

**ENVIRONMENTAL ASSESSMENT  
POWERTRAIN PN 64026**

**CORPUS CHRISTI ARMY DEPOT, TEXAS**



*Prepared for:*

**U.S. ARMY CORPS OF ENGINEERS TULSA DISTRICT**

Contract No. W912BV-10-D-1004

Task Order No. 0012

*and*

**CORPUS CHRISTI ARMY DEPOT**

308 Crecy Street

Corpus Christi, TX 78419-5260

*Submitted by:*

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June 2015



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Billingsley G. Pogue III  
Colonel, U.S. Army  
Commanding

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Date

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**ABSTRACT**

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1  
2 **Name of Action:** Assessment of the Powertrain PN64026 Project on Corpus Christi  
3 Army Depot (CCAD)

4 **Type of Report:** Environmental Assessment (EA)

5 **Responsible Agency:** Department of the Army

6 **Coordinating Agencies:** U.S. Army Corps of Engineers and the Department of the Navy

7 **Point of Contact:** Polly Gustafson, Chief, CCAD Environmental Support Division

8 **Abstract:**

9 CCAD, located at the Naval Air Station in Corpus Christi, Texas (NASCC), proposes to continue  
10 the construction of a replacement facility for the existing CCAD Building 8. This Proposed  
11 Action is a continuation of a larger, seven-phased project previously analyzed in a 2009 EA  
12 entitled, "Corpus Christi Army Depot Building 8 Replacement Facility." Specifically, this EA  
13 addresses activities proposed under the Powertrain PN64026 Project, which is the next phase of  
14 construction for the Building 8 Replacement Facility. The Powertrain PN64026 Project includes  
15 construction of the next phases of the Powertrain Facility, relocation of the NASCC facilities,  
16 and the demolition of Building 8 not previously assessed in the 2009 EA.

17 This EA documents and discloses the environmental impacts that would potentially result from  
18 implementation of the Proposed Action or alternatives at CCAD and NASCC. The U.S. Army  
19 Corps of Engineers (USACE), Tulsa District researched the issues presented, given the best  
20 available data on CCAD and NASCC. Based on the potential for significant environmental  
21 impacts from the Proposed Action, certain issues were designated for detailed study while other  
22 issues were eliminated. The resource areas addressed in detail within this document are Physical  
23 Environment (Geology, Soils, and Water Resources), Biological Environment, Historical and  
24 Cultural Resources, Socioeconomics, Land Use, Noise, Air Quality, Utilities and Infrastructure,  
25 Hazardous Materials, Air Quality, and Visual and Scenic Resources.

26 A summary of the probable environmental consequences associated with implementation of the  
27 Proposed Action are presented in Table ABS-1. For the purpose of this EA, the No Action  
28 Alternative is considered the baseline for comparison to the Proposed Action Alternative. The  
29 evaluation performed as the work product of the EA concludes that there will be no significant  
30 impact, either individually or cumulatively, to the human environment as a result of the Proposed  
31 Action.

**Table ABS-1  
Summary of Impact Assessment**

Section	Resource	Assessment of Impact						
		Adverse			No Appreciable Affect	Beneficial		
		Significant	Moderate	Minor		Minor	Moderate	Significant
<b>4.2</b>	<b>Physical Environment</b>				X			
4.2.1	Geology				X			
4.2.2	Soils			X	X			
4.2.3	Water Resources			X				
4.2.3.1	Coastal Management				X			
4.2.3.2	Corpus Christi Bay			X				
4.2.3.3	Floodplain			X				
4.2.3.4	Groundwater			X				
<b>4.3</b>	<b>Biological Environment</b>				X			
4.3.1	Terrestrial Habitat			X				
4.3.2	Aquatic Habitat			X				
4.3.3	Wildlife				X			
4.3.4	Protected Species				X			
4.3.5	Migratory Birds				X			
<b>4.4</b>	<b>Cultural Resources</b>				X			
<b>4.5</b>	<b>Socioeconomics</b>				X			
4.5.1	Demographics				X			
4.5.2	Local Economy					X		
4.5.3	Environmental Justice				X			
<b>4.6</b>	<b>Land Use</b>					X		
4.6.1	Restricted Land Uses				X			
<b>4.7</b>	<b>Utilities and Infrastructure</b>				X			
4.7.1	Stormwater			X				

