15 • Native American Tribes

16 This coordination fulfills the *Intergovernmental Cooperation Act of 1968* (42 U.S.C. § 4231(a))
17 and EO 12372, *Intergovernmental Review of Federal Programs* (14 July 1982), which require
18 Federal agencies to cooperate with and consider state and local views in implementing a Federal
19 proposal. An EA distribution list and copies of relevant correspondence can be found in
20 Appendix A.

21 **1.3.3 Public Participation**

22 The Navy invites public participation in the NEPA process to promote open communication and
23 enable better decision making. Input and comments have been solicited from the public in
24 accordance with NEPA. The draft EA and FONSI (if applicable) have been made available to
25 the public for a 30-day comment period with a Notice of Availability published in local
26 newspapers in Hancock County, Mississippi, and St. Tammany Parish, Louisiana. The
27 documents have been distributed to agencies, organizations, and individuals who express interest
28 in the project. The documents have also been posted on the Naval Facilities Engineering
29 Command Southeast Public Portal at [http://www.navfac.navy.mil/navfac_](http://www.navfac.navy.mil/navfac_worldwide/atlantic/fecs/southeast/about_us/environmental_planning.html)
30 [worldwide/atlantic/fecs/southeast/about_us/environmental_planning.html](http://www.navfac.navy.mil/navfac_worldwide/atlantic/fecs/southeast/about_us/environmental_planning.html). During this time the
31 Navy will consider any comments submitted by agencies, organizations, or members of the
32 public on the Proposed Action, the draft EA, or the draft FONSI. At the conclusion of the
33 comment period, the Navy may, if appropriate, execute the FONSI and proceed with the
34 Proposed Action.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Description of Proposed Action

The Proposed Action would expand NAVSCIATTS's training capabilities to provide sufficient accommodations to support an increase in permanent support personnel, student throughput, and training courses. An additional 44 permanent personnel would be added to NAVSCIATTS and student throughput would increase from approximately 80 to a maximum of 160 students for each of five annual 8- to 9- week training periods under the Proposed Action. The Proposed Action encompasses a number of construction projects and the addition of two 4-week riverine training courses. The proposed additional boat hours would increase the Navy's overall operational usage of the East Pearl River by approximately 8 percent.

The construction projects include a small craft operation and maintenance facility, a facility for additional student berthing, a floating pier and boat ramp, a field house with a covered training pad, a student locker/shower facility, and an athletic track, as well as an expansion of the dining facility seating capacity (Figure 2-1). The Proposed Action includes mechanical, electrical, and communication utilities; security lighting and fencing; site clearing and earthwork; access roads and parking; sidewalks; and landscaping. Anti-terrorism/force protection standards would be incorporated into the design, development, and construction of the proposed facilities. All of the proposed facilities would meet the Leadership in Engineering and Environmental Design (LEED) Silver rating.

Per Navy guidance, all applicable consultations, coordination, and authorizations must be completed before a FONSI may be signed and the Proposed Action implemented. All site preparation activities would follow Best Management Practices (BMPs) per the *John C. Stennis Space Center Storm Water Pollution Prevention Plan (SWPPP)* and comply with Section 438 of the EISA to prevent erosion and control noxious weeds (NASA 2014a). Section 438 of EISA instructs federal agencies to "use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate," for any project with a footprint that exceeds 5,000 square feet. The construction contractor would prepare a site-specific SWPPP and obtain the necessary stormwater pollution permits for the construction of the facilities. To help avoid the spread of noxious weeds, any additional soil necessary to level a construction area would be obtained from approved NASA sources inspected for plant material. All clearing and grubbing would be done outside the bird nesting season or nesting bird surveys would be carried out prior to site preparation and any active nests protected until the young have fledged. Construction of any overhead electrical lines to serve the facilities would be done in accordance with avian protection guidelines as outlined in *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* by the Avian Power Line Interaction

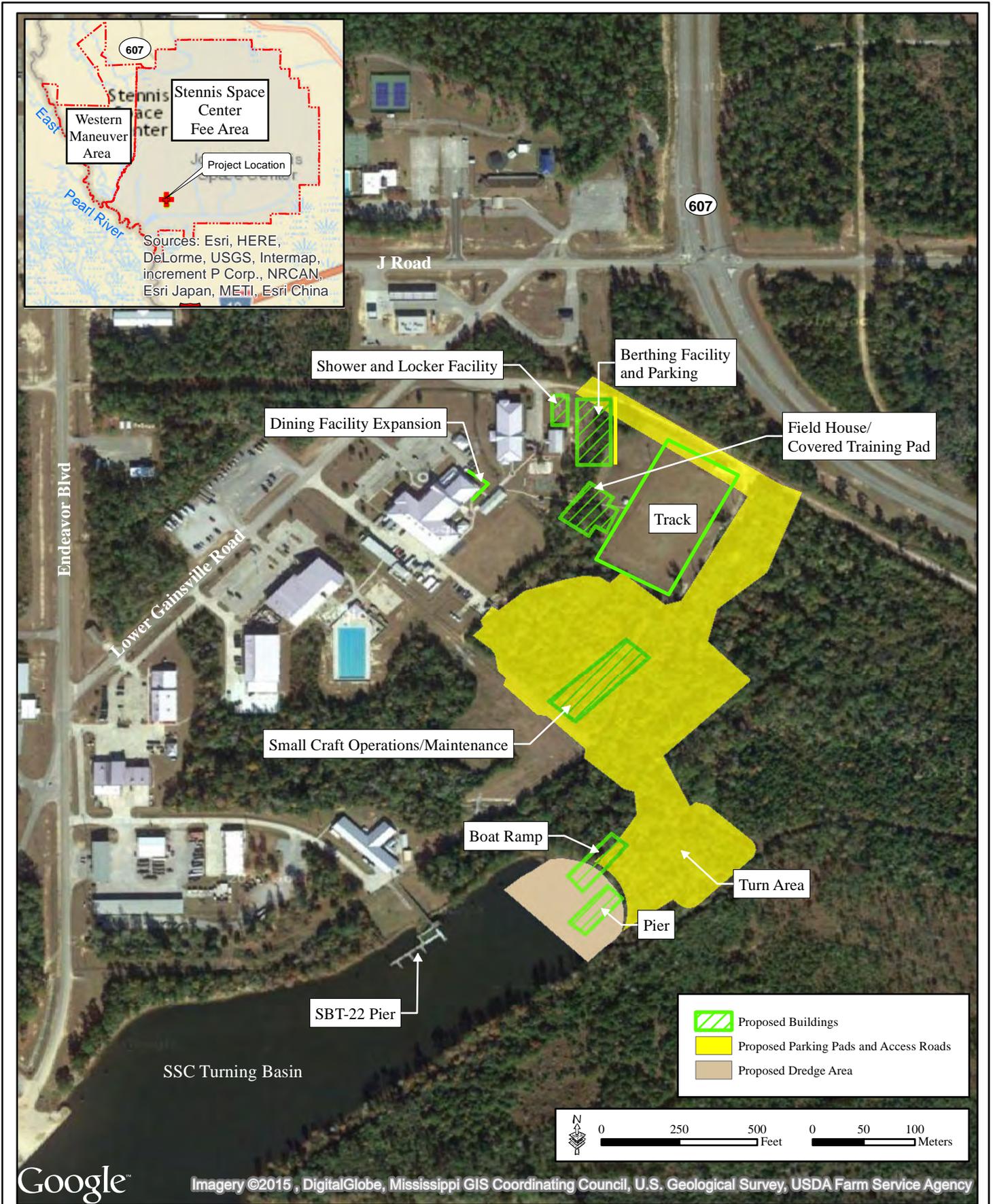


Figure 2-1. Proposed Facilities Map



December 2014

1 Committee (APLIC). The proposed project is also located in a coastal area subject to the
2 Federal consistency provisions of the CZMA.

3 Following is a description of each of the construction projects included in the Proposed Action:

- 4 • The proposed Small Craft Operation and Maintenance Facility would be 46,392 square
5 feet (sq. ft.) in size. The facility would be a multi-story, reinforced concrete masonry
6 building with a steel frame on a pile foundation and a standing-seam metal roof. It would
7 include areas for operational storage, vehicle maintenance, vehicle and small craft
8 storage, a boat shop, a recreational center, medical facilities, a communications center,
9 and hazardous material (HAZMAT) storage. The facility would include an exterior
10 drive-through small craft wash rack and an oil and water separator. A maximum of 11
11 acres would be cleared for the construction of parking pads, the boat launch turnaround
12 area, and access roads to connect the facility to the boat launch and interior
13 NAVSCIATTS roads (see Figure 2-1).
- 14 • The proposed student berthing facility would be a 22,410 sq. ft. multi-story building to
15 provide additional student housing on a temporary basis (see Figure 2-1). The facility
16 would include 20 double rooms with semi-private bathrooms for enlisted personnel and
17 20 rooms with private bathrooms for officers. Community and service core areas would
18 consist of laundry facilities, multipurpose rooms, lounges, administrative offices,
19 housekeeping areas, and public restrooms. The facility would be a reinforced concrete
20 masonry building with a steel frame, pile foundation, and a standing-seam metal roof.
- 21 • The proposed floating pier would be approximately 400 linear feet and located at the end
22 of the turning basin of the SSC access canal from the East Pearl River (see Figure 2-1). It
23 would have wooden, pre-cast concrete or steel piles and would be similar in design to the
24 existing nearby SBT-22 pier. Piles would be installed by a pile driver or vibrating
25 hammer depending upon the pile design and the character of the bottom material. The
26 installation of the piles would be carried out in the winter months. Sediment curtains
27 would be placed downstream of the project area to prevent sedimentation into the East
28 Pearl River.
- 29 • The proposed boat launch would be located adjacent to the floating pier (see Figure 2-1).
30 Construction of the boat launch would occur in the winter months (November through
31 April). Wet bottomland material from construction of the boat launch would be placed in
32 the proposed parking and boat launch area for dewatering. Silt fencing or other
33 appropriate material would be utilized around the stock piled material to contain the
34 material to the greatest extent possible. Following dewatering, the stockpiled material
35 would be loaded into dump trucks and transported to an upland location approved by
36 NASA for reuse or final disposal depending upon the characterization of the material.

1 Dry, excavated material resulting from the construction of the proposed boat ramp would
2 be disposed of at a NASA landfill and used for cover.

3 Supporting infrastructure includes a parking area for vehicles with trailers, a turnaround
4 area, and an access road. The boat launch, turnaround area, and parking area are located
5 within the 100-year floodplain. Additionally, approximately 900 linear feet of drainages
6 would be enclosed or re-routed depending upon final site and engineering design.

- 7 • Approximately 12,100 cubic yards of sediment would be dredged from approximately 1.5
8 acres of waterbottom within the SSC access canal turning basin to provide up to 10 feet
9 of water depth for the NAVSCIATTS boats. Dredging would be carried out in the winter
10 months (November through April) utilizing a barge equipped with a shovel and clamshell
11 type bucket. The bucket drop procedure developed by the USFWS would be employed
12 to encourage any fish or riverine wildlife in the vicinity to leave the dredge area.
13 Sediment curtains would be placed downstream of the dredge area to prevent
14 sedimentation into the East Pearl River and discourage fish and riverine wildlife from
15 entering the dredge area. Dredged material would be placed on shore in the proposed
16 parking and boat launch area for dewatering as described above. Following dewatering,
17 the stockpiled dredge material would be loaded into dump trucks and transported to an
18 upland location approved by NASA for reuse or final disposal depending upon the
19 characterization of the material.
- 20 • The proposed athletic field house would be 15,000 sq. ft. in size with an adjacent
21 1,800 sq. ft. covered training pad. The athletic field house would be located on a
22 relatively undisturbed site vegetated with trees and shrubs and 0.12 acres of wetlands (see
23 Figure 2-1). The facility would be a reinforced concrete masonry building with a steel
24 frame on a pile foundation and a standing-seam metal roof. It would be equipped with
25 exercise and physical training equipment.
- 26 • The proposed outdoor athletic track would be located on a previously disturbed site
27 around the perimeter of the existing soccer field (see Figure 2-1). It would be
28 approximately 20 feet wide and 1,320 linear feet.
- 29 • The proposed expansion of the existing dining facility would be 1,000 sq. ft. in size. The
30 north and east sides of the dining facility would be extended outward into the covered
31 walkway around the exterior perimeter of the building to provide additional seating area.
- 32 • The proposed student locker/shower facility would be 4,801 sq. ft. in size and located on
33 a previously disturbed site adjacent to the proposed new student berthing facility (see
34 Figure 2-1). It would provide shower and gear storage facilities for the students. The
35 building would be a reinforced concrete masonry building with a steel frame on a pile
36 foundation and a standing-seam metal roof.

1 The Proposed Action also includes the addition of two 4-week riverine training courses. These
2 courses would involve four boats and increase the NAVSCIATTS operational use on the East
3 Pearl River by 960 hours annually. The majority of the NAVSCIATTS riverine warfare training
4 is carried out on the East Pearl River within the Stennis Western Maneuver Area (WMA) located
5 within SSC's noise buffer zone. Training exercises typically include day/night riverine patrol
6 techniques; insertion and extraction; surveillance, concealing, and monitoring techniques;
7 defense maneuvers; and navigation.

8 In addition to NAVSCIATTS, SBT-22 and the Naval Oceanographic Office (NAVO) also utilize
9 the East Pearl River for operations and training. Combined, these units currently operate
10 approximately 11,040 boat hours annually (Navy 2000). The proposed additional
11 NAVSCIATTS boat hours represents an 8 percent increase in the Navy's overall use of the East
12 Pearl River.

13 **2.2 Description of Alternatives**

14 **2.2.1 No Action Alternative**

15 Under the No Action Alternative, the Navy would not construct the facilities needed to
16 adequately accommodate the increase in student throughput, training courses, and additional
17 support personnel that have been anticipated for NAVSCIATTS. There would be no additional
18 riverine training courses. The analysis of the No Action Alternative is required by CEQ and
19 Navy regulations and provides a baseline of existing conditions, enabling decision makers to
20 compare the magnitude of environmental effects of the Proposed Action and any other action
21 alternatives.

22 **2.2.2 Alternative Action(s)**

23 NAVSCIATTS was stationed at Naval Station (NS) Rodman, Panama, until its temporary
24 relocation at SSC in October 1999. In 2000, the school was permanently collocated with SBT-
25 22 within the Naval Special Warfare (NSW) use area at SSC. The collocation of NAVSCIATTS
26 and SBT-22 was evaluated in the Colocation EA. The FONSI for this action was signed on June
27 7, 2000.

28 In the Colocation EA, the Navy considered five alternatives for permanent relocation of
29 NAVSCIATTS from Panama. These alternatives were considered primarily because of their
30 proximity to coastal and riverine environments that are similar to the operational environments
31 of the Latin American, Caribbean, and Southeast Asian forces trained by NAVSCIATTS. The
32 alternatives locations included the following:

- 33 • Naval Construction Battalion Center (NCBC) Gulfport, Mississippi
- 34 • Naval Station Pascagoula, Mississippi

- 1 • Naval Weapons Station Charleston, South Carolina
- 2 • Marine Corps Base, Camp Lejeune, North Carolina
- 3 • SSC, Mississippi

4 Six criteria were used to evaluate the feasibility of each potential alternative location:

- 5 • Access to a realistic riverine and coastal training environment that is secluded and has a
- 6 low surrounding population density
- 7 • Availability of land or facilities to locate a training facility, isolation facility, and galley
- 8 in proximity to the training area
- 9 • Availability of adequate and affordable housing, schools, and services to support the
- 10 overall morale and quality of life of personnel
- 11 • Cost-effective use of public land and facilities at a U.S. Department of Defense or other
- 12 federal installation
- 13 • Availability of land and facilities to support potential growth in training operations in the
- 14 future
- 15 • Opportunity to integrate the assets and capabilities of NSW in a riverine environment

16 After applying these screening criteria to the five geographic alternative locations, the Navy
17 determined that co-locating NAVSCIATTS with SBT-22 at SSC with personnel support services
18 provided by NCBC Gulfport was the preferred alternative.

19 **2.3 Alternatives Considered but Eliminated from Further Analysis**

20 The Colocation EA also examined the potential environmental impacts of two site alternatives at
21 SSC for the permanent facilities for SBT-22 and NAVSCIATTS: a site within the Mississippi
22 Army Ammunition Plant compound at SSC, and a site adjacent to the Main Canal. Based on the
23 analysis in the Colocation EA, the site adjacent to the Main Canal was selected for
24 implementation of the proposed action.

25 As previously stated, the purpose of the proposed action is to address existing facility space
26 deficiencies at the NAVSCIATTS to accommodate an increase in partner nation student
27 throughput. In turn, this proposed action will meet U.S. defense strategy and policy. Since the
28 existing location of the NAVSCIATTS facilitates the integration of the training range assets and
29 capabilities of SBT-22 into the school's classroom and field training curriculum, a critical
30 capability, there are no viable alternative actions that would meet the purpose and need of the
31 proposed action. Moreover, the NAVSCIATTS site has been identified by NASA as a training
32 area in SSC and is included in the NASA Master Plan.

3.0 AFFECTED ENVIRONMENT

This section of the EA describes the natural and human environments that exist within the project area and the potential impacts of the Proposed Action. The project area can generally be defined as the NSW use area, the SSC access canal and turning basin, and the East Pearl River from the SSC access canal north to the northern boundary of the WMA (Figure 3-1). The NSW use area is approximately 150 acres in size and triangular in shape. It is bounded on the south by the access canal and to the east by the old rail corridor adjacent to Trent Lott Parkway. The northern and western boundaries are Lower Gainesville Road and Endeavour Boulevard, respectively.

