Environmental Assessment

For

Construction of Radial Arm Spill Gates

MacDill Air Force Base, Florida

Headquarters Air Mobility Command

Scott AFB, IL

May 2012

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
MAY 2012		**00-00-2012 to 00-00-2012**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Environmental Assessment for Construction of Radial Arm Spill Gates MacDill Air Force Base, Florida	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **6 Civil Engineer Squadron (6 CES/CEV),7621 Hillsborough Loop Drive,MacDill AFB,FL,33621-5207**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**Same as Report (SAR)**	**241**	

THIS PAGE INTENTIONALLY LEFT BLANK

FINDING OF NO SIGNIFICANT IMPACT
AND
FINDING OF NO PRACTICABLE ALTERNATIVE
CONSTRUCTION OF SPILL GATES
MACDILL AIR FORCE BASE, FLORIDA

Agency: United States Air Force (USAF), Headquarters, Air Mobility Command

Background: Pursuant to the President's Council on Environmental Quality (CEQ) regulations, Title 40 Code of Federal Regulations (CFR) Parts 1500-1508, as they implement the requirements of the National Environment Policy Act (NEPA) of 1969, 42 U.S.C. § 4321, et seq., and the Air Force Environmental Impact Analysis Process, as promulgated in 32 CFR Part 989, the USAF conducted an assessment of the potential environmental consequences associated with implementation of the following Proposed Action: the construction of three spill control and containment structures (Spill Gates). The attached Environmental Assessment (EA) considered all potential impacts of the proposed action and alternatives, both as solitary actions and in conjunction with other proposed activities. This Finding of No Significant Impact (FONSI) summarizes the results of the evaluation and the conclusions regarding the significance of impacts from the Proposed Action. The Finding of No Practicable Alternative (FONPA) summarizes the conclusion reached regarding the location of the Proposed Action in a floodplain.

Proposed Action: The Proposed Action involves the construction of three Spill Gates in three stormwater drainage ditches, designed to prevent a significant jet propulsion 8 fuel (JP8) release on the aircraft apron from reaching Tampa or Hillsborough Bay. Three radial arm gates, also known as Tainter gates, with riprap placed up and downstream to prevent scour, would be constructed. The gates would be composed primarily of structural coated mild steel or stainless steel. Various components of the trunnion (pivot point) assembly and operating equipment may be of forged or cast steel, copper alloys, or stainless steel and will be based on the final design. The Spill gates would be mounted in a reinforced concrete structure.

Alternatives: The Alternative to the Proposed Action considers the construction of sluice gates at nine airfield stormwater outfalls. Although effective as a spill control method, the headwalls of each of the outfalls would require replacement or substantial repair to support the sluice gate structure. In addition, in the event of a major spill, the time required to close the nine sluice gates would be substantially greater than that to close the three radial arm gates.

Under the No Action Alternative, MacDill AFB would continue to utilize a system of floating containment booms that are known to break free during major storm events, and require continual maintenance.

Florida Coastal Zone Management: In accordance with the federal Coastal Zone Management Act (CZMA) and the Florida CZMA, this federal action must be consistent "to the maximum extent practicable" with the Florida Coastal Management Program (CMP). Appendix B to the EA contains the Air Force's Consistency Statement and finds that the conceptual Proposed Action and Alternative plans presented in the EA are consistent with Florida's CMP. In accordance with Florida statutes, the Air Force submitted a copy of the attached EA to the State of Florida so they can perform a coastal zone consistency evaluation. The State of Florida determined that, at this stage, the Proposed Action is

consistent with the Florida CMP. The state's final concurrence of the project's consistency with the CMP will be determined during the environmental permitting stage of the project.

FINDING OF NO SIGNIFICANT IMPACT: Based upon my review of the facts and analyses contained in the attached Environmental Assessment, incorporated by reference, I conclude that implementation of the Proposed Action would not have a significant environmental impact, either by itself or cumulatively with other projects at MacDill AFB. Accordingly, the requirements of NEPA and the regulations promulgated by the Council on Environmental Quality and the Air Force are fulfilled and an Environmental Impact Statement is not required. The *Tampa Tribune* published a Notice of Availability on March 13, 2012. Copies of agency coordination letters, project correspondence, and comments received from the agencies are included in Appendix A of the EA. No public comments were received.

FINDING OF NO PRACTICABLE ALTERNATIVE: Pursuant to Executive Order 11988, the authority delegated in Headquarters Air Force Mission Directive (HAFMD) 1-18, and in AMC/CV Redelegation of Environmental Authorities letter dated 14 January 2005, and taking into consideration the findings of the EA, which is incorporated herein by reference, I find that there is no practicable alternative to the Proposed Action occurring in a floodplain. The Proposed Action includes all practicable measures to minimize harm to the environment. Based upon the environmental constraints and the nature of the Spill Gates project, there are no other available areas located on MacDill AFB that would satisfy the objectives of the Proposed Action. The Proposed Action, as designed, includes all practicable measures to minimize harm to the floodplain. The Air Force has sent all required notices to federal agencies, single points of contact, the State of Florida, local government representatives, and the local news media.

The signing of this combined FONSI/FONPA completes the environmental impact analysis process under US Air Force regulations.

Tim Green

TIMOTHY S. GREEN
Brigadier General, USAF
Director of Installations and
Mission Support

30 May 12

DATE

Attachment:
Environmental Assessment

TABLE OF CONTENTS

FIGURES

TABLES

SECTION 1.0
PURPOSE OF AND NEED FOR PROPOSED ACTION

This Environmental Assessment (EA) identifies, describes, and evaluates potential environmental impacts associated with the proposed construction of three spill control and containment structures consisting of Radial Arm Spill Gates (Spill Gates) at MacDill Air Force Base (MacDill AFB). This EA summarizes the Proposed Action, as well as an Alternative to the Proposed Action, and the No Action Alternative.

1.1 MISSION

First established in 1939 as an Army airfield, MacDill AFB became a US Air Force (USAF) Base in 1948. Since that time, the base has undergone several mission changes, and played a vital role in US armed forces training and strategic defense. Since 1996, MacDill AFB has been host to the 43rd Aerial Refueling Group (ARG), which joined the 6th Air Base Wing to form the 6th Air Refueling Wing (6th ARW). With the addition of the Commander in Chief (CINC) Support mission in January 2001, the 6th ARW was redesignated the 6th Air Mobility Wing (6th AMW). The 6th AMW is the host unit at MacDill AFB, and is a subordinate unit to the Air Mobility Command (AMC), headquartered at Scott AFB, Illinois.

The 6th AMW's overall mission is to Generate and Execute Air Refueling, Airlift, and Contingency Response Capabilities while providing Base Support for Joint, Coalition and Interagency Partners, including Headquarters US Central Command (USCENTCOM), Headquarters US Special Operations Command (USSOCOM), and 38 other mission partners that reside at MacDill AFB (http://www.macdill.af.mil/units/index.asp). In addition, the base provides similar support to tenant agencies and the surrounding MacDill AFB community, including over 116,000 retirees and their families (http://www.tampa.va.gov/about/index.asp). The organizational structure of the 6th AMW consists primarily of a maintenance group, medical group, operations group, and mission support group.

1.2 PURPOSE AND NEED FOR PROPOSED ACTION

The purpose of the Proposed Action is to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking aprons from reaching either Hillsborough Bay or Tampa

Bay. Stormwater drainage from the MacDill AFB aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls in multiple stormwater drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

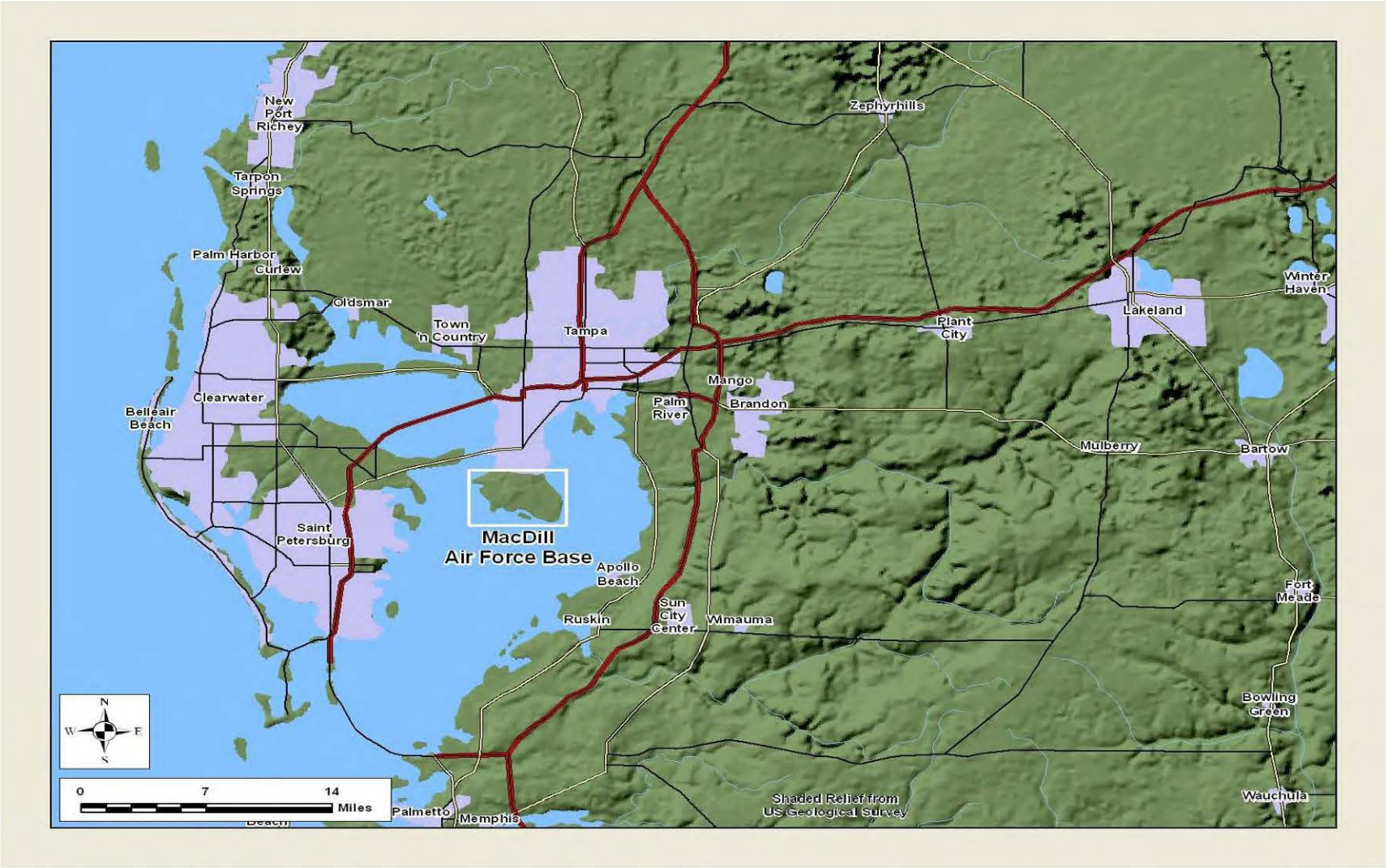
Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

1.3 LOCATION OF PROPOSED ACTION AND ALTERNATIVES

The Proposed Action would occur at MacDill AFB, located in Tampa, Florida. The base occupies approximately 5,630 acres and is located in Hillsborough County, adjacent to the City of Tampa, at the southern tip of the Interbay Peninsula. The base elevation ranges from sea level to approximately 15 feet above mean sea level (MSL). Much of the base is less than five feet above MSL, and wetland areas, especially mangrove wetlands, are common.

The base is bordered on the east, south and west by Tampa Bay and Hillsborough Bay and on the north by development within the City of Tampa (**Figure 1-1**). Urban land uses adjacent to the base are a mix of single-family residential, light commercial and industrial designations. The proposed location of the Spill Gates is within the MacDill AFB stormwater drainage ditches, which are considered jurisdictional surface waters (**Figure 1-2**).

Figure 1-1. Project Vicinity Map and General Location of Proposed Action



THIS PAGE INTENTIONALLY LEFT BLANK

Figure 1-2. Specific Locations of Proposed Spill Gates

THIS PAGE INTENTIONALLY LEFT BLANK

1.4 SCOPE OF THE ENVIORNMENTAL REVIEW

Due to the location of the Spill Gates within jurisdictional surface waters and other potential environmental impacts, an EA is required for the Proposed Action. This EA identifies, describes, and evaluates potential environmental impacts associated with the construction of the Spill Gates at MacDill AFB (the Proposed Action), as well as Alternatives to the Proposed Action. This section discusses the issues evaluated during the environmental impact analysis process.

1.5 COASTAL ZONE CONSISTENCY DETERMINATION

The Federal Coastal Zone Management Act (CZMA) creates a state-Federal partnership to ensure the protection of coastal resources. The Federal CZMA requires each Federal agency activity, within or outside the coastal zone, which affects any land or water use or natural resources of the coastal zone, to be carried out in a manner that is consistent, to the maximum extent practicable, with the enforceable policies of the Florida Coastal Management Program (CMP) of 1981. The Florida CMP presumes that "direct Federal activities" will directly affect the coastal zone. According to the Florida CMP, "direct Federal activities" are those that "are conducted or supported by or on behalf of a Federal agency in the exercise of its statutory responsibilities, including development projects."

The Federal CZMA requires Federal agencies carrying out activities subject to the Act to provide a "consistency determination" to the relevant state agency. The Federal regulations implementing the Act then require the state agency to inform the Federal agency of its agreement or disagreement with the Federal agency's consistency determination. Therefore, the Proposed Action and the Alternative to the Proposed Action analyzed in this EA require a consistency determination to be submitted by the US Air Force to the relevant Florida agency and a response from the State of Florida of either agreement or disagreement with that determination. The Air Force's Consistency Determination is contained in the Consistency Statement at **Appendix A**.

This EA, including the USAF's Consistency Statement, was submitted to Florida State Clearinghouse for a multi-agency review. The Florida Department of Environmental Protection (FDEP) assembled and reviewed the comments provided by the various state and county

agencies and determined that the proposed project is consistent with the CMP. Public notice and multi-agency coordination correspondence is included in **Appendix B**.

SECTION 2.0
DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVE

2.1 SELECTION CRITERIA

MacDill AFB has determined that the selection criteria for preventing a JP-8 spill on the aircraft parking apron that reaches the stormwater system before it gets to Tampa or Hillsborough Bay include the following:

- The Proposed Action must minimize the potential for a spill to reach the bays
- The Proposed Action must minimize the potential for harm to human health and the environment
- The Proposed Action must be easily and quickly operated
- The Proposed Action must be easily and quickly accessible in the event of a spill
- The Proposed Action must be easily maintained

2.2 BACKGROUND

JP-8 fuel is transferred from the pumping stations at Facility 105 to a hydrant refueling system along the flightline that services aircraft and refueling vehicles. Facility 105 has two field-erected, aboveground storage tanks (ASTs) that are 1,200,000 gallon each, and includes a pumphouse with four pumps, each operating at approximately 600 gallons per minute. The hydrant refueling system is a 1.13-mile long, 12-inch diameter hydrant loop that provides the primary source of issuing JP-8 to any of the twelve refueling points on the aircraft parking apron. Facility 105 includes two truck fill stands that provide a secondary source of issuing JP-8 to the aircraft apron via refueling vehicle. The largest refueling vehicle MacDill AFB operates can accommodate 6,000 gallons. Storm drain inlets are located approximately 100 feet from the refueling points.

The KC-135, the only large-size resident aircraft at MacDill AFB, stores up to approximately 29,700 gallons (198,287 pounds) of fuel within nine fuel cells, the largest of which holds approximately 7,100 gallons (47,400 pounds) of fuel. There are twelve KC-135 tanker aircraft stationed at MacDill AFB, eight of which are typically on the north aircraft apron at any given time. Common transient aircraft accommodated by MacDill AFB include the KC-10, C-130, C-141, and C-5. The C-130 is the most frequent visitor to the base. The maximum fuel load for

the C-130 is approximately 10,200 gallons (68,100 pounds), with the largest fuel cell holding about 1,160 gallons (7,745 pounds) of fuel. The largest fuel capacity transient aircraft is the KC-10, with a design fuel capacity of 53,333 gallons (356,065 pounds), including a maximum of 35,733 gallons (238,565 pounds) in the standard wing tankage and a maximum of 17,600 (117,500 pounds) stored in seven fuel cells below the main deck.

Aircraft parking is concentrated on the north aircraft apron (ramp). All of the KC-135 aircraft assigned to the 6th AMW are parked on the north ramp. The south ramp experiences little use, with the occasional transient aircraft utilizing this ramp space. The National Oceanic and Atmospheric Administration (NOAA) aircraft are generally parked inside the Hangar 5. The stormwater drainage system for the aircraft apron discharges to nine outfalls (**Figure 2-1**), which flow to multiple stormwater drainage ditches that discharge to Hillsborough and Tampa Bay's. During after hours and weekends, MacDill AFB's ability to quickly control and contain a large spill on the aircraft aprons that reaches the stormwater system is severely limited.

Figure 2-1. Aircraft Parking Apron Outfall Locations

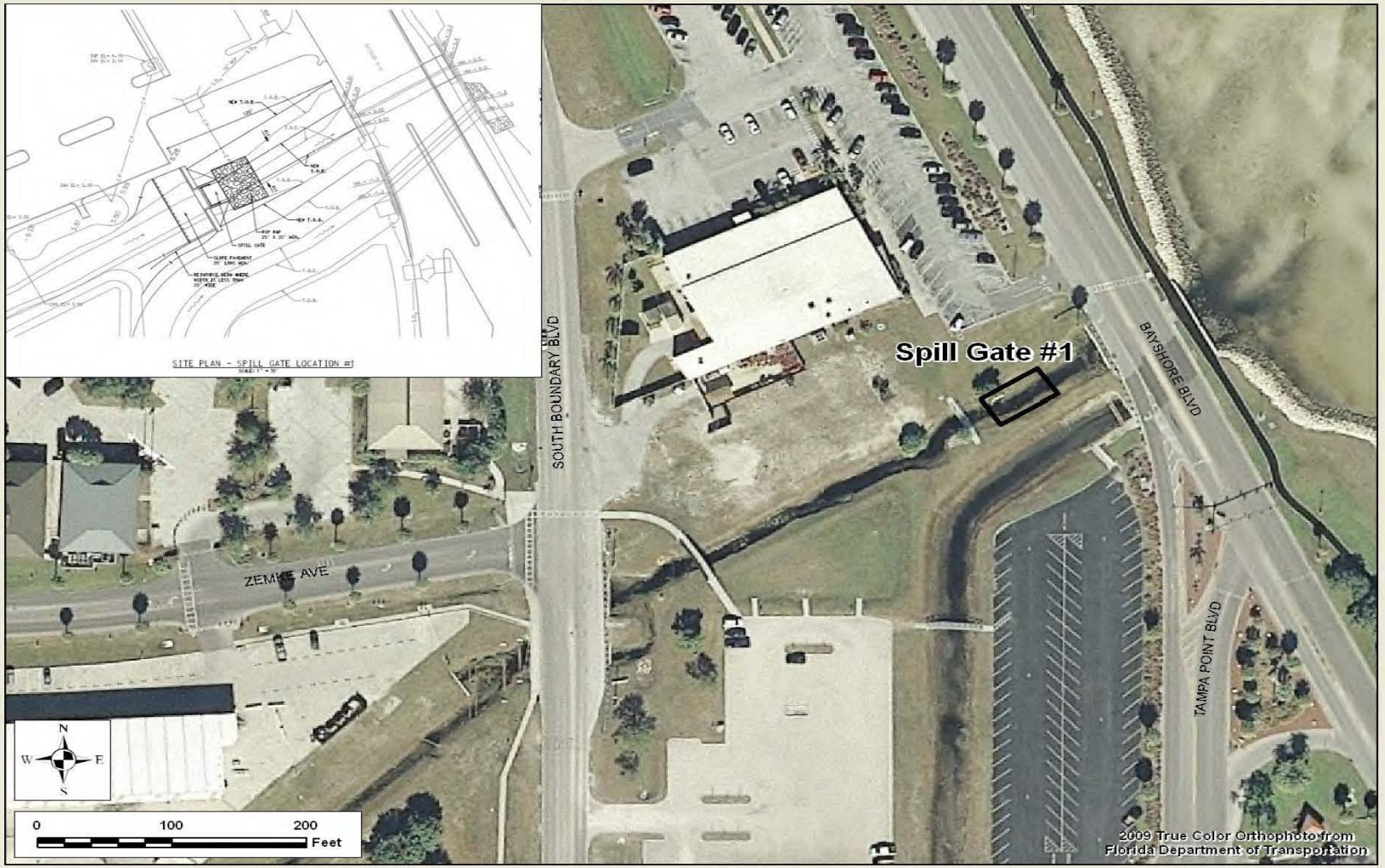
THIS PAGE INTENTIONALLY LEFT BLANK

2.3 DETAILED DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action involves the construction of spill control and containment structures (Spill Gates) in three stormwater drainage ditches to prevent an oil spill on the aircraft apron from reaching Tampa or Hillsborough Bay. **Figure 1-2** presents the proposed general location of the Spill Gates. **Figures 2-2**, **2-3**, and **2-4** present the detailed location of the Spill Gates. Three radial arm gates, also known as Tainter gates, with riprap placed up and downstream to prevent scour, would be constructed. **Figure 2-5** presents an example radial arm gate.

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 2-2. Spill Gate 1 Location Map

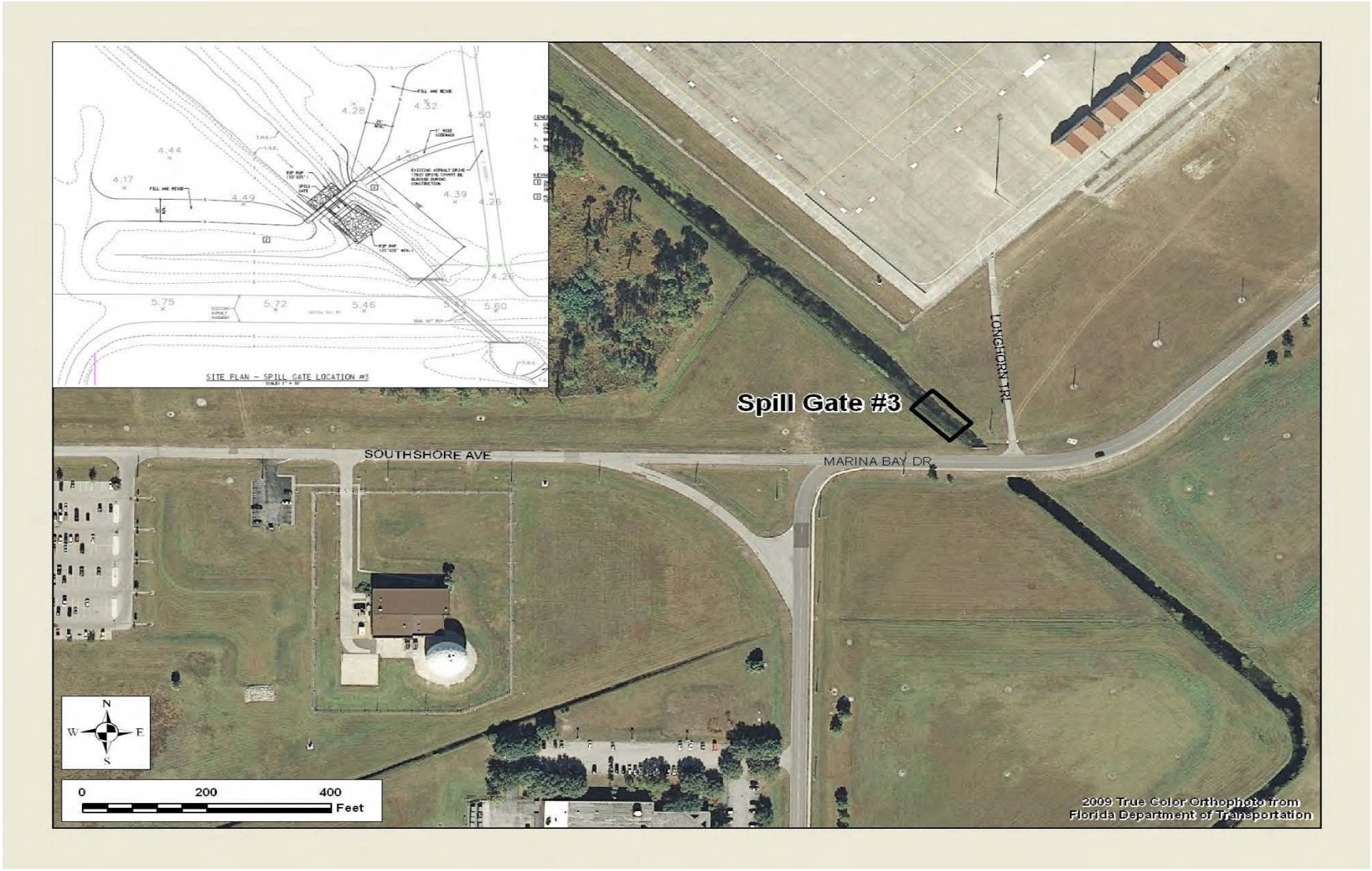


THIS PAGE INTENTIONALLY LEFT BLANK

Figure 2-3. Spill Gate 2 Location Map

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 2-4. Spill Gate 3 Location Map



THIS PAGE INTENTIONALL LEFT BLANK

Figure 2-5. Radial Arm Spill Gate Example

THIS PAGE INTENTIONALLY LEFT BLANK

The gates would be composed primarily of structural coated mild steel or stainless steel. Various components of the trunnion (pivot point) assembly and operating equipment may be of forged or cast steel, copper alloys or stainless steel and will be based on the final design. The Spill Gates would be mounted in a reinforced concrete structure. The Spill Gates will remain open except in the case of an emergency, or for maintenance and testing. Prior to maintenance or testing closure of Gate 2, a 20-minute period of manatee observation will be conducted.