Section	Resource	Assessment of Impact						
		Adverse			No Appreciable Affect	Beneficial		
		Significant	Moderate	Minor		Minor	Moderate	Significant
4.7.2	Water				X			
4.7.3	Wastewater				X			
4.7.4	Electricity					X		
4.7.5	Natural Gas					X		
4.7.6	Telecommunications					X		
4.7.7	Transportation			X				
4.7.8	Solid Waste			X				
<b>4.8</b>	<b>Hazardous Materials</b>				X			
4.8.1	Petroleum Product Storage and Hazardous Material Storage				X			
4.8.2	Hazardous Waste				X			
4.8.3	Solid Waste Management Units/Installation Restoration Sites				X			
4.8.4	Asbestos-Containing Materials				X			
4.8.5	Lead-Based Paint				X			
4.8.6	Occupational Health and Safety				X			
<b>4.9</b>	<b>Noise</b>			X				
<b>4.10</b>	<b>Air Quality</b>			X				
4.10.1	Air Quality Standards and Regulations					X		
4.10.2	Greenhouse Gases			X				
<b>4.11</b>	<b>Visual and Scenic</b>			X				
<b>4.12</b>	<b>Cumulative Impacts</b>				X			

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## LIST OF ACRONYMS

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ACM	asbestos-containing materials
ADP	Area Development Plan
AHPA	Archaeological and Historic Preservation Act
AICUZ	Air Installation Compatible Use Zone
AMC	U.S. Army Materiel Command
AMCOM	U.S. Army Aviation and Missile Command
amsl	above mean sea level
APAR	Affected Property Assessment Report
APZ	Accident Potential Zones
AQCR	Air Quality Control Region
AR	Army Regulation
ARADMAC	U.S. Army Transportation Aeronautical Depot Maintenance Center
Army	U.S. Army
AST	aboveground storage tanks
AWCF	Army Working Capital Fund
BASH	Bird/Animal Aircraft Strike Hazard
BCO	Base Communications Office
BEQ	Bachelor Enlisted Quarters
CAA	Clear Air Act
CAAA	Clean Air Act Amendments of 1990
CBQ	combined bachelor quarters
CCAD	Corpus Christi Army Depot
CEP	Central Energy Plant
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CMP	Coastal Management Program
CMU	concrete masonry unit
CMZA	Coastal Zone Management Act
CNIC	Commander, Navy Installations Command
CNO	Chief of Naval Operations
CNRA	coastal natural resource area
CNRSE	Commander, Navy Region Southeast
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2eq</sub>	carbon dioxide equivalents
CoC	Community of Comparison
COC	constituent of concern
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibels
dBA	A-weighted decibel

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**LIST OF ACRONYMS (CONTINUED)**


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DCRF	Dynamic Component Repair Facility
DNL	day-night sound level
DOD	Department of Defense
DPDO	Defense Property Disposal Office
DWTP	domestic wastewater treatment plant
EA	Environmental Assessment
EFH	essential fish habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FFTA	Firefighting Training Area
FIRM	flood insurance rate map
FNSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
ft	foot/feet
ft <sup>2</sup>	square foot/feet
FWCA	Fish and Wildlife Coordination Act
FWPCA	Federal Water Pollution Control Act
FY	fiscal year
GAC	granular activated charcoal
GHG	Greenhouse Gases
gpm	gallons per minute
GWP	global warming potential
HAZWOPER	hazardous waste operations and emergency response
HDSC	Hazardous Materials Distribution Support Center
HFC	hydrofluorocarbon
HMMS	Hazardous Materials Management System
HWMP	Hazardous Waste Management Plan
IICEP	Intergovernmental and Interagency Coordination for Environmental Planning
IRP	Installation Restoration Program
ISSA	Installation Services Support Agreement
IWTP	industrial wastewater treatment plant
kv	kilovolt
LCP	lead-containing paint
LEED	Leadership in Energy and Environmental Design
LF	linear feet

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**LIST OF ACRONYMS (CONTINUED)**


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LID	low impact development
MCA	Military Construction Army
MCM	minimum control measure
MGD	million gallons per day
MSGP	Multi-Sector General Permit
MILCON	military construction
MSA	Metropolitan Statistical Area
MWH	megawatt hours
MWR	morale, welfare, and recreation
N <sub>2</sub> O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NASCC	Naval Air Station Corpus Christi
NAVFAC SE	Naval Facilities Engineering Command – Southeast
NCP	National Contingency Plan
NEP	National Estuary Program
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NEX	Navy Exchange
NHPA	National Historic Preservation Act
NMCI	Navy Marine Corp Intranet
NMFS	National Marine Fisheries Services
NO <sub>2</sub>	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O <sub>3</sub>	ozone
OSHA	Occupational Safety and Health Administration
OPNAVINST	Chief of Naval Operations Instructions
P.L.	Public Law
PCB	poly-chlorinated biphenyls
PCL	protective concentration level
PCLE	Protective Concentration Level Exceedance
PFC	perfluorocarbons
PM <sub>10</sub>	10 micrometers in aerodynamic diameter
PM <sub>2.5</sub>	2.5 micrometers in aerodynamic diameter
PN	project number
PPE	personal protective equipment