The effects from the Proposed Action include impacts from the construction, operation, and maintenance of the proposed facilities and the increased training exercises on the East Pearl River. Only those resources that have the potential to be impacted by the Proposed Action or any of the alternatives considered are analyzed as per CEQ guidance (40 CFR, Part 1502.7[3]).

The following resources would not be affected by the Proposed Action and are not addressed in this EA:

- **Airspace:** The Proposed Action would not affect, or be affected by, airspace use.
- **Geology:** The Proposed Action would not affect, nor be affected by geologic and mineral resources on the SSC.
- **Land Use:** No change in land use would occur. The NSW use area has been identified as a training use area within SSC and included in the NASA Master Plan. The Proposed Action is compatible with that use.
- **Radio Frequency and Spectrum Use:** The Proposed Action would not affect radio frequency and spectrum use by the Navy or NASA.
- **Wild and Scenic Rivers:** There are no Federally designated “Wild and Scenic Rivers” in the region. Although the West Pearl River is protected under Louisiana’s Scenic Stream Act, the East Pearl River is not afforded protection.

3.1 Physical Environment

3.1.1 Soils

The NSW use area at SSC is approximately 150 acres in size. Soil units within the NSW use area are mapped by the Natural Resources Conservation Service (NRCS) as shown in Table 3-1. The objective of soil mapping is to separate the landscape into landforms or landform segments that have similar use and management requirements, not to delineate pure taxonomic classes. Each soil unit comprises several minor soil components. Soil units are named for the dominant soil within the unit. The Proposed Action within the NSW use area would occur primarily on Atmore, Smithton, Harleston, and Sulfaquepts soils (Figure 3-2).

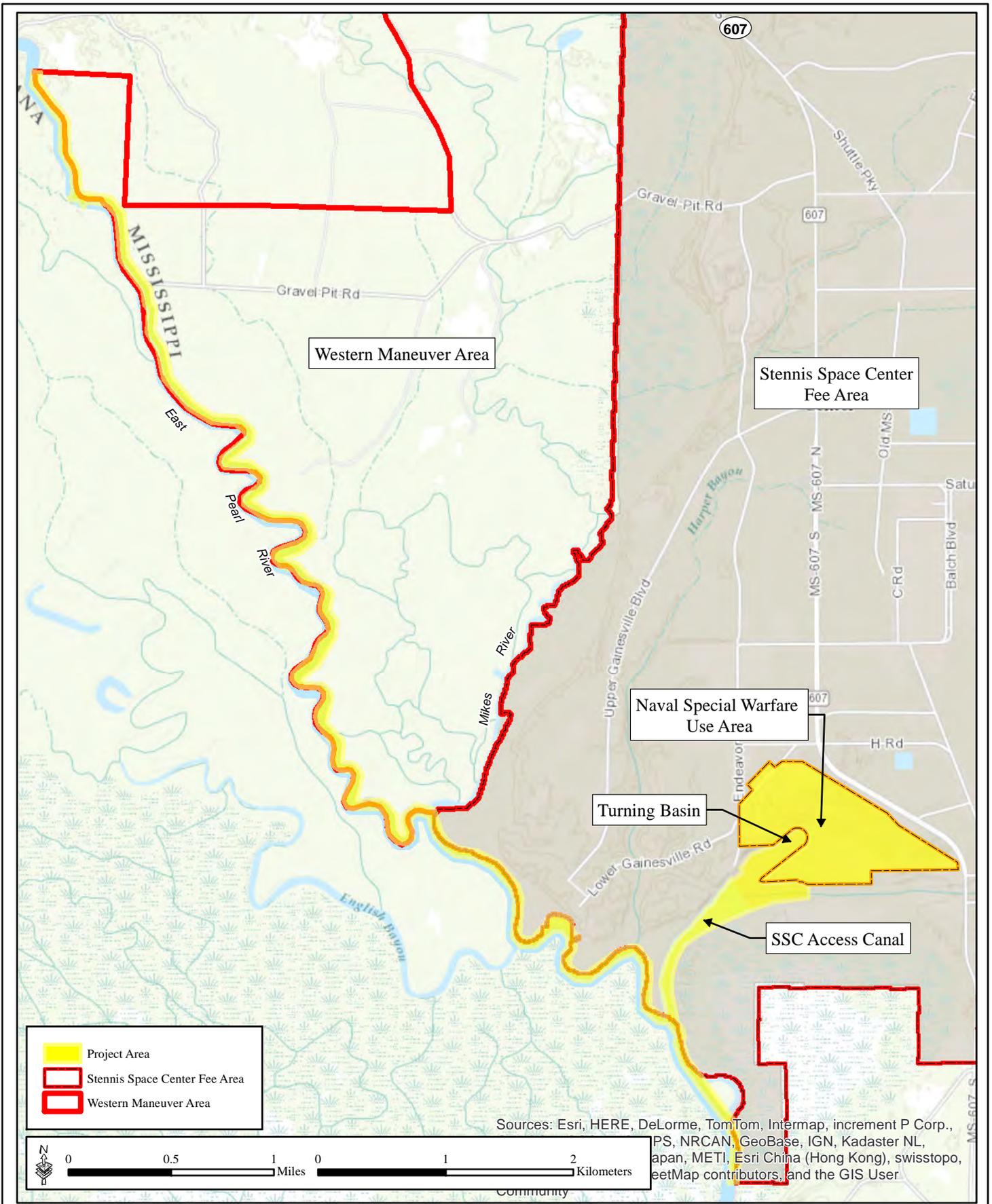


Figure 3-1. Project Area Map

1 **Table 3-1. Soil Units within the NSW Use Area**

Map Unit	Map Unit Name	Description
At	Atmore silt loam, 0 to 2 percent slopes	Very deep, poorly drained, moderately slowly permeable soils in depressions and interstream divides. They have a very high runoff potential, but not highly erodible soil. Hydric soil.
Be	Beauregard silt loam	Very deep, moderately well-drained, slowly permeable soils that formed in loamy alluvial sediments. Runoff rate is medium to slow and they are saturated for short periods during winter and spring. Potentially highly erodible soil.
EsA	Escambia loam, 0 to 2 percent slopes	Very deep, somewhat poorly drained, moderately to slowly permeable soils found on coastal plain uplands. Potentially highly erodible soil. Prime farmland soil.
EsB	Escambia loam, 2 to 5 percent slopes	Very deep, somewhat poorly drained, moderately to slowly permeable soils found on coastal plain uplands. Highly erodible soil. Prime farmland soil.
HIA	Harleston fine sandy loam, 0 to 2 percent slopes	Very deep, moderately well-drained, moderately permeable soils on terraces and uplands. They have a low runoff potential and are not a highly erodible. Prime farmland soil.
HIB	Harleston fine sandy loam, 5 to 8 percent slopes	Very deep, moderately well-drained, moderately permeable soils on terraces and uplands. Low runoff potential and are potentially highly erodible. Prime farmland soil.
PoB	Poarch fine sandy loam, 2 to 5 percent slopes	Very deep, moderately well- and well-drained, moderately permeable soils on uplands. Potentially highly erodible soil. Prime farmland soil.
SaC	Saucier fine sandy loam, 5 to 8 percent slopes	Moderately well-drained, slow permeability, slow to medium runoff potential. Found on upland ridges and hillsides. Highly erodible soil. Farmland of statewide importance.
ScD	Saucier-Susquehanna complex, 5 to 12 percent slopes	Moderately well-drained and somewhat poorly drained soils on upland slopes and narrow ridges. Moderate to slow permeability. Runoff potential is medium to rapid and they are highly erodible.
Su	Smithton fine sandy loam, frequently flooded	Very deep, poorly drained, moderately slowly permeable soils that formed in loamy alluvial sediments. These soils are found on level to nearly level slopes and stream terraces. The runoff potential is very high. Not a potentially highly erodible soil. Hydric soil.
Sx	Sulfaquepts	Soils that are formed in areas of dredge fill. They are variable in texture ranging from sand to silty clay and clay, acidic, poorly drained, and have a very low runoff potential.

2 Source: NRCS 2014

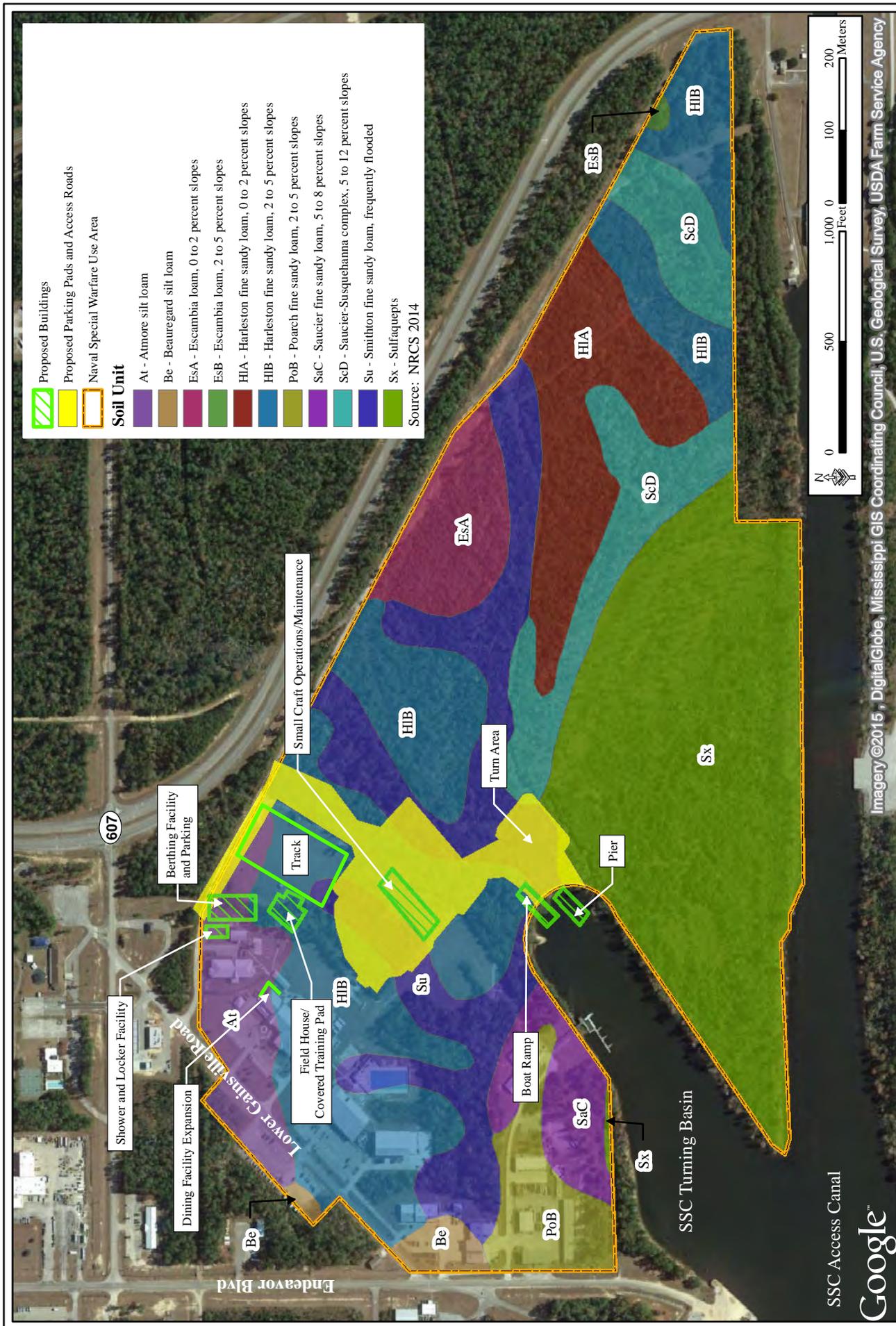


Figure 3-2. Soils Map

Imagery ©2015, DigitalGlobe, Mississippi GIS Coordinating Council, U.S. Geological Survey, USDA Farm Service Agency

1 The waterbottom soils within the SSC access canal turning basin are sands, silts, and clays
2 washed into the basin from the surrounding area.

3 The soils along the East Pearl River within the WMA are mapped by the NRCS as Arkabutla-
4 Rosebloom association, frequently flooded. This soil association consists of nearly level, poorly
5 to somewhat poorly drained soils with a very high runoff potential found on broad floodplains.
6 The permeability is moderate and the erosion hazard is slight. This soil association is not a
7 prime farmland soil (NRCS 2014).

8 The FPPA requires the assessment of adverse effects on the protection of farmland resulting
9 from any Federal action. Farmland subject to the FPPA does not have to be used currently for
10 cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-
11 land. The Escambia, Harleston, Poarch, and Saucier soil units are designated as prime farmland
12 soils.

13 **3.1.2 Water Resources**

14 **3.1.2.1 Surface Water**

15 The Proposed Action includes the construction of a boat launch and floating pier on the turning
16 basin of the SSC access canal. The SSC is located adjacent to the East Pearl River and has
17 access to the river through approximately 8 miles of man-made canals connected to the river
18 through a lock system. The canal system was constructed in the 1960s to provide water access to
19 storage and rocket testing areas and is used to transport heavy cargo and propellants brought to
20 SSC through the Gulf Intracoastal Waterway.

21 The Pearl River drainage basin covers an area of approximately 6,630 square miles and is located
22 within seven counties/parishes in Mississippi and Louisiana. West of Picayune, Mississippi, the
23 Pearl River divides into two main channels – the West Pearl River and the East Pearl River. The
24 East Pearl River flows to the Gulf of Mexico and forms the boundary between Louisiana and
25 Mississippi. In addition to NAVSCIATTS, SBT-22 and NAVO utilize the East Pearl River for
26 training exercises. The East Pearl River is also frequently utilized by the public for recreational
27 fishing and provides water access to the Pearl River State Wildlife Management Area located in
28 Louisiana. The East Pearl River up to the SSC Fee Area is part of the Gulf Intracoastal
29 Waterway.

30 Several natural drainages transect the NSW use area (Figure 3-3). They originate along the north
31 side of the NSW use area and run roughly southwest through the area, before discharging into
32 the SSC access canal or turning basin. These drainages are classified as waters of the U.S.

33 Discharge or filling of Waters of the U.S. is regulated under Sections 401 and 404 of the CWA.
34 The MDMR, Office of Coastal Zone Management, is the point contact for permits regarding
35 activities within waters of the United States in the Mississippi Coastal Zone.

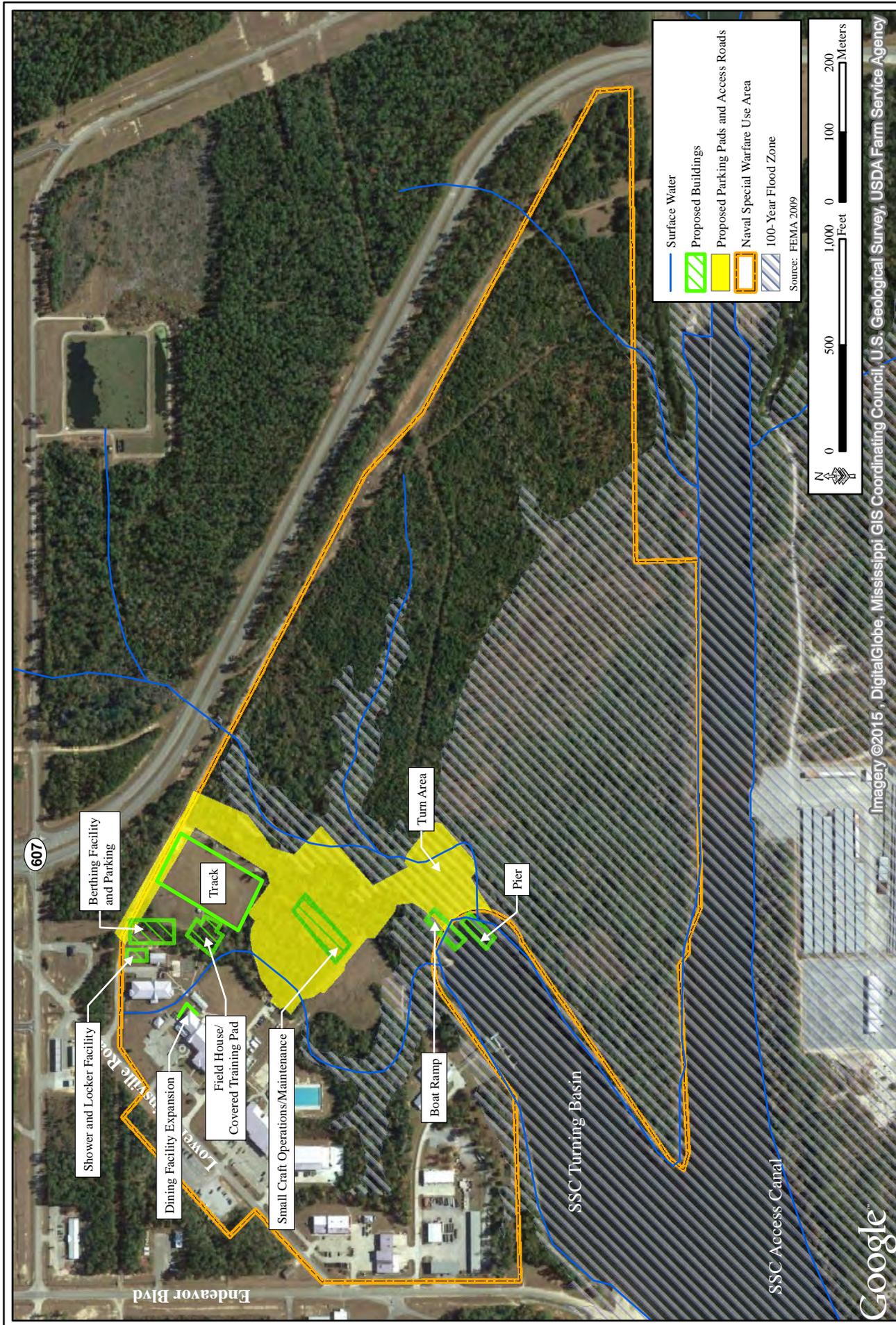


Figure 3-3. Floodplain Map

1 **3.1.2.2 Floodplain**

2 As shown in Figure 3-3, the proposed boat launch, floating pier, and a portion of the access road,
3 parking, and turnaround areas would be located within the 100-year floodplain per the Federal
4 Emergency Management Agency (FEMA) Flood Insurance Rate Map for Hancock County,
5 Mississippi. All other facilities proposed under the Proposed Action would be outside of the
6 floodplain (FEMA 2009).