Site preparation activities would include installation of erosion control/sedimentation barriers and floating turbidity barriers to prevent siltation of adjacent areas, streets, storm sewers and waterways. The erosion control/sedimentation barriers would remain in place until the construction is complete and all disturbed areas have been stabilized. Sod would be placed on all disturbed areas for stabilization.

The Spill Gates would be constructed in major three stormwater drainage ditches, which are considered jurisdictional surface waters. No mangroves are present in the ditches where the Spill Gates are proposed for construction. Temporary diversion ditches, of adequate size to handle anticipated flows, would be constructed around the Spill Gates during construction. Once the temporary diversion ditch is constructed, the Spill Gate location would be dammed off using either earthen material or steel sheeting to allow for construction. If dewatering is needed, the water would be discharged back into the ditch if the water is not turbid, except at Spill Gate #1, which is within SWMU 61, an area of known contamination. If dewatering is needed at Spill Gate #1, the water will be collected in tank(s), analyzed for contaminates and treated, if necessary, prior to discharge or disposal, in accordance with Federal, state and local regulations (See **Sections 3** and **4** for additional information). The Spill Gate concrete foundation may require a pile foundation depending on geotechnical analysis. After Spill Gate construction is complete, the temporary diversion ditch would be backfilled and the site restored. At Spill Gates #2 and #3, an earthen berm would be constructed adjacent to the Spill Gate to an appropriate elevation to better help contain water and spilled oil from bypassing the Spill Gate in adjacent low-lying areas during severe storm events.

Standard construction equipment would be used for project activities including graders, bulldozers, excavators, concrete trucks, cranes, pile drivers and dump trucks. It is estimated that

construction would take approximately four months per Spill Gate. Construction of the three Spill Gates may occur simultaneously.

2.4 DETAILED DESCRIPTION OF THE ALTERNATIVE TO THE PROPOSED ACTION

The Alternative to the Proposed Action would consist of constructing sluice gates at the apron outfall headwalls to prevent an oil spill on the aircraft apron from reaching Tampa Bay or Hillsborough Bay. Sluice gates are designed to attach to the headwall of the outfall structure at the mouth of a culvert; therefore, nine sluice gates would be required to provide sufficient protection to contain a major spill on any portion of the airfield aprons. The gates would be composed primarily of structural steel and are generally of welded fabrication. **Figure 2-1** presents the proposed locations of the Alternative Spill Gates at each outfall. **Figures 2-6**, **2-7**, and **2-8** present the detailed locations of the Alternative to the Proposed Action and **Figure 2-9** presents an example sluice gate.

Figure 2-6. Detailed Locations of Outfalls 1, 2, and 3

Outfall Location #1

Outfall Location #2

Outfall Location #3

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 2-7. Detailed Locations of Outfalls 4, 5 and 6

Outfall Location #4

Outfall Location #5

Outfall Location #6

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 2-8. Detailed Locations of Outfalls 7, 8 and 9

Outfall Location #7

Outfall Location #8

Outfall Location #9

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 2-9. Sluice Gate Example

THIS PAGE INTENTIONALLY LEFT BLANK

As with the Proposed Action, site preparation activities would include installation of erosion control/sedimentation barriers and floating turbidity barriers and would remain in place until the construction is complete and all disturbed areas have stabilized. The sluice gates would be constructed on the headwalls to major stormwater drainage ditches, which are considered jurisdictional surface waters. By agreement with FDEP, the Southwest Florida Water Management District (SWFWMD) and U.S. Army Corps of Engineers (USACE), the removal of vegetation, including mangroves, for the purpose of ditch maintenance, is permissible within the footprint proposed for construction of the sluice gates. Each of the nine locations would require removing vegetation in the ditch in front of the pipe/headwalls and riprap placed to prevent scouring. A small, approximately four foot by two foot, concrete pad would be placed behind the headwall and railing would be installed. An access port into the piping would be constructed to allow for oil removal at each location. All of the outfall headwalls would require repairs, if not redesign and replacement, to ensure resistance to anticipated water pressure.

Standard construction equipment would be used for project activities including graders, bulldozers, excavators, concrete trucks, cranes and dump trucks. It is estimated that construction would take approximately five months per sluice gate.

2.5 DESCRIPTION OF THE NO ACTION ALTERNATIVE

Under the No Action Alternative, new Spill Gates would not be constructed. If this alternative were implemented, MacDill AFB would continue to use floating containment booms located in the stormwater drainage ditches, which are inadequate to contain a large spill from reaching either of the bays. **Figure 2-10** presents the locations of the floating containment booms. In addition, the booms are frequently dislodged during severe storm events and require continual maintenance to ensure they remain secured in place. The booms require replacement every two to three years because of degradation.

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 2-10. Locations of Floating Containment Booms

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 3.0
AFFECTED ENVIRONMENT

This section establishes the basis and methodology for assessing impacts to resource areas that could be affected by the Proposed Action, the Alternative to the Proposed Action and the No Action Alternative.

3.1 ISSUES ELIMINATED FROM FURTHER ANALYSIS

A Description of the Proposed Action and Alternatives (DOPAA) was performed, resulting in the elimination of the following issues from further analysis.

3.1.1 Land Use

MacDill AFB designated land use as one of the following: airfield, urban, industrial, light industrial, commercial, institutional (educational & medical), residential, recreational, or improved vacant land. The project areas for the Proposed Action and Alternative to the Proposed Action are not located within the airfield land use area. The Proposed Action would not significantly alter land use at MacDill AFB. Consequently, the Air Force did not conduct further analysis for potential land use impacts.

3.1.2 Airspace/Airfield Operations

The airspace region of influence for MacDill AFB includes a 20-nautical-mile radius from the ground surface up to 10,000 feet above MSL. The MacDill AFB airfield infrastructure includes a pavement system comprised of the runway, paved overruns, parking/maintenance aprons, aircraft taxiways, and arm/disarm pad. The base's one runway, Runway 04/22, runs northeast to southwest with a parallel taxiway, Taxiway G. The runway is 11,421 feet long by 151 feet wide. Both ends of the runway have 1,000-foot long concrete touchdown zones with asphalt between them.

MacDill AFB has a bird-aircraft strike hazard (BASH) plan that provides guidance for reducing the incidents of bird strikes in and around areas where flying operations occur. The plan establishes provisions to disperse information on specific bird hazards and procedures for reporting hazardous bird activity. The Proposed Action sites are not within or directly adjacent

to the airfield land use areas. Consequently, the Air Force excluded Airspace/Airfield Operations and BASH from any further evaluation.

3.1.3 Hazardous Wastes, Materials and Stored Fuels

3.1.3.1 Sanitary Wastewater Treatment

As of 1 March 2011, MacDill AFB privatized its water and wastewater infrastructure. The owner is Florida Governmental Utility Authority and its operator is U.S. Water Services Corporation. The sanitary sewer system consists of sewer lines, lift stations, and a wastewater treatment plant (WWTP) located in the southeastern corner of the base on Bayshore Drive. The WWTP is permitted to treat 1.2 million gallons per day (mgd) with a design that will provide for two mgd. Current operations are at 400,000 gallons per day and consist primarily of domestic wastewater. The Air Force has determined that wastewater treatment would not be affected by the Proposed Action, Alternative to the Proposed Action or No Action Alternative and eliminated this issue from further evaluation in this EA.

3.1.3.2 Hazardous Materials

Approximately 168 work centers base-wide use hazardous materials. Hazardous materials on base include various organic solvents, chlorine, freon, paints, thinners, oils, lubricants, compressed gases, pesticides, herbicides, nitrates, and chromates. A detailed tracking and accounting system is in place to identify potentially hazardous materials and to ensure that MacDill AFB organizations are approved to use specific hazardous materials. The Proposed Action, Alternative to the Proposed Action, and No Action Alternative would not affect hazardous materials management on MacDill AFB and this issue was eliminated from further evaluation in this EA.

3.1.3.3 Asbestos and Lead-Based Paint

Construction in the action areas does not involve the demolition of facilities containing asbestos or lead-based paint. Therefore, the Air Force excluded asbestos and lead-based paint from any further evaluation.

3.1.3.4 Stored Fuel

The Base receives JP-8 at the Defense Fuel Supply Point (DFSP) by pipeline from the Port of Tampa, while commercial tank trucks deliver other fuels to the Base. JP-8 storage capacity at DFSP and MacDill AFB is over 9.6 million gallons. The JP-8 storage consists of three large, aboveground, internal floating-roof tanks at DFSP (total capacity 6.9 million gallons), two large aboveground storage tanks (ASTs) for the flightline fueling system and several miles of underground and aboveground pipeline (total capacity 2.7 million gallons). Diesel, gasoline, and heating oil are also stored throughout MacDill AFB in small to medium-sized underground storage tanks (UST) and ASTs ranging in size from 50 to 25,000 gallons. The Proposed Action, Alternative to the Proposed Action, and No Action Alternative would have no impact on stored fuels management. Consequently, the Air Force excluded stored fuel from any further evaluation.

3.1.4 Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, assures that Federal agencies focus attention on the potential for a proposed Federal action to cause disproportionately high and adverse health effects on minority and/or low-income populations. There are no environmental justice areas of low-income and/or minority populations located immediately adjacent to the project site, and site construction would not adversely impact low-income and/or minority populations. Consequently, the Air Force has eliminated environmental justice from detailed evaluation in this EA.

3.1.5 Socioeconomics

Construction of the Proposed Action would cost approximately $1.4 million, based on cost estimates for materials, transport, and installation. In total this would equal less than 0.12 percent of the nearly $1.2 billion annual expenditures that MacDill AFB provides to the local economy, and would therefore constitute a negligible beneficial impact on the work force in the region during the construction period. Consequently, the Air Force has determined that the socioeconomic impact from the Proposed Action did not warrant further evaluation and eliminated it from further consideration in this EA.

3.1.6 Cultural Resources

According to the MacDill AFB Integrated Cultural Resources Management Plan (ICRMP), dated September 2006, (USAF, 2006a) no significant cultural resources, including archeological sites or historic structures, are located in the vicinity of the three Proposed Action sites. Based on data contained in the ICRMP, it was concluded that the Proposed Action, Alternative to the Proposed Action, and No Action Alternative are not likely to have an effect on historic properties. Consequently, the Air Force excluded cultural resources from any further analysis in this EA. In consultation with MacDill AFB, the State Historic Preservation Officer has concurred that the Proposed Action is not likely to have an effect on historic properties provided that MacDill AFB makes contingency plans in the case of fortuitous finds or unexpected discoveries during ground disturbing activities within the project areas. Should any archaeological resources be discovered during project construction, work will cease until all appropriate coordination is conducted, and clearances from SHPO are obtained.

If any work not included as part of the Proposed Action or the proposed alternatives put forward in this EA is required in the future, these plans must be coordinated with 6 CES/CEV prior to their approval and implementation.

Sections 3.2 through 3.10 details those resource areas determined to require additional study.

3.2 AIR QUALITY

3.2.1 Air Pollutants and Regulations

The Clean Air Act (CAA) of 1970 directed the U. S. Environmental Protection Agency (USEPA) to develop, implement, and enforce strong environmental regulations that would ensure cleaner air for all Americans. In order to protect public health and welfare, USEPA developed concentration-based standards called National Ambient Air Quality Standards (NAAQS). USEPA established both primary and secondary NAAQS under the provisions of the CAA. Primary standards define levels of air quality necessary to protect public health with an

adequate margin of safety. Secondary standards define air quality levels necessary to protect public welfare (i.e., soils, vegetation, property, and wildlife) from any known or anticipated adverse effects. NAAQS currently are established for six air pollutants (known as criteria air pollutants) including carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O_3), sulfur oxides (SO_x), measured as sulfur dioxide (SO_2), lead (Pb), and particulate matter (PM). PM standards incorporate two particulate classes: (1) particulate matter with an aerodynamic diameter less than or equal to 10 micrometers [PM_{10}]; and (2) particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers [$PM_{2.5}$].

The CAA does not make the NAAQS directly enforceable; however, the CAA does require each state to promulgate a State Implementation Plan (SIP) that provides for implementation, maintenance, and enforcement of the NAAQS in each air quality control region (AQCR) in the state. Title I of the CAA requires Federal actions to conform to the provisions of the approved SIP, which was developed, and is maintained, by FDEP under Chapter 62 of the Florida Administrative Code (FAC). Title V of the CAA requires identification and characterization of emissions from all minor sources, including aircraft maintenance facilities, fuel storage tanks, and emissions from aircraft and motor vehicles.

USEPA classifies the air quality within an AQCR according to whether or not the concentration of criteria air pollutants in the atmosphere exceeds primary or secondary NAAQS. All areas within each AQCR are assigned a designation of attainment, nonattainment, maintenance, unclassifiable attainment, or not designated attainment for each criteria air pollutant. An attainment designation indicates that the air quality within an area is as good as or better than the NAAQS. Nonattainment indicates that air quality within a specific geographical area exceeds applicable NAAQS. Maintenance indicates that an area was previously designated nonattainment but is now attainment. Unclassifiable and not designated indicate that the air quality cannot be, or has not been, classified on the basis of available information as meeting or not meeting the NAAQS. As defined in the Clean Air Act, areas designated as unclassifiable or not designated are treated as attainment.

As promulgated in Section 62-204.240 of the FAC, the State of Florida has adopted standards equal to or more restrictive than the NAAQS, as in the case of SO_2. The standards, listed in **Table 3.2.1** are reported in parts per million (ppm) or milligram per cubic meter (mg/m^3).

Table 3.2.1 National and State Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards		Florida Standards	
	Level	Averaging Time	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour (1)	None		9 ppm (10 mg/m^3)	8-hour (1)
	35 ppm (40 mg/m^3)	1-hour (1)			35 ppm (40 mg/m^3)	1-hour (1)
Lead	0.15 $\mu g/m^3$ (2)	Rolling 3-Month Average	Same as Primary		None	
	1.5 $\mu g/m^3$	Quarterly Average	Same as Primary		1.5 $\mu g/m^3$	Quarterly Average
Nitrogen Dioxide	53 ppb (3)	Annual (Arithmetic Average)	Same as Primary		100 $\mu g/m^3$ (0.05 ppm)	Annual (Arithmetic Average)
	100 ppb	1-hour (4)	None		None	
Particulate Matter (PM_{10})	150 $\mu g/m^3$	24-hour (5)	Same as Primary		150 $\mu g/m^3$	24-hour (5)
	50 $\mu g/m^3$	Annual (Arithmetic Average)	Same as Primary		50 $\mu g/m^3$	Annual (Arithmetic Average)
Particulate Matter ($PM_{2.5}$)	15.0 $\mu g/m^3$	Annual (6) (Arithmetic Average)	Same as Primary		None	
	35 $\mu g/m^3$	24-hour (7)	Same as Primary			
Ozone	0.075 ppm (2008 std)	8-hour (8)	Same as Primary		None	
	0.08 ppm (1997 std)	8-hour (9)	Same as Primary		None	
	0.12 ppm	1-hour (10)	Same as Primary		0.12 ppm	1-hour (10)
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Average)	0.5 ppm	3-hour (1)	60 $\mu g/m^3$ (0.02 ppm)	Annual (Arithmetic Average)
					0.5 ppm	3-hour
	0.14 ppm	24-hour (1)			260 $\mu g/m^3$ (0.1 ppm)	24-hour (1)
	75 ppb (11)	1-hour	None		None	

ppm- parts per million

(1) Not to be exceeded more than once per year.

(2) Final rule signed October 15, 2008.

(3) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard

(4) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb (effective January 22, 2010).

(5) Not to be exceeded more than once per year on average over 3 years.

(6) To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.

(7) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006).

(8) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (Effective May 27, 2008)

(9) (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
(b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.
(c) EPA is in the process of reconsidering these standards (set in March 2008).

(10) (a) EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").
(b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.

(11) (a) Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

The General Conformity Rule requires that any Federal action meet the requirements of a SIP or Federal Implementation Plan. The General Conformity Rule applies only to actions in nonattainment or maintenance areas and considers both direct and indirect emissions MacDill AFB is located in Hillsborough County within the West Central Florida Intrastate Air Quality Control Region (AQCR), as defined in 40 CFR 81.96. According to 40 CFR 81.310, Hillsborough County is in attainment or unclassifiable for all criteria pollutants; therefore, the Conformity Rule does not apply to MacDill AFB.

Title V of the CAA requires state and local agencies to permit major stationary sources. A major stationary source is a facility (i.e., plant, base, or activity) that has the potential to emit more than 100 tons per year (tpy) of any one criteria air pollutant, 10 tpy of a hazardous air pollutant, or 25 tpy of any combination of hazardous air pollutants. The purpose of the permitting rule is to establish regulatory control over large, industrial-type activities and monitor their impact on air quality. The Environmental Protection Commission (EPC) of Hillsborough County has received full air permitting authority from the State. This allows the EPC, exclusively, to conduct permitting determinations, process applications, and issue air pollution permits for most facilities.

Federal Prevention of Significant Deterioration (PSD) regulations also define air pollutant emissions from proposed major stationary sources or modifications to be “significant” if (1) a

proposed project is within 10 kilometers of any Class I area, and (2) regulated pollutant emissions would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1.0 micrograms per cubic meter ($\mu g/m^3$) or more (40 CFR 52.21(b) (23) (iii)). PSD regulations also define ambient air increments, limiting the allowable increases to any area's baseline air contaminant concentrations, based on the area's designation as Class I, II, or III (40 CFR 52.21(c)). MacDill AFB is not within 10 kilometers of a Class I area; therefore, the PSD regulations do not apply.

3.2.2 Baseline Air Emissions

An air emissions inventory is an estimate of total mass emission of pollutants generated from a source or sources over a period of time, typically a year. The quantities of air pollutants are generally measured in pounds per year or tons per year. Emission sources may be categorized as point, area, or mobile emission sources. Point sources are stationary sources, which can be identified by name and operated at a fixed location. Area sources are stationary sources of emissions too small to track individually, such as gas stations, small office buildings, or open burning associated with agriculture, forest management, and land clearing activities. Mobile sources are vehicles or equipment with gasoline or diesel engines, e.g., an airplane or a ship. Mobile sources are divided into two types, on-road and non-road. On-road mobile sources are vehicles such as cars, light trucks, heavy trucks, buses, engines, and motorcycles. Non-road sources are aircraft, locomotives, diesel and gasoline boats and ships, personal watercraft, lawn and garden equipment, agricultural and construction equipment, and recreational vehicles. Accurate air emissions inventories are needed for estimating the relationship between emissions sources and air quality. The most recent (2002) emission inventory data from the USEPA Air Data web site (http://www.epa.gov/air/data/geosel.html) for Hillsborough County, which includes MacDill AFB (USEPA, 2002) are provided in **Table 3.2.2** and include point, area, and mobile data.

Table 3.2.2 Stationary Air Emissions Inventory, Hillsborough County, Florida

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO_X (tpy)	NO_X (tpy)	PM_{10} (tpy)[3]	$PM_{2.5}$ (tpy)
Point Sources	2,899	56,390	7,434	5,318	65,294	5,318
Area Sources	3,619	1,801	14,944	1,904	596	1,904
Stationary Total	**6,517**	**58,191**	**22,379**	**7,221**	**65,890**	**7,221**
On-road Mobile	228,413	25,546	706	506	1,283	506
Non-road Mobile	94,881	21,593	1,291	1,243	2,597	1,243
Mobile Total	**323,294**	**47,139**	**1,997**	**1,749**	**3,880**	**1,749**
Grand Total	**329,811**	**105,330**	**24,376**	**8,970**	**69,770**	**8,970**

Source: Hillsborough County data summarized from USEPA's Air Data for 2002 (http://www.epa.gov/air/data/index.html)

Radon Gas. The level at which USEPA recommends consideration of radon mitigation measures is 4 picocuries per liter (pCi/L). According to a sampling report obtained from 6 AMDS/SGPB, radon is not considered a concern at MacDill AFB (USAF, 1987). All samples analyzed were below USEPA target levels of 4 pCi/L.

3.3 NOISE

The primary human response to environmental noise is annoyance (American Industrial Hygiene Association, 1986). The degree of annoyance has been found to correlate well with the day-night average sound level (DNL). Annoyance for short-term activities, such as construction noise and fire fighting, could be influenced by other factors such as awareness and attitude toward the activity creating the noise.

Several social surveys have been conducted in which people's reaction to their noise environment has been determined as a function of DNL occurring outside their homes. Guidelines have been developed for individual land uses based upon the information collected in these surveys and upon information concerning activity interference. For various land uses, the level of acceptability of the noise environment is dependent upon the activity that is conducted and the level of annoyance, hearing loss, speech interference, and sleep interference that results there from.

In June 1980, the Federal Interagency Committee on Urban Noise published guidelines (FICUN 1980) relating DNL values to compatible land uses. This committee was composed of

representatives from the US Departments of Defense (DOD), Transportation (DOT), and Housing and Urban Development (HUD); USEPA, and the Veterans Administration (VA).

Since their issuance, Federal agencies have generally adopted their guidelines for noise analysis. Most agencies have identified 65 decibels (dB) DNL as a criterion that protects those most affected by noise and that can often be achieved on a practical basis. Base activities that have the highest potential source of noise impacts are the aircraft/airspace operations. The Air Installation Compatible Use Zone (AICUZ) Study (2008) plotted the DNL from 65 to 80 dB for a representative day at MacDill (**Figure 3-1**). The DNL contours reflect the aircraft operations at MacDill AFB. The DNL 65 dB contour covers the main runway, and extends about one mile southwest over Tampa Bay, and about 1½ miles northeast over Hillsborough Bay. The action areas for the Proposed Action and Alternative to the Proposed Action are located outside of the DNL 65dB contour.

Figure 3-1. MacDill AFB Noise Contours for a Representative Day

THIS PAGE INTENTIONALLY LEFT BLANK

3.4 WASTE

There are two classifications of wastes generated at MacDill AFB: nonhazardous solid waste and hazardous waste. Nearly 80 percent of the solid waste generated from various residential and industrial sources is incinerated as an energy source at the City of Tampa incineration facility off base. The remainder is disposed at Hillsborough County landfill facilities. Curbside recycling is available in Military Family Housing areas and cardboard, paper, and aluminum recycling is conducted throughout the Base.

C&D waste generated from construction projects on MacDill AFB, most of which are performed by off-base contractors, is the responsibility of the contractor. Contractors are required to comply with Federal, state, local, and USAF regulations for the collection and disposal of C&D waste from the installation. Much of this material can be recycled or reused, or otherwise diverted from landfills. All nonrecyclable C&D waste is collected in a dumpster until removal. C&D waste contaminated with hazardous waste, asbestos-containing materials (ACM), lead-based paint (LBP), or other undesirable components is managed in accordance with AFI 32-7042.

Approximately 168 work centers base-wide use hazardous materials. Hazardous materials on-base include various organic solvents, chlorine, freon, paints, thinners, oils, lubricants, compressed gases, pesticides, herbicides, nitrates, and chromates. A detailed tracking and accounting system is in place to identify potentially hazardous materials and to ensure that Base organizations are approved to use specific hazardous materials. The Base complies with Air Force guidelines to identify and eliminate the use of ozone-depleting chemicals.

The responsibility for managing hazardous waste lies with the generating organization and 6 CES/CEV. The 6 AMW maintains a *Hazardous Waste Management Plan* (MAFB 2010a) as directed by AFI 32-7042, *Solid and Hazardous Waste Compliance*. Wastes come from approximately 36 locations throughout the Base and are managed at initial accumulation points base-wide. Initial accumulation points are located at or near the points of hazardous waste generation and are operated in accordance with Federal, Florida, and Air Force regulations and guidelines. The former hazardous waste storage facility at Building 1115 is in closure status under RCRA and is currently designated as a 90-day accumulation point. At a 90-day

accumulation point, hazardous waste can be accumulated for less than 90 days before it is sent off to a transportation storage and disposal facility (TSDF). The Defense Reutilization and Marketing Office (DRMO) is responsible for the sale, reclamation, or disposal of hazardous materials and wastes generated at MacDill AFB.

Outside contractors periodically collect used oil, which is accumulated at sites around the Base, for recycling. Outside contractors also collect waste antifreeze, tires, batteries, and fluorescent bulbs for recycling. These types of wastes, while requiring special handling procedures, are not hazardous waste.

3.5 ENVIRONMENTAL RESTORATION PROGRAM

The Environmental Restoration Program (ERP), formerly known as the Installation Restoration Program, is a subcomponent of the Defense ERP that became law under the Superfund Amendments and Reauthorization Act (SARA). The ERP requires each DOD installation to identify, investigate, and clean up hazardous waste disposal or release sites. MacDill AFB began its ERP in 1981 with 38 sites originally identified. This consisted of a Phase I Records Search to identify potential sites of concern, which warranted further investigation. In accordance with USAF policy, all ERP sites at the base are addressed in a manner consistent with the CERCLA or RCRA process. Restoration projects on MacDill AFB are conducted under two regulatory programs: those governing petroleum releases from underground storage tanks (USTs), and those governing cleanup of Solid Waste Management Units (SWMUs) in accordance with the installation's RCRA permit. There are 49 SWMUs and ERP sites scattered throughout the installation. Of the 49 SWMUs and ERP sites, 21 are No Further Action (NFA), one is pending NFA, and 27 are Remedy in Place (RIP). None of these sites have been identified on the National Priorities List under CERCLA. Plans for future development in the areas of any of the ERP sites should take into consideration the possible restrictions and constraints that they represent. The FDEP regulates cleanup activities at petroleum sites, and has entered into a Petroleum Contamination Agreement with MacDill AFB. The investigation and cleanup of SWMUs is conducted in accordance with the Hazardous and Solid Waste Amendments (HSWA) permit issued to the base under USEPA ID No. FL6 570 024 582.

3.6 WATER RESOURCES

Water resources at MacDill AFB consist of stormwater, and other surface waters, and groundwater. These are addressed separately in the following sections.