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**LIST OF ACRONYMS (CONTINUED)**

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PPS	Powertrain Process Shops
psi	pounds per square inch
PVC	polyvinyl chloride
RAP	Response Action Plan
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SF <sub>6</sub>	sulfur hexafluoride
SIP	state implementation plan
SOC	species of concern
SO <sub>x</sub>	sulfur oxides
SPCC	Spill Prevention, Control, and Countermeasure Plan
SPCCP	Spill Prevention, Control, and Countermeasure Plan
SPL	sound pressure level
SWMP	Stormwater Management Plan
SWMU	solid waste management units
SWPPP	Stormwater Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
TCLP	Toxicity Characteristic Leaching Procedure
TGLO	Texas General Land Office
TPDES	Texas Pollutant Discharge Elimination System
tpy	tons per year
TSD	treatment, storage, and disposal
TTO	Total Toxic Organics
TWDB	Texas Water Development Board
U.S.	United States
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UV	ultraviolet
VOC	volatile organic compounds
WESTON	Weston Solutions, Inc.

1    **1.    INTRODUCTION**

2    This Environmental Assessment (EA) evaluates the effects of completing the Powertrain Project  
3    Number (PN) 64026 Project at Corpus Christi Army Depot (CCAD) located in Corpus Christi,  
4    Texas. This EA will facilitate the decision-making process regarding the Proposed Action and  
5    alternatives. Section 1 of this EA provides the authority for the Proposed Action, summarizes  
6    the project purpose, provides relevant background information, details the need for the Proposed  
7    Action, and describes the scope of the EA.

8    **1.1   BACKGROUND AND LOCATION OF THE PROPOSED ACTION**

9    CCAD is located within the boundaries of Naval Air Station Corpus Christi (NASCC) in Corpus  
10   Christi, Nueces County, Texas (Figure 1-1 Project Area). CCAD is the largest helicopter repair  
11   facility in the world and currently serves as the United States (U.S.) Army and the Department of  
12   Defense (DOD) facility for repair and overhaul of rotary wing aircraft.

13   This Proposed Action is a continuation of a larger project analyzed in a 2009 EA entitled  
14   “Corpus Christi Army Depot Building 8 Replacement Facility”, which is incorporated by  
15   reference throughout this EA. The Building 8 Replacement Facility, originally planned for  
16   construction over nine phases, is now planned to be erected in seven phases. The 2009 EA was  
17   prepared to identify and evaluate the environmental, cultural, social, and economic aspects of the  
18   proposed relocation and construction of the Building 8 Replacement Facility. The Proposed  
19   Action evaluated as part of the 2009 EA included two primary components:

- 20       ▪ The demolition of 23 existing NASCC and CCAD buildings, including the back nine  
21       holes of the Gulf Winds Golf Course. The 23 buildings, totaling 329,457 square feet  
22       (ft<sup>2</sup>), were proposed for deconstruction between 2010 and 2017; and
- 23       ▪ The construction of the Building 8 Replacement Facility, including the entire nine phases  
24       of the proposed 1,300,000-ft<sup>2</sup> facility to be constructed over the course of nine years,  
25       from 2009–2018.

26   As a result of the 2009 evaluation, Finding of No Significant Impact (FNSI)s were signed by  
27   both CCAD and the Commander, Navy Installation Command (CNIC) for the demolition of 23  
28   buildings, the demolition of the back nine holes of the Gulf Winds Golf Course, and the  
29   construction of the nine phases of the 1,300,000-ft<sup>2</sup> facility. Since completion of the 2009 EA,

1 planning for the Building 8 Replacement Facility has been revised to include seven phases, as  
2 opposed to the nine phases evaluated in the 2009 EA.