7 Land use and development are regulated by the National Flood Insurance Act and EO 11988,
8 which requires that Federal agencies take action to reduce the risk of flood loss, minimize the
9 impact of floods on human safety, health and welfare, and preserve the beneficial values that
10 floodplains serve.

11 **3.1.2.3 Wetlands and Coastal Zone Management**

12 Jurisdictional wetlands are located in the affected areas of the proposed boat launch, turnaround
13 area, parking, student berthing facility, and the athletic field house (Figure 3-4). These wetlands
14 are associated with drainage areas and floodplain areas (NASA 2010). The USACE is the point
15 of contact for unavoidable impacts on wetlands and waters of the United States. NASA
16 maintains a wetland mitigation program under USACE General Permit 53 to provide NASA and
17 SSC tenant agencies a vehicle to mitigate for unavoidable adverse impacts on wetlands within
18 the SSC Fee Area by new construction. As a tenant agency, the Navy would be able to utilize
19 this mitigation program.

20 The Mississippi Coastal Zone includes the entire counties of Hancock, Harrison, and Jackson.
21 As such, all of SSC Fee Area and the WMA is within the designated coastal zone. In accordance
22 with Section 307 of the CZMA, Federal actions that may have a reasonably foreseeable direct,
23 indirect, or cumulative effect on a state's coastal uses or resources must be consistent to the
24 maximum extent practicable with the enforceable policies of the approved state coast
25 management program. The MDMR, Office of Coastal Zone Management, is the point of contact
26 for coastal zone consistency.

27 **3.1.3 Noise**

28 Noise is defined as a sound that can induce hearing loss or interfere with ordinary daily
29 activities. Sound is a series of vibrations (energy) transmitted through a medium that are
30 perceived by a receiver. Sound varies in intensity and frequency. Sound pressure level
31 described in decibels is used to quantify sound intensity. The sound pressure level represented
32 by a given decibel value is usually adjusted to make it more relevant to sound that the human ear
33 hears especially well; for example, an "A-weighted" decibel is derived from emphasizing mid-
34 range frequencies to which the human ear responds especially well and de-emphasizing the
35 lower and higher range frequencies.

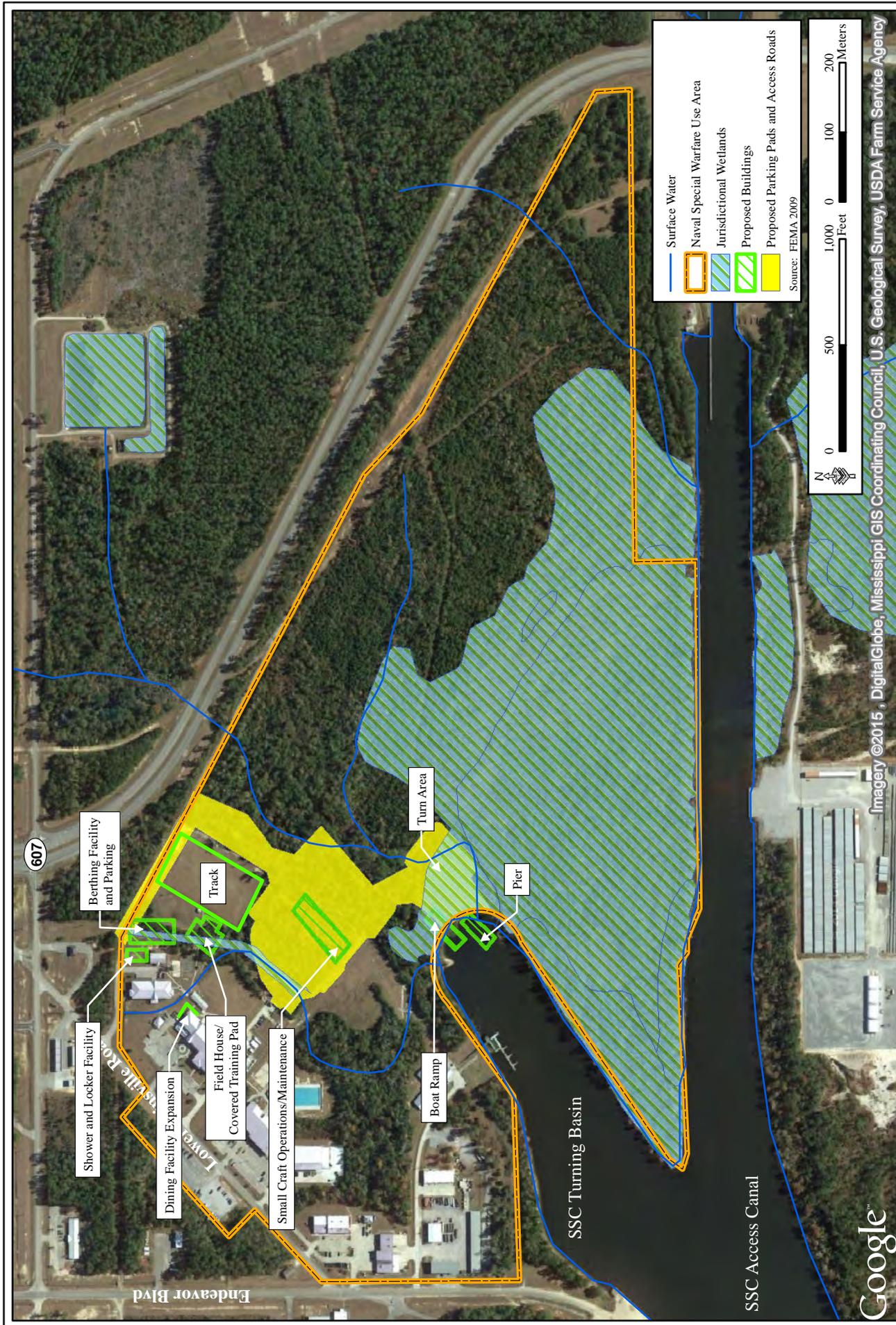


Figure 3-4. Wetland Map

1 Continuous sources of ambient noise include generators, automobile traffic, and heating,
2 ventilation, and air conditioning units. Other intermittent noise sources at SSC include rocket
3 engine tests, military maneuvers, and range activities. The primary source of noise generated by
4 NAVSCIATTS would be from use of boats during riverine training exercises.

5 NASA holds a restrictive easement, or buffer zone, which prohibits the construction of habitable
6 structures on privately owned land within 5 miles of the SSC Fee Area boundary. The purpose
7 of the buffer zone is to restrict the development of noise-sensitive land uses, such as residential
8 housing, in areas subject to sound overpressures during rocket engine tests by NASA. There are
9 no noise-sensitive receptors such as schools, churches, or hospitals, within or near the project
10 area. However, the Pearl River State Wildlife Management Area in St. Tammany Parish,
11 Louisiana, located west of the East Pearl River and the project area, is considered a noise-
12 sensitive receptor for wildlife.

13 **3.1.4 Air Quality**

14 **3.1.4.1 National Air Quality Standards**

15 The USEPA established National Ambient Air Quality Standards (NAAQS) for specific
16 pollutants determined to be of concern with respect to the health and welfare of the general
17 public (USEPA 2014a). Ambient air quality standards are classified as either “primary” or
18 “secondary.” The major pollutants of concern, or criteria pollutants, are carbon monoxide (CO),
19 sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), particulate matter less than 10 microns
20 (PM-10), particulate matter less than 2.5 microns (PM-2.5), and lead. NAAQS represent the
21 maximum levels of background pollution that are considered safe, with an adequate margin of
22 safety, to protect the public health and welfare.

23 Areas that do not meet NAAQS standards are called non-attainment areas; areas that meet both
24 primary and secondary standards are known as attainment areas. The Federal Conformity Final
25 Rule (40 CFR Parts 52 and 93) specifies criteria or requirements for conformity determinations
26 for Federal projects. The rule mandates that a conformity analysis must be performed when a
27 Federal action generates air pollutants in a region that has been designated a non-attainment or
28 maintenance area for one or more NAAQS.

29 A conformity analysis is the process used to determine whether a Federal action meets the
30 requirements of the General Conformity Rule. It requires the responsible Federal agency to
31 evaluate the nature of a proposed action and associated air pollutant emissions, and calculates
32 emissions as a result of the proposed action. If the emissions exceed established limits known as
33 *de minimis* thresholds, the proponent is required to implement appropriate mitigation measures.

34 The MDEQ, Office of Pollution Control has adopted the NAAQS as the state air quality
35 standards. The ambient air quality of Hancock County, Mississippi, and St. Tammany Parish,
36 Louisiana, is considered attainment for all air quality standards (USEPA 2014b.)

1 SSC operates under a Title V Operating Permit issued by the MDEQ, which covers air pollution
2 sources for NASA and NASA contractors. NAVSCIATTS would be responsible for their own
3 air pollution permitting. However, NAVSCIATTS does not currently maintain any facilities or
4 conduct operations at SSC that are classified as point-source pollutants. The boats operated by
5 NAVSCIATTS are powered by gasoline or diesel-burning engines. Emissions include volatile
6 organic compounds (VOCs), CO₂, CO, nitrogen oxides, PM, and sulfur oxides.

7 **3.1.4.2 Greenhouse Gas (GHG) and Climate Change**

8 Global climate change refers to a change in the average weather on the earth. GHGs are gases
9 that trap heat in the atmosphere. They include water vapor, carbon dioxide (CO₂), methane
10 (CH₄), nitrous oxide (N₂O), fluorinated gases including chlorofluorocarbons (CFC) and
11 hydrochlorofluorocarbons (HFC), and halons (California Energy Commission 2007). Both
12 Hancock County, Mississippi, and St. Tammany Parish, Louisiana, are in attainment for all
13 greenhouse gas standards. (USEPA 2014b)

14 The primary source of GHG emissions by NAVSCIATTS within SSC the and surrounding area
15 would be from use of boats during riverine training exercises and heating, ventilation, and air
16 conditioning systems and generator usage.

17 **3.1.5 Hazardous Materials and Waste Management**

18 Hazardous materials are substances or materials that are capable of posing an unreasonable risk
19 to health, safety, property, or the environment. Hazardous wastes generated during the course of
20 NAVSCIATTS training, maintenance, and repair activities include waste paints, adhesives,
21 solvents, filters, aerosol cans, off-specification fuel, batteries, and cleanup debris from the small
22 arms range. The USEPA granted the state of Mississippi the authority to implement and enforce
23 hazardous waste regulations, including the identification, packaging, labeling, storing,
24 transportation, and treatment standards for disposal of regulated waste. Navy regulations require
25 all shore installations to develop a hazardous waste management plan in accordance with
26 applicable Federal, state, and local regulations. NAVSCIATTS manages hazardous materials
27 under the direction of the *Hazardous Waste Management Plan Naval Special Warfare Group*
28 *FOUR, Stennis Space Center, Mississippi* (HAZWASTE PLAN).

29 Various agencies and contractors at SSC generate hazardous waste. NASA is the only large-
30 quantity generator (LQG) at SSC according to the Resource Conservation and Recovery Act
31 (RCRA) (42 U.S.C. § 6901 et seq.). All of the NSW units (including NAVSCIATTS) located
32 within the NSW use area operate under one USEPA permit (USEPA ID: MSR000004929) as a
33 small-quantity generator (SQG). An SQG generates more than 100 kilograms, but less than
34 1,000 kilograms, of hazardous waste per month. The Navy's *Pollution Prevention Management*
35 *Plan Naval Special Warfare Group FOUR, Stennis Space Center, Mississippi* (P2MP) provides
36 guidance to NAVSCIATTS to remain below the SQG threshold for hazardous waste generation.

1 **3.1.6 Infrastructure**

2 **3.1.6.1 Transportation**

3 Interstates 10 and 59, as well as, Mississippi State Highway 607, serve the area around SSC.
4 Interstate 10, located approximately 5 miles south of SSC, is the primary east-west connector
5 linking Biloxi, Gulfport, and other coastal cities from New Orleans, Louisiana, to Jacksonville,
6 Florida (see Figure 1-1). On the west side of SSC, Interstate 59 merges with Interstate 10 near
7 Slidell, Louisiana, and extends northeast to Hattiesburg, Mississippi, and into Alabama.
8 Mississippi State Highway 607 provides direct access to SSC from Interstates 10 and 59. It is a
9 four-lane divided highway and is closed to the general public within SSC with Access Control
10 Points located at both entrances to SSC.

11 Access to NAVSCIATTS is provided via Trent Lott Parkway (Highway 607), Lower Gainesville
12 Road, and Endeavour Boulevard in the southwest corner of the SSC Fee Area. Trent Lott
13 Parkway is a major arterial connecting the smaller access roads to the larger facilities within
14 SSC. Lower Gainesville Road is a two lane local road that connects with H Road and Trent Lott
15 Parkway at the northern end of the NSW use area. Endeavour Boulevard on the west side of the
16 NSW use area is a local road providing access to the SBT-22 boat storage yard and boat ramp.

17 **3.1.6.2 Potable Water**

18 Potable water for use at SSC is supplied through three on-site, large-capacity artesian wells and a
19 distribution system pressured by three elevated storage tanks. These wells are between 1,433
20 and 1,518 feet deep. The average daily supply of potable water based on the natural flow rate
21 of these wells is 3.6 million gallons (Navy 2000). In 2014, the potable water use for SSC
22 averaged 520,548 gallons per day (Clarke 2014).

23 Potable water is supplied to the NSW use area by an elevated storage tank located west of
24 Endeavour Boulevard just south of H Road. The primary water mains serving the NSW use area
25 from the elevated storage tank run along the south side of H Road and the west side of
26 Endeavour Boulevard (Figure 3-5).

27 **3.1.6.3 Wastewater Treatment**

28 The existing sanitary sewer system serving SSC is made up of various size (1.5- to 6-inch) force
29 mains with lift stations discharging into an 8-inch gravity sewer main that flows into a
30 wastewater lagoon treatment system located south of H Road, east of Trent Lott Parkway (see
31 Figure 3-5). The system was designed for an average flow of 30 gallons per capita per 8-hour
32 shift and a maximum flow of 2.5 times the average flow (Navy 2000).

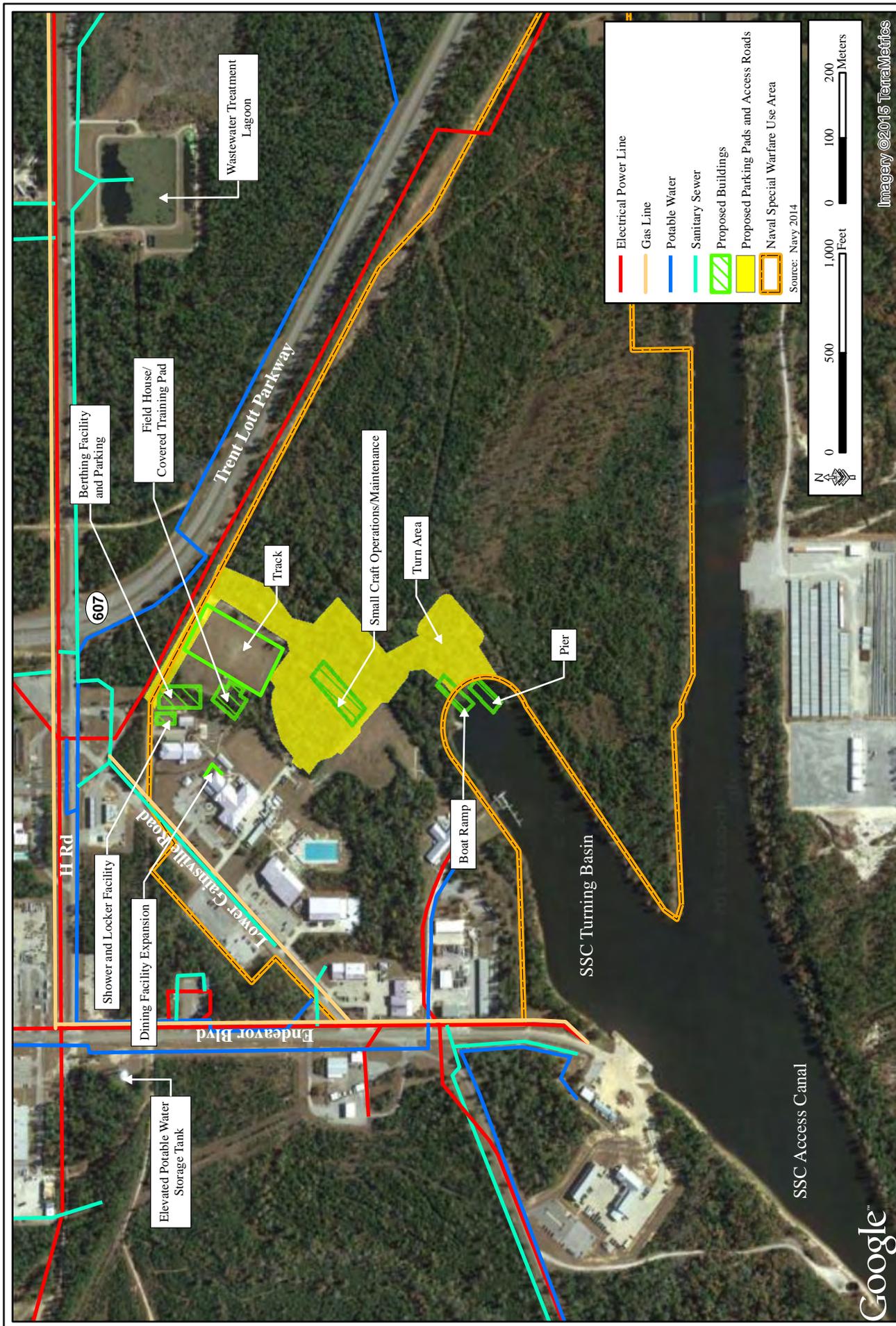


Figure 3-5. Utility Infrastructure within the NSW Use Area

1 **3.1.6.4 Energy**

2 Electrical power to SSC is supplied through two 115-kilovolt (kV) overhead transmission lines
3 that are owned and operated by the Mississippi Power Company. The interior electric
4 distribution system is 13.8 kV and a combination of overhead and underground lines owned and
5 operated by Mississippi Power Company (Navy 2000).