3.5.1 Surface Water

Surface water flows at the Base are primarily from stormwater runoff. Topographic maps show that the entire Base is an independent drainage area with no natural surface waters entering or leaving the Base prior to final discharge into Tampa Bay. Most of the Base drains toward the southern tip of the Interbay Peninsula; however, the easternmost section of the Base drains eastwards, toward Hillsborough Bay.

About 25 percent of the Base surface cover is impervious. The soil type is predominantly poorly drained fine sands. Raccoon Creek and Broad Creek are the only two natural drainage ways and occur on the southern portion of MacDill AFB.

As detailed in the SPCC, the drainage system consists of approximately 25 miles of culverts, 56 miles of open ditches and canals, and 22.5 acres of artificial impoundments. Most of these features are interconnected and tidally influenced. The two largest surface water impoundments, Lake McClelland and Lewis Lake, total approximately 20 acres and are on the eastern side of the base. There are numerous other small, unnamed retention ponds throughout the base, particularly around the golf course. The coastal plain, which is primarily mangrove swamps, is crisscrossed with drainage canals (USAF 2008, 2010a).

The USEPA has issued a National Pollutant Discharge Elimination System (NPDES) Multi-Sector Generic Permit (MSGP) for Stormwater Discharge Associated with Industrial Activity (No. FLR05E128-003) to MacDill AFB in March 2011 and a NPDES Phase II Municipal Separate Storm Sewer (MS4) permit (No. FLR04E059) to MacDill AFB in March 2008. These permits authorize the discharge of stormwater associated with industrial and municipal activities respectively. Areas of potential runoff contamination at the Base are the runways and the airfield aprons.

To control for discharges of floating pollutants resulting from accidental spills, the Base maintains a number of boom-type containment systems and absorbents across stormwater

channels. The Base also maintains a SPCC Plan in accordance with 40 CFR 112. Per the same regulation, the base maintains a FRP, given the location of the Base adjacent to navigable waters and shorelines, as well as the amount of fuel storage capacity existing on site.

3.5.2 Groundwater

There are two aquifer systems underlying MacDill AFB, the surficial aquifer and the Floridan Aquifer. The surficial aquifer system, which consists generally of sand, clayey sand, and shell, is unconfined and approximately 20 feet thick. In residential areas beyond the Base boundaries, small-diameter wells are installed in the surficial aquifer to supply small irrigation systems. The Floridan Aquifer underlies the surficial aquifer, and is separated from it by a clay confining layer. The Floridan Aquifer is a major source of groundwater in the region, but is not used for water supply at MacDill AFB. The City of Tampa supplies potable water to MacDill AFB. The primary source of water for the City of Tampa is the Hillsborough River. During the dry season, the City also purchases water from Tampa Bay Water (TBW). This source is supplied from the TBW Aquifer Storage and Recovery (ASR) system, groundwater, surface water, and desalinated seawater supplies. There are no potable water supply wells located on MacDill AFB.

The water table in the surficial aquifer is shallow and ranges from land surface near Tampa Bay and tidal creeks to approximately five feet below land surface at inland locations. Groundwater levels and flow directions generally are determined by low gradients and are tidally influenced by ditches and canals and by Hillsborough and Tampa Bays. The direction of groundwater flow in the surficial aquifer is generally radial from the north-central portion of the Base towards the coastline. Groundwater mounding or a localized elevation of the water table above natural levels has been shown to occur in the golf course area where reclaimed water from the on-base wastewater treatment plant is applied by spray irrigation.

Groundwater quality has been affected by past and present Base activities. Elevated volatile organic compound concentrations have been found in surficial aquifer groundwater at various sites that contain or contained petroleum storage tanks, including Site 1 of the Proposed Action and sites 1, 2 and 3 of the Alternative to the Proposed Action. **Figure 3-2** indicates the locations of Areas of Environmental Constraint. Elevated metals concentrations have been found in areas

of former landfills. Elevated nitrate, nitrite, and pesticide concentrations have been identified in golf course areas.

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 3-2. MacDill AFB Areas of Environmental Constraint

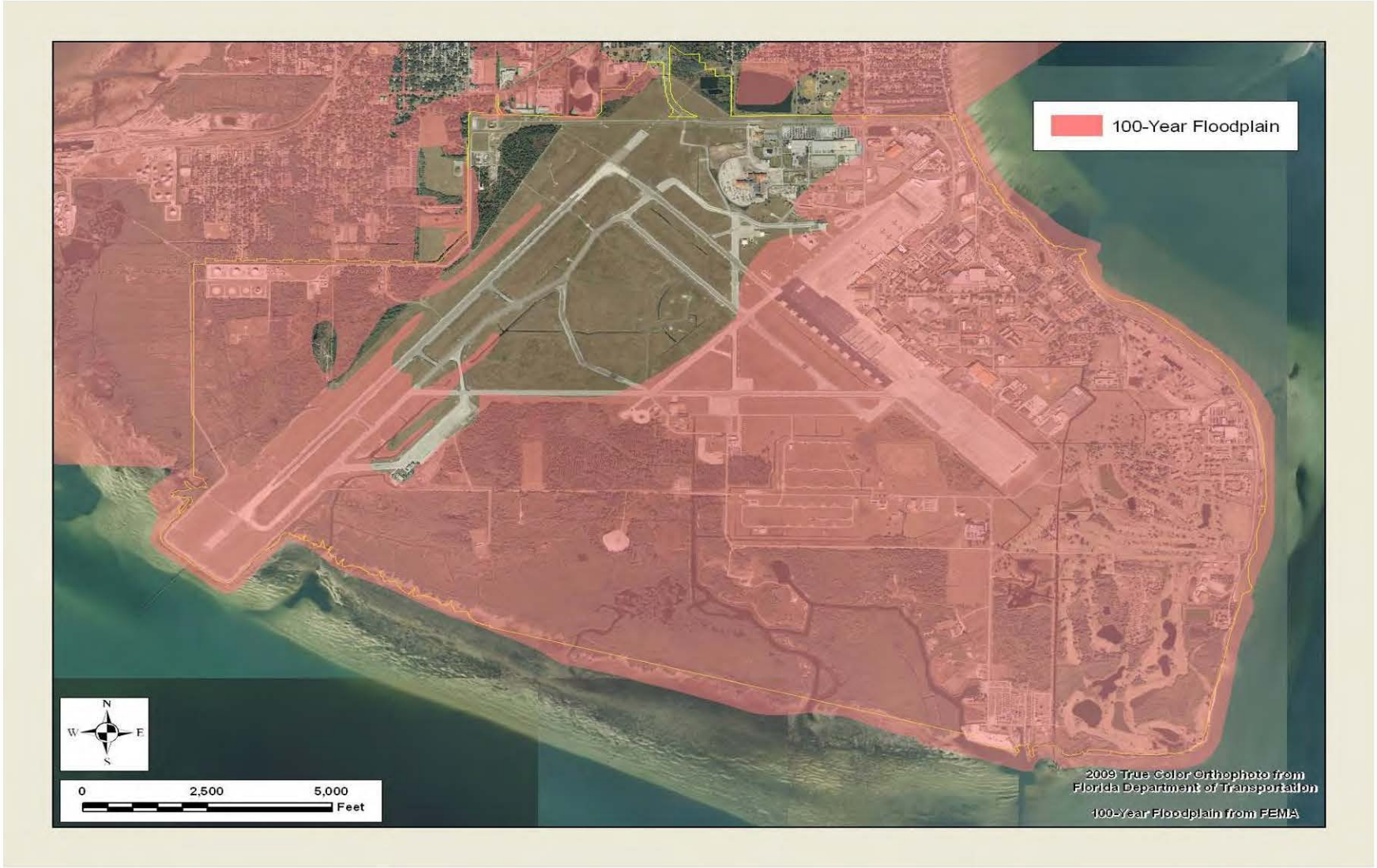
THIS PAGE INTENTIONALLY LEFT BLANK

3.7 FLOODPLAINS

According to information provided by the Federal Emergency Management Agency (FEMA Maps dated 2008), 80 percent (4,510 acres) of the Base is within the 100-year floodplain. **Figure 3-3** indicates that the residential, industrial, and institutional land uses on the Base are within the 100-year floodplain, along with most of the commercial and aviation support areas. Furthermore, the runway and airfield occupy approximately 80 percent of land mass outside the floodplain on MacDill AFB and is constrained from being developed for safety reasons (clear zones, noise constraints). Drainage ditches, culvert, roads and sidewalks occupy another 17 percent. Therefore, less than three percent of the land mass is outside the 100-year floodplain and suitable for development.

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 3-3. Location of 100-Year Floodplain



THIS PAGE INTENTIONALLY LEFT BLANK

Executive Order (EO) 11988, *Floodplains Management,* requires Federal agencies to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains. Federal agencies are required to evaluate the potential effects of any action it takes in the floodplain to ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplains management. When an action is proposed for location in the floodplain, the Air Force is required to consider alternatives to avoid adverse effects and incompatible development in the floodplain. When the only practicable alternative consistent with the law and with the policy set forth in the EO requires siting in the floodplain, the project must be designed or modified to minimize the potential harm to the floodplain. Finally, the agency is required to provide public notice and an opportunity for public comment prior to proceeding with any action in the floodplain.

3.8 BIOLOGICAL RESOURCES

Land use on MacDill AFB is designated as either: airfield, urban, industrial, light industrial, commercial institutional (educational and medical) residential, recreational or improved vacant land. The improved vacant land includes cleared open fields, grassed areas, treated wastewater spray fields, and the golf course. The developed and semi-developed areas on the Base comprise approximately 3,500 acres of the 5,630-acre Base. The undeveloped areas within the Base boundaries have experienced some degree of disturbance, such as ditching, clearing, or the encroachment of exotic vegetation. The unimproved vegetative communities include forested uplands and shrub-scrub wetlands.

3.7.1 Wetlands and Waters of the United States

The 1998 Wetland Delineation Study identified, delineated, and classified approximately 1,195 acres of wetlands on MacDill AFB (USAF, 1998). Wetland systems included palustrine wetlands (315 acres) and estuarine wetlands (880 acres). Mangrove wetlands are the principal estuarine wetland community on the Base. Black mangrove (*Avicennia germinans*) and white mangrove (*Laguncularia racemosa*) are the dominant species. Red mangrove (*Rhizophora mangle*) is also present at the waterward fringes of the community. The mangroves have been negatively impacted by historic dredge and fill activities and the excavation of mosquito ditches.

However, despite these impacts, this community type provides valuable wildlife habitat and is protected by state and local regulations.

A jurisdictional wetland survey performed by a USACE-certified wetland delineator indicated the locations of Waters of the United States, and jurisdictional wetlands at MacDill AFB (USAF, 1998). This survey serves as a useful planning and habitat management tool. All of the upland cut drainage ditches on MacDill AFB are classified as Waters of the United States.

3.7.2 Wildlife

Representatives from the Florida Fish and Wildlife Conservation Commission (FFWCC), National Audubon Society, and the Tampa Bay Sanctuaries completed an evaluation of the wildlife habitat on MacDill AFB in 1992 (Paul, 1992). These surveys determined that the habitat quality ranged from poor to excellent, with the upland forested communities considered poor and the mangrove wetlands considered excellent. The upland forested habitat has been degraded for native fauna due to the suppression of the natural fire cycle, the fragmentation of the habitat, and the invasion of exotic vegetation. The mangrove wetland habitat has been degraded somewhat by the excavation of mosquito ditches and the deposition of spoil within the wetlands. However, the large contiguous habitat area that the mangroves provide and the relative inaccessibility to humans have increased the habitat value.

The surveys also included an evaluation of the wildlife species present and potentially present on the Base. The species observed during the surveys included one reptile, 10 mammals, and 79 birds. Based on the types of habitat available, the survey concluded that 20 reptiles, 17 mammals, and 155 birds might occur within the boundaries of the Base.

3.7.3 Endangered, Threatened, and Special Concern Species

Wildlife species listed by Federal or state agencies as endangered, threatened, or of special concern and known to occur permanently or periodically, or have the potential to occur on the Base are shown in **Table 3.7.3**. The majority of the listed species is associated with the mangrove community and includes shore birds, wading birds, and raptors. These species use the mangrove community primarily for foraging and nesting.

The forested upland communities provide habitat for several state and federally listed species. The southeastern American kestrel, the burrowing owl, and gopher tortoise have been observed within this community on the Base. Other listed species that may occur in this habitat include gopher frog, Florida pine snake, short-tailed snake, Bachman's warbler, and Florida mouse. A bald eagle nest is located on MacDill AFB; however, the nest tree is located a significant distance southwest of Spill Gate 1, west-southwest of Spill Gate 2 and west of Spill Gate 3. A breeding pair of bald eagles has repeatedly nested on MacDill AFB for many years. Over the last 15 years the eagles have occupied three different nest locations, the first nest was abandoned around 1998 in favor of a new location closer to the South Ramp. The new nest tree was blown over a few years later during tropical storm Gabriel in September 2001. In 2003, the eagles constructed a new nest in a longleaf pine tree in the middle of the Munitions Storage Area. Although the tree has since succumb to pine beetles, the dead tree is still standing and the nest continues to be occupied during the breeding season. A 660-foot "clear zone" has been established around the nest site. A possible second bald eagle nest was recently identified on the far west side of MacDill AFB on top of the Digital Global Positioning System tower south of the Defense Fuel Supply Point facility. Nesting activity has not been confirmed yet.

In 1996, the *Biological Survey of MacDill AFB* and the *Endangered Species Management Plan MacDill AFB* identified the general locations of protected species at MacDill AFB (USAF, 1996a and 1996b). In 2005, MacDill AFB completed an updated Endangered Species Population Survey (USAF, 2005). **Table 3.7.3** represents species identified at MacDill AFB that are currently listed by FFWCC and the US Fish and Wildlife Service as endangered, threatened or species of special concern, or are a candidate for listing.

Table 3.8.3 Summary of Protected Species Identified at MacDill AFB

Common name	Scientific Name	Status	
		Federal	State
Reptile/Amphibians			
American alligator	*Alligator mississippiensis*	T (S/A)	-
Atlantic loggerhead turtle	*Caretta caretta*	T	-
Atlantic green turtle	*Chelonia mydas*	E	-
Gopher tortoise	*Gopherus polyphemus*	C2	T
Gopher frog	*Lithobates capito*	-	SSC
Florida pine snake	*Pituophis melanoleucus mugitus*	-	SSC
Short-tailed snake	*Stilosoma extenuatum*	-	T

Common name	Scientific Name	Status	
		Federal	State
Birds			
Limpkin	*Aramus guarauna*	-	SSC
Burrowing owl	*Athene cunicularia*	-	SSC
Piping plover	*Charadrius melodus*	T	-
Southeastern snowy plover	*Charadrius alexandrinus tenuirostris*	-	T
Little blue heron	*Egretta caerulea*	-	-
Reddish egret	*Egretta rufescens*	-	SSC
Snowy egret	*Egretta thula*	-	SSC
Tricolored heron	*Egretta tricolor*	-	SSC
White ibis	*Eudocimus albus*	-	SSC
Southeast American kestrel	*Falco sparverius paulus*	-	T
Florida sandhill crane	*Grus canadensis pratensis*	-	T
American oystercatcher	*Haematopus palliatus*	-	SSC
Wood stork	*Mycteria americana*	E	-
Brown pelican	*Pelecanus occidentalis*	-	SSC
Roseate spoonbill	*Platalea ajaja*	-	SSC
Least tern	*Sterna antillarum*	-	T
Roseate tern	*Sterna dougalii dougalii*	T	-
Bachman's warbler	*Vermivora bachmanii*	E	-
Black skimmer	*Rynchops niger*	-	SSC
Mammals			
Florida mouse	*Podomys floridanus*	-	SSC
West Indian (FL) manatee	*Trichechus manatus*	E	-
Fish			
No State or Federally listed fish species are known to exist on Base		-	-
Plants			
No State or Federally listed plant species are known to exist on Base		-	-

T=Threatened, T (SA) =Threatened/Similarity of Appearance, E= Endangered, SSC= Species of Special Concern, C2=Candidate for listing
Source: Florida's Endangered and Threatened Species (FFWCC, 2011)

The locations of the Proposed Action and Alternative to the Proposed Action are potentially utilized for foraging by such listed wading bird species as the little blue heron, reddish egret, snowy egret, tricolored heron, white ibis and wood stork, but are not critical habitat for any listed wildlife species.

3.9 TRANSPORTATION

MacDill AFB is served by four operating gates on the north side of the base: Dale Mabry Highway, Bayshore Boulevard, MacDill Avenue, and Tanker Way. The Dale Mabry, Bayshore,

and MacDill gates are used for government and personal vehicles (commuter traffic). The large vehicle (contractor trucks, delivery vehicles, and recreational vehicles) entry point is the Tanker Way gate. Large vehicles are inspected, and their credentials and destinations are confirmed before entering the base.

Sections of Bayshore Boulevard near Gandy Boulevard and sections of Gandy Boulevard west of Dale Mabry currently operate at congested levels of service. The transportation system on Base consists of arterial and collector roads, and local streets that connect with the off-base network through the four gates. On-base arterial facilities include North and South Boundary Boulevard, Bayshore Boulevard, Marina Bay Drive, and Tampa Point Boulevard.

Spill Gate 1 of the Proposed Action is located adjacent to Bayshore Blvd., a major thoroughfare within the heavily developed portion of the Base. Spill Gates 2 and 3 of the Proposed Action are located adjacent to Marina Bay Dr., a much less utilized road, within areas of improved vacant land.

3.10 SAFETY AND OCCUPATIONAL HEALTH

A safe environment is defined as one in which there is an absence of, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Human health and safety addresses (1) workers' health and safety during demolition and construction activities and (2) public safety during demolition and construction activities and during subsequent operations of those facilities (Headquarters Air Mobility Command [AMC], 2007).

Construction site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. Numerous DOD and USAF regulations designed to comply with standards issued by the Occupational Safety and Health Administration (OSHA) and USEPA safeguard the health and safety of on-site military and civilian workers. These standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors.

All contractors performing construction activities are responsible for following ground safety and OSHA regulations and are required to conduct construction activities in a manner that does not pose a risk to workers or installation personnel. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and use and availability of Material Safety Data Sheets. Industrial hygiene is the responsibility of contractors and USAF personnel, as applicable. Contractor responsibilities include the following: to review potentially hazardous workplaces; to monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous material), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; to recommend and evaluate controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures or engaged in hazardous waste work.

In addition, EO 13045 requires that Federal agencies identify and assess environmental health and safety risks that might disproportionately affect children. The Proposed Action would not pose any adverse or disproportionate environmental health or safety risks to children living near the base. Safety precautions routinely employed during construction activities, such as construction fencing, would be applied to ensure that adverse health of safety risks to children, nearby residents, military personnel, and/or any other person on base are eliminated.

3.11 GEOLOGY AND SOILS

Geological resources consist of the earth's surface and subsurface materials. Within a given physiographic province, these resources typically are described in terms of topography, soils, geology, minerals, and, where applicable, paleontology.

Topography. Topography pertains to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features. The topography at the proposed Spill Gates can be described as generally flat with only localized very gentle slopes to depressions and drainage features. Topography of the surrounding land at Spill Gate 1 of the Proposed Action ranges from approximately 5.80 to 6.28 feet above mean sea level, at Spill Gate 2 from approximately 3.31 to 6.15 feet above mean sea level and at Spill Gate 3 from approximately 3.00 to 4.49 feet above mean sea level.

Geology. Geology, which concerns itself with the study of the earth's composition, provides information on the structure and configuration of surface and subsurface features. Such information derives from field analysis based on observations of the surface and borings to identify subsurface composition. Hydrogeology extends the study of the subsurface to water-bearing structures. Hydrogeological information helps in the assessment of groundwater quality and quantity and its movement.

The geological resources information provided in this EA was obtained from the *MacDill Air Force Base General Plan* (USAF, 2010a) and the INRMP (USAF, 2010b). MacDill AFB is in the Pamlico Terrace, which rises gently from the coast to about 25 feet above sea level. Elevations on the base range from sea level at the southern edge to about 15 feet above sea level in the northern portions. Much of the base is less than 5 feet above mean sea level.

MacDill AFB is situated in the Gulf Coastal Lowlands physiographic region. There are three principal lithologic sequences in the area. The top unit is unconsolidated sand, clay, and marl. This unit might include remnants of the Hawthorn Formation composed of sand, clay, and thin lenses of limestone. Sands in this unit range from five to 20 feet thick with clay layers up to 40 feet thick. This surficial layer is very thin or even absent on the eastern side of the base, and underlying limestone formations sometimes outcrop in this area. The next deepest layer is composed of Tampa and Suwannee Limestone, which range from 250 to 500 feet thick. Below this layer are the Ocala Group; Avon Park, Lake City, and Oldsmar Limestone; and Cedar Keys Limestone, which are about 2,300 feet deep.

Sinkholes are common in the Hillsborough County area, but they are uncommon on MacDill AFB because of overlying impervious layers of clay, limited groundwater recharge, and the presence of a slow discharge zone for the Floridan Aquifer. There has also been considerable amount of fill material used at MacDill AFB. Most of this material originated from dredging activities in the surrounding bays. Erosion is an ongoing problem along Gadsden Point at the southeastern corner of the Bay Palms Golf Complex. There is also a problem with sand washing in the boat channel leading to the base marina.

Soils. Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics.

Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

Eight soil series are found within MacDill AFB: Myakka, Urban Land, St. Augustine, Wabasso, Malabar, Arents, Pomello, and Tavares. Two MacDill AFB soils, Myakka Fine Sand and Malabar Fine Sand, are hydric and thus have jurisdictional wetland implications. Myakka Fine Sand (frequently flooded) is within tidal areas and occurs mainly on mangrove areas. These soils are subject to tidal flooding, are very level, and poorly drained. Malabar Fine Sand is generally adjacent to the Myakka Fine Sand. This includes flatwood areas, portions of the golf course, and some development. They are nearly level and poorly drained, often occurring in low-lying sloughs and shallow flatwoods depressions. Myakka is a hydric soil association with Myakka Fine Sand found in tidal areas associated with mangroves. Malabar Fine Sand is also a hydric soil found adjacent to Myakka Fine Sand. There are no prime or unique farmland soils on MacDill AFB. Soils at Spill gate 1 of the Proposed Action are mapped as Urban Land, at Spill Gate 2 as Myakka fine sand, and at Spill Gate 3 as St. Augustine – Urban Land Complex.

SECTION 4.0
ENVIRONMENTAL CONSEQUENCES

This section presents an analysis of the potential environmental consequences of the Proposed Action, the Alternative to the Proposed Action, and the No Action Alternative on the environmental resource areas evaluated in **Section 3.0**. The Proposed Action is the construction of Spill Gates at the locations proposed in **Section 2.2**. Potential environmental consequences of the Proposed Action are evaluated separately in **Section 4.0**. The Alternative to the Proposed Action includes the construction of sluice gates at nine airfield outfall locations. The No Action Alternative was also considered as an alternative to the implementation of the Proposed Action.

4.1 APPLICABLE REGULATORY REQUIREMENTS

This environmental analysis has been conducted in accordance with the President's Council on Environmental Quality (CEQ) regulations, Title 40 of the Code of Federal Regulations (CFR) §§1500-1508, as they implement the requirements of the National Environmental Policy Act (NEPA) of 1969, 42 USC. §4321, et seq., and Air Force Instruction (AFI) 32-7061 Environmental Impact Analysis Process (EIAP), as promulgated in 32 CFR Part 989. These regulations require Federal agencies to analyze the potential environmental impacts of proposed actions and alternatives and to use these analyses in making decisions on a proposed action. Cumulative effects of other ongoing activities also must be assessed in combination with the Proposed Action. The CEQ was instituted to oversee Federal policy in this process. The CEQ regulations declare that an EA is required to accomplish the following objectives:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI);
- Aid in an agency's compliance with NEPA when an EIS is not necessary, and facilitate preparation of an EIS when necessary.

Procedurally, 32 CFR 989 specifies the requirements for the implementation of NEPA and preparation of the EA.

This EA identifies other environmental regulatory requirements relevant to the Proposed Action and Alternatives to the Proposed Action. Regulatory requirements under the following programs were assessed: Noise Control Act of 1972; Clean Air Act; Clean Water Act; National Historic Preservation Act; Endangered Species Act; Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA) of 1970; and Occupational Safety and Health Act. Requirements also include compliance with Executive Order (EO) 11988, Floodplain Management; EO 11990, Protection of Wetlands; Federal Coastal Zone Management Act; and EO 12898 and EO 13045 Environmental Justice.

4.2 AIR QUALITY

4.2.1 Proposed Action

Air quality impacts would occur during construction of new Spill Gates; however, these air quality impacts would be minor and temporary in nature. Fugitive dust (particulate matter) and construction vehicle exhaust emissions would be generated by (1) equipment operation; and (2) entrainment of dust particles by the action of the wind on exposed soil surfaces and debris. The quantity of fugitive dust emissions from the construction (and demolition) site is proportional to the land disturbed and the level of construction activity. These emissions would be greater during the new area site grading. Emissions would vary daily depending on soil moisture and winds. Equipment movement in the limit construction sites would generate dust that would fall rapidly within a short distance from the source.

Chapter 62-296.320(4)(c), FAC, requires that no person shall allow the emissions of unconfined particulate matter or fugitive dust from any activity (including vehicular movement, transportation of materials, construction, demolition, or wrecking, etc.) without taking reasonable precautions to prevent such emissions. Reasonable precautions include:

- Paving and maintenance of roads, parking areas, and yards;
- Applications of water or chemicals (foam) to control emissions from activities such as demolition, grading roads, construction, and land clearing;

- Application of asphalt, water, or other dust suppressants to unpaved roads, yards, open stock piles, and similar areas;
- Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from building or work areas to prevent particulates from becoming airborne; and
- Landscaping or planting of vegetation.

Pollutants from construction equipment and vehicle engine exhausts include NO_x, CO, PM_{10}, $PM_{2.5}$, and VOCs. Internal combustion engine exhausts would be temporary and, like fugitive dust emissions, would not result in long-term impacts.