3 Following completion of the 2009 EA, construction of the Phase 0 (the Dynamic Component  
4 Repair Facility [DCRF], also known as Building 1700) was completed. Since completion of the  
5 2009 EA, project-specific phasing and activities have been slightly modified to better meet  
6 CCAD needs, suit engineering demands, and meet military construction (MILCON) program  
7 mandates. Additionally, at the time that the 2009 EA was conducted, the relocation and  
8 reconfiguration of the 23 buildings and the Gulf Winds Golf Course had not been finalized and  
9 were therefore not included in the previous evaluation. Since completion of the Building 8  
10 Replacement Facility EA in 2009, NASCC facilities have been identified that would require  
11 relocation of their functions and demolition of those facilities presently used for completion of  
12 the PN64026 project. In addition, the configuration of the Building 8 replacement facility has  
13 been modified to no longer impact the Gulf Winds Golf Course. Therefore, the relocation of the  
14 back nine holes of the Gulf Winds Golf Course will no longer be required and is not included in  
15 the PN64026 project. Therefore, CCAD is preparing a new environmental analysis for the  
16 activities currently proposed under the Powertrain PN64026 Project, which is the next phase of  
17 construction for the Building 8 Replacement Facility, including the relocation of the NASCC  
18 facilities and the demolition of portions of Building 8 not previously assessed in the 2009 EA.

## 19 **1.2 PURPOSE AND NEED FOR PROPOSED ACTION**

20 Over the past 50 years, CCAD has become the nation's leading center of excellence for the  
21 modification, repair, and overhaul of rotary wing and unmanned aircraft components and  
22 platforms. CCAD is the largest helicopter repair facility in the world and is the largest tenant at  
23 NASCC, with 60 buildings and 2.3 million ft<sup>2</sup> of industrial space on a total of approximately 158  
24 acres. CCAD provides full-spectrum support for the warfighter including worldwide onsite  
25 maintenance, recapitalization and crash battle damage repair, modernization and new builds, and  
26 hands-on training. To date, CCAD has restored over 13,850 aircraft for various clientele,  
27 including all branches of the U.S. military (Navy, Army, Air Force, Coast Guard) and numerous  
28 foreign military organizations. Additionally, over 70% of the total revenue for CCAD comes  
29 from repairing over 280,000 components within the past 11 years (CCAD, 2013).

1 In the recent past, CCAD incurred production and operation challenges due to workloads that  
2 have increased through 2011. Currently, CCAD's workload is projected to decrease  
3 approximately 2–3% per year through FY18 (CCAD, 2013). Although CCAD's current  
4 workload is not expected to significantly increase through FY18, it is anticipated that future  
5 demands on rotary repair will require CCAD to (1) maintain the capacity and the overall  
6 capability of the entire facility; (2) upgrade existing tooling facilities; and (3) develop the  
7 necessary skill sets for new and modern technologies to better meet client needs. This proposed  
8 action is needed to efficiently manage CCAD's workload, by supporting major changes in the  
9 production facility that are required, including additional tooling, equipment, material handling,  
10 parts storage, and more efficient use of floor space and layout.

11 Building 8, originally constructed in 1941, currently serves as the primary CCAD production  
12 facility. This facility consists of six distinct buildings that were merged together and is largely  
13 an outdated, deteriorating, and aging facility that can no longer meet the demands on CCAD  
14 (USACE, 2009).

15 CCAD must continue to maintain multi-service depot-level support for rotary wing aircraft and  
16 unmanned aircraft. For this reason, the recently completed Dynamic Component Repair Facility  
17 (DCRF) and the proposed Powertrain PN64026 Project described in this Proposed Action are  
18 essential to meeting the need for updated facilities and to improving and assisting with CCAD  
19 operations. Additionally, these updated state-of-the art and energy efficient facilities will reduce  
20 energy costs and eliminate flash corrosion (CCAD, 2013).

21 The purpose of this proposed action and this EA is to allow for the continuation of the  
22 Powertrain PN64026 Project. To continue subsequent phases of the Powertrain Project,  
23 replacement facilities must also be assessed for those NASCC facilities impacted by the DCRF  
24 and the Powertrain PN64026 Project described in this Proposed Action. This Proposed Action  
25 will also include demolition of portions of Building 8.

### 26 **1.3 AUTHORITY**

27 The National Environmental Policy Act (NEPA), as amended, requires Federal agencies to  
28 consider the environmental consequences of their Proposed Actions in their decision-making  
29 process. The President's Council on Environmental Quality (CEQ) has issued regulations to

1 implement NEPA that include provisions for both the content and procedural aspects of the  
2 required environmental impact analysis.

3 The Army would provide funding for the Proposed Action, and thus is the proponent for this  
4 action. Therefore, the Army is conducting this environmental analysis following procedures set  
5 forth in CEQ regulations (40 Code of Federal Regulations [CFR] Sections 1500–1508) and in 32  
6 CFR 651, Environmental Analysis of Army Actions. These Federal regulations establish both  
7 the administrative process and substantive scope of the environmental impact evaluation  
8 designed to ensure that deciding authorities have a proper understanding of the potential  
9 environmental consequences of a contemplated course of action.