6 Electricity to the NSW use area is supplied from a three-phase overhead distribution line that
7 runs from the main substation along an old railroad bed located west of Trent Lott Parkway to H
8 Road and Endeavour Road. Underground lines supply the various buildings and facilities (see
9 Figure 3-5).

10 **3.1.6.5 Natural Gas**

11 The natural gas distribution system feeding the NSW use area consists of a 2-inch main located
12 on the north side of H Road and down the east side of Endeavour Road Boulevard to Lower
13 Gainesville Road. It then extends east along the south side of Lower Gainesville Road,
14 terminating south of the old railroad crossing. A 1-inch main extends south along the east side of
15 Endeavour Boulevard from Lower Gainesville Road to the NASA waterfront maintenance area
16 (see Figure 3-5).

17 **3.1.6.6 Communications**

18 Telecommunication lines parallel the electric distribution system. Currently the existing system
19 within the NSW use area does not have the fiber-optic infrastructure to support growth. It can be
20 severely compromised during peak periods when fiber optics is borrowed from NASA to
21 maintain day-to-day operations. The NSW use area has been scheduled for a Non-Secure
22 Internet Protocol Router circuit upgrade since late 2013 (Navy 2014a).

23 **3.1.7 Cultural Resources**

24 Section 110 of NHPA requires Federal agencies to inventory, protect, and maintain historic
25 properties under their jurisdiction, while Section 106 requires Federal agencies to take into
26 account the effect of their undertakings on cultural resources and to provide the Advisory
27 Council on Historic Preservation an opportunity to comment on these undertakings.

28 NASA has conducted numerous surveys for cultural resources and historic properties within the
29 SSC Fee Area and the noise buffer. These surveys concluded that with the exception of the
30 historically significant towns of Gainsville and Logtown, no significant archaeological sites were
31 identified. The A-1, A-2, and B-1/B-2 Test Stands at SSC have been designated as National
32 Historic Landmarks due to their importance in the testing of Saturn rockets and the importance
33 of the Saturn rocket's role in landing man on the moon (NASA 2007a, NASA 2011).

1 The NSW use area has been highly disturbed during the construction of the SSC access canal in
2 the early 1960s and again in 2004 during construction of the permanent facilities for
3 NAVSCIATTS. During 2006 a large tree salvage operation was conducted in the area as a result
4 of Hurricane Katrina uprooting most of the marketable timber. A 2014 study of the NSW use
5 area concluded that it is highly unlikely that cultural resources would be found within the NSW
6 use area (NASA 2014b).

7 **3.2 Biological Environment**

8 **3.2.1 Vegetation**

9 The majority of the NSW use area is composed of trees and shrubs that can be defined as mixed
10 pine-hardwood forest. This habitat type consists of an overstory of loblolly pine (*Pinus taeda*),
11 longleaf pine (*Pinus palustris*), shortleaf pine (*Pinus echinata*), southern red oak (*Quercus*
12 *falcata*), turkey oak (*Quercus laevis*), blackjack oak (*Quercus marilandica*), and mockernut
13 hickory (*Carya tomentosa*). The associated understory include bluebeech (*Carpinus*
14 *caroliniana*), hophornbeam (*Ostrya caroliniana*), flowering dogwood (*Cornus florida*), and
15 sourwood (*Oxydendrum arboretum*). Typical shrubs include yaupon (*Ilex vomitoria*), farkleberry
16 (*Vaccinium arboretum*), arrowwood (*Viburnum dentatum*), greenbrier (*Smilax* spp.), and
17 blackberry (*Rubus* spp.) (MMNS 2005).

18 Forested wetlands within the NSW use area are located in the drainage areas that transect the
19 area and floodplain associated with the East Pearl River. Vegetation found within these areas
20 includes blackgum (*Nyssa sylvatica*), red maple (*Acer rubrum*), slash pine (*Pinus elliottii*), water
21 oak (*Quercus nigra*), swamp magnolia (*Magnolia virginiana*), swamp cyrilla (*Cyrilla*
22 *racemiflora*), saw palmetto (*Serenoa repens*), winged elm (*Ulmus alata*), Cherokee sedge (*Carex*
23 *cherokeensis*), and poison ivy (*Toxicodendron radicans*) (NASA 2010).

24 Vegetation found along the banks of the East Pearl River within the WMA is primarily
25 composed of bottomland hardwood forests. Common tree species include sweetgum
26 (*Liquidambar styraciflua*), water oak, white oak (*Quercus alba*), swamp chestnut oak (*Quercus*
27 *michauxii*), willow oak (*Quercus phellos*), American elm (*Ulmus americana*), green ash
28 (*Fraxinus pennsylvanica*), and various hickories (*Carya* spp.). The understory consists of
29 winged elm, red maple, possumhaw (*Viburnum nudum*), arrowwood, and witch-hazel
30 (*Hamamelis virginiana*). Woody vines include grapes (*Vitis* spp.), greenbriers, trumpet-creeper
31 (*Campsis radicans*), and poison ivy (MMNS 2005).

32 **3.2.2 Wildlife**

33 Typical wildlife found within SSC include white-tailed deer (*Odocoileus virginianus*), wild
34 turkey (*Meleagris gallopavo*), raccoon (*Procyon lotor*), eastern cottontail rabbit (*Sylvilagus*
35 *floridanus*), squirrel (*Sciurus* spp.), opossum (*Didelphis virginiana*), feral hog (*Sus* spp.), and

1 various reptiles and amphibians. The Pearl River supports various fish and wildlife species
2 including largemouth bass (*Micropterus salmoides*), turtles, and waterfowl (MMNS 2005). The
3 Proposed Action would also be located in habitat that could be utilized by bird species such as
4 raptors, songbirds, and waterfowl protected from harm or harassment under the MBTA.

5 **3.2.3 Threatened and Endangered Species and Critical Habitat**

6 The ESA requires that a discretionary Federal action not put into jeopardy the continued
7 existence of a listed species, and not destroy or adversely modify their critical habitat. The
8 USFWS maintains a list of species considered to be threatened with extinction or in danger of
9 becoming extinct, as well as species' critical habitat designation. Table 3-2 shows the species
10 listed in St. Tammany Parish, Louisiana, and Hancock County, Mississippi, and their potential to
11 inhabit the project area.

12 **Table 3-2. Federally Listed Threatened and Endangered Species and Critical Habitat**
13 **Known to Occur in St. Tammany Parish, LA, and Hancock County, MS**

Species	Federal Status	County/Parish Listed	Potential to Inhabit the Project Area
Louisiana black bear (<i>Ursus americanus luteolus</i>)	Threatened	Hancock County	Yes – Inhabits tracts of heavily wooded bottomland hardwoods. Unlikely, however, to inhabit the WMA and not known to inhabit the SSC Fee Area.
West Indian manatee (<i>Trichechus manatus</i>)	Endangered	Hancock County and St. Tammany Parish	No – known to inhabit the Pearl River basin in Louisiana; however, there have been no confirmed reports of the manatee in the vicinity of the SSC Fee Area and the WMA.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Delisted ¹	Hancock County and St. Tammany Parish	Yes – Nests in transitional area between forest and water. No known nests exist within the NSW use area or the WMA, but may be a transient species.
Piping plover (<i>Charadrius melodus</i>)	Threatened, Critical Habitat	Hancock County	No – Habitat not present. Inhabits wash zones, intertidal ocean beach, wrack lines, mud and sand shorelines of streams, ephemeral ponds, lagoons, and salt marshes. No Critical Habitat has been designated in the project area.

Table 3-2, continued

Species	Federal Status	County/Parish Listed	Potential to Inhabit the Project Area
Rufa red knot (<i>Calidris canutus rufa</i>)	Proposed Threatened ²	Hancock County	No – Habitat not present. Prefers coastal habitats and over winters along the U.S. coast from Texas to North Carolina.
Sprague’s pipit (<i>Anthus spragueii</i>)	Candidate ³	St. Tammany Parish	No – Habitat not present. Breeds in open grasslands.
Red-cockaded Woodpecker (<i>Picoides borealis</i>)	Endangered	St. Tammany Parish	No – Habitat not present. Nests in cavities of mature longleaf pine forests and mixed pine-upland hardwood forest (60+ years old) and foraging habitats consists of 30+ year old stands.
Dusky gopher frog (<i>Rana sevosa</i>)	Endangered, Critical Habitat	St. Tammany Parish	No – Habitat not present. Habitat includes both upland, sandy, areas covered with longleaf pine forest and isolated, temporary, wetland breeding sites within the forest. No Critical Habitat has been designated in Hancock County.
Gopher tortoise (<i>Gopherus polyphemus</i>)	Threatened	Hancock County and St. Tammany Parish	No – Habitat not present. Inhabits well-drained sandy soils, especially in low-growing vegetation areas of longleaf pine and loblolly pine.
Green sea turtle (<i>Chelonia mydas</i>)	Threatened	Hancock County	No – Habitat not present. Inhabits marine waters.
Kemp’s ridley sea turtle (<i>Lepidochelys kempii</i>)	Endangered	Hancock County	No – Habitat not present. Inhabits marine waters.
Leatherback sea turtle (<i>Dermochelys comacea</i>)	Endangered	Hancock County	No – Habitat not present. Inhabits marine waters.
Loggerhead sea turtle (<i>Caretta caretta</i>)	Threatened, Critical Habitat	Hancock County	No – Habitat not present. Inhabits marine waters. Nests on coastal beaches. No Critical Habitat designated within the project area.
Ringed map turtle (<i>Graptemys oculifera</i>)	Threatened	Hancock County and St. Tammany Parish	Yes – Prefers river stretches with moderate currents and a lot of basking sites, and nests on sand bars.

Table 3-2, continued

Species	Federal Status	County/Parish Listed	Potential to Inhabit the Project Area
Gulf sturgeon (<i>Acipenser oxyrinchus desotoi</i>)	Threatened, Critical Habitat	Hancock County and St. Tammany Parish	Yes – Inhabits the Pearl River for spawning on clean substrate composed of rock and rubble. The East Pearl River below the Ordinary High Water Mark is designated as Critical Habitat.
Pearl darter (<i>Percina aurora</i>)	Candidate ³	Hancock County	No – Habitat not present. Prefers rapids or riffles over gravel or bedrock substrata in slow to moderate currents. Believed to be extirpated in the Pearl River drainage.
Inflated heelsplitter (<i>Potamilus inflatus</i>)	Threatened	Hancock County and St. Tammany Parish	No – Known present distribution limited to the Amite River, Louisiana and the Tombigbee and Black Warrior Rivers in Alabama.
Louisiana quillwort (<i>Isoetes louisianensis</i>)	Endangered	Hancock County and St. Tammany Parish	No – Habitat not present. Inhabits small shallow streams with scour channels.
Wood stork (<i>Mycteria americana</i>)	Threatened	Mississippi statewide	No – Habitat not present. Inhabits freshwater and estuarine wetlands, nesting in cypress or mangrove swamps. Feeds in narrow tidal creeks or flooded tidal pools.

1 Source: USFWS 2014a, USFWS 2014b, and Navy 2011b.

2 ¹ Nesting bald eagles and their nest trees are protected by law under the Bald and Golden Eagle Act of
3 1940 (16 U.S.C. § 668-668c).

4 ² Proposed for listing September 27, 2013.

5 ³ Candidate species receive no statutory protection under the ESA.

6 Though the bald eagle has been de-listed, nesting eagles and their nests are still protected under
7 the Bald and Golden Eagle Act. The bald eagle nests in Mississippi from December through
8 mid-May in mature trees near open water or marshes where they forage.

9 3.3 Socioeconomic Environment

10 3.3.1 Socioeconomics

11 This socioeconomics section provides a brief overview of the socioeconomic environment in the
12 area around SSC. The Region of Influence (ROI) for socioeconomics is a relatively large area
13 that includes Harrison, Hancock, and Pearl River counties in Mississippi, and St. Tammany

1 Parish in Louisiana. Ninety percent of the employees at SSC reside in the four-county/parish
2 region (Table 3-3). The SSC Office of Communications reports that the average salary and
3 benefits paid to the 5,128 workers at the SSC is approximately \$92,000 per year (NASA 2014c).

4 **Table 3-3. Stennis Personnel Place of Residence**

	Number of Employees (2013)	Percent
Hancock County	1,119	22
Harrison County	882	17
Pearl River County	1,364	27
St. Tammany Parish	1,260	25
Other Louisiana	188	4
Other Mississippi	276	5
Other	39	1
Total	5,128	-

5 Source: NASA 2014b

6 Data included in the SSC Mission Brochure (2014) show that the estimated direct economic
7 impact of the SSC on the region within a 50-mile radius of the SSC in 2013 was approximately
8 \$619 million. Direct and indirect employment as a result of the SSC totaled approximately
9 19,000 jobs (NASA 2014d).

10 Demographic data, shown in Table 3-4, provide an overview of the socioeconomic environment
11 in the ROI. The population of the ROI in 2013 was estimated to be 539,471. Per capita personal
12 income data show that, with the exception of St. Tammany Parish, incomes in the ROI are
13 relatively low compared to the Nation as a whole.

14 U.S. Bureau of Labor Statistics data show that the 2013 annual average labor force for the four-
15 county/parish area was 240,340. Unemployment rates are near or above the national average in
16 the Mississippi counties. The unemployment rate in St. Tammany Parish, where the 2013 per
17 capita income is 112 percent of the national average, is well below the national average (U.S.
18 Bureau of Labor Statistics 2014).

19 The U.S. Census Bureau estimates that there are approximately 230,000 housing units in the
20 four-county/parish area where most SSC employees live. Over 30,000 of those housing units
21 are estimated to be vacant (U.S. Census Bureau 2013).

1 **Table 3-4. Population, Income, Labor Force, and Unemployment**

	2013 Population Estimate*	Average Annual Growth Rate 2000-2013	Per Capita Personal Income 2013	Per Capita Personal Income As A Percent of U.S.	Labor Force 2013 Annual Average	Unemployment Rate (2013 Annual Average)
Hancock County	45,566	0.5%	\$34,029	76.0	17,288	8.2%
Harrison County	196,500	0.3%	\$35,688	79.7	85,574	7.9%
Pearl River County	55,072	1.0%	\$30,112	67.3	20,892	8.5%
St. Tammany Parish	242,333	2.1%	\$50,328	112.4	115,050	5.1%
ROI	539,471	1.1%	NA	NA	240,340	NA
Louisiana	4,625,470	0.3%	\$41,204	92.0	2,099,431	6.2%
Mississippi	2,991,207	0.4%	\$33,913	75.8	1,286,434	8.6%
U.S.	316,128,839	0.9%	\$44,765	100		7.4%

2 Source: U.S. Census Bureau, 2000, 2010, 2014a, and 2014b; Bureau of Economic Analysis 2013; Bureau
3 of Labor Statistics 2014

4 *As of July 1, 2013

5 NA – Not Applicable

6 **3.3.2 Recreation**

7 The East Pearl River is used for training by NAVSCIATTS, SBT-22, and public recreation, such
8 as boating and fishing. The river is not restricted from use by the general public during training.

9 The Navy, however, stations picket boats on the river to alert the public when training is
10 occurring.

11 Recreation in the area includes boating and fishing on the East Pearl River as well as boating,
12 fishing, and hunting within the Pearl River Wildlife Management Area. Several public and
13 private boat launches are located along the river, providing public access for boating, fishing,
14 and hunting.

15 **3.3.3 Environmental Justice and Protection of Children**

16 **3.3.3.1 Environmental Justice**

17 EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-*
18 *Income Populations*, was issued by President Clinton on February 11, 1994. It was intended to
19 ensure that proposed Federal actions do not have disproportionately high and adverse human
20 health and environmental effects on minority and low-income populations and to ensure greater
21 public participation by minority and low-income populations.