Additional sensitivity to dust impacts to residential locations should be taken into consideration. In an effort to minimize dust impacts to extent possible in the area of the Proposed Action, efforts would be employed to prevent the staging of equipment and/or any unnecessary materials near the sites. Construction fencing and silt screening would be utilized along the border of the disturbed areas to minimize dust impacts associated with construction. In order to evaluate the air emissions and their impact to the overall region, the emissions associated with Proposed Action activities were compared to the total emissions on a pollutant-by-pollutant basis for the Hillsborough County's 2002 inventory data, as presented in **Section 3.2.2**.

Significant impacts to air quality would be the total emissions of any pollutant that equals ten percent or more of the county's emissions for that specific pollutant or if the total emissions of any pollutant equals or exceeds 100 tpy. This criteria approach is used as an indicator for impact analysis to provide a consistent approach to evaluating the impact of construction. Pollutant emission estimates for the Proposed Action are presented in **Appendix D** and summarized in **Table 4.2.1**. As stated in Section 3.2, MacDill AFB is located in Hillsborough County, which is in attainment or unclassifiable for all criteria pollutants.

Table 4.2.1 Proposed Action Air Emissions at MacDill AFB

Pollutant	Proposed Action Annual Emissions (tpy)	Hillsborough County Emissions Inventory[a] (tpy)	Proposed Action Net Change (%)	Conformity Rate[b] (tpy)	Above/ Below Rate
CO	0.02	6,517	0.004	100	Below
VOC	0.00	34,880	0.000	100	Below
NO_X	0.06	58,191	0.001	100	Below
SO_X	0.00	65,890	0.000	100	Below
PM10[b]	1.39	22,379	0.062	100	Below
PM2.5	0.14	7,221	0.020	100	Below

a Based on stationary emissions presented in Table 3.1.2.
b Source: 40 CFR 93.153, November 30, 1993.
tpy tons per year
% Percent

As shown in **Table 4.2.1**, the Proposed Action would generate emissions well below 10 percent of the emissions inventory for Hillsborough County and are below the conformity rates as stated in 40 CFR 93.153(b). In addition, the emissions would be short-term in nature. Therefore, no significant impact on regional or local air quality would result from implementation of the Proposed Action.

4.2.2 Alternative to the Proposed Action

The Alternative to the Proposed Action would be nine alternate locations in lieu of the three sites chosen as the Proposed Action, as discussed in **Section 2.3**. This alternative would result in equal or lesser environmental impacts when compared to the Proposed Action. As shown in **Table 4.2.2**, the Alternative to the Proposed Action would generate emissions well below 10 percent of the emissions inventory for Hillsborough County and are below the conformity rates as stated in 40 CFR 93.153(b). In addition, the emissions would be short-term in nature. Therefore, no significant impact on regional or local air quality would result from implementation of the Alternative to the Proposed Action, or in any combination with the Proposed Action.

Table 4.2.2 Alternative to the Proposed Action Air Emissions at MacDill AFB

Pollutant	Alternative to the Proposed Action Annual Emissions (tpy)	Hillsborough County Emissions Inventory[a] (tpy)	Net Change (%)	Conformity Rate[b] (tpy)	Above/ Below Rate
CO	0.01	6,517	0.001	100	Below
VOC	0.00	34,880	0.000	100	Below
NO_X	0.02	58,191	0.000	100	Below
SO_X	0.00	65,890	0.000	100	Below
PM10[b]	0.20	22,379	0.009	100	Below
PM2.5	0.02	7,221	0.003	100	Below

a) Based on stationary emissions presented in Table 3.1.2.
b) Source: 40 CFR 93.153, November 30, 1993.
tpy tons per year

4.2.3 No Action Alternative

The No Action Alternative would result in no new construction. Therefore, no impacts to air quality would result from the No Action Alternative.

4.3 NOISE

The meaning of noise for this analysis is undesirable sound that interferes with speech communication and hearing, or is otherwise annoying (unwanted sound).

4.3.1 Proposed Action

The Proposed Action would occur outside the 65 dB contour resulting from noise analysis of typical airfield operations, as detailed in **Figure 3.1**. Noise impacts from construction activities associated with the Proposed Action would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Normally, construction activities are completed in stages and each stage has its own noise characteristics based on the mixture of construction equipment in use.

The highest calculated cumulative energy equivalent sound levels from construction activities are estimated to be approximately 101 dB at 50 feet from the point where work is being conducted. It is anticipated that levels will reduce to 85 dB when the pile driving portion of the construction has been completed. According to the Federal Highway Administration (FHWA) website,

http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm,

typical construction noise levels at 50 feet for equipment used during construction include the following: 82 dB for bulldozers, 81 dB for cranes, 78 dB for backhoes, 74 dB for flat bed trucks and 101 dB for impact pile drivers. Pile driving would result in the highest noise levels that would be an annoyance to surrounding occupied areas.

Given the extent of the projects under the Proposed Action and the proximity to populations' on-base, impacts from construction noise are unavoidable. Facility occupants likely to experience noise in the immediate vicinity of Spill Gate 1 of the Proposed Action include the Marine Corps Forces Central Command (MARCENT) Facilities, US Central Command (USCENTCOM) and USCENTCOM Coalition Village Facilities, Enlisted Dining Club and Security Forces. Facility occupants likely to experience noise in the immediate vicinity of Spill Gate 2 of the Proposed Action include the Joint Communications Support Element. Facility occupants likely to experience noise in the immediate vicinity of Spill Gate 3 include the 290th Joint Communication Support Squadron, Satellite Communications Facility and the Naval Reserve Facility.

Tinker Elementary School is approximately 1,850 feet from the action area of Spill Gate 2. Based upon FHWA calculations, noise from pile driving would be approximately 70 dB at this distance. The Youth Center and Child Care facilities are 3,300 feet and 3,500 feet respectively from the action area of Spill Gate 1. Based upon FHWA calculations, noise from pile driving would be 65 dB and 64 dB at these locations. These calculations do not take into account buffering of noise by intervening structures, which would further reduce the sound level.

In an effort to minimize noise impacts to the extent possible, construction would only occur during the daylight hours, and construction equipment would be used only as necessary and would be maintained to the manufacturer's specifications to minimize noise impacts. Efforts would be employed to prevent the staging of equipment and/or any unnecessary materials near occupied buildings and roads. Construction fencing would be utilized to minimize impacts associated with construction. The magnitude of these impacts would be directly tied to the proximity of the occupied facility to the construction site. The impacts may vary according to the activity occurring on any particular day, and impacts would cease when construction is completed, anticipated to be four months each and may be concurrent. It is not anticipated that the short-term increase in ambient noise levels from the Proposed Action would cause significant adverse impacts on the surrounding populations.

Under the Proposed Action, potential noise impacts to the above-mentioned facilities would occur during the installation of the pilings. Once the proposed projects are completed, the ambient noise level would return to its normal level. Consequently, the Proposed Action would have an insignificant impact on noise at MacDill AFB.

4.3.2 Alternative to the Proposed Action

The Alternative to the Proposed Action would be sluice gates at nine alternate locations in lieu of the three sites chosen for the Proposed Action, as discussed in **Section 2.3**. This alternative would require standard construction equipment as in the Proposed Action however; pile driving would not be required. Therefore, insignificant impact on noise at MacDill AFB would result from implementation of the Alternative to the Proposed Action.

4.3.3 No Action Alternative

The No Action Alternative would result in no new construction; therefore, no impacts on noise would result from the No Action Alternative.

4.4 WASTE

4.4.1 Proposed Action

A temporary increase in the generation of solid waste would occur during construction activities associated with the Proposed Action. Construction materials would be recycled to the extent practicable. The construction materials that could not be recycled would be loaded into roll-off dumpsters and hauled off base for disposal at a certified construction and demolition debris landfill in the local area. Local off-base waste handling services/facilities have sufficient capacity to handle this increased output.

Waste anticipated to be generated by the Proposed Action includes, but is not limited to, concrete rubble, framing boards, rebar, unsuitable soils, pallets, metal strapping and wood scraps.

Contractors would be required to properly manage and dispose of their own wastes. Based on these conditions, the implementation of the Proposed Action would have an insignificant impact to the Base's waste management program.

4.4.2 Alternative to the Proposed Action

A temporary increase in the generation of solid waste would also occur during construction activities associated with the Alternative to the Proposed Action. As the Alternative to the Proposed Action would require the demolition and replacement of some, if not all, of the nine existing outfall headwalls to facilitate the construction of sluice gates, it is anticipated this action would generate a larger volume of construction waste than the Proposed Action.

As with the Proposed Action, contractors would be required to properly manage and dispose of their own wastes. Based on these conditions, the implementation of the Alternative to the Proposed Action would have an insignificant impact to the base's waste management program.

4.4.3 No Action Alternative

The No Action Alternative would result in no new construction; therefore no impacts on waste would result from the No Action Alternative.

4.5 ENVIRONMENTAL RESTORATION PROGRAM

4.5.1 Proposed Action

The following section describes hazardous materials covered under the Environmental Restoration Program. Additional hazardous materials and hazardous waste are addressed in Section 3.1.

4.5.1.1 Environmental Restoration Program

Spill Gates 2 and 3 of the Proposed Action do not involve construction in any portion of an ERP site. However, Spill Gate 1 of the Proposed Action would involve construction in a portion of ERP site SWMU-61. None of the constituents of concern at the site represents an immediate threat to life and health. SWMU 61 is an area designated as a groundwater contamination plume of low-level chlorinated solvents and petroleum that extends from the north ramp east to Hillsborough Bay, and underlies the proposed site of Spill Gate 1 of the Proposed Action.

Due to the excavation required to construct the temporary diversion ditches and install the support structure for Spill Gate 1, it is likely that contaminated media will be encountered. Consequently, the construction contractor would be required to prepare a site-specific health and safety plan that meets the requirements of 29 CFR 1910.120(b) (4). In addition, the construction contractor must use workers that have received 40-hour Hazardous Waste Operator training with an 8-hour annual refresher in accordance with 29 CFR 1910.120 for those portions of the project where exposures could potentially occur. If contaminated media is encountered during construction work, the MacDill ERP manager would be contacted to insure that the material is managed in accordance with ERP guidelines.

Produced groundwater at Spill Gate 1 is not to be discharged back to the site. The Contractor must contain and test all removed groundwater, and provide the test results to 6 CES/CEVR prior to any action. Based on the test results, the Contractor has the following options:

1. If the test results are below FDEP Groundwater Cleanup Target Levels (GCTLs), the Contractor may discharge the groundwater to stormwater drainage system in accordance with the requirements of the FDEP;

2. If the test results are above FDEP GCTLs, the contaminated groundwater must be transported off-site for disposal/treatment.

Based on these conditions, the implementation of the Proposed Action would have an insignificant impact on the ERP Program.

4.5.2 Alternative to the Proposed Action

The Alternative to the Proposed Action would be the construction of nine sluice gates outfalls in different locations in lieu of the three sites chosen as the Proposed Action, as discussed in **Section 2.3**. Under the Alternative to the Proposed Action, Sluice Gates 1, 2 and 3 would be constructed within SWMU-61. As excavation would be required to construct diversion ditches and replace or repair the culvert headwalls, greater impacts to ERP may result from the Alternative to the Proposed Action. Though more than the Proposed Action, the cumulative impacts of the nine sluice gates would still be minimal and not considered a significant impact.

4.5.3 No Action Alternative

The No Action Alternative would result in no new construction. Therefore, no impacts to ERP would result from the No Action Alternative.

4.6 WATER RESOURCES

Water resources at MacDill AFB consist of stormwater, and other surface waters, and groundwater. Potential impacts to these resources include erosion and siltation, and impacts to fish, wildlife and aquatic vegetation through degradation of water quality.

4.6.1 Proposed Action

A small amount of soil erosion may occur during construction since portions of the soil surface would be exposed and disturbed during the Proposed Action. Soil erosion in areas that are disturbed would be minimized by implementing a sediment and erosion control plan, adopting Best Management Practices (BMPs) such as temporary sediment basins, silt fencing, re-vegetation of disturbed areas, berms and rip-rap to prevent scour. There would be no long-term impacts to water resources once the project is complete.

Under the Proposed Action, there are no direct discharges to groundwater. The Proposed Action would have a net increase of impervious surface on the Base by approximately 675 sq ft (0.01 acre) from the construction of sidewalks at Spill Gates 1 and 3. The increased impervious surface would cause an insignificant reduction in the potential for rainwater or floodwater to infiltrate quickly and evenly. This increase in impervious surface would result in an insignificant increase in untreated stormwater under the Proposed Action.

The construction contractor will submit a Notice of Intent to apply for coverage under the Florida NPDES Construction Generic Permit (CGP) for Stormwater Discharge from Large and Small Construction Activities. Per the permit requirements, contractor will prepare and adhere to a Storm Water Pollution Prevention Plan (SWPPP) to minimize erosion, sedimentation and other pollutants on and off the site.

Implementation of the Proposed Action would have no impact to the existing potable water usage of the Base.

4.6.2 Alternative to the Proposed Action

The Alternative to the Proposed Action would be nine sluice gates at existing outfall locations in lieu of the three sites chosen as the Proposed Action, as discussed in **Section 2.3**. The Alternative to the Proposed Action would involve a greater number of construction sites, diversion canals and sidewalks than the Proposed Action; however, the cumulative impacts to water resources from the nine sluice gates would be minimal and not considered a significant impact.

Implementation of the Alternative to the Proposed Action would have no impact to the existing potable water usage of the Base.

4.6.3 No Action Alternative

The No Action Alternative would result in no new construction. Therefore, no impacts to water resources would result from the No Action Alternative.

4.7 FLOODPLAINS

In accordance with the requirements of EO 11988, the Air Force must demonstrate that there is no practicable alternative to carrying out the Proposed Action within the flood pool or floodplain. MacDill AFB covers 5,638 acres of land at the southern tip of the Interbay Peninsula. Approximately 80 percent of the land at MacDill, or about 4,510 acres, is located in the 100-year floodplain. The Proposed Action is located within the 100-year floodplain. As a result, the project would involve construction in the 100-year floodplain, as well as an increase in impervious surface in the floodplain. Consequently, impacts to the floodplain must be addressed.

The EA considered all potential impacts of the proposed action and alternatives, both as solitary actions and in conjunction with other proposed activities. The USAF publishes and seeks public comment on the EA. It is impossible to meet the Purpose of and Need for the Action and avert the 100-year floodplain. Therefore, there is no practical alternative to completing the Proposed Action in the floodplain. The Finding of No Practicable Alternative (FONPA) summarizes the conclusion reached regarding the location of the Proposed Action in a floodplain to satisfy the requirements of Executive Order 11988.

4.7.1 Proposed Action

The Proposed Action is located in the 100-year floodplain. The project would have a minor negative impact to the floodplain due to an increase in total impervious surface. The Proposed Action would result in a net increase in impervious surface of approximately 675 sq ft (0.01 acre). This increase represents the use of an insignificant percent of the total acreage located in the floodplain. The increased impervious surface would cause a reduction

in the potential for rainwater or floodwater to infiltrate quickly and evenly. This minor increase in runoff has the potential of causing an insignificant increase in the pollutant loading on Hillsborough Bay. In addition, the spill gates have been designed and sized so as not to impede the flow of water within the ditches. Therefore, no upstream flooding would occur due to the Proposed Action. Based on these conditions, the Proposed Action would not have a significant impact on the 100-year floodplain.

All sites considered under the Proposed Action and Alternative to the Proposed Action would temporarily affect surface waters jurisdictional to USACE, SWFWMD and FDEP. However, these agencies have determined that the Proposed Action or Alternative to the Proposed Action would not result in impacts to wetlands or require mitigation.

In accordance with EO 11988, *Floodplain Management*, the USAF must demonstrate that there are no practicable alternatives to construction within a floodplain. It is impossible to meet the Purpose of and Need for the Action and averts the 100-year floodplain. Therefore, there is no practical alternative to completing the Proposed Action in the floodplain. Although the Proposed Action would occur in the 100-year floodplain, long-term use would not permanently damage floodplain values, including fish and wildlife habitat, or water quality. Nor would the Proposed Action pose a threat to human life, health, or safety. Under the Proposed Action, no long-term negative impacts to the floodplain would occur.

4.7.2 Alternative to the Proposed Action

The Alternative to the Proposed Action would be the construction of sluice gates at nine alternate locations in lieu of the three sites chosen as the Proposed Action, as discussed in **Section 2.3**. For the purpose of this EA, it was estimated that the Alternative to the Proposed Action would result in a minor net increase in impervious surface from the construction of sidewalks at a minimum of eight sluice gate locations. The Alternative to the Proposed Action also represents an insignificant increase in impervious use of the total acreage located in the floodplain. Consequently, the Alternative to the Proposed Action would not have a

significant impact on the 100-year floodplain. Under the Alternative to the Proposed Action, no long-term negative impacts to the floodplain would occur.

4.7.3 No Action Alternative

The No Action Alternative would result in no new construction. Therefore, no impacts to floodplain values would result from the No Action Alternative.

4.8 BIOLOGICAL RESOURCES

Biological resources include wetlands and Waters of the United States, wildlife and state and Federal listed species. These are addressed separately below.

4.8.1 Proposed Action

In accordance with EO 11990, *Protection of Wetlands*, the USAF must demonstrate that there are no practicable alternatives to carrying out the Proposed Action. EO 11990 applies to new construction and defines that term to include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of this Order (May 24, 1977). Implementation of the Proposed Action would have a negligible impact on jurisdictional surface waters and no impacts on jurisdictional wetlands.

4.8.1.1 Wetlands

The Proposed Action would not impact wetlands jurisdictional to USACE, SWFWMD or the Environmental Protection Commission (EPC) of Hillsborough County. Consultation with EPC and SWFWMD has been accomplished and these agencies have confirmed that the upland cut drainage ditches throughout MacDill AFB are not classified as jurisdictional wetlands, and that the proposed construction activities at all three locations would not result in wetland impacts which require mitigation (Appendix B). Initial consultation with the USACE has been accomplished, including a site visit to inspect the three proposed construction sites. The USACE considers the upland cut drainage ditches to be Waters of the United States; and the USACE indicated during informal consultation that the proposed construction work would not result in impacts to wetlands or require mitigation (Appendix

B). A formal response from the USACE is pending, and is anticipated to be similar to their informal determination during the site visit.

4.8.1.2 Waters of the United States

The Proposed Action would impact Waters of the United States. By design, the Spill Gates must be constructed within surface waters (drainage ditches) to function as intended. Site 1 of the Proposed Action is within a portion of a drainage ditch running northeast, between South Boundary Blvd. and Bayshore Blvd, at the northeastern terminus of the airfield. This drainage ditch discharges directly into Hillsborough Bay. Site 2 of the Proposed Action is within a drainage ditch running south, east of Marina Bay Dr. and north of McClelland Ave. This drainage ditch discharges directly into Tampa Bay. Site 3 of the Proposed Action is within a drainage ditch running south, north of Marina Bay Dr. and west of Longhorn Trail. This drainage ditch discharges into Lewis Lake, a permitted stormwater management system.

The drainage ditches at the three Proposed Action sites range from approximately 15 feet to 29 feet wide and two to six feet deep. Vegetation within the drainage ditches at the Proposed Action sites is sparse to non-existent, and the edges are vegetated with Bahia grass and a mixture of weedy species. The ditch at Site 1 is tidally influenced, and the ditches at all three of the proposed locations remain inundated under normal conditions. All ditches within MacDill AFB are subject to maintenance to prevent the buildup of vegetation and assorted debris which can restrict flow.

Impacts to Waters of the United States would be avoided through the use of standard erosion and sedimentation control methods. Prior to construction of the Spill gates, diversion canals would be constructed in upland areas around the construction site to maintain flows. The construction areas would then be isolated from the rest of the ditches by the construction of dams. Upon completion of the Spill Gate construction, the dams would be removed and the diversion canals restored.

Construction of the Spill Gates would result in a total of approximately 4,930 ft^2 of permanent impacts to the ditches and would require a Nationwide Permit (NWP) from

USACE and a Standard General Environmental Resource Permit (ERP) from SWFWMD. Coordination with the state and Federal regulatory agencies would also be completed to insure that no environmental issues are overlooked and environmental impacts are reduced. After construction is completed, there would be no changes to water flow while the Spill Gates are open. Consequently, no significant impacts to surface waters are anticipated to occur upon completion of the Proposed Action.

4.8.1.3 Wildlife

Site 1 of the Proposed Action is located in a heavily developed area of the Base adjacent to structures and vehicle parking areas. Sites 2 and 3 of the Proposed Action are located within improved vacant land. Short-term impacts to wildlife that would result from implementation of the Proposed Action include the temporary disturbance of fish and amphibians, wading bird species that utilize the drainage ditches for foraging, and raccoons, opossums, squirrels and other urban wildlife species that utilize the adjacent improved vacant land. While construction activities are occurring, wildlife would be temporarily displaced from within the construction area and, due to the presence of construction equipment and personnel, the immediate surroundings. However, numerous other areas of similar, suitable foraging habitat are available on MacDill AFB. Upon completion of the Proposed Action, wildlife species should return, resulting in no long-term impacts to wildlife from the Proposed Action. Therefore, no significant impacts to wildlife are expected from the implementation of the Proposed Action.

4.8.1.4 Endangered, Threatened, and Special Concern Species

The drainage ditches within which the Proposed Action or Alternative to the Proposed Action would occur and the uplands immediate surrounding the Action areas, are not critical habitat for any listed wildlife species. Some listed wading bird species, such as the little blue heron, reddish egret, snowy egret, tricolored heron, white ibis and wood stork, that may utilize the drainage ditches for foraging would be temporarily displaced from the construction areas and immediate surroundings. However, numerous other areas of similar, suitable foraging habitat are available on MacDill AFB. Consequently, the Proposed Action

would have only minor, short-term insignificant impacts on listed species at MacDill AFB. No long-term impacts to listed species are anticipated to occur as a result of the Proposed Action.

Table 3.7.3 includes the state and federally listed species that potentially occur at MacDill AFB. Coordination with the US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) has been initiated ensure compliance with the Endangered Species Act. Agency correspondence letters are included in **Appendix B**.

4.8.2 Alternative to the Proposed Action

The Alternative to the Proposed Action is the construction of sluice gates at nine alternate locations, as discussed in **Section 2.3**. As with the Proposed Action, standard erosion and sedimentation controls would be utilized during construction, thus minimizing the potential for impacts to wetlands and surface waters. Permanent impacts to the ditches would require permitting through USACE and SWFWMD. Coordination with state and Federal regulatory agencies would be completed to ensure that no environmental issues are overlooked and environmental impacts are minimized.

The Alternative to the Proposed Action would result in the short-term displacement of listed and non-listed wading birds from the nine construction sites and immediate surroundings. As with the Proposed Action, impacts to wildlife and listed species would be minor and temporary, and no substantial long-term impacts to wildlife or listed species would occur.

4.8.3 No Action Alternative

No new construction would occur with implementation of the No Action Alternative and no impacts to biological resources would occur.

4.9 TRANSPORTATION

Impacts to traffic due to the Proposed Action and Alternative to the Proposed Action include additional vehicles entering and leaving the Base, including large trucks transporting

heavy equipment and materials, and impediments to traffic flow at laydown areas and the construction sites.

4.9.1 Proposed Action

The Proposed Action would result in minor and temporary impacts to transportation at the Sites 2 and 3 Spill Gates construction areas due to the presence of construction personnel and equipment in close proximity to Marina Bay Drive and Longhorn Trail.

MacDill AFB is served by four operating gates on the north side of the Base; Dale Mabry Highway, Bayshore Boulevard, MacDill Avenue and Tanker Way gates. The Dale Mabry, Bayshore and MacDill gates are used for government and personal vehicles. The Tanker Way gate is used as the large vehicle (contractor trucks, delivery vehicles and recreational vehicles) entry point. Large vehicles are inspected and their credentials and destinations confirmed before entering the base.

During the implementation of the Proposed Action, construction vehicles will access the Base via the Tanker Way gate and construction personnel would utilize one of the commuter gates. Contractor laydown areas would be designated near the construction sites during the project kick-off stage, and construction personnel would be permitted to park in these areas for the duration of the project. Upon completion of the Proposed Action, all impediments to transportation would be removed.

No long-term impacts to transportation would result from implementation of the Proposed Action.

4.9.2 Alternative to the Proposed Action

The Alternative to the Proposed Action is the construction of sluice gates at nine alternative sites in lieu of the three sites chosen as the Proposed Action, as discussed in **Section 2.3**, and would require a greater number of construction equipment and personnel. Five of the Alternative to the Proposed Action sites are located within close proximity to major Base roads. As with the Proposed Action, upon completion of the Alternative to the Proposed Action construction, all impediments to transportation would be removed.

No significant or long-term impacts to transportation would result from the implementation of the Alternative to the Proposed Action.

4.9.3 No Action Alternative

No new construction would occur with implementation of the No Action Alternative and transportation conditions at the Base would remain unchanged.

4.10 SAFETY AND OCCUPATIONAL HEALTH

4.10.1 Proposed Action

The Proposed Action would pose safety hazards to workers similar to those associated with typical industrial construction projects, such as falls, slips, heat stress, and machinery injuries. Construction would not involve any unique hazards and all construction methods would comply with OSHA requirements to ensure the protection of workers and the general public during construction. Specifically, safety precautions employed during construction activities, such as construction fencing, would be applied to ensure that activities of the Proposed Action do not pose any adverse health or safety risks to any nearby children and/or residents. Governmental oversight of contractor activities would help assure OSHA compliance.