#### 10 **1.4 DECISION TO BE MADE**

11 This EA evaluates the potential environmental consequences of the Powertrain PN64026 Project,  
12 which include the continued construction of Building 1700 and associated facilities, the  
13 relocation of Navy facilities currently within the footprint of the Proposed Action, and the  
14 demolition of portions of Building 8. The Powertrain PN64026 Project is part of a multi-phased  
15 facility intended to house activities currently conducted within the existing Building 8. The No-  
16 Action Alternative of the proposed Powertrain PN64026 Project is assessed within this EA.  
17 Additionally, this EA will assess the potential cumulative environmental consequences of the  
18 Proposed Action in combination with other past, present, and reasonably foreseeable future  
19 actions in the neighboring community and within both NASCC and CCAD. Based on this  
20 information, the Army will determine if the Proposed Action qualifies for a FNSI or if an  
21 Environmental Impact Statement (EIS) will be required. As the owners of the facility on which  
22 CCAD is located, the Commander, Navy Region Southeast (CNRSE) will also review and sign  
23 the same decision document for this EA. As required by NEPA and its implementing  
24 regulations, preparation of an environmental document must precede final decision-making for  
25 the proposed project. Furthermore per 32 CFR 651.36, this environmental document has been  
26 made available to interested members of the public, and substantive public comments will be  
27 addressed prior to the final decision. This EA is intended to inform decision-makers of any  
28 potential environmental impacts resulting from the Proposed Action.

1 As discussed in the 2009 Building 8 Replacement Facility EA, this Proposed Action is only a  
2 portion of an overall action that spans nine years. The 2009 Building 8 Replacement Facility EA  
3 was reviewed for adequacy and completeness, in light of the Powertrain PN64026 Project. Due  
4 to substantial additions to the Proposed Action (demolition and relocation of CCAD and Navy  
5 facilities and demolition of portions of Building 8 that were replaced by the DCRF and that will  
6 be replaced by the Powertrain PN64026 Project), the Army determined that the current analysis  
7 should be conducted as a continuation of the 2009 Building 8 Replacement Facility EA, as the  
8 new locations for the impacted NASCC facilities were not determined until after completion of  
9 the 2009 EA.

## 10 **1.5 SCOPE OF THIS ENVIRONMENTAL ASSESSMENT**

11 The scope of this EA identifies, describes, and evaluates the potential environmental impacts that  
12 are associated with the construction associated with the Powertrain PN64026 Project, including  
13 construction of the Central Energy Plant (CEP) and the Powertrain Process Shops (PPS) and  
14 associated paving and utilities, construction of site drainage and stormwater conveyance features,  
15 demolition of portions of Building 8, and the relocation and demolition of CCAD and NASCC  
16 facilities located within the footprint of the proposed Powertrain PN64026 Project. The study  
17 area of this EA, or the proposed Project Area of the Proposed Action, is depicted in Figure 1-1.  
18 Potential environmental effects of taking no action, as well as cumulative effects from projects in  
19 the reasonably foreseeable future, will also be addressed within the scope of this EA.

### 20 **1.5.1 Resource Areas Discussed in Detail in this Assessment**

21 The scoping of this EA was conducted in compliance with 32 CFR Part 651, Subpart A, Section  
22 651.4(q)(4-5); Subpart B, Section 651.14 (d)(4) and (e); Subpart E, Sections 651.36 and 651.37;  
23 and Subpart G, Section 651.48. A scoping meeting was held 18 November 2014 at CCAD to  
24 assess the potential project impacts and impacts from the alternative actions to the variety of  
25 resource areas potentially impacted. Specific resources determined necessary for inclusion in  
26 this analysis as a result of the scoping meeting are listed in Table 1-1. These resources are  
27 discussed in greater detail in Sections 3 and 4 of this EA.

1  
2**Table 1-1  
Resource Areas**

Section	General Area	Specific Resource	
3.2 and 4.2	Physical Environment	Geology	
		Soils	
		Water Resources	Surface Water
			Groundwater
			Wetlands
Floodplains			
3.3 and 4.3	Biological Environment	Terrestrial Habitat	
		Aquatic Habitat	
		Wildlife	
		Protected Species	
		Migratory Birds	
3.4 and 4.4	Cultural Resources	Archaeology	
		Historical Architecture	
3.5 and 4.5	Socioeconomic Resources	Population	
		Economy	
		Environmental Justice	
3.6 and 4.6	Land Use	Land Use	
3.7 and 4.7	Utilities and Infrastructure	Stormwater Management	
		Water	
		Wastewater	
		Electricity/Natural Gas	
		Transportation	
	Solid Waste		
3.8 and 4.8	Hazardous Material and Wastes	Occupational Health and Safety	
3.9 and 4.9	Noise	Noise	
3.10 and 4.10	Air Quality	Regional Air Quality	
		Emissions	
		Climate and Greenhouse Gas	
3.11 and 4.11	Visual Resources	Visual Aesthetics	
4.12	Cumulative Effects	Review of past, present, and reasonably foreseeable future actions by CCAD, NASCC, and other NASCC tenants	