1 Analysis of demographic data on race and ethnicity and poverty provides information on
 2 minority and low-income populations that could be affected by the proposed actions. The 2010
 3 Census reports numbers of minority individuals and the U.S. Census American Community
 4 Survey provides the most recent poverty estimates available. Minority populations include those
 5 persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan
 6 Native, Pacific Islander, or Other. Poverty status is used to define low-income. Poverty is
 7 defined as the number of people with income below poverty level, which was \$23,834 for a
 8 family of four in 2013, according to the U.S. Census Bureau (U.S. Census Bureau 2014c). A
 9 potential disproportionate impact may occur when the percent minority in the study area exceeds
 10 50 percent or the percent low-income exceeds 20 percent of the population. Additionally, a
 11 disproportionate impact may occur when the percent minority or low-income in the study area is
 12 meaningfully greater than that of the region.

13 Table 3-5 presents U.S. Census data showing minority population and poverty rates for the ROI.

14 **Table 3-5. Minority and Poverty**

	Minority Population (Percent)	All Ages in Poverty (Percent)
Hancock County	13.7	21.3
Harrison County	32.8	21.2
Pearl River County	17.8	24.4
St. Tammany Parish	19.4	11.8
Louisiana	39.7	20.0
Mississippi	42.0	23.3
U.S.	36.3	15.9

15 Source: U.S. Census Bureau 2010 and U.S. Census Bureau 2013

16 **3.3.3.2 Protection of Children**

17 EO 13045 requires each Federal agency “to identify and assess environmental health risks and
 18 safety risks that may disproportionately affect children” and “ensure that its policies, programs,
 19 activities, and standards address disproportionate risks to children that result from environmental
 20 health risks or safety risks.” This EO was prompted by the recognition that children, still
 21 undergoing physiological growth and development, are more sensitive to adverse environmental
 22 health and safety risks than adults. The potential for impacts on the health and safety of children
 23 is greater where projects are located near residential areas. There are no residential areas or
 24 schools within the SSC fee area. The closest residential areas to SSC, the communities of
 25 Nicholson, Pearlinton, and Kiln, Mississippi, are 5 miles away. The closest schools to SSC,
 26 Hancock County High School, Hancock County Middle School, and South Hancock Elementary
 27 School are located more than 6 miles away.

4.0 ENVIRONMENTAL CONSEQUENCES

Impacts (consequence or effect) can be either beneficial or adverse, and can be either directly related to the action or indirectly caused by the action. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR, Part 1508.8[a]). Indirect impacts are those effects that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR, Part 1508.8[b]). As discussed in this section, the No Action Alternative and the Proposed Action may create temporary (lasting the duration of construction), short-term (up to 3 years), long-term (greater than 3 years), or permanent impacts or effects.

Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis, the intensity of impacts will be classified as negligible, minor, moderate, or major. The intensity thresholds are defined as follows:

- **Negligible:** A resource would not be affected or the effects would be at or below the level of detection, and changes would not result in any measurable or perceptible consequences.
- **Minor:** Effects on a resource would be detectable, although the effects would be localized, small, and of little consequence to the sustainability of the resource. BMPs and standard operating practices, if needed to offset adverse effects, would be simple and achievable.
- **Moderate:** Effects on a resource would be readily detectable, long-term, localized, and measurable. Mitigation measures, if needed to offset adverse effects, would be extensive and likely achievable.
- **Major:** Effects on a resource would be obvious, long-term, and would have substantial consequences on a regional scale. Extensive mitigation measures to offset the adverse effects would be required and success of the mitigation measures would not be guaranteed.

4.1 Physical Environment

4.1.1 Soils

4.1.1.1 Proposed Action

Long-term adverse impacts on soil resources would result from disturbance of soils and compaction from heavy machinery and vehicle traffic during construction activities. Approximately 12 acres of soils would be permanently lost from productivity (wildlife habitat) due to development. Although this loss is permanent, it would be a minor loss in comparison to the overall wildlife habitat found within the SSC and WMA.

1 Temporary impacts on soil resources would consist of possible soil erosion during construction
2 activities; however, these impacts would be considered negligible to minor with the use of
3 appropriate BMPs following guidance of the SSC SWPPP.

4 The Proposed Action would not adversely affect prime or unique farmlands. The NSW use area
5 is existing Federal land owned by NASA that has been designated for the Navy's use and
6 development. Projects on land already in or committed to urban development or water storage
7 are not subject to the FPPA [Section 1540(c)(1)(A), 7 U.S.C. 4201(c)(1)(A)]. Section 658.2(a),
8 provides that prime farmland is "committed to urban development or water storage" if a local
9 zoning code or ordinance or current local comprehensive land use plan designated this land for
10 commercial or industrial use or for residential use that is not intended at the same time to protect
11 farmland.

12 There would be negligible impacts on soils from the additional boat traffic leading to potential
13 for shoreline erosion of the East Pearl River. Boat wakes, especially those created during
14 insertion and extraction exercises, can cause soil erosion on the river bank. However, the soil
15 along the East Pearl River is not very erodible, and much of the river bank is highly vegetated
16 reducing the probability for erosion.

17 Implementation of the Proposed Action would result in no significant impacts on soils.

18 **4.1.1.2 No Action Alternative**

19 There would be no impact on soils, as construction of the proposed facilities would not be
20 undertaken and the additional training courses would not be implemented.

21 **4.1.2 Water Resources**

22 **4.1.2.1 Proposed Action**

23 There would be minor to negligible impacts on surface water quality. Approximately 12 acres of
24 land currently stabilized with vegetation would be disturbed due to construction activities. A
25 site-specific SWPPP following the guidance of the SSC SWPPP would be developed for each
26 project implemented under the Proposed Action to prevent stormwater runoff during and
27 following construction.

28 Approximately 12,100 cubic yards from 1.5 acres of sediments from the bottom of the turning
29 basin would be mechanically dredged to provide up to 10 feet of draft for NAVSCIATTS.
30 Turbidity in the turning basin would increase during dredging and construction of the floating
31 pier and boat launch, but it would return to normal after construction is completed. Sediment
32 curtains would be placed downstream of the dredge area to prevent sedimentation into the East
33 Pearl River from dredging and construction activities.

1 The Proposed Action would also create additional impervious surfaces and alter current surface
2 drainage and runoff characteristics. However, impacts to water resources would be minor to
3 negligible with implementation of site-specific SWPPPs following the guidance provided in the
4 SSC SWPPP. All wash water used for the cleaning of vehicles and boats at the proposed Small
5 Craft Operation and Maintenance Facility would run through an oil-water separator before
6 discharge.

7 There could be minor leaks or spills of fuel into surface waters from boat operations; however,
8 such leaks or spills would be handled in accordance with guidelines of the HAZWASTE PLAN
9 and the P2MP.

10 There would be negligible impacts on the floodplain. Approximately 3.7 acres of floodplain
11 would be impacted; however, no inhabitable or aboveground structures would be built in the
12 floodplain and dredge material would not be placed in the floodplain. The loss of vegetation
13 and the construction of the proposed boat ramp, floating pier, road, and parking and turnaround
14 areas would have a negligible impact on the flood storage capacity and would not increase flood
15 elevations, velocity, duration, or frequency.

16 There would be a minor, permanent impact on wetlands and drainages from the construction of
17 the proposed boat ramp and associated infrastructure. Approximately 2.25 acres of jurisdictional
18 wetlands and approximately 900 linear feet of drainage would be impacted. Impacted drainage
19 would be enclosed with a culvert or re-routed as necessary. Wetlands and drainages would be
20 avoided to the greatest extent possible during final siting and architectural design of the proposed
21 facilities. The disturbance of wetlands within SSC is covered under an existing General Permit
22 53 issued by the USACE Vicksburg District. NASA mitigates the unavoidable impacts on
23 wetlands from construction projects through creation, restoration, or enhancement and continued
24 management of wetlands within SSC Fee Area and the buffer zone in accordance with the
25 *Special Area Management Plan for Potential Wetland Mitigation Areas John C. Stennis Space*
26 *Center, Mississippi* (NASA 2007b).

27 CWA Section 401 and 404 permits authorizing work within the SSC access canal were applied
28 for on February 27, 2015 through a joint MDMR, MDEQ, and USACE permit process (see
29 Appendix A). The Navy has also determined that the Proposed Action would have effects on
30 coastal uses and resources in the Mississippi Coastal Zone. Therefore, the Navy submitted a
31 Coastal Zone Consistency Determination to the MDMR, Office of Coastal Zone Management on
32 February 27, 2015. Concurrence with the Navy's determination was received on (DATE). See
33 Appendix A for a copy of the Coastal Consistency Concurrence.

34 Implementation of the Proposed Action would result in no significant impacts on surface water,
35 wetlands, floodplains, and the Mississippi Coastal Zone.

1 **4.1.2 No Action Alternative**

2 There would be no impacts on surface water, wetlands, floodplain, or the Coastal Zone, as the
3 Proposed Action would not be implemented.

4 **4.1.3 Noise**

5 **4.1.3.1 Proposed Action**

6 Noise impacts on the staff and students at NAVSCIATTS and the surrounding area within SSC
7 would be negligible to minimal. The noise associated with the Proposed Action would come
8 primarily from the heavy machinery, vehicles, and tools used during the construction of the
9 facilities included in the Proposed Action. This noise would be intermittent, temporary, and
10 primarily limited to daylight hours. There are no sensitive noise receptors within the SSC Fee
11 Area. No noise generated by construction activities would be heard beyond SSC boundaries due
12 to the extensive buffer area (5 miles around the SSC Fee Area [see Figure 1-1]); therefore, there
13 would be no noise impact as it relates to the general public.

14 There would be temporary but negligible underwater noise disturbance from the installation of
15 the piles supporting the floating pier on fish and riverine wildlife. The extent of the disturbance
16 would depend upon the method of installation, which has not been determined. However, use of
17 the vibrating hammer would minimize higher underwater sound pressure levels associated with
18 the impact pile driver. As such, it should be utilized to the maximum extent possible (Navy
19 2014d). Sediment curtains will be placed downstream of the dredge area to prevent
20 sedimentation into the East Pearl River and to protect the Gulf sturgeon or other riverine wildlife
21 from straying into the dredge area where noise from pile driving and dredging operations would
22 occur. Pile installation will be undertaken in the winter months (November through April), when
23 cold water temperatures make it unlikely that the Gulf sturgeon would be present. In addition,
24 the bucket drop procedure developed by the USFWS will be employed to encourage any fish or
25 riverine wildlife in the vicinity to leave the dredge area.

26 There would be negligible impacts on the ambient noise levels from the proposed increase in
27 boat hours on the East Pearl River by NAVSCIATTS within the Pearl River State Wildlife
28 Management Area. Current ambient noise levels along the East Pearl River are primarily
29 impacted by the noise generated by boats operated by SBT-22, NAVSCIATTS, NAVO, and the
30 general public. There are no permanent, human sensitive noise receptors within the Pearl River
31 State Wildlife Management Area, and wildlife is typically adaptable to ambient noise. The
32 additional riverine training would increase the Navy's overall operational use on the East Pearl
33 River by approximately 8 percent; however, the associated boat noise would be temporary,
34 fleeting, and spread out over the length of the river within the project area. The increase would
35 be considered negligible.

1 Implementation of the Proposed Action would result in no significant impacts on noise within
2 SSC Fee Area, the Pearl River State Wildlife Management Area, and the WMA.

3 **4.1.3.2 No Action Alternative**

4 There would be no additional impacts on the ambient noise levels within the SSC Fee Area or
5 the buffer zone.

6 **4.1.4 Air Quality, Greenhouse Gases, and Climate Change**

7 **4.1.4.1 Proposed Action**

8 Temporary and minor increases in air pollution and GHG emissions would occur from use of
9 construction equipment (combustion emissions) and the disturbance of soils (fugitive dust)
10 during construction activities. The effects from the construction activities would be minimal and
11 last only as long as the duration of the activity and no long-term impacts would occur. BMPs,
12 such as watering the disturbed areas, covering aggregate trucks and stockpiled dirt, prevention of
13 dirt carryover to paved roads, and the use of erosion barriers, would be utilized to reduce fugitive
14 dust during construction of the facilities. In addition, proper and routine maintenance of all
15 vehicles and construction equipment would be implemented to ensure that emissions are within
16 design standards of the equipment and would not cause a violation or change in attainment
17 status.

18 Construction workers would temporarily increase the combustion emission during their commute
19 to and from the construction area. Additionally, the increase in operational support personnel,
20 student throughput, and boat hour operations at NAVSCIATTS would slightly increase the GHG
21 emissions at SSC. However, when compared with the normal day-to-day vehicle usage from
22 over 5,000 employees and 11,040 hours of boat operations by the Navy, the increase in GHG
23 would be negligible.

24 NAVSCIATTS does not currently maintain any facilities or conduct operations that are classified
25 as point-source pollutants and the Proposed Action would not change that condition.

26 Implementation of the Proposed Action would result in no significant impacts on air quality,
27 greenhouse gases, and climate change.

28 **4.1.4.2 No Action Alternative**

29 There would be no increase in the air pollution and GHG emissions.

1 **4.1.5 Hazardous Materials and Waste**

2 **4.1.5.1 Proposed Action**

3 The quantities of the hazardous materials or solid waste generated as a result of the construction
4 or operation of the proposed facilities would be managed using existing hazardous material
5 management procedures as outlined in the HAZWASTE PLAN (Navy 2014b). Generated waste
6 consisting of household-type wastes and non-hazardous industrial wastes from the construction
7 and operation of the proposed facilities would be removed by a private contractor for off-site
8 disposal as is the current practice. All hazardous waste generated at SSC is shipped to a
9 permitted off-site facility for treatment, storage, or disposal (Navy 2014b). All NSW units
10 (including NAVSCIATTS) located at SSC operate under one USEPA permit as a SQG. The
11 Proposed Action would not change that status. Following guidelines found in the P2PM would
12 allow NAVSCIATTS to remain below the SQG threshold for hazardous waste generation.

13 The refueling of all construction machinery and vehicles used during construction of the
14 facilities would be completed following accepted guidelines. Drip pans would be utilized during
15 storage and parking of all construction vehicles and heavy equipment to contain minor spills and
16 drips.

17 The dining facility was constructed after 1978; therefore, asbestos containing material or lead-
18 based paint was not used in its construction and would not be encountered during its renovation
19 or expansion. All appropriate material from the dining facility expansion would be recycled to
20 the greatest extent possible. The remaining material would be disposed of in an applicable
21 landfill permitted for the disposal of asphalt, stone, brick, motor, concrete, and natural vegetative
22 material.

23 The HAZMAT storage area within the Small Craft Operation and Maintenance Facility would be
24 designed per applicable laws and regulations for all materials expected to be used and stored in
25 the facility.

26 Implementation of the Proposed Action would result in no significant increases in hazardous
27 materials or solid wastes production.

28 **4.1.5.2 No Action Alternative**

29 There would be no increase in hazardous materials or solid wastes production.

1 **4.1.6 Infrastructure**

2 **4.1.6.1 Proposed Action**

3 The Proposed Action would result in a minor increase in the number of personnel and vehicles
4 utilizing the existing roads on and near SSC and the NSW use area. However, this impact is
5 expected to be minor given that there are over 5,000 personnel at SSC.

6 The Proposed Action would result in an increase in usage of potable water, natural gas,
7 electricity, and sanitary waste generation. It is expected that the overall potable water usage of
8 SSC would remain well below the production capability of the three artesian wells and the
9 overall existing infrastructure for water, gas, electricity, and sanitary waste generation would
10 have sufficient size, and capacity to accommodate the expected increase in demand. As part of
11 the proposed project, an engineering study would be completed to determine the infrastructure
12 needs of each facility. Any required improvements to the existing infrastructure and the
13 installation of new infrastructure to support the proposed facilities would occur within existing
14 utility corridors, previously disturbed and developed areas, or within the proposed clearing and
15 grubbing area. As such, it is highly unlikely that the upgrade or installation of new infrastructure
16 to serve the proposed facilities would not result in significant adverse impacts.

17 The Proposed Action would increase the demand on the already taxed communication network
18 within the NSW use area. However the scheduled Non-Secure Internet Protocol Router circuit
19 upgrade is expected to support the proposed increase, so the proposed impact would be
20 negligible. As part of the proposed project, an engineering study would be completed to
21 determine the communication requirements of each facility. Installation of new fiber-optic lines
22 or equipment would occur within existing utility corridors, within previously disturbed and
23 developed areas, or within the proposed clearing and grubbing area. Therefore, the installation
24 of the communication network to serve the proposed facilities would not result in significant
25 adverse impacts.

26 **4.1.6.2 No Action Alternative**

27 There would be no impact or increase on the transportation, potable water, wastewater, energy,
28 or communications infrastructure.

29 **4.1.7 Cultural Resources**

30 **4.1.7.1 Proposed Action**

31 No impacts on cultural resources would be expected by the implementation of the Proposed
32 Action, except for the remote possibility that archaeological features or human remains could be
33 found during construction. NASA submitted a letter to MDAH for concurrence of this finding in
34 compliance with Section 106, and concurrence was received from MDAH on December 3, 2014

1 (see Appendix A). If archaeological features or human remains are inadvertently discovered, all
2 work would be halted in that area and the NASA Historic Preservation Officer and the MDAH,
3 Historic Preservation Division, would be contacted and appropriate measures would be
4 implemented to mitigate adverse impact.