Site 1 of the Proposed Action would involve construction activities in ERP site SWMU 61, and would entail excavations that could potentially encounter contaminated media. None of the chemicals of concern at the site represents an immediate threat to life and health. The construction contractor would be required to prepare a site-specific health and safety plan that meets the requirements of 29 CFR 1910.120(b)(4). In addition, the construction contractor must use workers who have received 40-hour Hazardous Waste Operator training with an 8-hour annual refresher in accordance with 29 CFR 1910.120 for those portions of the project where exposures could potentially occur. If contaminated media is encountered during construction or demolition activities, the MacDill ERP manager would be contacted to insure that the material is managed in accordance with ERP guidelines. Implementation of this work approach would dramatically reduce the potential for impacts to worker health and safety. Testing of groundwater would be required as discussed in **Section 4.5.1.1**.

Consequently, no significant impacts to safety and occupational health would be incurred with implementation of the Proposed Action.

4.10.2 Alternative to the Proposed Action

The Alternative to the Proposed Action is the construction of sluice gates at nine alternate locations in lieu of the three sites chosen as the Proposed Action, as discussed in **Section 2.3**. The Alternative to the Proposed Action would result in additional construction sites within ERP SWMU 61, increasing the potential for worker exposure to contaminated media and groundwater. As in the Proposed Action, the construction contractor would be required to prepare a site-specific health and safety plan that meets the requirements of 29 CFR 1910.120(b)(4). In addition, the construction contractor must use workers who have received 40-hour Hazardous Waste Operator training with an 8-hour annual refresher in accordance with 29 CFR 1910.120 for those portions of the project where exposures could potentially occur. If contaminated media is encountered during construction or demolition activities, the MacDill ERP manager would be contacted to insure that the material is managed in accordance with ERP guidelines. Testing of groundwater would be required as discussed in **Section 4.5.1.1**.

Implementation of this work approach would dramatically reduce the potential for impacts to worker health and safety. Consequently, no significant impacts to safety and occupational health would be incurred with implementation of the Alternative to the Proposed Action.

4.10.3 No Action Alternative

No impacts on safety and occupational health would be incurred under the No Action Alternative.

4.11 GEOLOGY AND SOILS

4.11.1 Proposed Action

Soils exposed during construction of the Proposed Action would be subject to erosion and a small amount of soil erosion is expected during the construction since portions of the

soil surface would be exposed and disturbed. Soil erosion in areas that are disturbed would be controlled by implementation of a sediment and erosion control plan, which would include implementation of BMPs such as temporary sediment basins, silt fencing, re-vegetation of disturbed areas, and containment berms.

This EA has been prepared under the assumption that all non-impervious areas disturbed during construction activities would, at a minimum, be covered with a clean layer of graded fill and sod upon the completion of the Proposed Action. Covering the areas of exposed soil with sod during construction and demolition would significantly reduce the potential for erosion. Overall, the impacts to soils would be minimal and temporary and are not considered significant.

4.11.2 Alternative to the Proposed Action

The Alternative to the Proposed Action is the construction of sluice gates at nine alternate locations in lieu of the three sites chosen as the Proposed Action, as discussed in **Section 2.3**. As with the Proposed Action, soil erosion in areas that are disturbed would be controlled by implementation of a sediment and erosion control plan, which would include implementation of BMPs such as silt fencing, temporary sediment basins, re-vegetation of disturbed areas, and containment berms. Therefore, impacts to soils from the Alternative to the Proposed Action would be minimal and temporary and are not considered significant.

4.11.3 No Action Alternative

No impacts to geology and soils would be incurred with implementation of the No Action Alternative.

4.12 COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

Table 4.13 is a summary of the potential environmental impacts of the Proposed Action, Alternative to the Proposed Action, and the No Action Alternative.

Table 4.13 Comparison of Environmental Consequences

Environmental Resources	Proposed Action – Phase One	Alternative to the Proposed Action	No Action Alternative
Air Quality	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - No Impact Long-term - No Impact
Noise	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - No Impact Long-term - No Impact
Water Resources	Short-term – *Minor Adverse* Long-term - No Impact	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - No Impact Long-term - No Impact
Floodplains	Short-term - *Minor Adverse* Long-term - *Minor Adverse*	Short-term - *Minor Adverse* Long-term - *Minor Adverse*	Short-term - No Impact Long-term - No Impact
Biological Resources	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - No Impact Long-term - No Impact
Transportation	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - No Impact Long-term - No Impact
Safety and Occupational Health	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - No Impact Long-term - No Impact
Geology and Soils	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - *Minor Adverse* Long-term - No Impact	Short-term - No Impact Long-term - No Impact
Indirect and Cumulative Impacts	Short-term - *Minor Adverse* Long-term - *Beneficial*	Short-term - *Minor Adverse* Long-term - *Beneficial*	Short-term - No Impact Long-term – *Potential Major Adverse*

4.13 IDENTIFICATION OF THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

Notwithstanding the potential adverse impacts to Hillsborough Bay and Tampa Bay from a JP-8 spill on the aircraft parking aprons, the short-term environmentally preferred

alternative is the No Action Alternative, as no construction would take place. However, action is required to eliminate the potential for long-term catastrophic impacts to the environment. The long-term benefits of the Proposed Action or the Alternative to the Proposed Action far outweigh the short-term and minor impacts. In a comparison of the Proposed Action and Alternative to the Proposed Action, the Proposed Action would be considered the environmentally preferred action for the following reasons:

- The Proposed Action occurs at three locations rather than nine locations,
- The Proposed Action represents a more favorable operational alternative. Closing three gates as opposed to nine would minimize human error and reaction time to a major fuel release, reducing risk to the environment.

4.14 OTHER ACTIVITIES IN THE AREA

Routine maintenance and repair projects are on-going occurrences at MacDill AFB. Additionally, a roadway improvement project is proposed involving CENTCOM Avenue, South Boundary Boulevard, Zemke Avenue, Bayshore Boulevard, and the intersection of Tampa Point Boulevard. Demolition of the existing USCENTOM HQ facility (B540) may also occur during construction of the Proposed Action. Construction activities for the upgrade/repair Marina Bay Drive running trail may still be underway when the Proposed Action begins. Additionally, construction/demolition activities at the Visitor's Quarters may still be underway when the Proposed Action begins.

4.15 INDIRECT AND CUMULATIVE IMPACTS

This section of the EA addresses the potential cumulative impacts associated with the implementation of the Proposed Action, Alternatives to the Proposed Action and other projects that are occurring concurrently at MacDill AFB. The CEQ defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). This section continues, “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” The identification of

cumulative impacts considers whether significant impacts exists that were not identified when the Proposed Action or Alternative in this EA were considered alone.

Reasonably foreseeable future projects occurring concurrently include, but are not limited to, the projects identified in **Tables 4.15.1** and **4.15.2**. All of the MacDill projects identified in these tables will have short-term impacts during construction. A summary of the anticipated cumulative impacts relative to the Proposed Action and Alternative are presented below. These discussions are presented for each of the resources described previously.

AIR QUALITY

Impacts on air quality would be considered significant if the action results in a violation of USEPA air quality standards and regulations. Air emissions generated during implementation of the Proposed Action or Alternative would be short-term, minor, and insignificant. **Tables 4.2.1** and **4.2.2** presents the air emission totals due to implementation of the Proposed Action or Alternative.

Table 4.15.3 presents the cumulative air emissions totals due to construction, landscaping, or grading activities implemented simultaneously. As stated in Section 3.2, MacDill AFB is located in Hillsborough County, which is in attainment or unclassifiable for all criteria pollutants. If all these projects were to be implemented simultaneously, the proposed emissions would remain below the 10% of regional emissions threshold; USEPA air quality standards and regulations would not be violated. No significant adverse cumulative impacts on air quality would be expected.

The cumulative air impacts would include air sources from other proposed construction and demolition projects on MacDill AFB during the period of time needed to complete the Proposed Action. A listing of the other proposed construction and demolition projects are presented in **Tables 4.15.1** and **4.15.2**, respectively.

Table 4.15.1 Cumulative Construction Projects at MacDill AFB

Other Proposed Construction Projects	
New USCENTCOM HQ & Demo B540	Logistics Readiness Complex (formerly Trans/Supply Complex)
Consolidated Communication Facility	SOCCENT HQ
JCSE Ops & Logistics Mobility Facility	New CATM
MacDill AFB Gate Improvements	New Child Development Center
JCSE Paint Facility	120 Room Dorm
USCENTCOM Parking Garage	Mission Support Facility
Warehouse Complex	JCSE Squadron Facility
Multiple Roadway Improvement Projects	

Table 4.15.2 Cumulative Demolition Projects at MacDill AFB

Facility Number	
500	540
510	541
119	543
317	178
397	3176
398	3500
258	297
2020	1051
1053	265
89	848
860	861
886	JCSE Temp DJC2
1066	373

Details of the other proposed construction and demolition projects are included in **Appendix D**. As stated in **Section 3.2**, MacDill AFB is located in Hillsborough County, which is in attainment or unclassifiable for all criteria pollutants. Pollutant emission estimates are presented in **Appendix D** and summarized in **Table 4.15.3**. Based on the

calculations provided in **Appendix D** and presented in **Table 4.15.3**, the cumulative annual emission estimates fall below the rate of 100 tons per year for all five pollutants evaluated.

Table 4.15.3 Cumulative Air Emissions at MacDill AFB

Pollutant	Cumulative Annual Emissions (tpy)	Hillsborough County Emissions Inventory[a] (tpy)	Net Change (%)	Conformity Rate[b] (tpy)	Above/ Below Rate
CO	25.90	6,517	0.397	100	Below
VOC	7.18	34,880	0.021	100	Below
NO_X	59.94	58,191	0.103	100	Below
SO_X	4.01	65,890	0.006	100	Below
PM10[b]	71.18	22,379	0.318	100	Below
PM2.5	12.11	7,221	0.168	100	Below

[a] Based on stationary emissions presented in Table 3.1.2.
[b] Source: 40 CFR 93.153, November 30, 1993.
tpy Tons per year
% Percent

NOISE

Actions would be considered to cause significant impacts if they permanently increase ambient noise levels over 65 dBA. Noise emanating from the proposed activities at construction sites would be localized, short-term, and intermittent.

Cumulative noise exposure can lead to human health effects such as permanent hearing loss. The cumulative noise impacts on Base would include noise sources from the proposed Spill Gates construction activities, and other construction projects near the vicinity of the project areas. The proposed construction and demolition projects listed in **Tables 4.15.1 and 4.15.2** are not planned to occur simultaneously and, therefore, the noise impacts from these proposed projects are short term in nature and are spread throughout the Base. In general, noise levels associated with the identified construction activities are minor and insignificant when compared to noise impacts from aircraft arriving and departing from the Base.

Due to the intermittent nature of construction noise, impacts on the noise environment would not be long term and no significant adverse cumulative impacts on the noise environment would be expected.

HAZARDOUS MATERIALS

Significant impacts would occur if an action creates a public hazard or if the site is considered a hazardous waste site that poses health risks.

Environmental Restoration Program. Spill Gate 1 of the Proposed Action would involve construction in a portion of ERP site SWMU-61. The Alternative to the Proposed Action would involve additional construction in portions of ERP site SWMU-61. It is not expected that construction workers and/or site personnel will never come into contact with contaminated media (soil, sediment, surface water, ground water, and air). Complete contaminant removal, administrative controls, and/or proper engineering controls would be implemented to ensure no significant adverse cumulative impacts on the Environmental Cleanup Program would be expected.

WATER RESOURCES

The significance threshold for surface water and Waters of the US include any action that substantially depletes surface water supplies, substantially alters drainage patterns, or results in the loss of Waters of the US that cannot be compensated.

Storm Water. None of the proposed construction projects and the other identified projects would create direct discharge to surface water. Permits would be required from USACE and SWFWMD. Standard erosion and sediment control techniques would be employed to minimize potential degradation of water quality. No significant adverse cumulative impacts on storm water would be expected.

FLOODPLAINS

Federal and local laws governing floodplains limit development within the 100-year floodplain. Due to the location of MacDill AFB, the Proposed Action and the other identified projects are located within the 100-year floodplain. The proposed projects would

conform to applicable floodplain protection standards and accepted flood-proofing and protection measures in accordance with EO 11988. No significant adverse cumulative impacts on the floodplain would be expected. The completed structures add impervious surface, which could change the permeability of the drainage basin and increase the flow of water and potentially change flow characteristics. The collective acreage affected by the proposed projects is insignificant when compared to the available acreage in the drainage basin and no significant adverse cumulative impacts on the drainage basin would be expected

BIOLOGICAL RESOURCES

The significance threshold for wildlife and aquatic resources would include a substantial reduction in ecological process, communities, or populations that would threaten the long-term viability of a species, or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated.

It is not anticipated that implementation of the Proposed Action and the other identified projects would result in the incremental loss of valuable habitat because most projects are proposed in previously developed areas of MacDill AFB and the locations of sensitive habitat are removed from developed areas. Construction noise would occur which could disturb or aggravate wildlife, but wildlife would likely relocate to other areas on the installation with more suitable habitat during construction and return to their normal routine when construction activities cease.

The Proposed Action and the other identified projects would not have an effect on protected species, nor would any of the other planned projects on the Base; therefore, no cumulative impacts would occur. Coordination with state and Federal regulatory agencies would also be completed to insure that no environmental issues are overlooked. No significant adverse cumulative impacts on biological resources would be expected.

Wetlands. The Proposed Action would occur within jurisdictional surface waters and adverse impacts to wetlands would be avoided. None of the other identified projects impact wetlands, except the Airfield Drainage Improvement Projects, which the EPC, SWFWMD,

and USACE have authorized subject to mitigation of the impacted wetlands. No significant adverse cumulative impacts on wetlands would be expected.

Wildlife. Site 1 of the Proposed Action is located in the heavily developed area of the Base while Sites 2 and 3 are located in an area of improved vacant land at the southeast terminus of the aircraft parking apron. Implementation of the Proposed Action at the three sites would result in short-term impacts to wildlife. Short-term impacts to wildlife that would result from implementation of the Proposed Action include the temporary disturbance of some wading bird species that utilize the drainage ditches for foraging. While construction activities are occurring, wading birds would be temporarily displaced from within the construction area and, due to the presence of construction equipment and personnel, the immediate surroundings. However, numerous other areas of similar, suitable foraging habitat are available on MacDill AFB. Upon completion of the Proposed Action, the birds should return and resulting in no long-term impacts to wildlife from the Proposed Action. Therefore, no significant adverse cumulative impacts to wildlife would be expected.

Endangered, Threatened, and Special Concern Species. Wildlife species listed by Federal or state agencies as endangered, threatened, or of special concern are known to occur permanently or periodically, or have the potential to occur on the Base. The drainage ditches within which the Proposed Action would occur, and the immediate surrounding land, is not critical habitat for any listed species. Some listed avian species that utilize the drainage ditches for foraging would be temporarily displaced from the construction areas and immediate surroundings. However, numerous areas of other similar, suitable foraging habitat are available on MacDill AFB. Consequently, the Proposed Action would have only minor, short-term impacts on listed species at MacDill AFB. No long-term impacts to listed species are anticipated to occur as a result of the Proposed Action. Consequently, no adverse cumulative impacts to listed species would be expected. Under informal Section 7 Consultation, USFWS has concurred that, with the incorporation of standard manatee construction conditions, and a 20-minute manatee observation period prior to maintenance testing closures (emergency response would be exempt from this requirement) at Gate 2, that

the project would pose no adverse impacts to threatened or endangered species (Appendix B).

TRANSPORTATION

Impacts on traffic or roadways would be considered to cause significant impacts if the increase of traffic exceeded the ability for the surface streets to offer a suitable level of service for the area. Short-term impacts to transportation patterns around the Base would result from the Proposed Action due to the proximity of construction equipment and personnel to Base roads. Upon completion of the Proposed Action, all impediments to transportation would be removed. No significant adverse cumulative impacts on transportation would be expected.

SAFETY AND OCCUPATIONAL HEALTH

Construction and demolition activities associated with the Proposed Action and the other identified projects are not expected to increase safety risks. Construction and demolition activities would be accomplished in accordance with Federal, state, and local regulations to minimize general construction hazards as well as those associated with hazardous materials, wastes, and substances. The Proposed Action and some of the other indentified projects would involve construction activities in ERP sites but would not involve excavations that would likely encounter contaminated soil or groundwater. None of the chemicals of concern at the site represents an immediate threat to life and health. Consequently, no significant adverse cumulative impacts on safety or occupational health would be expected.

GEOLOGY AND SOILS

The grading and excavating of soils and removal of geotechnically incompatible soils for construction site preparation would affect geological resources. Some construction projects would occur simultaneously, but likely in different areas of the installation; these projects would also be spread out over several years. MacDill AFB would ensure that BMPs are employed during these activities to minimize effect on soil and prevent erosion and sediment runoff. All activities would comply with the installation's surface water management plan and would employ erosion-control techniques, such as silt fencing and sediment traps.

In addition, MacDill AFB would revegetate, according to the current landscape management plan, which helps with erosion control and soil stability. Grading, excavation, and recontouring of soil materials would adhere to all Federal, state, and local regulations. No significant adverse cumulative impacts on Geological Resources or soils are expected.

SUMMARY

When the Proposed Action or Alternative to the Proposed Action are considered in conjunction with past, present, or reasonably foreseeable future actions, no significant cumulative impacts would be expected on any resource area.

4.16 UNAVOIDABLE ADVERSE IMPACTS

There are no significant unavoidable adverse impacts associated with the Proposed Action, Alternative to the Proposed Action, or No Action Alternative.

4.17 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Implementation of the Proposed Action would have a positive effect on long-term productivity by following the requirements of the SPCC and FRP, and the purpose of the INRMP: to integrate the Air Force mission with an interdisciplinary approach to ecosystem management to ensure That MacDill AFB continues to support present and future mission requirements while preserving, improving, and enhancing ecosystem integrity. Goals of the INRMP include the improvement of natural resources that have the capability to support existing and future military missions, the protection and improved recovery of threatened, endangered or special concern species, and protection of the quality of water, both surface water and groundwater, at MacDill AFB.

Implementation of the Proposed Action provides ecosystem preservation, improvement, and enhancement measures required to effectively complete mission goals. Implementation of the Alternative to the Proposed Action similarly provides ecosystem benefits, although to a lesser degree than that of the Proposed Action due to the increased time required to close nine sluice gates as opposed to three spill gates. The No Action Alternative would not result in long-term ecological benefits but rather maintain the potential for long-term, significant

impacts to water resources, wildlife, listed species and the ecosystems of Tampa Bay and Hillsborough Bay.

4.18 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Action and Alternative to the Proposed Action would irreversibly commit fuels, manpower, materials, and costs required to complete the proposed scope of work.

SECTION 5.0 PERSONS CONTACTED

Steve Boyd	6 CES/CEP MacDill AFB, FL 33621 813-828-5420
Danny Clayton	FL Coastal Management Program 3900 Commonwealth Boulevard, MS 47 Tallahassee, FL 32399-3000 850-414-6568
Michael Cooley	6 CES/CEC MacDill AFB, FL 33621 813-828-0855
Christina Hummel	6 CES/CEPP MacDill AFB, FL 33621 813-828-0836
John Hess	6 CES/CEPP MacDill AFB, FL 33621 813-828-1145
Laura Kammerer	Division of Historical Resources Compliance Review Section 500 S. Bronough Street Tallahassee, FL 32399-0250 1-800-847-7278
Jason Kirkpatrick	6 CES/CEVN MacDill AFB, FL 33621 813-828-0459
Tish Matty	6 CES/CEVR MacDill AFB, FL 33621 813-828-4554
Terri Calleson	US Fish and Wildlife Service 600 4th Street South St. Petersburg, FL 33701 727-570-5398

Lauren Milligan	FL Coastal Management Program 3900 Commonwealth Boulevard, MS 47 Tallahassee, FL 32399-3000 850-414-6568
Kristy Snyder	6 CES/CEVR MacDill AFB, FL 33621 813-828-0789
Mark Sramek	NOAA's National Marine Fisheries Service Southeast Region, Habitat Conservation Division 263 13th Avenue South St. Petersburg, FL 33701-5505

SECTION 6.0 LIST OF PREPARERS

Mr. Andrew Rider, P.E.
6 CES/CEV
7621 Hillsborough Loop Dr.
MacDill AFB, FL 33621-5207
e-mail: andrew.rider.CTR @macdill.af.mil

Mr. Matt Dinkins
LG² Environmental Solutions, Inc.
14785 Old St. Augustine Rd.
Jacksonville, FL 32258
e-mail: mattdinkins@lg2es.com

Ms. Leesa Gerald
LG² Environmental Solutions, Inc.
14785 Old St. Augustine Rd.
Jacksonville, FL 32258
e-mail: leesagerald@lg2es.com

Mr. Lee Gerald
LG² Environmental Solutions, Inc.
14785 Old St. Augustine Rd.
Jacksonville, FL 32258
e-mail: leegerald@lg2es.com

Mr. Dan Boylan
LG² Environmental Solutions, Inc.
14785 Old St. Augustine Rd.
Jacksonville, FL 32258
e-mail: danboylan@lg2es.com

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 7.0
REFERENCES

Advisory Council on Historic Preservation, 1986	*36 CFR Part 800: Protection of Historic Properties*. US Government Printing Office, Washington, D.C.
Federal Interagency Committee on Urban Noise (FICUN), 1980	Federal Interagency on Committee Urban Noise, Guidelines for Considering Noise in Land Use Planning and Control, June 1980.
Florida Natural Areas Inventory (FNAI), 1996	Florida Natural Areas Inventory, 1996. Biological Survey of MacDill Air Force Base.
Headquarters Air Mobility Command [AMC], AMC, 2007	HQ AMC, 2007. Environmental Assessment of Installation Development at MacDill Air Force Base.
AMC, 2006	HQ AMC, 2006. Floodplain Management Plan, MacDill Air Force Base.
MacDill Air Force Base (MAFB), 20010a	MAFB, 2010a. Hazardous Waste Management Plan.
MAFB, 2009a	MAFB, 2009a. Asbestos Management and Operation Plan.
MAFB, 2009b	MAFB, 2009b. Lead-Based Paint Management Plan.
Paul, 1992	Paul, R. and A. Schnapf. 1992. MacDill Air Force Base Wildlife Survey. Tampa Bay Sanctuaries, National Audubon Society, Tampa, FL.
State of Florida, 1981	Florida Coastal Management Program.
United States Environmental Protection	National Emission Inventory Database, United States Environmental Protection Agency, AirData Website:

Agency (USEPA), 2002 http://www.epa.gov/oar/data/neidb.html.

USEPA, 1995 Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, 5th Edition (AP-42), USEPA, Research Triangle Park, January 1995 (Supplement A, February 1996).

USEPA, 1988 Gap Filling PM_{10} Emission Factors for Selected open Area Dust Sources (EPA-450/4-88-003), United States Environmental Protection Agency, Research Triangle Park, February 1988.

USEPA, 1985 Compilation of Air Pollutant Emission Factors, Volume II: Mobile Sources, 4th Edition (AP-42), USEPA, Ann Arbor, September 1985, (Supplement A, January 1991).

United States Air Force USAF, 2010a United States Air Force, 2010. MacDill Air Force Base General Plan.

USAF, 2010b US Air Force, 2010. Integrated Natural Resource Management Plan (INRMP) MacDill Air Force, Florida.

USAF, 2010c US Air Force, 2010. Title V Permit No. 0570141-001-AV MacDill Air Force Base, Florida.

USAF, 2008 US Air Force, 2008. Air Installation Compatible Use Zone (AICUZ) Study, MacDill AFB, Tampa.

USAF, 2006a US Air Force, 2006. Asbestos Survey Report Officers Club ID 397, MacDill AFB, FL.

USAF, 2006b US Air Force, 2006. Asbestos Removal Summary Officers Club ID 397, MacDill AFB, FL.

USAF, 2007a — US Air Force, 2007. Asbestos Management and Operations Plan, MacDill AFB, FL.

USAF, 2007b — US Air Force, 2007. Lead-Based Paint Management Plan, MacDill AFB, FL.

USAF, 2006a — US Air Force, 2006. Integrated Cultural Resources Management Plan (ICRMP) MacDill Air Force, Florida.

USAF, 2005 — US Air Force, 2005. Endangered Species Population Survey, MacDill AFB, Tampa.

USAF, 2003 — Economic Resource Impact Statement MacDill Air Force Base, Florida.

USAF, 1998a — US Air Force, 1998. Delineation Study of the Waters of the United States Including the Landward Extent of Wetlands and Surface Waters MacDill Air Force Base Tampa, Hillsborough County, Florida.

USAF, 1998b — US Air Force, 1998. Environmental Compliance Assessment and Management Program (ECAMP), MacDill Air Force Base, Florida.

USAF, 1998c — US Air Force, 1998. Entry Gate Development Study MacDill Air Force Base, Florida.

USAF, 1996a — US Air Force, 1996. Biological Survey of MacDill Air Force Base – Final Report.

USAF, 1996b — US Air Force, 1996. Endangered Species Management Plan MacDill Air Force Base, Florida.

USAF, 1995a — US Air Force, 1995. Environmental Assessment for Implementation of the Integrated Natural Resources Management Plan MacDill Air Force Base, Florida.

USAF, 1994 — US Air Force, 1994. Environmental Assessment, Transfer and Reuse of Part of MacDill Air Force Base, Florida.

USAF, 2011 — US Air Force, 2011. Environmental Assessment, Multiple Roadway Improvement Projects MacDill Air Force Base, Florida.

APPENDIX A

CONSISTENCY STATEMENT

APPENDIX A
CONSISTENCY STATEMENT

This consistency statement will examine the potential environmental consequences of the Proposed Action and ascertain the extent to which the consequences of the Proposed Action are consistent with the objectives of Florida Coastal Management Program (CMP).

Of the Florida Statutory Authorities included in the CMP, impacts in the following areas are addressed in the EA: beach and shore preservation (Chapter 161), historic preservation (Chapter 267), economic development and tourism (Chapter 288), public transportation (Chapters 334 and 339), saltwater living resources (Chapter 370), living land and freshwater resource (Chapter 372), water resources (Chapter 373), environmental control (Chapter 403), and soil and water conservation (Chapter 582). This consistency statement discusses how the proposed options may meet the CMP objectives.