## 1 **1.5.2 Resource Areas Eliminated from Further Analysis in this Assessment**

2 During the scoping meeting conducted 18 November 2014, resource areas anticipated to not be  
3 affected by the proposed or alternative actions were discussed for exclusion from further study.  
4 Resource areas that were eliminated from further detailed study in the 2009 Building 8  
5 Replacement Facility EA and that have been eliminated from study in this document, along with  
6 the rationales for eliminating them, are presented below:

- 7     ▪ Aircraft Operations. Neither the Proposed Action nor the alternative actions are  
8 anticipated to significantly change the number of active aircraft assigned to NASCC,  
9 airfield facilities, or NASCC runways. Therefore, aircraft operations would not be  
10 affected by the proposed or alternative actions.
- 11     ▪ Airspace Use and Management. Neither the Proposed Action nor the alternative actions  
12 are anticipated to significantly change the airspace associated with aircraft operations.  
13 Therefore, airspace compliance with Laws, Executive Orders (EOs), and DOD  
14 instructions would not be affected by the proposed or alternative actions.

## 15 **1.6 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION**

16 The Interagency Coordination Act and EO 12372 require Federal agencies to cooperate with and  
17 consider state and local views in implementing a Federal proposal. Local, state, and Federal  
18 agencies with jurisdiction that could be affected by the proposed or alternative actions were  
19 notified and consulted. Intergovernmental and Interagency Coordination for Environmental  
20 Planning (IICEP) letters were prepared and distributed to provide a description of the Proposed  
21 Action to appropriate agencies. A complete list of agencies consulted and copies of IICEP  
22 correspondence are provided in Appendix A. An initial project scoping with these groups was  
23 signed and submitted on 9 January 2015. Responses were received from the City of Corpus  
24 Christi, Texas Commission on Environmental Quality (TCEQ), Federal Emergency Management  
25 Agency (FEMA), Texas A&M University-Corpus Christi, Texas General Land Office (GLO),  
26 Texas Historical Commission (THC), Texas Parks and Wildlife (TPWD), U.S. Department of  
27 Agriculture (USDA)–Natural Resources Conservation Service (NRCS), U.S. Army Corps of  
28 Engineers (USACE), and Texas Water Development Board (TWDB). Comments received  
29 during this initial scoping period have been incorporated into this EA. Additionally, this EA and  
30 Draft FNSI will also be provided for review during a 30-day public review period. Copies of  
31 responses received from both public review periods are included in Appendix A.

1 Additionally, as a tenant in NASCC facilities, CCAD prepared this EA with comprehensive  
 2 consultation with the Army (U.S. Army Corps of Engineers [USACE], U.S. Army Aviation and  
 3 Missile Command [AMCOM], and U.S. Army Materiel Command [AMC]) and the Navy  
 4 (NASCC and Naval Facilities Engineering Command Southeast [NAVFAC SE]) throughout the  
 5 NEPA process. As such, this assessment has been prepared following the Chief of Naval  
 6 Operations (CNO) Instruction (OPNAVINST) Environmental Readiness Manual, 5090.1D,  
 7 updated in January 2014. Once submitted, the June 2015 CNO letter initiating Navy  
 8 coordination will be included in Appendix A. Additionally, per NAVFACINST 11010.45,  
 9 Regional Planning Instructions, NASCC granted site approval for CCAD request SA23-13. A  
 10 copy of the NASCC site approval is included in Appendix B.

### 11 **1.6.1 Regulatory Requirements**

12 This EA considers all applicable local, state, and Federal laws and regulations. The proposed  
 13 Project Area is located within the boundaries of NASCC and is leased and operated by CCAD.  
 14 Although NASCC operations are not assessed in this EA, NAVFAC SE and NASCC applicable  
 15 regulations, including DOD Instructions, will be considered as part of the analysis due to the  
 16 location of the Project Area within NASCC. Applicable laws, regulations, and guidance  
 17 identified for the Proposed Action have been identified and are provided in Table 1-2. These  
 18 regulations, laws, and guidances are more fully described and discussed in the appropriate  
 19 subsections of Sections 3 and 4 of this document.