5 **4.1.7.2 No Action Alternative**

6 There would be no impact on cultural resources since the Proposed Action would not be
7 implemented.

8 **4.2 Biological Resources**

9 **4.2.1 Vegetation**

10 **4.2.1.1 Proposed Action**

11 The loss of approximately 12 acres of vegetation from implementation of the Proposed Action
12 would be considered negligible to minor because of the vast amount of similar vegetation
13 (primarily mixed pine-hardwood forest) found within SSC and the buffer zone. (This
14 community type comprises approximately 21 percent (744 acres) of the WMA alone [Navy
15 2011]). No vegetation along the East Pearl River or within the WMA would be removed.

16 Site preparation activities such as clearing, grubbing, and leveling could also spread noxious
17 weeds. Use of appropriate BMPs following the SSC SWPPP guidance would be implemented to
18 help prevent the spread of noxious weeds. Any additional soil needed for site preparation would
19 come from approved NASA sources. However, noxious weeds are likely well established on
20 SSC. The new disturbance areas likely would not return to a natural community and open areas
21 would become maintained turf.

22 **4.2.1.2 No Action Alternative**

23 There would be no impact on vegetation. No vegetation would be lost, as the Proposed Action
24 would not be implemented.

25 **4.2.2 Wildlife**

26 **4.2.2.1 Proposed Action**

27 There could be some loss of common individual wildlife specimens such as raccoon, eastern
28 cottontail rabbit, squirrel, opossum, and various reptiles and amphibians during the removal of
29 the trees and shrubs. However, the small number of individuals expected to be lost would not
30 appreciably reduce the overall population of species found on SSC and it would be expected that
31 species utilizing this habitat would move to adjacent similar habitat. The displacement would
32 minimally reduce the population size within the project area, but would have a negligible effect

1 on the overall population viability. Some of the vegetation could be utilized for habitat by bird
2 species protected under the MBTA. To avoid adverse effects on migratory birds, site preparation
3 activities would occur outside of the bird nesting season (mid-February through September) or
4 the area would be surveyed for nesting birds prior to site preparation activities. If active nests
5 are encountered, the nests would be protected until the young have fledged.

6 Additionally, to avoid impacts on raptors and other bird species, construction of any overhead
7 electrical lines to serve the facilities would be done in accordance with avian protection
8 guidelines as outlined by the APLIC (APLIC 2006).

9 **4.2.2.2 No Action Alternative**

10 There would be no impact on wildlife and habitat would not be lost, as the Proposed Action
11 would not be implemented.

12 **4.2.3 Threatened and Endangered Species and Critical Habitat**

13 **4.2.3.1 Proposed Action**

14 The primary species of concern that could have the potential to occur in the project area include
15 the Louisiana black bear, the ringed map turtle, and the Gulf sturgeon. The remaining listed
16 species or their critical habitat would not be affected by the Proposed Action as the species are
17 not known to inhabit the project area, or suitable habitat does not exist within the project area.

18 The Proposed Action may affect, but is not likely to adversely affect, the Louisiana black bear.
19 The vegetation that would be removed from the NSW use area for the construction of the
20 proposed facilities is not suitable habitat for the bear as it inhabits bottomland hardwood forest.
21 The Louisiana black bear is not known to inhabit the SSC Fee Area but it is a transient species
22 that could enter the project area (NASA 2010). No potential habitat or vegetation along the East
23 Pearl River would be removed by the implementation of the Proposed Action and the Louisiana
24 black bear is unlikely to inhabit the WMA.

25 The Proposed Action may affect, but is not likely to adversely affect the ringed map turtle.
26 There is no suitable basking or nesting habitat within the turning basin for the ringed map turtle,
27 which requires sand bars for nesting and fallen trees, brush piles, and logs for basking, so there
28 would be no loss of nesting habitat. The species is not known to inhabit the NSW use area
29 (NASA 2010). No construction activities or removal of vegetation or brush along the East Pearl
30 River would occur.

31 The Proposed Action may affect, but is not likely to adversely affect, the Gulf sturgeon and
32 would not result in destruction or adverse modification of their Critical Habitat. The East Pearl
33 River below the Ordinary High Water Mark has been designated as Critical Habitat for the Gulf
34 sturgeon; however, the SSC access canal and turning basin is not designated as Critical Habitat.

1 The SSC access canal and turning basin is man-made and not considered a natural riverine
2 system. Dredging would be carried out in the winter months (November through April) when
3 the sturgeon is unlikely to be in the river, as it overwinters in warm coastal bays and estuaries.
4 Mechanical dredging utilizing a barge equipped with a shovel and clamshell-type bucket would
5 be utilized. The bucket drop procedure developed by the USFWS would be employed to
6 encourage any sturgeon in the vicinity to leave the dredge area. Turbidity in the turning basin
7 would temporarily increase during dredging and construction of the floating pier and boat
8 launch, but would return to normal after construction is completed. Sediment curtains would be
9 placed downstream of the dredge area to prevent sedimentation into the East Pearl River and
10 discourage sturgeon from entering the dredge area. The water bottom sediments of the turning
11 basin are composed of sands, silts, and clays washed into the turning basin from the surrounding
12 area. As the sturgeon spawns on clean substrate such as limestone outcrops and cut limestone
13 banks, bedrock, large gravel or cobble beds marl, soapstone, or hard clay, the turning basin is not
14 suitable spawning habitat for the sturgeon so there would be no loss of spawning habitat.

15 The Gulf sturgeon could be adversely affected by a collision with a boat during training
16 exercises; however, the Gulf sturgeon is a bottom dweller and collisions with a boat would be
17 unlikely. Further, there have been no recorded instances of Navy boats colliding with a
18 breaching sturgeon on the East Pearl River. It is NAVSCIATTS practice to reduce operating
19 speed if an obstruction, such as a breaching sturgeon, is encountered. Therefore, the proposed
20 increased boat hours would negligibly impact the probability of a boat encountering a sturgeon.

21 The Navy submitted a letter to the USFWS for informal consultation under Section 7 of the ESA
22 on March 10, 2015. See Appendix A for a copy of the USFWS concurrence received on **DATE**.

23 **4.2.3.2 No Action Alternative**

24 There would be no additional impact on threatened and endangered species or designated critical
25 habitat, as the Proposed Action would not be implemented.

26 **4.3 Socioeconomic Environment**

27 **4.3.1 Socioeconomics**

28 **4.3.1.1 Proposed Action**

29 Socioeconomic impacts resulting from the construction of the new NAVSCIATTS facilities
30 would be temporary and minor. Minor beneficial temporary impacts in the form of jobs and
31 income for area residents, revenues to local businesses, and sales taxes to the State of Mississippi
32 could be realized if construction materials are purchased locally or local construction workers are
33 hired for land preparation and facility construction.

1 The Proposed Action, which would add 44 permanent positions, would have negligible long-
2 term impacts on socioeconomic resources. The ROI, which has a population of more than half a
3 million, could easily assimilate up to 44 additional families into the region. With more than
4 30,000 vacant housing units in the ROI, impacts on housing would be negligible. The average
5 salary and benefits (an average of approximately \$92,000 per year) could have a minor, long-
6 term beneficial impact (NASA 2014d). Personnel to be trained as part of the Proposed Action
7 would reside on SSC. The ROI could also experience minor, positive impacts as a result of
8 occasional visits to local restaurants and shops.

9 The Proposed Action would result in the potential for an 8 percent increase in the probability of
10 affecting the general public's use of the river for recreational boating and fishing, or to access
11 hunting areas within the Pearl River Wildlife Management Area. This would be considered a
12 sporadic, minor effect on the general public. The East Pearl River would not be closed to the
13 general public during NAVSCIATTS training.

14 Implementation of the Proposed Action would result in no significant impacts on
15 socioeconomics.

16 **4.3.1.2 No Action Alternative**

17 Under the No Action Alternative, there would be no impacts on socioeconomic resources, as
18 there would be no construction of new facilities, no additional impact on the recreational use of
19 the East Pearl River, and no new personnel moving into the region.

20 **4.3.2 Environmental Justice and Protection of Children**

21 **4.3.2.1 Proposed Action**

22 All construction of facilities, as well as the training activities, would take place within the SSC
23 and the surrounding buffer zone. There are no residential housing units or schools within SSC.
24 The closest residential areas are approximately 5 miles and the closest schools are more than 6
25 miles from the SSC. Therefore, the Proposed Action would not result in (1) disproportionately
26 high and adverse human health or environmental effects on minority populations and low income
27 populations; nor (2) environmental health risks and safety risks that may disproportionately
28 affect children.

29 Implementation of the Proposed Action would result in no significant impacts on environmental
30 justice and children.

31 **4.3.2.2 No Action Alternative**

32 Under the No Action Alternative, there would be no impacts on people, so there would be no
33 disproportionately high and adverse human health or environmental effects on minority

1 populations and low income populations; nor would there be any environmental health risks or
2 safety risks that may disproportionately affect children.

3 **4.4 Cumulative Effects**

4 Cumulative impacts are defined as the impacts on the environment that result from the
5 incremental impact of the action when added to other past, present, and reasonably foreseeable
6 future actions. The primary cumulative effects include those associated with increased
7 urbanization of the landscape and associated degradation of the human and biological
8 environment.

9 The Navy is proposing to construct an auditorium and classroom facility and a Hazardous Waste
10 Accumulation Facility (HWAFF) within the NSW lease area by late 2015. The auditorium and
11 classroom facility is a NAVSCIATTS facility. Construction and operation of the facility and
12 supporting utility infrastructure have previously undergone NEPA analysis and have received a
13 Categorical Exclusion and a NASA Record of Environmental Consideration. The HWAFF is not
14 a NAVSCIATTS project and is currently undergoing a separate NEPA analysis. Both of these
15 projects are proposed to be constructed in previously disturbed areas and would not be expected
16 to cause significant cumulative impacts.

17 The Navy is considering improvements to the ranges within the WMA and expansion of
18 navigational training for NAVSCIATTS and SBT-22 that could extend into Lake Borgne and to
19 the coastline from Louisiana to Florida, but the scope of the proposed improvements and training
20 expansion has not yet been developed. NEPA analysis would be required to review the potential
21 effects and cumulative impacts of these proposed actions once the scope has been determined.
22 The Navy has also proposed the re-designation and expansion of special-use airspace at SSC to
23 support military air-to-ground munitions training and NASA rocket engine testing. A draft of
24 the EA was released for public review in December 2014.

25 A study by NASA is currently underway to evaluate the existing conditions and capabilities of
26 the wastewater infrastructure to handle the expected increased load resulting from the Proposed
27 Action. Any resulting improvements to the infrastructure or waste treatment lagoon would be
28 undertaken under appropriate NEPA analysis by NASA. There are no other projects currently
29 scheduled for construction by NASA at SSC in compliance with the March 2013 Office of
30 Management and Budget Memorandum M-12-12, Section 3: Freeze the Footprint (OMB 2013).

31 There are approximately 40 Federal, state, academic, and private organizations and companies
32 located at SSC. Any development of infrastructure on SSC to support these entities could result
33 in an increase to air emissions and noise; loss and degradation of soils, vegetative communities,
34 and wildlife habitat; increased surface water runoff with accelerated erosion and sedimentation,
35 increased utility usage, and could allow for the introduction or expansion of invasive species.
36 However, any new facility on SSC would undergo appropriate NEPA analysis including

- 1 cumulative effects to review the potential impact prior to development. Although the Proposed
2 Action would contribute to adverse effects, the cumulative effect would be minimal due to the
3 use minimization measures and BMPs such as adherence to the SSC SWPPP guidance, use of
4 LEED certification, and the vast amount of similar vegetation and wildlife habitat found within
5 SSC Fee Area and the buffer zone.
- 6 Implementation of the Proposed Action would result in the potential for an 8 percent increase in
7 the probability of affecting the general public's use of the East Pearl River for recreational
8 boating and fishing, or to access hunting areas within the Pearl River Wildlife Management Area
9 in Louisiana. This would be considered a sporadic, minor effect on the general public. The East
10 Pearl River would not be closed to the general public during NAVSCIATTS training.
- 11 The Proposed Action would have beneficial cumulative impacts on the management of human
12 resources by providing much needed operational support facilities to provide improved quality of
13 living for NAVSCIATTS students, while accommodating future training requirements.
- 14 When added to past, present, and reasonably foreseeable future actions, the Proposed Action
15 would have no significant cumulative impacts on the physical, biological or the socioeconomic
16 environmental resources within the project area.

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5.0 PERMITS AND MINIMIZATION AND MITIGATION MEASURES

5.1 Permits

All applicable state and Federal permits would be obtained prior to site preparation activities. These include:

- Section 401 of the CWA for dredging within the SSC access canal turning basin and impacts on surface water quality.
- Section 404 of the CWA for the discharge of dredged or fill material into waters of the U.S., including wetlands. The unavoidable impact on wetlands is covered under an existing NASA General Permit 53 issued by the USACE, Vicksburg District.
- Project specific storm water permits under the National Pollution Discharge Elimination System program. These would be obtained by the construction contractor.
- Individual project SSC Underground Construction Permits. These would be obtained by the construction contractor.

Additionally, per Navy guidance, all applicable consultations, coordination, and authorizations such as a CZMA Coastal Consistency Determination from the MDMR Office of Coastal Zone Management, ESA Section 7 consultation with the USFWS, and a Section 106 NHPA consultation with the MDAH must be completed before a FONSI may be signed and the Proposed Action may be implemented.

5.2 Minimization and Mitigation Measures

The following measures will be implemented to minimize or avoid adverse impacts.

BMPs and Standard Operating Practices:

- All site preparation activities will follow Best Management Practices per the SCC SWPPP and comply with Section 438 of the EISA.
- All facilities will be designed and constructed to meet LEED Silver rating where applicable.
- The construction contractor will prepare a site-specific stormwater pollution prevention plan for each project.
- To help avoid the spread of noxious weeds, any additional soil necessary to level a construction area will be obtained from approved NASA sources that have been inspected for the absence of noxious weeds and plant parts.
- Construction of any overhead electrical lines to serve the facilities will be done in accordance with avian protection guidelines.

- 1 • If archaeological features or human remains are inadvertently discovered, all work will
- 2 be halted in that area and the NASA Historic Preservation Officer and the MDAH,
- 3 Historic Preservation Division, would be contacted, and appropriate measures would be
- 4 implemented to mitigate an adverse impact.
- 5 • Drip pans will be utilized during storage and parking of all construction vehicles and
- 6 heavy equipment to contain minor spills and drips.
- 7 • NAVSCIATTS boats will reduce operating speed if a Gulf sturgeon is observed.

8 **Mitigation Measures**

- 9 • To avoid potential adverse effects on migratory birds, site preparation activities will
- 10 occur outside of the bird nesting season (mid-February through September) or the area
- 11 will be surveyed for nesting birds prior to site preparation activities. If active nests are
- 12 encountered, the nests will be protected until the young have fledged.
- 13 • Dredging and construction activities within the SSC access canal turning basin will be
- 14 carried out in the winter months (November through April) when the presence of the Gulf
- 15 sturgeon is unlikely. The bucket drop procedure developed by the USFWS will be
- 16 employed to encourage any fish or riverine wildlife in the vicinity to leave the dredge
- 17 area. Sediment curtains will be placed downstream of the dredge area to prevent
- 18 sedimentation into the East Pearl River and discourage fish and riverine wildlife from
- 19 entering the construction area.

1 **6.0 LIST OF AGENCIES AND PERSONS CONSULTED**

2 The following individuals, non-Navy agencies, organizations, groups, and persons were
3 consulted in the development of the EA.

4 Mr. H. T. Holmes
5 Historic Preservation Officer
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8 Jackson, MS 39205

9 Adam Murrah
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12 Stennis Space Center, MS 39529-6000

13 Hugh Carr
14 Wetland and Timber Management
15 National Aeronautics and Space Administration
16 Stennis Space Center, MS 39529-6000

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18 Ms. Jan Boyd
19 Director, Coastal Zone Management Office
20 Mississippi Department of Marine Resources
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22 Biloxi, MS 39530

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24 Mr. Stephen Ricks
25 Field Supervisor
26 United States Fish and Wildlife Service
27 Jackson Mississippi Ecological Services Field Office
28 6578 Dogwood View Parkway, Suite A
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31 Ms. Jennifer Mallard
32 Chief
33 Regulatory Branch
34 Vicksburg District
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1 **7.0 LIST OF PREPARERS**

2 The following people were primarily responsible for the preparation of this EA.

Name	Agency / Organization	Discipline / Expertise	Experience	Role in Preparing EA
Royce Kemp	NAVFAC SE	NEPA Compliance Section Head	20 years of Environmental Science	EA review and comment
Emily Detrich	NAVFAC SE	Biologist/Natural Resources Specialist	12 years of Natural Resources studies	EA Project Manager
LT Michael Gibson	NSWG4 N44	Staff Civil Engineer	6 Years of Project Management, EIT	EA review and comment
Adrienne Saboya	NSW Command N44	Environmental Program Manager	25 years of Environmental studies	Project Proponent; EA review and comment
Carolyn Kennedy	NASA, Environmental	NASA NEPA Manager	20 years of NEPA, Air Permitting, Compliance, and Environmental Management Systems	EA review and comment
Chris Ingram	Gulf South Research Corporation	Biology/Ecology	36 years of EA/EIS studies	Meetings and project coordination; EA review and comment
Mark Walker	Gulf South Research Corporation	NEPA/Natural Resource Management	30 years of Natural Resources and NEPA studies	Project Manager and EA preparation
Ann Guissinger	Gulf South Research Corporation	Socioeconomics and Planning	34 years of Socioeconomics analysis	Socioeconomics and Environmental Justice
Liz Ayarbe-Perez	Gulf South Research Corporation	GIS/Graphics	16 years of GIS and Graphics experience	Graphics production
Michael Hodson	Gulf South Research Corporation	Ecology/Botany	12 years of NEPA and Natural Resources studies	Biological, Water, Soil Resources review and comment

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14 *and Technical Training School (NAVSCIATTS) Stennis Space Center, Mississippi.*
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3 [industry&7001=720&7029=20&7090=70](http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=5#reqid=70&step=25&isuri=1&7022=20&7023=7&7024=non-industry&7001=720&7029=20&7090=70)
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- 2 online at: <http://www.fws.gov/wetlands/>. Accessed 12/15/2014.