CONSISTENCY DETERMINATION

Chapter 161: Beach and Shore Preservation

Due to the nature of the Proposed Action and Alternative to the Proposed Action, minor impacts to the base's canals will occur. Short-term impacts due to the increased sedimentation into the bay as a result of construction are expected to be very minor, and will be minimized by the development of a SWPPP and implementation of best management practices (BMPs) for erosion and sedimentation control, as appropriate.

Chapter 267: Historic Preservation

The Air Force and the Florida State Historic Preservation Officer have determined that the Proposed Action and Alternative to the Proposed Action would have no effect on historic properties associated with the Base.

Chapter 288: Economic Development and Tourism

The EA presents the new employment impact and net income impact of the Proposed Action and Alternative to the Proposed Action. The options would not have significant adverse effects on any key Florida industries or economic diversification efforts.

Chapter 372: Saltwater Living Resources

The EA addresses potential impacts to local water bodies. Water quality impacts from the Proposed Action and Alternative to the Proposed Action were considered. Results indicate that no significant impacts would result from the Proposed Action or Alternative Action. The intent of the Proposed Action and Alternative to the Proposed Action is to eliminate one potential for significant adverse impacts to the marine habitat, therefore we anticipate a long-term beneficial effect to saltwater living resources.

Chapter 372: Living Land and Freshwater Resources

Threatened and endangered species, major plant communities, conservation of native habitat, and mitigation of potential impacts to the resources are addressed in the EA. The Proposed Action and Alternative to the Proposed Action would not result in permanent disturbance to native habitat and should not impact threatened or endangered species.

Chapter 373: Water Resources

Short-term impacts to surface water quality as a result of construction of the Proposed Action and Alternative to the Proposed Action are expected to be very minor, and will be minimized by the development of a SWPPP and implementation of best management practices (BMPs) for erosion and sedimentation control, as appropriate. The Proposed Action and Alternative to the Proposed Action would not result in significant or long-term impacts to surface water or groundwater quality.

Chapter 403: Environmental Control

The EA addresses the issues of conservation and protection of environmentally sensitive living resources; protection of groundwater and surface water quality and quantity; potable water supply; protection of air quality; minimization of adverse hydrogeologic

impacts; protection of endangered or threatened species; solid, sanitary, and hazardous waste disposal; and protection of floodplains and wetlands. Where impacts to these resources can be identified, possible mitigation measures are suggested. Implementation of mitigation would be, for the most part, the responsibility of MacDill AFB.

Chapter 582: Soil and Water Conservation

The EA addresses the potential of the Proposed Action and alternatives to disturb soil and presents possible measures to prevent or minimize soil erosion. Impacts to groundwater and surface water resources also are discussed in the EA.

CONCLUSION

The Air Force finds that the conceptual Proposed Action and alternatives plans presented in the EA are consistent with Florida's CMP.

APPENDIX B

PUBLIC NOTICE AND AGENCY COORDINATION LETTERS

PUBLIC NOTICE - UNITED STATES AIR FORCE

The United States Air Force (AF) seeks public comment on AF Environmental Impact Analysis Process (EIAP) documents for the Proposed Construction of Radial Arm Spill Gates at MacDill Air Force Base (AFB). The Proposed Action is intended to prevent a large jet propulsion 8 fuel release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay. MacDill AFB has evaluated this action in accordance with Executive Order 11988 – Floodplain Management, and with Executive Order 11990 – Protection of Wetlands and believes there is no practical alternative to construction within the floodplain or jurisdictional wetlands, primarily drainage canals.

NOTICE OF AVAILABILITY

The EIAP documents satisfy the requirements of the National Environmental Policy Act (NEPA). The documents are available for public review and comment from March 1st through April 1st, 2012 at the Tampa/Hillsborough County Public Library, located at 900 N. Ashley Drive, Tampa, FL 33602, and at the University of Tampa Merl Kelce Library, located at 401 West Kennedy Blvd. Tampa, Florida 33606. The documents may be found in the Humanities Section of the Main Library. Address written comments to 6 AMW Public Affairs, 8209 Hangar Loop Drive, Suite 14, MacDill AFB, FL 33621-5502. The telephone number is (813) 828-2215.

PUBLIC NOTICE - UNITED STATES AIR FORCE

The United States Air Force (AF) seeks public comment on AF Environmental Impact Analysis Process (EIAP) documents for the Proposed Construction of Radial Arm Spill Gates at MacDill Air Force Base (AFB). The Proposed Action is intended to prevent a large jet propulsion 8 fuel release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay. MacDill AFB has evaluated this action in accordance with Executive Order 11988 - Floodplain Management, and with Executive Order 11990 - Protection of Wetlands and believes there is no practical alternative to construction within the floodplain or jurisdictional wetlands, primarily drainage canals.

NOTICE OF AVAILABILITY

The EIAP documents satisfy the requirements of the National Environmental Policy Act (NEPA). The documents are available for public review and comment from March 1st through April 1st, 2012 at the Tampa/Hillsborough County Public Library, located at 900 N. Ashley Drive, Tampa, FL 33602, and at the University of Tampa Merl Kelce Library, located at 401 West Kennedy Blvd. Tampa, Florida 33606. The documents may be found in the Humanities Section of the Main Library. Address written comments to 6 AMW Public Affairs, 8209 Hangar Loop Drive, Suite 14, MacDill AFB, FL 33621-5502. The telephone number is (813) 828-2215.

#6788 3/2/2012

The Tampa Tribune

Published Daily

Tampa, Hillsborough County, Florida

State of Florida }
County of Hillsborough } SS.

Before the undersigned authority personally appeared C. Pugh, who on oath says that she is the Advertising Billing Analyst of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of the

Legal Ads IN THE Tampa Tribune

In the matter of Legal Notices

was published in said newspaper in the issues of

03/03/2012

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, this advertisement for publication in the said newspaper.

C Pugh

Sworn to and subscribed by me, this 5 day of Mar, A.D. 2012

Personally Known ✓ or Produced Identification ___
Type of Identification Produced _____

Charlotte A. Offner

Notary Public State of Florida
Charlotte A Offner
My Commission DD895783
Expires 06/03/2013

Order # 0003151719

1362312 -- LG2 ENVIRONMENTAL SOLUTIO

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 28, 2012

Mr. Art Bagley
University of Tampa
Merl Kelce Library
401 West Kennedy Blvd
Tampa, Florida 33606

Re: Draft Environmental Assessment and Draft Finding of No Significant Impact
Proposed Construction of Radial Arm Spill Gates
MacDill Air Force Base, Florida

Dear Mr Bagley:

LG² Environmental Solutions, Inc. (LG²ES) has been retained by the US Air Force to assist in the Environmental Assessment (EA) process in accordance with the National Environmental Policy Act (NEPA). The enclosed draft EA has been advertised in the Tampa Tribune as available for public comment through April 1, 2012. At a minimum, please make this document available for public review at your library through that date.

Thank you for assistance with this matter. If you have any questions or require additional information, please contact Leesa Gerald or me.

Sincerely,

LG² Environmental Solutions, Inc.

Matt Dinkins
Senior Biologist

Enclosure: Draft Environmental Assessment and Draft Finding of No Significant Impact

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 28, 2012

Ms. Judy McAfee
Hillsborough County Public Library
900 N. Ashley Drive
Tampa, Florida 33602

Re: Draft Environmental Assessment and Draft Finding of No Significant Impact
Proposed Construction of Radial Arm Spill Gates
MacDill Air Force Base, Florida

Dear Ms McAfee:

LG² Environmental Solutions, Inc. (LG²ES) has been retained by the US Air Force to assist in the Environmental Assessment (EA) process in accordance with the National Environmental Policy Act (NEPA). The enclosed draft EA has been advertised in the Tampa Tribune as available for public comment through April 1, 2012. At a minimum, please make this document available for public review at your library through that date.

Thank you for assistance with this matter. If you have any questions or require additional information, please contact Leesa Gerald or me.

Sincerely,

LG² Environmental Solutions, Inc.

Matt Dinkins
Senior Biologist

Enclosure: Draft Environmental Assessment and Draft Finding of No Significant Impact

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Mr. Charles Schnepel
U.S. Army Corps of Engineers
Jacksonville Regulatory Division – Tampa Section
10117 Princess Palm Avenue, Suite 120
Tampa, Florida 33610-8300

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact**
Proposed Construction of Spill Gates
MacDill Air Force Base, Florida

Dear Ms. Reynolds:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative

and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

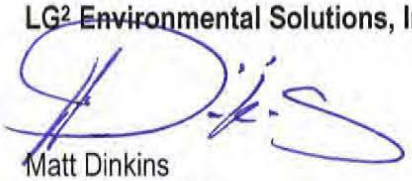
3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.



Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Mr. Dave Hankla
U.S. Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, Florida 32256-7517

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact Proposed Construction of Spill Gates MacDill Air Force Base, Florida**

Dear Ms. Reynolds:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air

quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.

Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Ms. Jasmine Ruffington
Florida Coastal Management Program
Florida Department of Environmental Protection
3900 Commonwealth Blvd, Mail Station 47
Tallahassee, FL 32399-3000

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact**
Proposed Construction of Spill Gates
MacDill Air Force Base, Florida

Dear Ms. Ruffington:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative

and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

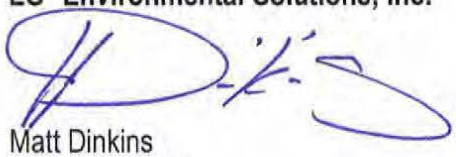
3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.



Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Ms. Jean Reynolds
HQ AMC/A7PI
507 Symington Drive
Scott AFB, IL 62225-5022

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact Proposed Construction of Spill Gates MacDill Air Force Base, Florida**

Dear Ms. Reynolds:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air

quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.

Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Ms. Lauren Milligan
Florida State Clearinghouse
Florida Department of Envir. Protection
3900 Commonwealth Blvd, Mail Station 47
Tallahassee, FL 32399-3000

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact**
Proposed Construction of Spill Gates
MacDill Air Force Base, Florida

Dear Ms. Reynolds:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative

and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

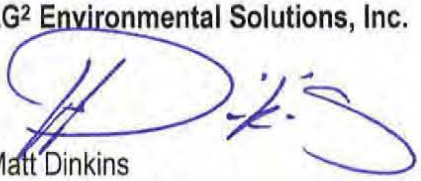
3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.



Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Mr. Mark Sramek
National Marine Fisheries Service
263 13th Ave South
St. Petersburg, FL 33701

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact**
Proposed Construction of Spill Gates
MacDill Air Force Base, Florida

Dear Ms. Reynolds:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air

quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

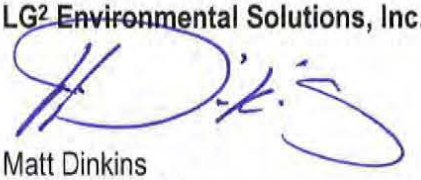
3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.



Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Mr. Steve West
Florida Department of Environmental Protection
Bureau of Beaches and Coastal Systems
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact**
Proposed Construction of Spill Gates
MacDill Air Force Base, Florida

Dear Mr. West:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (<1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative

and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

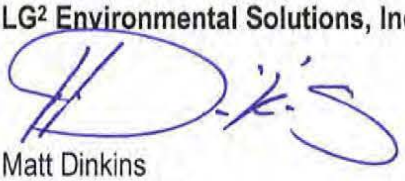
3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.



Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Mr. Tom Ash
Environmental Protection Commission
3629 Queen Palm Drive
Tampa, FL 33619-1309

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact**
Proposed Construction of Spill Gates
MacDill Air Force Base, Florida

Dear Mr. Ash:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air

quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.

Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

LG² Environmental Solutions, Inc.
14785 Old St. Augustine Road, Suite 4
Jacksonville, FL 32258
Phone: (904) 288-8631 Fax: (904) 262-8637

February 27, 2012

Mr. Tom Glancy
Florida Department of Environmental Protection
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

RE: **Draft Environmental Assessment and Draft Finding of No Significant Impact**
Proposed Construction of Spill Gates
MacDill Air Force Base, Florida

Dear Mr. Glancy:

Enclosed is a draft copy of the Environmental Assessment and Draft Finding of No Significant Impact (FONSI) prepared by LG² Environmental Solutions, Inc. (LG²ES) on behalf of, and in conjunction with, the US Air Force (USAF). On their behalf, LG²ES notes the following:

1. USAF requests your review of the Draft Environmental Assessment (EA) for a proposed construction project to install three spill control and containment structures, consisting of radial arm spill gates, within existing drainage ditches associated with the aircraft parking aprons MacDill Air Force Base (AFB) (Enclosed). The Proposed Action is intended to prevent a large jet propulsion 8 fuel (JP-8) release on the MacDill AFB aircraft parking apron from reaching either Hillsborough Bay or Tampa Bay. Currently, stormwater drainage from the MacDill AFB parking aircraft parking aprons is collected in a network of stormwater collection and transmission pipes. These collection and transmission pipes discharge to nine outfalls, in multiple drainage ditches, which ultimately discharge into Hillsborough Bay and Tampa Bay.

   Due to the facility's proximity to water, a discharge of JP-8, or other petroleum products, from MacDill AFB into or on navigable waters, or adjacent shorelines, has the potential to cause substantial harm to the environment. To prevent such damage to environmentally sensitive areas, MacDill AFB needs to contain a JP-8 spill before it reaches Tampa Bay or Hillsborough Bay. Because MacDill AFB has over 4,000,000 gallons of a petroleum products or oil stored on site and conducts transfers of fuel in close proximity to water (>1 mile), MacDill AFB has prepared a Facility Response Plan (FRP) for responding to oil spills. An oil discharge scenario that would have the potential to reach either bay is a spill during JP-8 refueling of an aircraft from a refueling vehicle, or a failure of the hydrant refueling system. Currently, spill containment is limited to floating containment booms, located in the stormwater drainage ditches, which are inadequate to prevent a large spill from reaching either of the bays.

2. The EA describes the Proposed Action, Alternative and No Action Alternative (Chapter 2). It establishes baseline environmental conditions for the Base (Chapter 3) and evaluates the potential impacts associated with implementation of the Proposed Action, Alternative and No Action Alternative (Chapter 4). Resource areas discussed in the EA include: air

quality, noise, waste, water resources, floodplains, biological resources, safety and occupational health, geology and soils, land use, airspace/airfield operations, hazardous wastes, materials and stored fuels, environmental justice, socioeconomics and cultural resources.

3. The EA meets the requirements of the National Environmental Policy Act (NEPA) for evaluation of impacts of a proposed action as part of the planning process. As the EA has determined that no significant impacts would result from the Proposed Action, USAF has prepared a draft FONSI (Attached) for the project.

In order to maintain our schedule for completion of the EA, we would appreciate receiving your comments by March 27, 2012.

If you have any questions or require additional information, please contact Mr. Andrew Rider (813-828-2718, andrew.rider.ctr@us.af.mil) or me.

Sincerely,

LG² Environmental Solutions, Inc.

Matt Dinkins
Senior Biologist
mattdinkins@lg2es.com

Attachments

Matt Dinkins

From: Milligan, Lauren [Lauren.Milligan@dep.state.fl.us]
Sent: Monday, March 12, 2012 2:50 PM
To: mattdinkins@lg2es.com
Cc: 'RIDER, ANDREW W CTR Contractor AMC 6 CES/CEVW'; 'KIRKPATRICK, JASON W CTR Contractor AMC 6 CES/CEVN'
Subject: MacDill AFB Draft EA for Construction of Radial Arm Spill Gates - State Clearance

Mr. Matt Dinkins, Senior Biologist

LG^2 Environmental Solutions, Inc.

14785 Old St. Augustine Road, Suite 4

Jacksonville, FL 32258

RE: Department of the Air Force – Draft Environmental Assessment for Construction of Radial Arm Spill Gates at MacDill Air Force Base – Hillsborough County, Florida.

SAI # FL201203016151C

Dear Mr. Dinkins:

Florida State Clearinghouse staff has received and reviewed the subject Draft Environmental Assessment (EA) under the following authorities: Presidential Executive Order 12372; Section 403.061(42), *Florida Statutes*; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

As noted in the Draft EA, the proposed spill gates construction project will likely require the issuance of a Standard General Environmental Resource Permit (ERP) from the Southwest Florida Water Management District (SWFWMD). Further inquiries concerning the state's permitting requirements should be directed to ERP Program staff in the SWFWMD's Tampa Regulation Department at (813) 985-7481.

Based on the information contained in the Draft EA, minimal project impacts and

Tampa Bay/Hillsborough Bay water quality benefits, the state has determined that the proposed federal action is consistent with the Florida Coastal Management Program (FCMP). The state's continued concurrence will be based on the activity's compliance with FCMP authorities, including federal and state monitoring of the activity to ensure its continued conformance, and the adequate resolution of any issues identified during subsequent regulatory reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting process in accordance with Section 373.428, *Florida Statutes*.

If you have any other questions regarding this message or the state intergovernmental review process, please don't hesitate to contact me at (850) 245-2170 or Lauren.Milligan@dep.state.fl.us. Thank you.

Yours sincerely,

Lauren P. Milligan

Lauren P. Milligan, Environmental Manager
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Blvd, M.S. 47
Tallahassee, FL 32399-3000
ph. (850) 245-2170
fax (850) 245-2190

Please take a few minutes to share your comments on the service you received from the department by clicking on this link. DEP Customer Survey.

DEPARTMENT OF THE AIR FORCE
6TH AIR MOBILITY WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

20 SEP 2011

MEMORANDUM FOR NOAA FISHERIES SERVICE
ATTN: MR. MARK SRAMEK
SOUTHEASTERN REGIONAL OFFICE
263 13TH AVENUE SOUTH
ST PETERSBURG FL 33701

FROM: 6 CES/DD
7621 Hillsborough Loop Drive
MacDill AFB FL 33621

SUBJECT: Construction of Spill Gates at MacDill AFB

1. The US Air Force intends to construct three spill control and containment structures (spill gates) in three stormwater drainage canals on MacDill AFB. The spill gates are intended to provide a final line of defense that would prevent a catastrophic JP-8 spills on the aircraft apron from reaching Tampa or Hillsborough Bay. Stormwater drainage from the aircraft aprons is collected in a network of stormwater collection and transmission pipes, which all discharge to three main drainage ditches that in turn discharge to Hillsborough and Tampa Bay (Figure 1). The base currently maintains floating containment booms the stormwater drainage ditches; however, the booms are not designed or intended to fully contain a large spill from reaching the bays. This project would construct three radial arm gates, also known as Tainter gates, which are designed to fully stop movement of surface water within the ditch. The gates would be composed primarily of structural coated milled steel or stainless steel mounted in a reinforced concrete structure. The spill gates would be constructed in major stormwater drainage ditches, which are considered wetlands. Consequently, environmental permitting through the Federal, state and county regulatory agencies would be accomplished prior to construction of the spill gates. Temporary diversion ditches would be constructed of adequate size to handle flows around the spill gates during construction. Figure 2 presents an example radial arm gate. Figure 3 presents the proposed locations of the spill gates.

2. An alternative being considered would consist of constructing nine sluice gates at the apron outfall headwalls to prevent a JP-8 spill on the aircraft apron from reaching Tampa or Hillsborough Bay, as identified in Figure 1. Under this alternative, all of the existing outfalls would require repairs, if not replacement, so that they would be able to withstand the water pressure when closed.

3. A representative from the MacDill AFB Natural Resources staff surveyed the proposed spill gate project sites and alternate sites to determine if any threatened or endangered species inhabit these areas. No Federally protected threatened and endangered species were observed along or adjacent to the proposed project areas. These areas have not been identified as critical habitat for any threatened or endangered species. Consequently, MacDill AFB believes that the proposed

project would not adversely impact threatened or endangered species. We seek your input on the proposed project and our finding of no impact to NOAA NMFS resources.

4. If you would like to inspect the proposed new spill gate project areas, or if you have any questions or require additional information on the Proposed Action, please contact Mr. Andy Rider or Mr. Jason Kirkpatrick, 6 CES/CEV at (813) 828-2718 or (813) 828-0459, respectively.

ROBERT D. MOORE, GS-13
Deputy Director, 6th Civil Engineer Squadron

Attachments:
Figure 1 – Aircraft Apron Outfalls
Figure 2 – Example Radial Arm Gate
Figure 3 – Proposed Spill Gate Locations