20 **Table 1-2**  
 21 **Applicable Environmental Laws and Regulations**

Federal Statutes and Policies	Compliance of Alternatives
Archaeological and Historic Preservation Act (AHPA), 1974, as amended, 16 United States Code (U.S.C.) 469, et. seq	Full
Clean Air Act (CAA), 1970, as amended, 42. U.S.C. 7609, et. seq	Full
Clean Water Act (CWA), 1972, as amended, 33 U.S.C. 1251, et. seq	Full
Endangered Species Act (ESA), 1973, as amended, 16 U.S.C. 1531, et. seq	Full
Farmland Protection Policy Act (FPPA), 1981, 7 U.S.C. 4201, et. seq	N/A
Fish and Wildlife Coordination Act (FWCA), 1980, as amended, 16 U.S.C. 661, et. seq	Full
Land and Water Conservation Fund Act, 1965, as amended, 16 U.S.C. 4601, et. seq	N/A

Federal Statutes and Policies	Compliance of Alternatives
Magnuson-Stevens Act Fishery Conservation and Management Act, 1996, as amended. National Marine Fisheries Service (NMFS)	Full
National Historic Preservation Act (NHPA), 1966, as amended, 16 U.S.C. 470a, et. seq	Full
National Environmental Policy Act (NEPA), 1970, as amended, 42 U.S.C. 4321, et. seq	Full
Native American Graves Protection and Repatriation Act (NAGPRA), 1990, 25 U.S.C. 3001-13, et. seq	N/A
Watershed Protection and Flood Prevention Act, 1954, 16 U.S.C. 1001, et. seq	Full
Wild and Scenic Rivers Act, 1968, as amended, 16 U.S.C. 1271, et. seq	N/A
Coastal Zone Management Act (CZMA), 1972, Public Law (P.L.) 92- 583, 16 U.S.C. 1451-1464	Full
Pollution Prevention Act, 1990, 42 U.S.C. 6901 et. seq	Full
Resource Conservation and Recovery Act (RCRA), 1976, 42 U.S.C. 6901 et. seq	Full
Energy Independence and Security Act of 2007 P.L. 110-140	N/A
U.S. House of Representatives U.S.C. – Title 42, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 1980.	Full
State Regulations	
Texas Integrated Report for CWA, Section 303(d), 1992, as amended.	Full
Texas Commission on Environmental Quality (TCEQ) Texas Pollutant Discharge Elimination System (TPDES), 1998.	Full
Executive Orders (EO)	
Floodplain Management (E.O. 11988), 1977	Full
Protection of Wetlands (E.O. 11990), 1977	Full
Environmental Justice (E.O. 12898), 1994	Full
Strengthening Federal Environmental, Energy, and Transportation Management (E.O. 13423), 2007	N/A
Federal Facilities on Historic Properties (E.O. 13006), 1996	Full
Accommodation of Native American Sacred Sites (E.O. 13007), 1996	N/A
Migratory Bird Treaty Act, 16 U.S.C. 703-711, et. seq (E.O. 13186), 2001	Full
Protection of Children from Environmental Health Risks and Safety Risks (E.O. 13045), 1997	N/A
Intergovernmental Review of Federal Programs (E.O. 12372), 1982	Full
Department of Defense (DOD) Regulations	
Air Installations Compatible Use Zones (AICUZ) program (OPNAV Instruction 11010.36C), 2008	N/A
Environmental Readiness Program Manual; Chapter 10 – Environmental Planning under NEPA and EO 12114 (OPNAV M-5090.1), January 2014	Full
DOD Instructions, Environmental Planning and Analysis (DoDI 4715.9) 3 May 1996	Full
DOD Instructions, Cultural Resources Management (DoDI 4715.16) 18 September 2008	Full

Federal Statutes and Policies	Compliance of Alternatives
Navy Bird/Animal Aircraft Strike Hazard (BASH) Program Implementing Guidance (CNICINST 3700) 7 July 2011	N/A
Navy Low Impact Development (LID) Policy for Stormwater Management issued by the Assistant Secretary of the Navy for Installations and Environment, 16 November 2007	Full
Regional Planning Instructions, Site Approval Process (OPNAVINST 11010.45), 2001	Full
Army Regulation 200-1, Environmental Protection and Enhancement, 2007	Full
Army Regulation 420-1, Army Facilities Management, 2009	Full
32 CFR 651, Environmental Analysis of Army Actions, 2002	Full

## 1 1.6.2 Permits

2 Applicable permits from local, state, and Federal agencies will be identified and obtained prior to  
3 construction or demolition activities associated with the Proposed Action. The construction  
4 contractor will identify and obtain appropriate permits for construction and demolition activities.  
5 The Proposed Action would require a Notice of Intent (NOI) for Stormwater Discharges for the  
6 TPDES permit and a Stormwater Pollution Prevention Plan (SWPPP) to be developed and  
7 implemented prior to construction activities. In addition to local, state, and Federal agency  
8 permits, various local NASCC permits would be required prior to any construction activities.  
9 Local NASCC permits include construction permits for the extension of the potable water  
10 system, extension of the sanitary water collection system, and a construction excavation/dig  
11 permit.