APPENDIX A
CORRESPONDENCE

Appendix Distribution List

Federal Agencies

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Principal Chief
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Council Chairman
Alabama-Coushatta Tribes of Texas
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The Honorable Freddy Drennan
Mayor
Slidell City Hall
2055 Second Street
Slidell, LA 70458

The Honorable Les Fillingame
Mayor
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Bay St. Louis, MS 39521



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
JACKSONVILLE, FL 32212-0030

5090
Ser EV21/088
March 10, 2015

United States Fish and Wildlife Service
Jackson Mississippi Ecological Services Field Office
Attn: Mr. Stephen Ricks
6578 Dogwood View Parkway, Suite A
Jackson, MS 39213-7856

Dear Mr. Ricks:

SUBJECT: ENDANGERED SPECIES ACT CONSULTATION FOR THE PROPOSED
NAVAL SMALL CRAFT INSTRUCTION AND TECHNICAL TRAINING
SCHOOL FACILITY EXPANSION AT STENNIS SPACE CENTER,
HANCOCK COUNTY, MISSISSIPPI

On behalf of the Naval Small Craft Instruction and Technical Training School (NAVSCIATTS), Naval Facilities Engineering Command Southeast is preparing a Draft Environmental Assessment (EA) for the proposed expansion of the NAVSCIATTS, located at Stennis Space Center in Hancock County, MS. NAVSCIATTS is proposing to construct additional support facilities and expand their riverine training courses. The draft EA is currently scheduled for public release on March 24, 2015, which would begin the 30-day public review comment period. A copy of the draft EA will be provided to your office.

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Navy is requesting an informal consultation under Section 7 of the Endangered Species Act with the United States Fish and Wildlife Service regarding the Navy's findings during the preliminary draft EA preparation and analysis. The Navy has determined that the Proposed Action may affect, but is not likely to adversely affect, the Gulf sturgeon (*Acipenser oxyrinchus desotoi*) and would not result in destruction or adverse modification of its Critical Habitat. The Navy has also determined that the Proposed Action may affect, but is not likely to adversely affect, the Louisiana black bear (*Ursus americanus luteolus*). Additionally, the Proposed Action may affect, but is not likely to adversely affect, the ringed map turtle (*Cryptomys oculifera*). The enclosed document is a description of the Proposed Action and a summary of the analysis supporting our conclusions. Pursuant to Section 7 of the ESA, we request your concurrence with these findings. Your response is requested by April 10, 2015.

5090
Ser EV21/088
March 10, 2015

If you have any questions, or need further information please contact Ms. Emily Detrich, Project Manager, at (904) 542-6864 or e-mail: emily.detrich@navy.mil. Please mail your response to:

Commander
NAVFAC Southeast
Attn: Ms. Emily Detrich (EV21)
PO Box 30A, B903, NAS
Jacksonville, FL 32212-0030

Sincerely,



C. R. DESTAFNEY, PE
Environmental Business Line
Coordinator
By direction of the
Commanding Officer

Enclosures: 1. Description of the Proposed Action
2. USFWS Letter on T&E Findings dated May 2009

United States Fish and Wildlife Service
Informal Consultation for Environmental Assessment for the
Naval Small Craft Instruction and Technical Training School Facility Expansion
Stennis Space Center, Hancock County, Mississippi

Proposed Action

The Naval Small Craft Instruction and Technical Training School (NAVSCIATTS) located at Stennis Space Center (SSC) in Hancock County, Mississippi, proposes to expand its operational capabilities by constructing additional support facilities and creating additional riverine training courses (Figure 1). The Proposed Action would add a projected 44 permanent support personnel and increase the student throughput from approximately 80 to a maximum of 160 students for each of five annual 8- to 9-week training periods. Additionally, the Proposed Action would add two 4-week riverine training courses that would increase the Navy's overall utilization of the East Pearl River by 8 percent annually.

The project area can generally be defined as the NSW lease area, the SSC access canal and turning basin, and the East Pearl River from the SSC access canal north to the northern boundary of the Western Maneuver Area (WMA) (Figure 2). The Proposed Action encompasses several construction projects within the Navy Special Warfare (NSW) lease area within the SSC Fee Area. These include a small craft operation and maintenance facility, a student berthing facility, a floating pier, a boat ramp, a field house with a covered training pad, a student locker/shower facility, an athletic track, and an expansion of the dining facility seating capacity (Figure 3). Approximately 12 acres of vegetation, 2.25 acres of disturbed wetlands, 900 linear feet of drainages, and 3.7 acres of floodplain would be impacted by the construction of the facilities (Figures 4 and 5). Additionally, approximately 12,100 cubic yards of sediment would be dredged from approximately 1.5 acres of bottomland within the man-made SSC access canal turnaround basin to provide appropriate draft for the NAVSCIATTS boats.

All construction would be carried out within the NSW lease area and the turning basin. No construction or removal of vegetation would occur along the East Pearl River or within the WMA where the majority of the NAVSCIATTS riverine training is carried out. Training exercises typically include day/night riverine patrol techniques; insertion and extraction; surveillance, concealing, and monitoring techniques; defense maneuvers; and navigation. Navigation training can extend into Lake Borgne in Louisiana and to the coastline from Louisiana to Florida.

The majority of the vegetation found within the NSW lease area is mixed pine-hardwood forest. This habitat type consists of an overstory of loblolly pine (*Pinus taeda*), longleaf pine (*Pinus palustris*), shortleaf pine (*Pinus echinata*), southern red oak (*Quercus falcata*), turkey oak (*Quercus laevis*), blackjack oak (*Quercus marilandica*), and mockernut hickory (*Carya tomentosa*). The associated understory include bluebeach (*Carpinus caroliniana*), hophornbeam (*Ostrya caroliniana*), flowering dogwood (*Cornus florida*), and sourwood (*Oxydendrum arboretum*). Typical shrubs include yaupon (*Ilex vomitoria*), farkleberry (*Vaccinium arboretum*), arrowwood (*Viburnum dentatum*), greenbriar (*Smilax* spp.), and blackberry (*Rubus* spp.).

Forested wetlands within the NSW lease area are located in the drainage areas that transect the area and floodplain associated with the East Pearl River. Vegetation found within these areas includes blackgum

(*Nyssa sylvatica*), red maple (*Acer rubrum*), slash pine (*Pinus elliottii*), water oak (*Quercus nigra*), swamp magnolia (*Magnolia virginiana*), swamp cyrilla (*Cyrilla racemiflora*), saw palmetto (*Serenoa repens*), winged elm (*Ulmus alata*), Cherokee sedge (*Carex cherokeensis*), and poison ivy (*Toxicodendron radicans*).

Vegetation found along the banks of the East Pearl River within the WMA is primarily composed of bottomland hardwood forests. Common tree species include sweetgum (*Liquidambar styraciflua*), water oak, white oak (*Quercus alba*), swamp chestnut oak (*Quercus michauxii*), willow oak (*Quercus phellos*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), and various hickories (*Carya* spp.). The understory consists of winged elm, red maple, possumhaw (*Viburnum nudum*), arrowwood, and witch-hazel (*Hamamelis virginiana*). Woody vines include grapes (*Vitis* spp.), greenbriers, trumpet-creeper (*Campsis radicans*), and poison ivy.

The NSW lease area has been highly disturbed by previous earthwork during the construction of the SSC access canal in the early 1960s and again in 2004 during construction of the permanent facilities for NAVSCIATTS. During 2006, a large tree salvage operation was conducted in the area as a result of Hurricane Katrina uprooting most of the marketable timber. Prior surveys by the National Aeronautics and Space Administration (NASA) for the presence of Federally listed threatened and endangered species within the SSC Fee Area have resulted in no encounters with individual species. As a result, NASA concluded that activities within the SSC Fee Area are not likely to adversely affect any Federally listed species. The United States Fish and Wildlife Service (USFWS) concurred with NASA on 19 May 2009 (attached). The East Pearl River and the WMA were not included in these surveys.

Preliminary EA Conclusions

The following species are listed by the USFWS as being threatened, endangered, or candidate species in Hancock County, Mississippi and St. Tammany Parish, Louisiana:

- Louisiana black bear (*Ursus americanus luteolus*) – Threatened
- West Indian manatee (*Trichechus manatus*) – Endangered
- Bald eagle (*Haliaeetus leucocephalus*) – Delisted
- Piping plover (*Charadrius melodus*) – Threatened, Critical Habitat
- Rufa red knot (*Calidris canutus rufa*) – Proposed Threatened
- Sprague's pipit (*Anthus spragueii*) – Candidate
- Red-cockaded woodpecker (*Picoides borealis*) – Endangered
- Dusky gopher frog (*Rana sevosia*) – Endangered, Critical Habitat
- Gopher tortoise (*Gopherus polyphemus*) – Threatened
- Green sea turtle (*Chelonia mydas*) – Threatened
- Kemp's ridley sea turtle (*Lepidochelys kempii*) – Endangered
- Leatherback sea turtle (*Dermochelys comacea*) – Endangered
- Loggerhead sea turtle (*Caretta caretta*) – Threatened, Critical Habitat
- Ringed map turtle (*Graptemys oculifera*) – Threatened
- Gulf sturgeon (*Acipenser oxyrhynchus desotoi*) – Threatened, Critical Habitat
- Inflated heelsplitter (*Potamilus inflatus*) – Threatened

- Louisiana quillwort (*Isoetes louisianensis*) – Endangered
- Wood stork (*Mycteria americana*) – Threatened

The Navy has concluded that the following listed species or critical habitat may occur within the project area. The remaining listed species or their critical habitat would not be affected by the Proposed Action as the species are not present within the project area, or suitable habitat does not exist within the project area.

Gulf sturgeon: The Proposed Action **may affect, but is not likely to adversely affect**, the gulf sturgeon and would not result in destruction or adverse modification of its Critical Habitat. The East Pearl River below the Ordinary High Water Mark has been designated as Critical Habitat for the gulf sturgeon; however, the SSC access canal and turning basin is not designated as Critical Habitat. The SSC access canal and turning basin is man-made and not considered a natural riverine system. Dredging and construction of the boat ramp and floating pier would be carried out in the winter months when the sturgeon is unlikely to be in the river, as it overwinters in warm coastal bays and estuaries. Mechanical dredging utilizing a barge equipped with a shovel and clamshell-type bucket would be utilized. The bucket drop procedure developed by the USFWS would be employed to encourage any sturgeon in the vicinity to leave the dredge area prior to the start of dredging activities. Turbidity in the turning basin would temporarily increase during dredging and construction of the floating pier and boat launch, but would return to normal after construction is completed. Sediment curtains would be placed downstream of the dredge area to prevent sedimentation into the East Pearl River and discourage sturgeon from entering the dredge area. The water bottom sediments of the turning basin are composed of sands, silts, and clays washed into the turning basin from the surrounding area. As the sturgeon spawns on clean substrate such as limestone outcrops and cut limestone banks, bedrock, large gravel or cobble beds marl, soapstone, or hard clay, the turning basin is not suitable spawning habitat for the sturgeon so there would be no loss of spawning habitat.

The gulf sturgeon could be adversely affected by a collision with a boat during training exercises; however, the gulf sturgeon is a bottom dweller and collisions with a boat would be unlikely. Further, there have been no recorded instances of Navy boats colliding with a breaching sturgeon on the East Pearl River. It is NAVSCIATTS practice to reduce operating speed if an obstruction, such as a breaching sturgeon, is encountered. Therefore, the proposed increased boat hours would negligibly impact the probability of a boat encountering a sturgeon.

Ringed map turtle: The Proposed Action **may affect, but is not likely to adversely affect**, the ringed map turtle. There is no suitable basking or nesting habitat within the turning basin for the ringed map turtle, which requires sand bars for nesting and fallen trees, brush piles, and logs for basking, so there would be no loss of nesting habitat. The species is not known to inhabit the NSW lease area. No construction activities or removal of vegetation or brush along the East Pearl River would occur under the Proposed Action.

Louisiana black bear: The Proposed Action **may affect, but is not likely to adversely affect**, the Louisiana black bear. The vegetation that would be removed from the NSW lease area for the construction of the proposed facilities is not suitable habitat for the bear as it inhabits bottomland hardwood forest. The Louisiana black bear is not known to inhabit the SSC Fee Area but it is a transient

species that could enter the action area. No potential habitat or vegetation along the East Pearl River would be removed by the implementation of the Proposed Action and the Louisiana black bear is unlikely to inhabit the WMA.

The Navy also recognizes that the Proposed Action would be located in habitat that could be utilized by bird species such as raptors, songbirds, and waterfowl protected from harm or harassment under the Migratory Bird Treaty Act. Approximately 12 acres of trees and shrubs that may provide habitat for migratory birds would be removed from the NSW lease area by the Proposed Action. To avoid adverse effects on migratory birds, site preparation activities would occur outside of the nesting season (typically mid-February through September) or the area would be surveyed for nesting birds prior to site preparation activities. If active nests are encountered, the nests would be protected until the young have fledged. Additionally, construction of any overhead electrical lines to serve the new facilities would be done in accordance with avian protection guidelines.

Prior to construction applicable permits under Section 401 of the Clean Water Act will be obtained for construction within the SSC Access Canal turning basin and Section 404 for unavoidable impacts on waters of the United States including wetlands. The disturbance of wetlands is covered under an existing NASA General Permit 53 issued by the United States Army Corps of Engineers. Mitigation for unavoidable impacts on wetlands from the proposed construction projects would be undertaken in accordance with NASA's *Special Area Management Plan for Potential Wetland Mitigation Areas John C. Stennis Space Center, Mississippi* and outlined in NASA's General Permit 53.