ATTACHMENTS

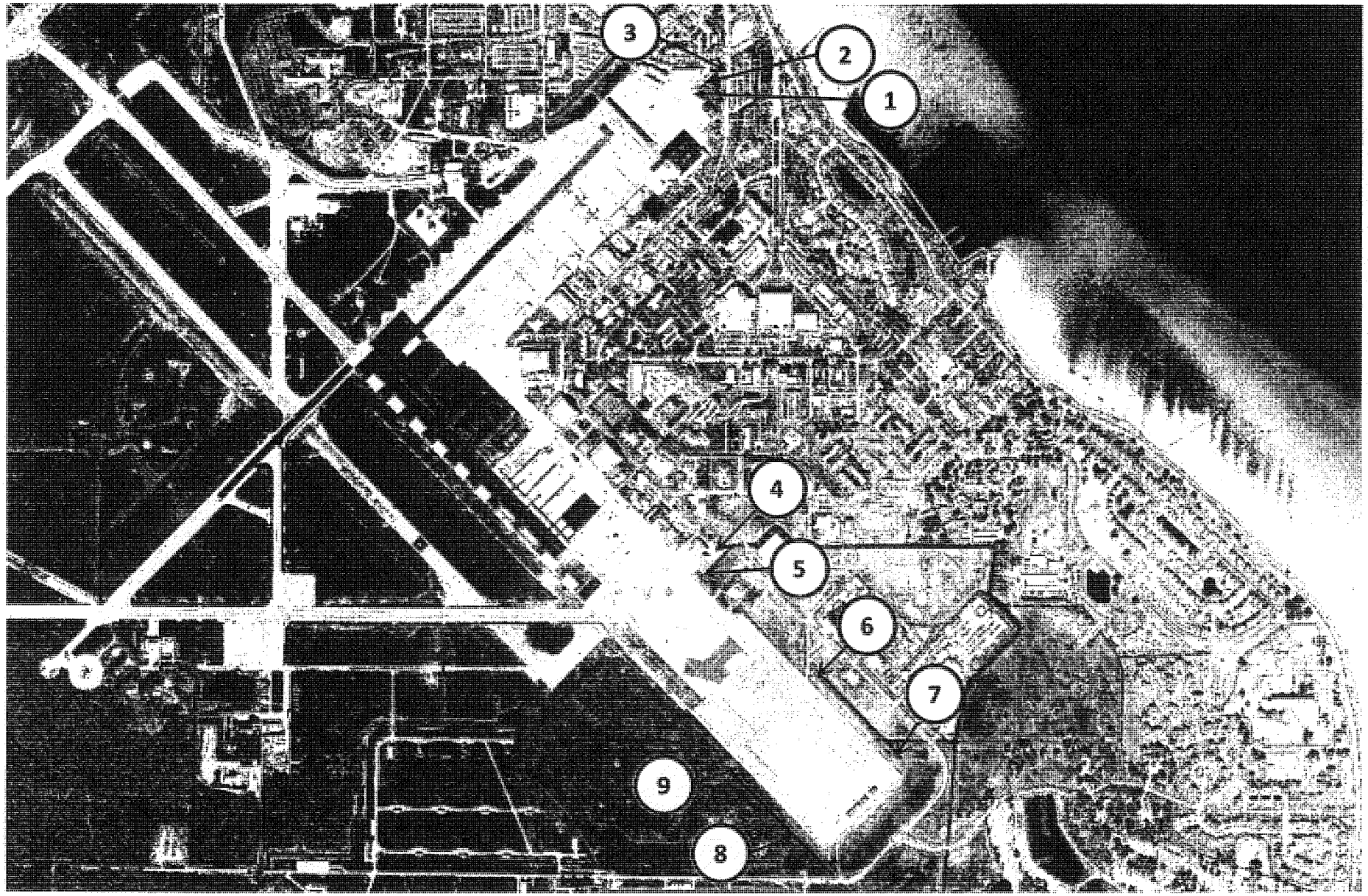


Figure 1 – Aircraft Apron Outfalls

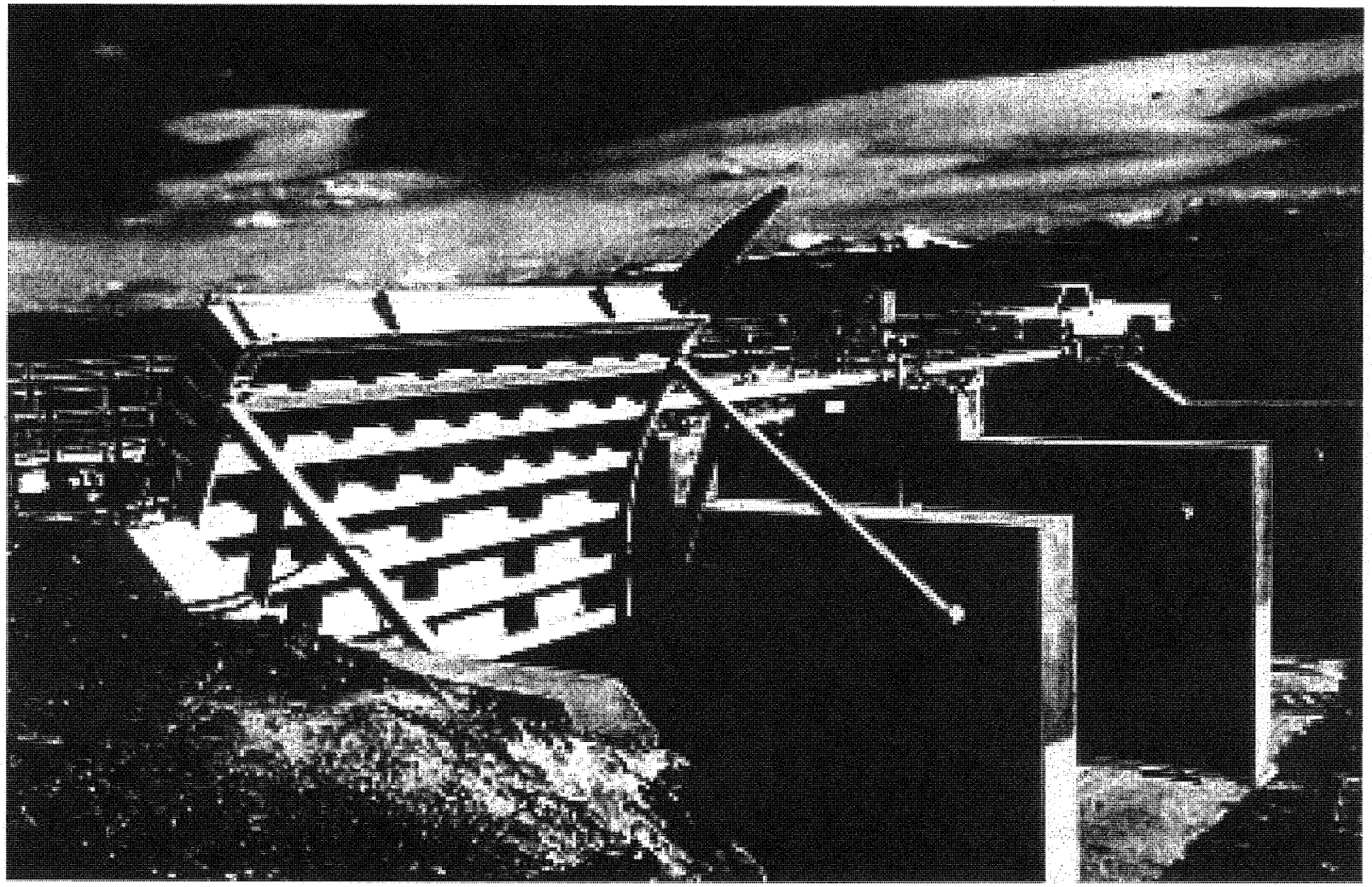


Figure 2 – Example Radial Arm Spill Gate

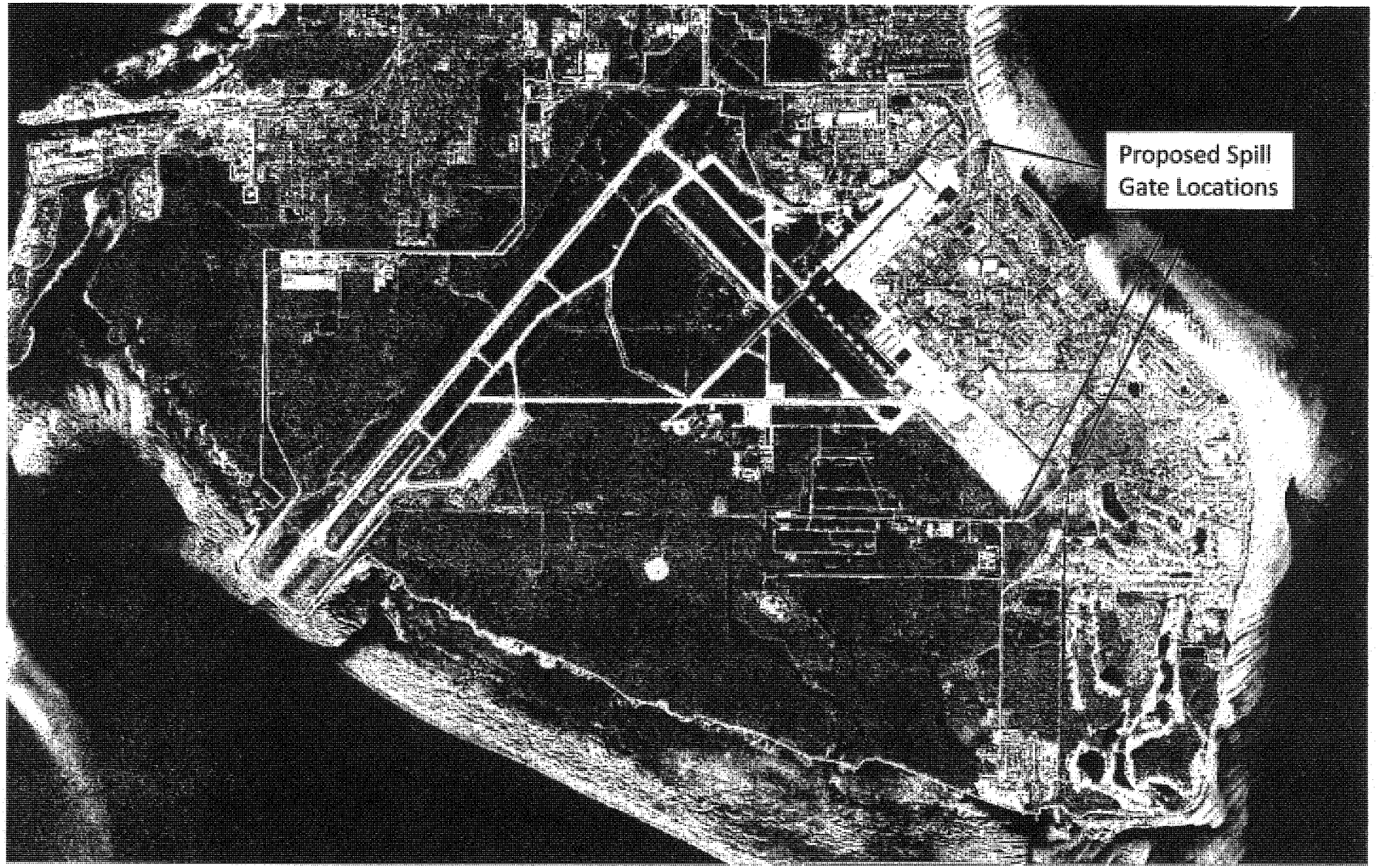


Figure 3 – Proposed Spill Gate Locations

From:	Mark Sramek
To:	RIDER, ANDREW W CTR Contractor AMC 6 CES/CEVW
Cc:	KIRKPATRICK, JASON W CTR Contractor AMC 6 CES/CEVN
Subject:	Re: Construction of Spill Gates @ MacDill AFB
Date:	Wednesday, February 22, 2012 12:51:34 PM

NOAA's National Marine Fisheries Service, Southeast Region, Habitat Conservation Division, has reviewed the Department of Defense, U. S. Air Force proposed subject construction activities listed below and detailed in accompanying attachments previously provided to our office. From our review of the information provided and based upon the anticipated locations of the proposed structures, we anticipate that any adverse effects that might occur on marine and anadromous fishery resources would be minimal and, therefore, do not object to authorization of these activities.

Thank you for your efforts to consult with our office on this project.

On Thu, Feb 9, 2012 at 12:25 PM, RIDER, ANDREW W CTR Contractor AMC 6 CES/CEVW <andrew.rider.ctr@us.af.mil> wrote:
> Mark,
>
> We sent the attached letter out back in September 2011 and I was looking in
> my files and email and noticed that I cannot find any return correspondence
> from you. Do you remember seeing this letter and responding? If not, can
> we get some feedback from you?
>
> Thanks
>
> v/r
>
> //Signed//
> Andy Rider, P.E., Contractor
> IAP Worldwide Services
> Air Quality & EIAP Manager
> 6 CES/CEV
> 7621 Hillsborough Loop Dr.
> MacDill AFB FL 33621
> Comm: 813-828-2718
> DSN: 968-2718
>
> Please visit CEV's internal website for information:
> https://cs.eis.af.mil/a7cportal/eDASH/AMC/macdill/default.aspx
> ---
> "Commit to Serve, Commit to Conserve"
>
>
>

DEPARTMENT OF THE AIR FORCE
6TH AIR MOBILITY WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

20 SEP 2011

MEMORANDUM FOR DIVISION OF HISTORIC RESOURCES
ATTN: MR. SCOTT EDWARDS
500 SOUTH BRONOUGH STREET
TALLAHASSEE FL 32399

FROM: 6 CES/DD
7621 Hillsborough Loop Drive
MacDill AFB FL 33621

SUBJECT: Construction of Spill Gates at MacDill AFB

1. The US Air Force intends to construct three spill control and containment structures (spill gates) in three stormwater drainage canals on MacDill AFB. The spill gates are intended to provide a final line of defense that would prevent a catastrophic JP-8 spills on the aircraft apron from reaching Tampa or Hillsborough Bay. Stormwater drainage from the aircraft aprons is collected in a network of stormwater collection and transmission pipes, which all discharge to three main drainage ditches that in turn discharge to Hillsborough and Tampa Bay (Figure 1). The base currently maintains floating containment booms the stormwater drainage ditches; however, the booms are not designed or intended to fully contain a large spill from reaching the bays. This project would construct three radial arm gates, also known as Tainter gates, which are designed to fully stop movement of surface water within the ditch. The gates would be composed primarily of structural coated milled steel or stainless steel mounted in a reinforced concrete structure. The spill gates would be constructed in major stormwater drainage ditches, which are considered wetlands. Consequently, environmental permitting through the Federal, state and county regulatory agencies would be accomplished prior to construction of the spill gates. Temporary diversion ditches would be constructed of adequate size to handle flows around the spill gates during construction. Figure 2 presents an example radial arm gate. Figure 3 presents the proposed locations of the spill gates.

2. An alternative being considered would consist of constructing nine sluice gates at the apron outfall headwalls to prevent a JP-8 spill on the aircraft apron from reaching Tampa or Hillsborough Bay, as identified in Figure 1. Under this alternative, all of the existing outfalls would require repairs, if not replacement, so that they would be able to withstand the water pressure when closed.

3. A representative from the MacDill AFB Cultural Resources staff surveyed the proposed spill gate project sites and alternate sites to determine if the proposed project has a potential to impact historic resources. There are no archeological sites or historic structures in the vicinity of the proposed action site. We seek your input on the Proposed Action and our finding of no adverse effect to historic resources.

4. If you would like to inspect the proposed new spill gate project areas, or if you have any questions or require additional information on the Proposed Action, please contact Mr. Andy Rider or Mr. Jason Kirkpatrick, 6 CES/CEV at (813) 828-2718 or (813) 828-0459, respectively.

ROBERT D. MOORE, GS-13
Deputy Director, 6th Civil Engineer Squadron

Attachments:
Figure 1 – Aircraft Apron Outfalls
Figure 2 – Example Radial Arm Gate
Figure 3 – Proposed Spill Gate Locations

ATTACHMENTS

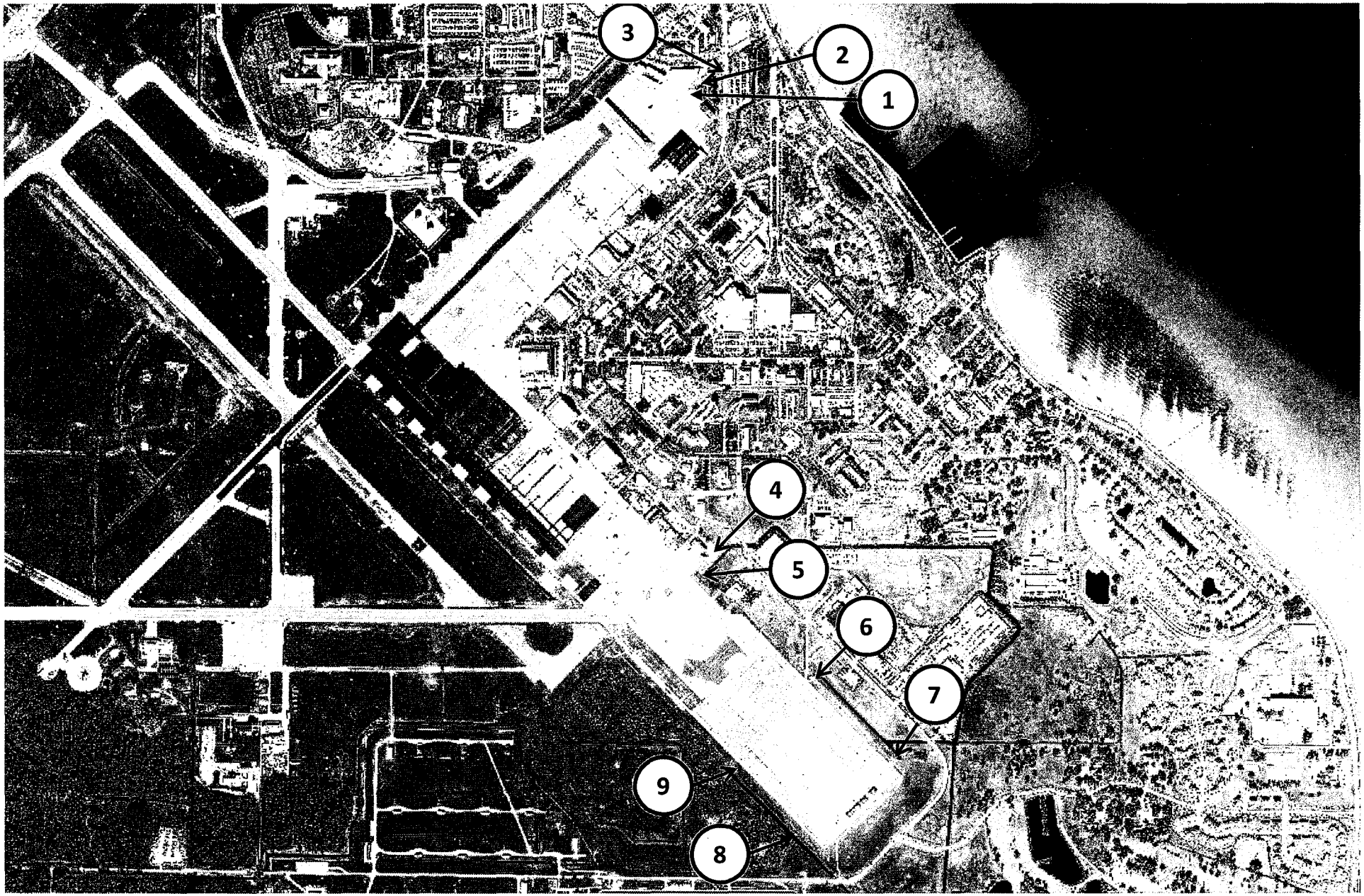


Figure 1 – Aircraft Apron Outfalls

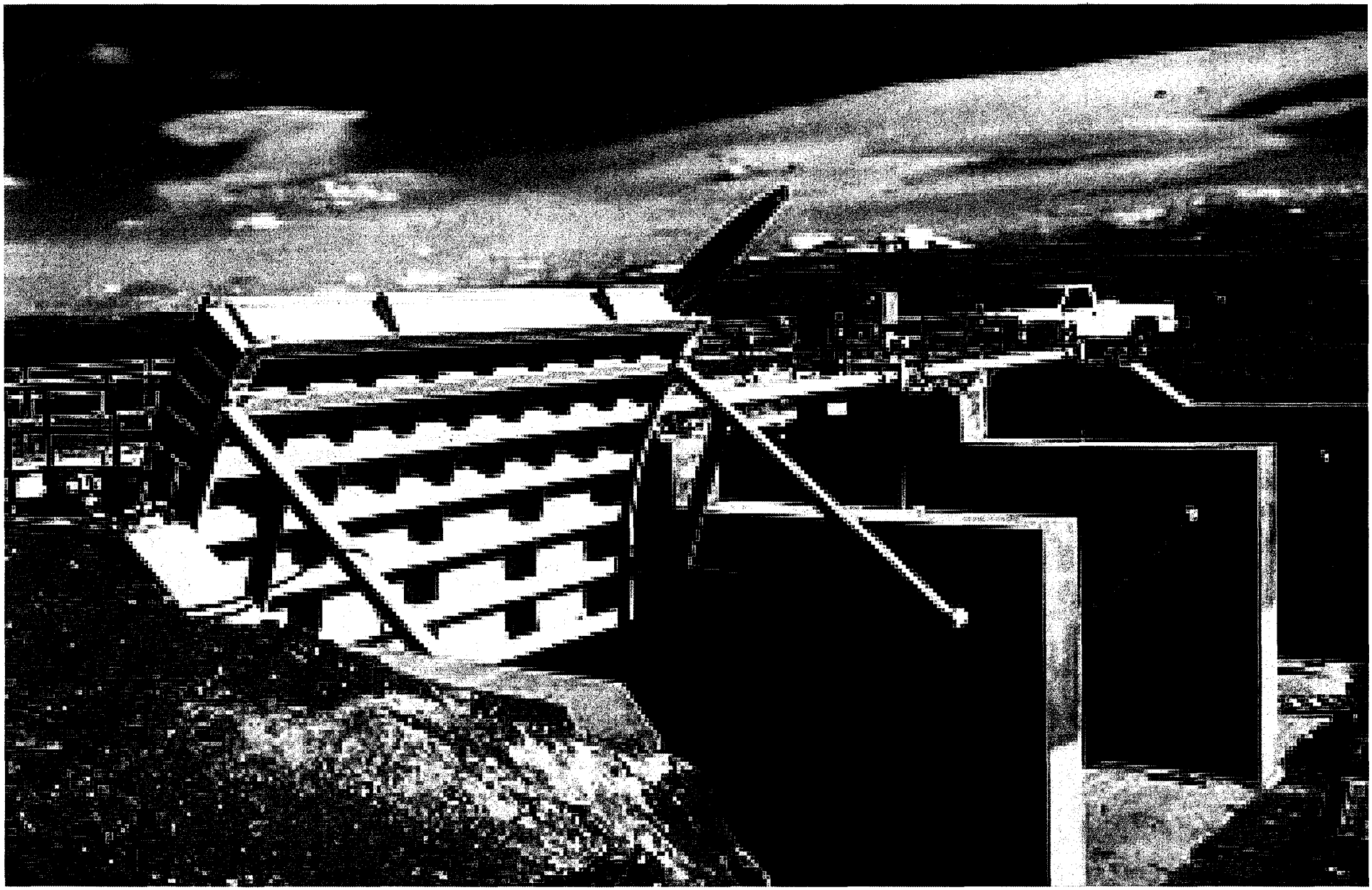


Figure 2 – Example Radial Arm Spill Gate

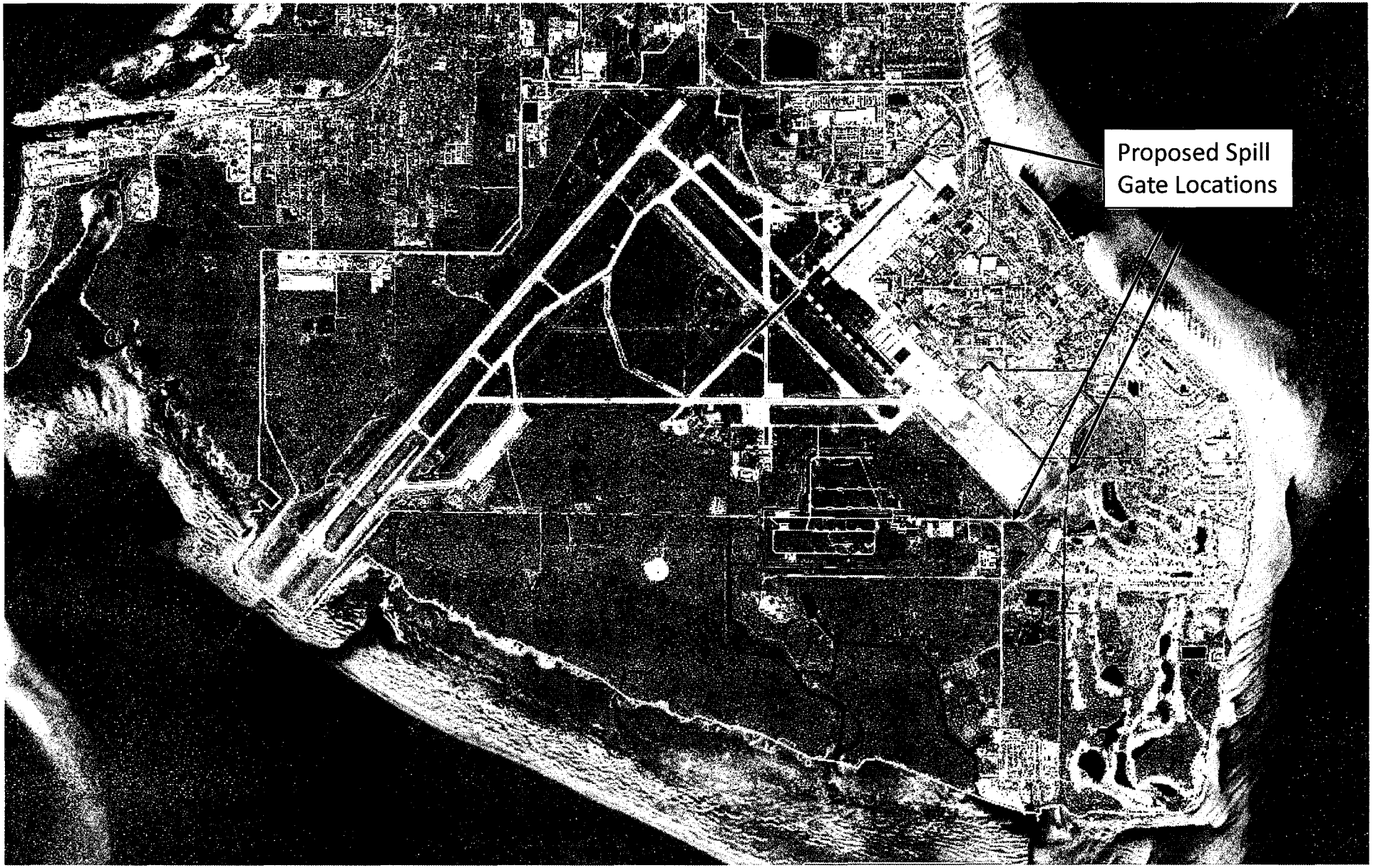


Figure 3 – Proposed Spill Gate Locations

FLORIDA DEPARTMENT OF STATE
Kurt S. Browning
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Robert D. Moore
Department of the Air Force
6 CES/DD
7621 Hillsborough Loop Drive
MacDill Air Force Base, Florida 33621

October 28, 2011

RE: DHR Project File Number: 2011-4768
Proposed Construction of Spill Gates
MacDill Air Force Base, Hillsborough County

Dear Mr. Moore:

This office reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, on the *National Register of Historic Places.* The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966,* as amended and *36 CFR Part 800: Protection of Historic Properties.*

Based on the information provided, it is the opinion of this office that the proposed undertaking is not likely to have an effect on historic properties, provided that the Department of the Air Force/MacDill AFB makes contingency plans in the case of fortuitous finds or unexpected discoveries during ground disturbing activities within the project area:

- If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with early Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The applicant shall contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at (850) 245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, *Florida Statutes.*

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail *sedwards@dos.state.fl.us,* or at 850.245.6333.

Sincerely,

Laura A. Kammerer

Laura A. Kammerer
Deputy State Historic Preservation Officer
For Review and Compliance

PC: Jason Kirkpatrick, MacDill AFB

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ **Director's Office** (850) 245.6300 • FAX: 245.6436
☐ **Archaeological Research** (850) 245.6444 • FAX: 245.6452
☑ **Historic Preservation** (850) 245.6333 • FAX: 245.6437

DEPARTMENT OF THE AIR FORCE
6TH AIR MOBILITY WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

20 SEP 2011

MEMORANDUM FOR U.S. FISH AND WILDLIFE SERVICE
ATTN: MS. TERRI CALLESON
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE FL 32256

FROM: 6 CES/DD
7621 Hillsborough Loop Drive
MacDill AFB FL 33621

SUBJECT: Construction of Spill Gates at MacDill AFB

1. The US Air Force intends to construct three spill control and containment structures (spill gates) in three stormwater drainage canals on MacDill AFB. The spill gates are intended to provide a final line of defense that would prevent a catastrophic JP-8 spills on the aircraft apron from reaching Tampa or Hillsborough Bay. Stormwater drainage from the aircraft aprons is collected in a network of stormwater collection and transmission pipes, which all discharge to three main drainage ditches that in turn discharge to Hillsborough and Tampa Bay (Figure 1). The base currently maintains floating containment booms the stormwater drainage ditches; however, the booms are not designed or intended to fully contain a large spill from reaching the bays. This project would construct three radial arm gates, also known as Tainter gates, which are designed to fully stop movement of surface water within the ditch. The gates would be composed primarily of structural coated milled steel or stainless steel mounted in a reinforced concrete structure. The spill gates would be constructed in major stormwater drainage ditches, which are considered wetlands. Consequently, environmental permitting through the Federal, state and county regulatory agencies would be accomplished prior to construction of the spill gates. Temporary diversion ditches would be constructed of adequate size to handle flows around the spill gates during construction. Figure 2 presents an example radial arm gate. Figure 3 presents the proposed locations of the spill gates.

2. An alternative being considered would consist of constructing nine sluice gates at the apron outfall headwalls to prevent a JP-8 spill on the aircraft apron from reaching Tampa or Hillsborough Bay, as identified in Figure 1. Under this alternative, all of the existing outfalls would require repairs, if not replacement, so that they would be able to withstand the water pressure when closed.

3. A representative from the MacDill AFB Natural Resources staff surveyed the proposed spill gate project sites and alternate sites to determine if any threatened or endangered species inhabit these areas. No Federally protected threatened and endangered species were observed along or adjacent to the proposed project areas. These areas have not been identified as critical habitat for any threatened or endangered species. Consequently, MacDill AFB believes that the proposed project would not adversely impact threatened or endangered species. We seek your input on the proposed project and our finding of no impact to USFWS resources.

4. If you would like to inspect the proposed new spill gate project areas, or if you have any questions or require additional information on the Proposed Action, please contact Mr. Andy Rider or Mr. Jason Kirkpatrick, 6 CES/CEV at (813) 828-2718 or (813) 828-0459, respectively.

ROBERT D. MOORE, GS-13
Deputy Director, 6th Civil Engineer Squadron

Attachments:
Figure 1 – Aircraft Apron Outfalls
Figure 2 – Example Radial Arm Gate
Figure 3 – Proposed Spill Gate Locations

ATTACHMENTS

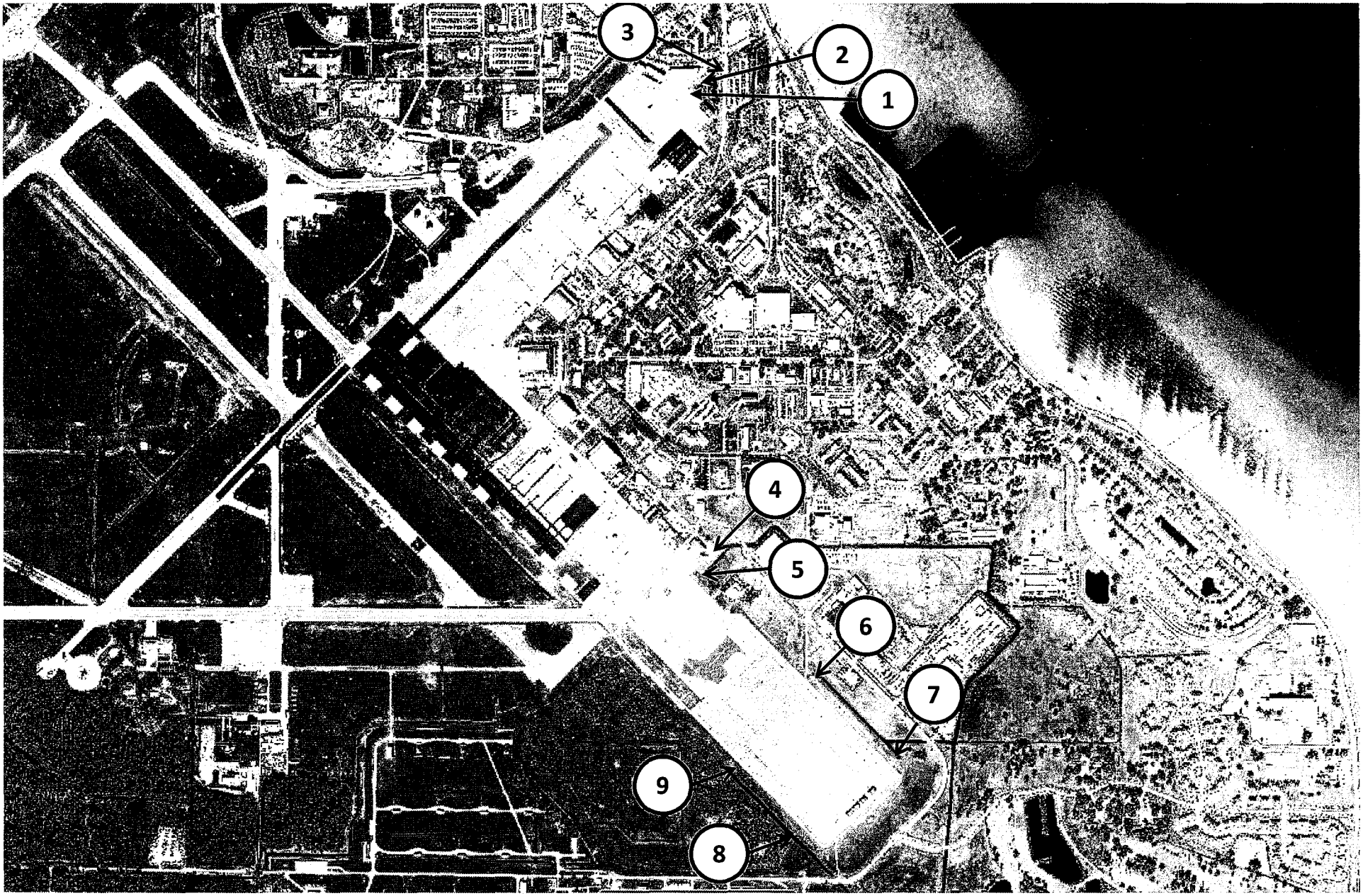


Figure 1 – Aircraft Apron Outfalls

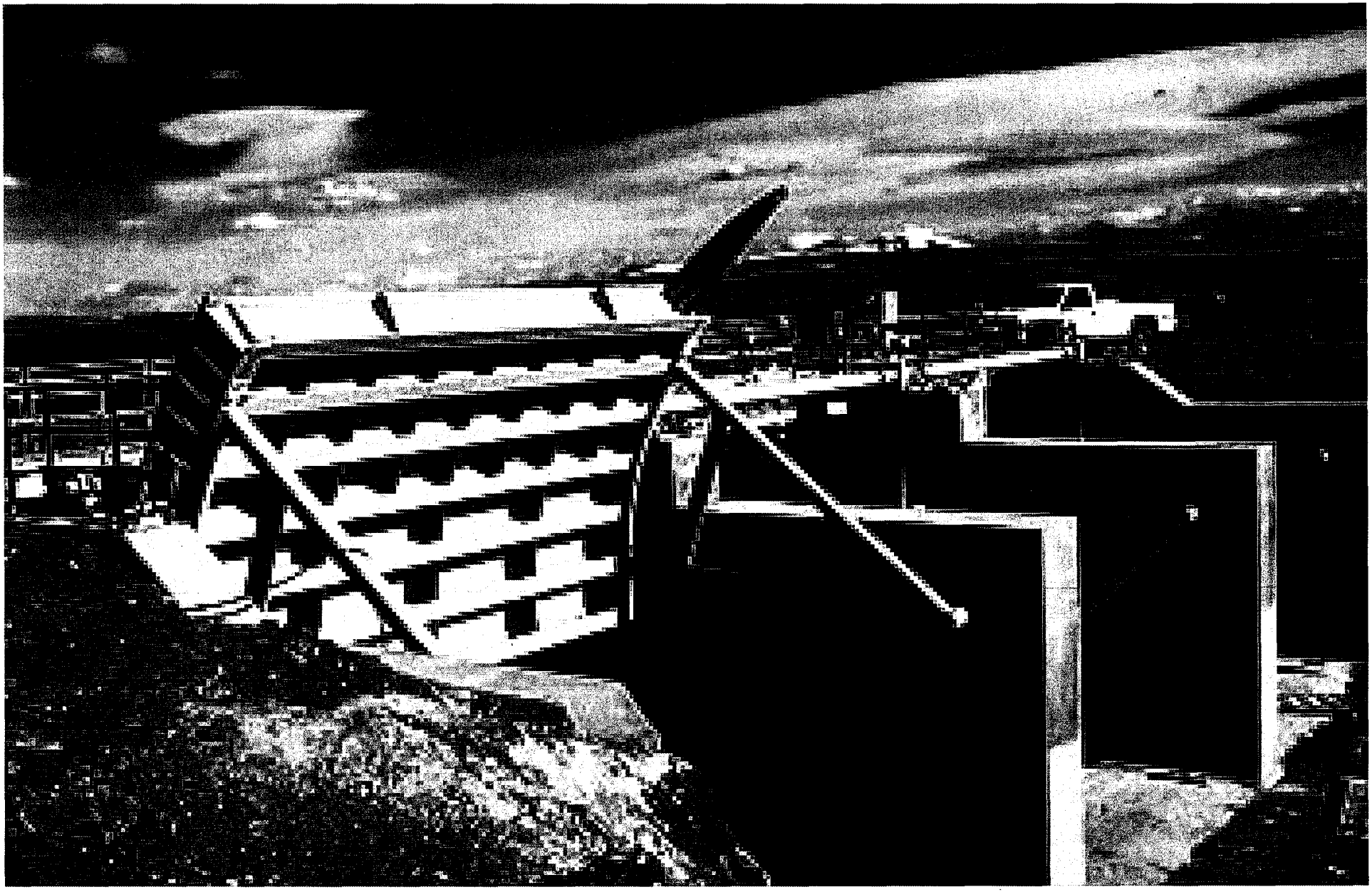


Figure 2 – Example Radial Arm Spill Gate

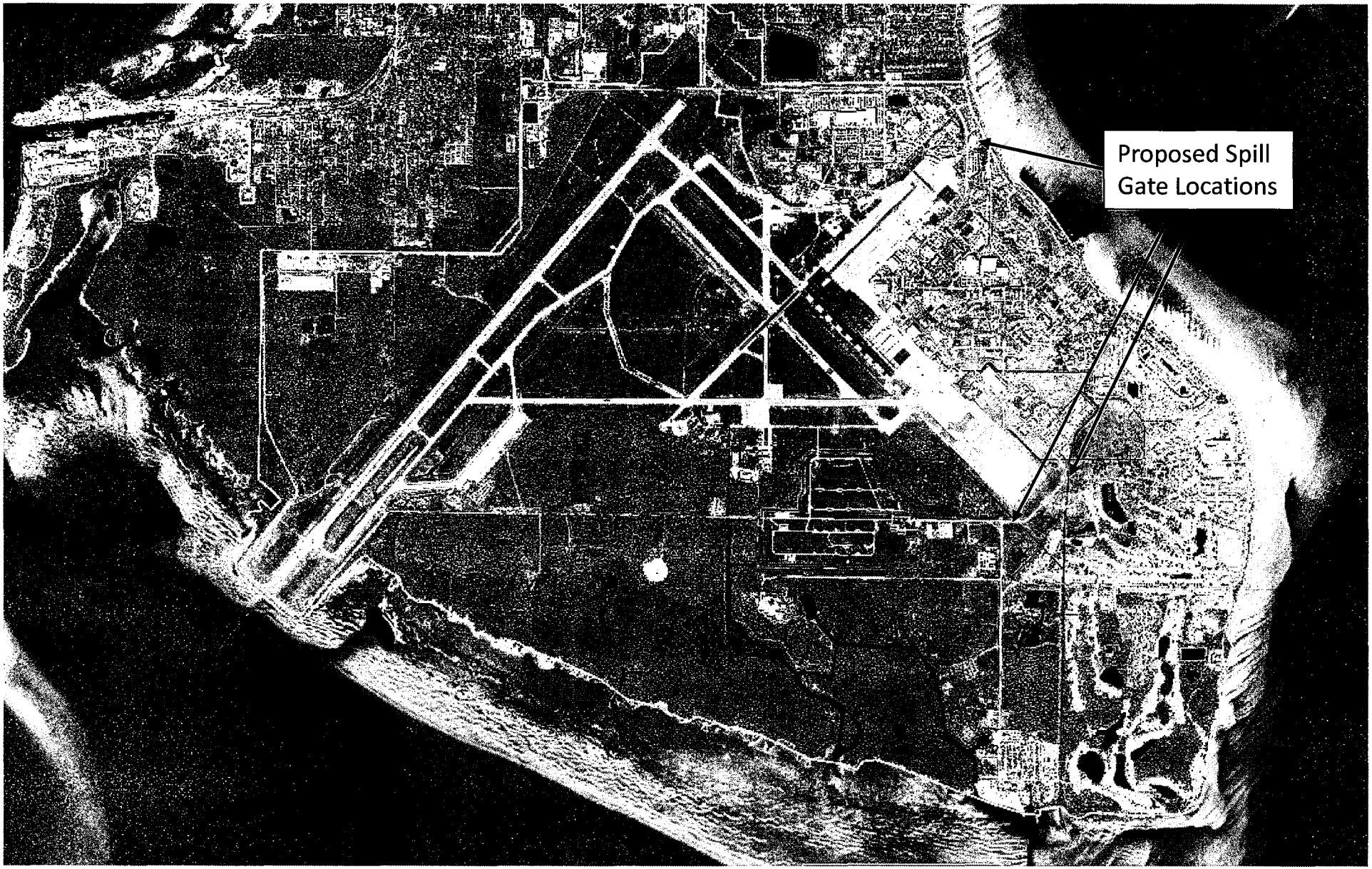


Figure 3 – Proposed Spill Gate Locations

United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:

FWS Log No. 41910-2012-I-0012

February 28, 2012

Mr. Robert D. Moore
Deputy Director, 6th Civil Engineer Squadron
Department of the Air Force
6th Air Mobility Wing
MacDill Air Force Base, Florida 33621
(Attn: Jason Kirkpatrick)

Re: Proposed Construction of Spill Gates at MacDill Air Force Base

Dear Mr. Moore:

Our office has reviewed your correspondence and accompanying information, received in our office on October 11, 2011, for the proposed spill gate construction project.

The proposed work will involve the construction of three spill control and containment structures (spill gates) in three stormwater canals on MacDill Air Force Base to help prevent fuel spills around the aircraft apron from reaching the surrounding Tampa and Hillsborough Bays. The proposed radial arm spill gate structures would be of steel and concrete construction and would function in containing contaminated surface water within the ditch. Only one of the proposed gates, referred to as gate 2, would be potentially accessible to manatees, but is still 7000 feet in from Hillsborough Bay. Depths at this gate are approximately four feet at high tide. The proposed gates would be manually operated and on a November 28, 2011 visit to the site, Mr. Jason Kirkpatrick of the Civil Engineer Squadron agreed to manatee observation at gate 2, prior to any maintenance testing. The gates would remain in the open position and be closed only in the event of an emergency spill or periodic maintenance testing. The project is located at MacDill Air Force Base, Tampa, Hillsborough County, Florida. At this time, the project is in the planning phase, and the applicant is requesting concurrence with a determination of no adverse impact to endangered and threatened species.

With the incorporation of the standard manatee construction conditions and a 20-minute manatee observation period prior to any maintenance testing closures (emergency response would be exempt from this requirement) at gate 2 as conditions of the federal permit, it is our position that the likelihood of take of a manatee or its habitat is insignificant or discountable. As such, we would concur with the Air Force's

determination that the project would pose no adverse impacts to threatened or endangered species.

If you have any questions regarding this response, please contact Ms. Terri Calleson of my staff at the address on the letterhead, or by calling (904) 731-3286.

Sincerely,

for David L. Hankla
Field Supervisor

cc:
Ms. Carol Knox
Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Imperiled Species Management Section
620 South Meridian Street
Tallahassee, Florida 32399

From: Ryan, Angela C SAJ
To: KIRKPATRICK, JASON W CTR Contractor AMC 6 CES/CEVN
Cc: RIDER, ANDREW W CTR Contractor AMC 6 CES/CEVW
Subject: RE: Construction of Spill Gates @ MacDill AFB (UNCLASSIFIED)
Date: Thursday, February 23, 2012 9:56:35 AM

Classification: UNCLASSIFIED
Caveats: NONE

Hello Jason and Andy,

Here are my preliminary thoughts on your projects:

1. These projects do not have independent utility and would need to all be reviewed as one project. They all have 1 project purpose and are interrelated. At the time of application, please submit a package for all three projects.

2. At the time of application, please submit the exact linear foot of stabilization and fill associated for each project in a table format.

3. For all Clean Water Act 404 discharges, a permit will be denied if the discharge that would be authorized by such permit does not comply with the Environmental Protection Agency's 404(b)(1) guidelines. For each project, the sequential process of avoidance, minimization and compensatory mitigation is required. A project may not require compensatory mitigation if the aforementioned steps of avoidance and minimization are successfully fulfilled. Also, please understand that projects must be the least environmental damaging practicable alternative to comply with the 404(b)(1) guidelines. Without doing a thorough review, it appears that the minor length of placement of rip-rap along drainage ditches and the placement of fill within the ditch beds would not result in adverse impacts to the aquatic environment. Although my recommendation is entirely preliminary, the projects for bank and bed stabilization within drainage ditches at the project sites may not require compensatory mitigation if avoidance and minimization steps are proficiently executed.

If you would like additional information on what is needed for a complete application, please contact me.

Thank you,

Angela C. Ryan
Biologist, Tampa Regulatory Office
U.S. Army Corps of Engineers
10117 Princess Palm Avenue, Suite 120
Tampa, Florida 33610-8300
Phone: (813)769-7069
Fax: (813)769-7061
Angela.C.Ryan@usace.army.mil

-----Original Message-----
From: KIRKPATRICK, JASON W CTR Contractor AMC 6 CES/CEVN
[mailto:jason.kirkpatrick.2.ctr@us.af.mil]
Sent: Wednesday, February 22, 2012 2:35 PM
To: Ryan, Angela C SAJ

APPENDIX C

AIR EMISSION CALCULATIONS FOR PROPOSED ACTION AND CUMULATIVE AIR EMISSIONS

Summary Summarizes total emissions for each project by calendar year

Combustion Estimates emissions from non-road equipment exhaust as well as painting

Fugitive Estimates fine particulate emissions from earthmoving, vehicle traffic, and windblown dust

Grading Estimates the number of days of site preparation, to be used for estimating heavy equipment exhaust and earthmoving dust emissions

Tier Report Summarizes total emissions for Hillsborough County, FL for 2002, to be used to compare project to county emissions.
Source: USEPA-AirData NET Tier Report (http://www.epa.gov/air/data/geosel.html). Site visited on 15 March 2011.

Current or future year emissions inventories are not readily available. Therefore, available 2002 air emissions inventories (given in tons per year (typ)) for Hillsboorgh county were used as an approximation of the regional inventory. Because the Proposed Action is several orders of magnitude below regional significance, the determination would be the same, regardless of whether future year budget data set were used.

Hillsborough County Emissions - Determination Significance for Proposed Activities (Significance Threshold = 10%)

	Point and Area Sources Combined					
	NO_x (tpy)	**VOC (tpy)**	**CO (tpy)**	**SO_2 (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
	58,191	34,880	6,517	65,890	22,379	7,221
10% of Hills. County Emissions	5,819	3,488	652	6,589	2,238	722

Air Quality Emissions from Phase One of the Proposed Action						
Construction Emissions from Phase One of the Proposed Action	**NO_x (tpy)**	**VOC (tpy)**	**CO (tpy)**	**SOx (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
Spill Gate #1	0.02	0.00	0.01	0.00	0.20	0.02
Spill Gate #2	0.02	0.00	0.01	0.00	0.35	0.04
Spill Gate #3	0.04	0.00	0.02	0.00	0.66	0.07
Air Quality Emissions - Total Proposed Action	**0.08**	**0.01**	**0.03**	**0.00**	**1.21**	**0.13**
10% of Hills. County Emissions	5,819	3,488	652	6,589	2,238	722
Proposed Action %	**0.001%**	**0.000%**	**0.005%**	**0.000%**	**0.054%**	**0.017%**
Regionally Significant?	**no**	**no**	**no**	**no**	**no**	**no**

Air Quality Emissions from the Alternative to the Proposed Action						
Construction Emissions from Alternative to PA	**NO_x (tpy)**	**VOC (tpy)**	**CO (tpy)**	**SOx (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
Sluice Gates 1-9-Alternative	0.021	0.001	0.008	0.000	0.237	0.025
Air Quality Emissions - Total Alternative to PA	**0.02**	**0.00**	**0.01**	**0.00**	**0.24**	**0.02**
10% of Hills. County Emissions	5,819	3,488	652	6,589	2,238	722
Proposed Action %	**0.000%**	**0.000%**	**0.001%**	**0.000%**	**0.011%**	**0.003%**
Regionally Significant?	**no**	**no**	**no**	**no**	**no**	**no**

Summary Summarizes total emissions by calendar year for cumulative projects.

Projects Included Summarizes construction and demolition projects included for cumulative analysis

Combustion Estimates emissions from non-road equipment exhaust as well as painting

Fugitive Estimates fine particulate emissions from earthmoving, vehicle traffic, and windblown dust

Grading Estimates the number of days of site preparation, to be used for estimating heavy equipment exhaust and earthmoving dust emissions

Tier Report Summarizes total emissions for Hillsborough County, FL for 2002, to be used to compare project to county emissions.

Air Quality Emissions from Total Cumulative Construction Projects

Construction Emissions from Cumulative Projects	NO_x (typ)	VOC (typ)	CO (typ)	SOx (typ)	PM_{10} (typ)	$PM_{2.5}$ (typ)
Spill Gate #1	0.02	0.00	0.01	0.00	0.20	0.02
Spill Gate #2	0.02	0.00	0.01	0.00	0.35	0.04
Spill Gate #3	0.042	0.003	0.016	0.001	0.657	0.068
New CENTCOM Construction and Demolition	4.74	0.75	2.08	0.36	9.31	1.26
Consolidated Communication Facility Construction	2.32	0.33	1.02	0.18	0.76	0.22
Consolidated Communication Fac - Demo Bldg 26	0.09	0.01	0.04	0.00	0.04	0.01
JCSE Ops Facility Construction	2.34	0.41	1.03	0.18	1.66	0.31
JCSE Ops Facility -Demo Bldg 89	0.35	0.02	0.14	0.01	0.16	0.04
JCSE Ops Facility -Demo Bldg 848	0.06	0.00	0.03	0.00	0.02	0.01
JCSE Ops Facility -Demo Bldg 860	0.03	0.00	0.01	0.00	0.00	0.00
JCSE Ops Facility -Demo Bldg 861	1.23	0.07	0.48	0.02	0.58	0.12
JCSE Ops Facility -Demo Bldg 886	0.05	0.00	0.02	0.00	0.02	0.00
JCSE Ops Facility -Demo Temp DJC2	0.20	0.01	0.08	0.00	0.09	0.02
MacDill Gate	0.34	0.02	0.13	0.01	0.34	0.08
JCSE Paint Facility	2.32	0.24	1.02	0.18	0.26	0.17
CENTCOM Parking Garage Construction	4.67	1.00	2.05	0.36	9.54	1.24
CENTCOM Parking - Demo Bldg 1051	0.23	0.01	0.09	0.00	0.10	0.02

CENTCOM Parking - Demo Bldg 1053	0.13	0.01	0.05	0.00	0.06	0.01
Warehouse Complex	4.70	0.53	2.07	0.36	9.66	1.30
Logistics Readiness Complex	5.08	0.61	2.22	0.37	5.01	1.16
SOCCENT HQ	5.03	0.64	2.20	0.37	12.07	1.75
New CATM	4.72	0.44	2.08	0.36	0.97	0.44
New CDC	4.70	0.52	2.07	0.36	5.43	0.87
120 Room Dorm	4.63	0.52	2.04	0.36	1.88	0.49
Mission Support - Demo Building 1066	0.09	0.01	0.04	0.00	0.04	0.01
Mission Support - Demo Building 373	0.53	0.03	0.21	0.01	0.25	0.05
JCSE Squadron Facility	4.68	0.60	2.06	0.36	1.80	0.52
Building 53 Consolidation - Demo Bldg 297	0.19	0.01	0.07	0.00	0.08	0.02
Building 53 Consolidaiton - Demo Bldg 258 & 202(	0.52	0.03	0.21	0.01	0.25	0.05
Building 500 Demolition	0.65	0.04	0.26	0.01	0.31	0.07
Building 510 Demolition	0.04	0.00	0.02	0.00	0.01	0.00
Building 119 Demolition	0.04	0.00	0.02	0.00	0.01	0.00
Building 317 Demolition	0.08	0.00	0.03	0.00	0.03	0.01
Building 397 Demolition	0.58	0.03	0.23	0.01	0.28	0.06
Building 398 Demolition	0.07	0.00	0.03	0.00	0.02	0.01
Building 540 Demolition	3.50	0.21	1.38	0.07	3.89	0.57
Building 541 Demolition	0.06	0.00	0.02	0.00	0.02	0.01
Building 543 Demolition	0.08	0.00	0.03	0.00	0.03	0.01
Building 178 Demolition	0.05	0.00	0.02	0.00	0.02	0.00
Building 3176 Demolition	0.02	0.00	0.01	0.00	0.00	0.00
Building 3500 Demolition	0.02	0.00	0.01	0.00	0.00	0.00
Eliminate CENTOM Avenue	0.13	0.01	0.05	0.00	0.13	0.02
Extend SOCOM Memorial Drive	0.07	0.00	0.03	0.00	0.41	0.07
Eliminate Intersection at Tampa Point and Baysho	0.04	0.00	0.02	0.00	0.02	0.00
Extend Zemke Avenue	0.04	0.00	0.02	0.00	0.25	0.05
Widen South Boundary Boulevard	0.04	0.00	0.02	0.00	0.36	0.06
Extend Great Egret Street	0.09	0.01	0.04	0.00	1.01	0.18
Construct Parking Lot	0.07	0.00	0.03	0.00	0.42	0.07
Relocate Aircraft Wash Rack	0.11	0.01	0.05	0.00	1.17	0.34
Other Potential Roadway Improvement Projects	0.09	0.01	0.04	0.00	1.21	0.28
Total Cumulative Emissions	**59.94**	**7.18**	**25.90**	**4.01**	**71.18**	**12.11**

Since future year budgets were not readily available, actual 2002 air emissions inventories for the county was used as an approximation of the regional inventory. Because the Proposed Action is several orders of magnitude below significance, the conclusion would be the same, regardless of whether future year budget data set were used.

Hillsborough County

Point and Area Sources Combined						
Year	**NO_x (tpy)**	**VOC (tpy)**	**CO (tpy)**	**SO_2 (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
2002	58,191	34,880	6,517	65,890	22,379	7,221

Source: USEPA-AirData NET Tier Report (http://www.epa.gov/air/data/geosel.html).

Determination Significance (Significance Threshold = 10% or above De minimus values) for Construction Activities

	Point and Area Sources Combined					
	NO_x (tpy)	**VOC (tpy)**	**CO (tpy)**	**SO_2 (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
Hillsborough County Emissions	58,191	34,880	6,517	65,890	22,379	7,221
10% of Hills. County Emissions	5,819	3,488	652	6,589	2,238	722
Cumulative Emissions	59.939	7.184	25.897	4.010	71.177	12.110
Cumulative Construction %	**0.103%**	**0.021%**	**0.397%**	**0.006%**	**0.318%**	**0.168%**
Regionally Significant?	**no**	**no**	**no**	**no**	**no**	**no**

APPENDIX D

SITE PHOTOGRAPHS

Spill Gate 1 Location Detail

Spill Gate 2 Location Detail

Spill Gate 3 Location Detail

Floating Containment Boom