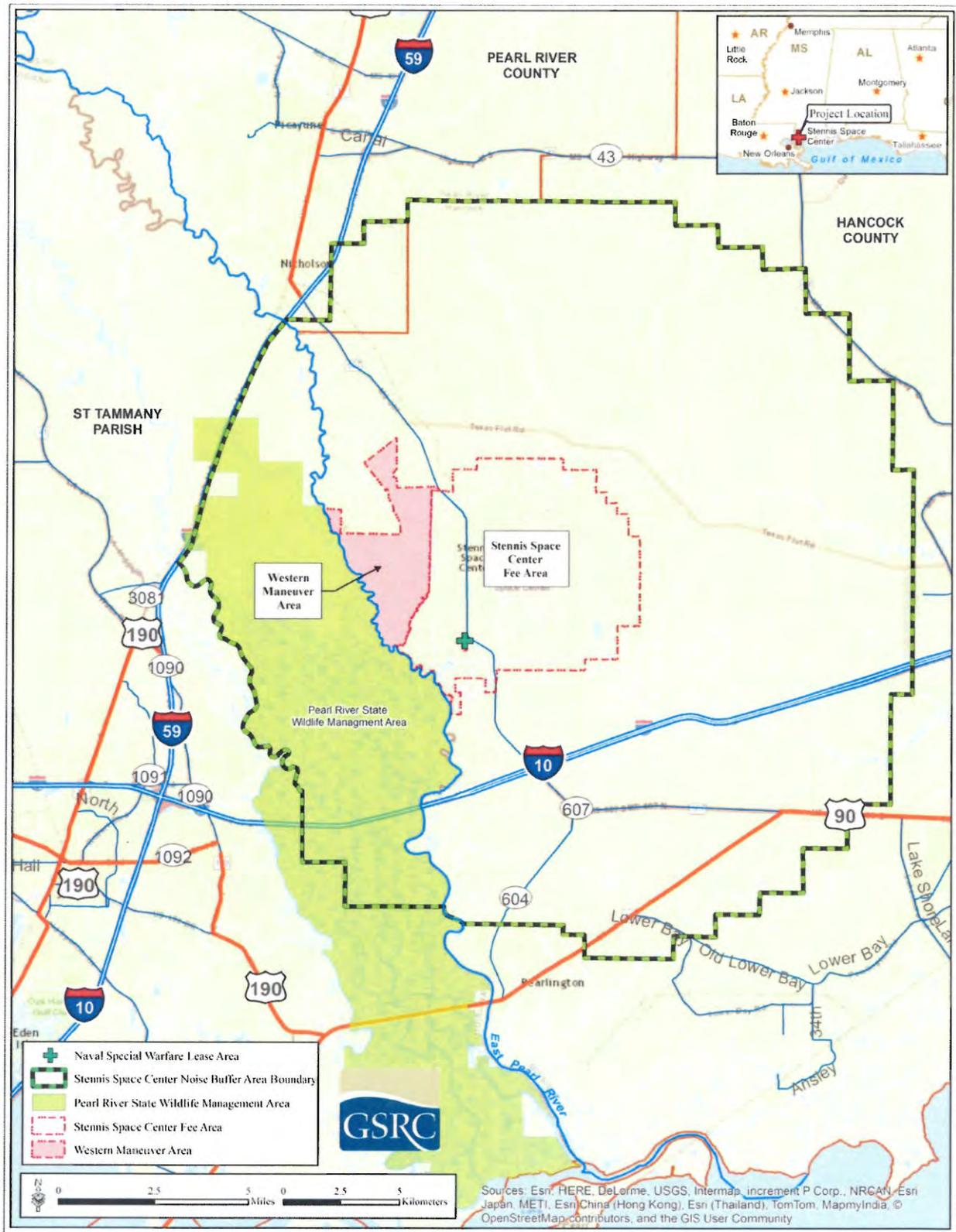


Figure 1: Vicinity Map

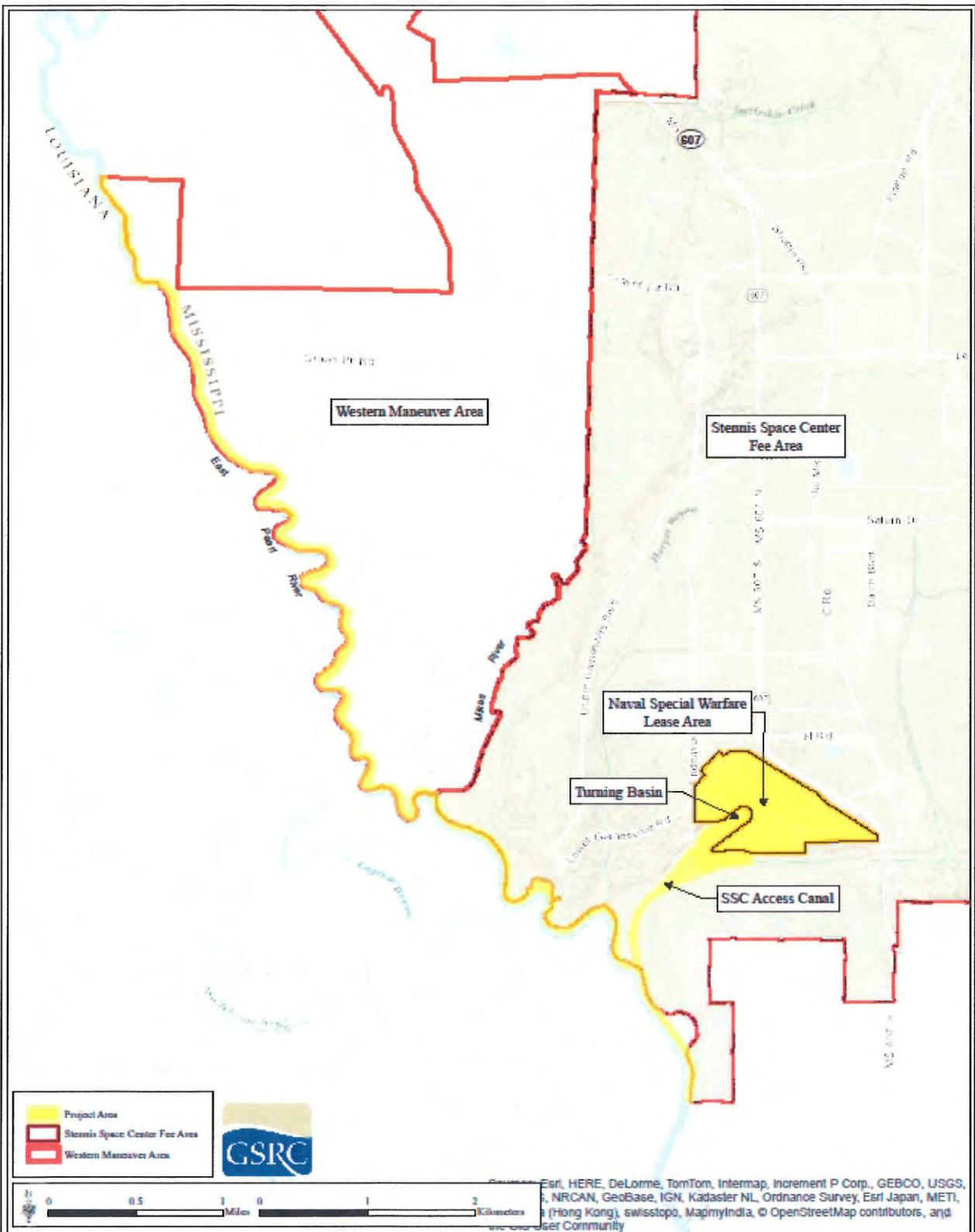


Figure 2: Project Area



Figure 3: Proposed Facilities

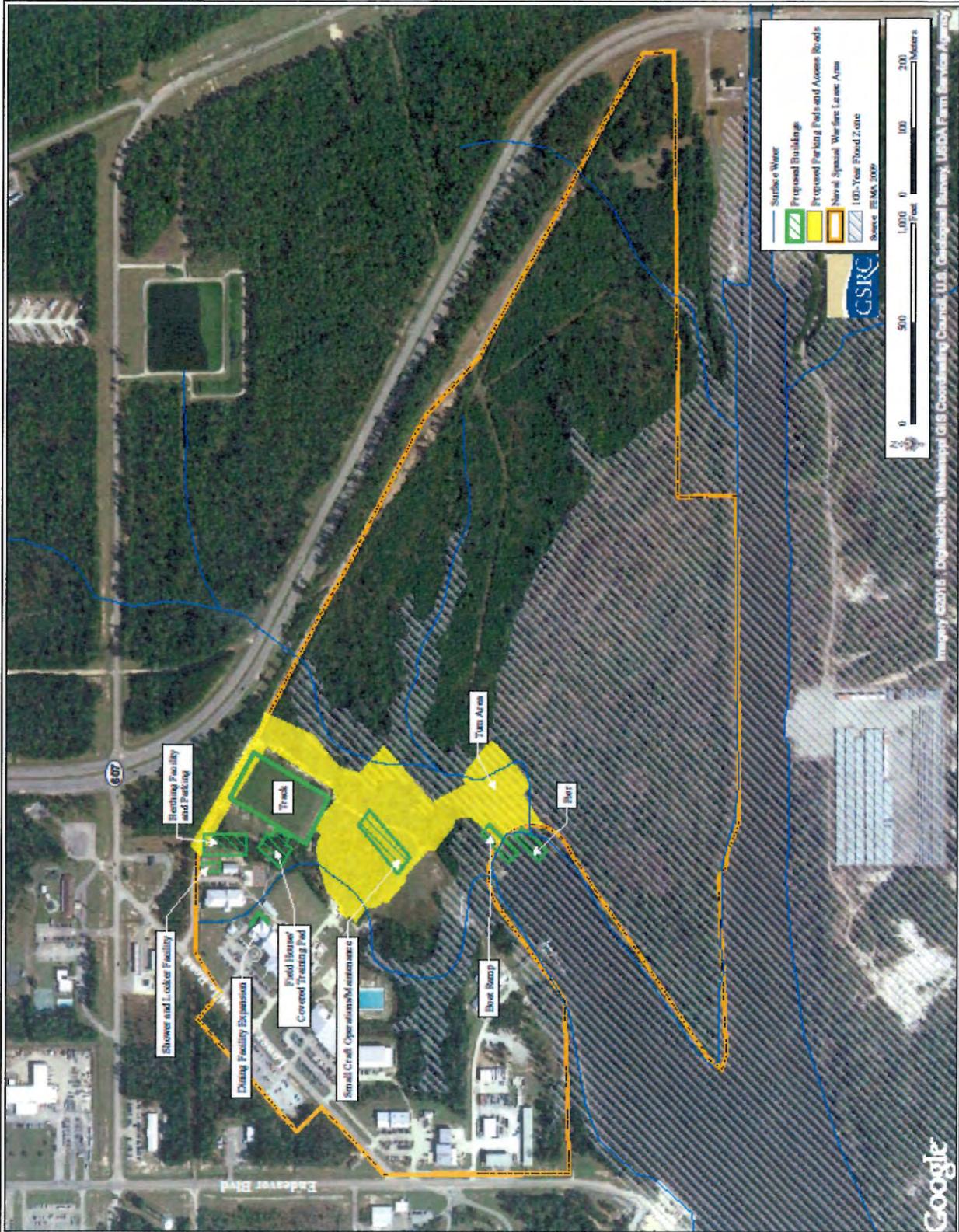


Figure 4: Floodplain Map

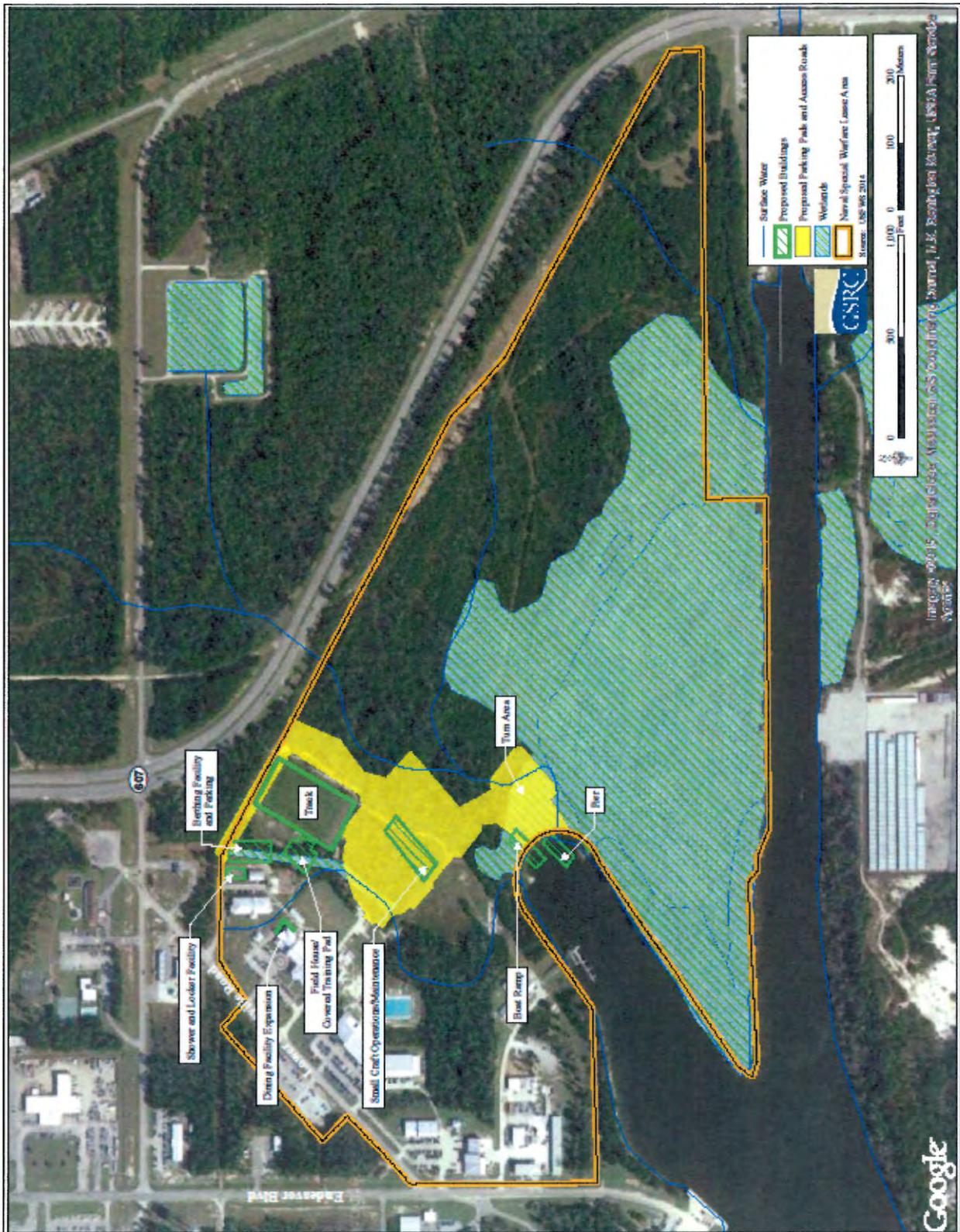


Figure 5: Wetland Map (USFWS 2014)



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Mississippi Field Office
6578 Dogwood View Parkway, Suite A
Jackson, Mississippi 39213

May 19, 2009

Mr. Hugh Carr
Environmental Specialist
NASA Environmental Office
Stennis Space Center, Mississippi 39529-6000

Dear Mr. Carr:

The Fish and Wildlife Service (Service) has reviewed the information in your May 2009, Final Report on Threatened and Endangered Species Surveys on Stennis Space Center (SSC), Hancock County, Mississippi.

In previous correspondence the Service has stated that the following federally listed species or their habitats could be found on SSC:

Louisiana black bear (*Ursus a. luteolus*) – threatened
gopher tortoise (*Gopherus polyphemus*) – threatened
black pine snake (*Pituophis melanoleucus ssp. lodingi*) - candidate species
Louisiana quillwort (*Isoetes louisianensis*) - endangered
ringed map turtle (*Graptemys oculifera*) - threatened
Gulf sturgeon (*Acipenser oxyrinchus desotoi*) – threatened/critical habitat
piping plover (*Charadrius melodus*) – threatened/critical habitat
inflated heelsplitter mussel (*Potamilus inflatus*) – threatened
bald eagle (*Haliaeetus leucocephalus*) – Bald and Golden Eagle Protection Act

Consequently, we have recommended surveys for these species in areas with suitable soils and/or appropriate habitats before beginning any earth disturbing activities.

From 2005-2008, surveys for the above species were conducted by the Forest and Wildlife Research Center, Mississippi State University, on lands within the Fee Area of SSC and NASA landholdings within the acoustical buffer area. Although areas of medium to marginal habitat were observed, no individuals were found. Therefore, your agency has

Encl. 2

determined that ongoing activities within SSC are not likely to adversely affect any federally listed species.

Based on the survey information, the Service concurs with that finding. However, due to the mobility of many of these species, the Service recommends that additional surveys be conducted each year in areas of suitable habitat prior to commencement of any ground disturbing activities. If evidence of any listed species is found, this office must be notified immediately.

If you have any questions, please feel free to contact this office, telephone (601) 321-1132. Our comments are submitted in accordance with the Endangered Species Act (87 Stat. 884, as amended; 16 U.S. Code 1531 et seq.).

Sincerely,

A handwritten signature in cursive script that reads "Kathy W. Lunceford". The signature is written in dark ink and is centered below the word "Sincerely,".

Kathy W. Lunceford
Fish and Wildlife Biologist



HISTORIC PRESERVATION
Jim Woodrick, director
PO Box 571, Jackson, MS 39205-0571
601-576-6940 • Fax 601-576-6955
mdah.state.ms.us

December 3, 2014

Mr. David K. Lorance
National Aeronautics and Space Administration
John C. Stennis Space Center
Stennis Space Center, Mississippi 39529-6000

RE: Proposed expansion of the Naval Small Craft instruction and Technical Training School at the John C. Stennis Space Center, MDAH Project Log #11-028-14, Hancock County

Dear Mr. Lorance:

We have reviewed your request for a cultural resources assessment, received on November 5, for the above referenced project in accordance with our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. After reviewing the information provided, it is our determination that no cultural resources are likely to be affected. Therefore, we have no objection with the proposed undertaking.

Should there be additional work in connection with the project, or any changes in the scope of work, please let us know in order that we may provide you with appropriate comments in compliance with the above referenced regulations.

If you have any questions, please do not hesitate to contact us at (601) 576-6940.

Sincerely,

A handwritten signature in black ink that reads "Hal Bell". The signature is written in a cursive style.

Hal Bell

Review and Compliance Assistant

FOR: Greg Williamson
Review and Compliance Officer



DEPARTMENT OF THE ARMY

VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

March 2, 2015

Operations Division

SUBJECT: U.S. Navy, Naval Special Warfare Group 4, Proposed Construction of Floating Piers for Small Craft Berthing and Boat Ramp to Support Training and Operations at NAVSCIATTS, Hancock County, Mississippi

Mr. Gary Reviere
NAVSCIATTS Facilities
2606 Lower Gainsville Road
Stennis Space Center, Mississippi 39529

Dear Mr. Reviere:

We received your correspondence, subject as above, on February 27, 2015. For ease of reference, we have assigned your correspondence identification number MVK-2015-160. Please refer to this number should you write or call us about your request.

If you have any questions about the status of your request, please call this office at (601) 631-7660.

Sincerely,

A handwritten signature in blue ink that reads "Jennifer A. Mallard".

Jennifer A. Mallard
Chief, Regulatory Branch



**MISSISSIPPI
DEPARTMENT OF MARINE RESOURCES**

REQUEST FOR REVIEW OF APPLICATION

TO: Jennifer Mallard, Permit Section Chief
USACE Regulatory Division, Vicksburg District
Office of Land and Water Resources
Department of Archives and History
Office of Pollution Control
Mississippi Wildlife Federation
Department of Wildlife, Fisheries and Parks
Secretary of State
Paul Necaize, U.S. Fish and Wildlife Service

FROM: Department of Marine Resources,
Bureau of Wetlands Permitting

SUBJECT: Application by U.S. Navy; DMR-150012

DATE: February 27, 2015

In accordance with the provisions of the Mississippi Coastal Program and the terms of the February, 1984 Memorandum of Understanding, we herewith enclose a copy of the application by U.S. Navy.

Please provide your comments in writing to our office by close of business on **March 27, 2015**.

If a coastal program agency has not commented within the allotted review time, its concurrence with the proposed activity will be assumed.

If you have any questions, please contact Jennifer Wilder at 228-523-4121 or Jennifer.wilder@dmr.ms.gov.

cc: Gary Reviere, NAVSCIATTS Facilities