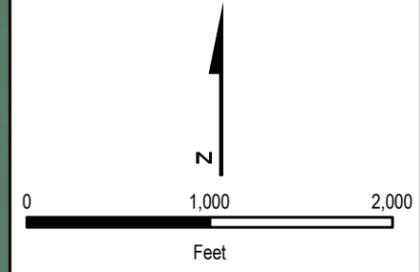
12 All applicable or potential permits are discussed in more detail in the appropriate subsections of  
13 Sections 3 and 4 of this document.



- LEGEND**
- Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - - - Proposed Underground Electrical Line
  - Powertrain PN64026 Project Area
  - NASCC Boundary



**Note:**  
 Project areas in this figure depict the action area for the specific project construction and/or operational activities. This project area represents the study area for many resources in this EA, including but not limited to: biological resources, cultural resources, and geology. Study areas may vary by resource (such as for air quality or stormwater) and could include areas immediately around the project area, in the general vicinity of the project, or include a regional setting. Study Areas for each resource will be discussed in Section 3.0 of this EA.



SOURCE: Aerial provided by ESRI



**FIGURE 1-1  
 POWERTRAIN PN64026  
 PROJECT AREA  
 CORPUS CHRISTI ARMY DEPOT  
 CORPUS CHRISTI, TEXAS**

DATE	PROJECT NO	SCALE
MAY 2015	03886.544.012.0002.20	AS SHOWN

1 **2. DESCRIPTION OF THE PROPOSED ACTION AND**  
2 **ALTERNATIVES**

3 **2.1 ALTERNATIVE 1: PROPOSED ACTION**

4 The environmental impacts from the proposed construction and demolition of the buildings  
5 (except the existing Building 8) associated with the nine-phased, 1,300,000-ft<sup>2</sup> Building 8  
6 Replacement Facility were originally assessed in the previous 2009 Building 8 Replacement  
7 Facility EA (USACE, 2009). Construction of the first 138,000 ft<sup>2</sup> of the Powertrain Facility,  
8 known as the DCRF (Phase 0 of the Building 8 Replacement Facility), was recently completed.  
9 However, further analysis and planning has indicated that new actions, not included in the  
10 previous EA (e.g., the relocation of NASCC facilities and demolition of portions of Building 8),  
11 also need to be conducted as part of the Powertrain PN64026 Project. This EA assesses all  
12 actions proposed under the Powertrain PN64026 Project as described in the following sections  
13 and depicted in Figure 2-1 and Figure 2-2. Specifically, this analysis includes the following  
14 items which are discussed in further detail within the following Subsections:

- 15       ▪ Construction of the PPS and the CEP, including supporting utilities and paving, two  
16       supporting electrical feeders, and site drainage and stormwater conveyance features  
17       (Figure 2-1).
- 18       ▪ Demolition of portions of the existing Building 8 that were replaced by the DCRF and  
19       that will be replaced by the proposed Powertrain PN64026 Project and all following  
20       phases (approximately 865,000 ft<sup>2</sup>).
- 21       ▪ Demolition and relocation of CCAD and NASCC facilities located in the footprint of the  
22       proposed Powertrain PN64026 Project. The facilities will be relocated either to existing  
23       facilities or to undeveloped areas (Figure 2-2).

24 As discussed in the 2009 Building 8 Replacement Facility EA, these phases receive funding and  
25 approval, separate from the NEPA process, as part of Military Construction Army (MCA)  
26 programs. The MCA process is a highly competitive project selection process that can introduce  
27 uncertainty into the project schedule. The Proposed Action covers primarily one MCA project  
28 (PN64026) valued at \$85 million and estimated to start in mid-2016. The Proposed Action also  
29 includes the demolition of a portion of Building 8 totaling approximately 865,000 ft<sup>2</sup> phased  
30 throughout five MCA projects (PNs 71594, 71596, 71597, 71598, and 71599) that are estimated  
31 to be completed by 2024. The timeline for completing the Proposed Action may move by one to  
32 two years, depending on approval or disapproval of individual MCA projects. Furthermore,

1 Congress now requires a 6% reinvestment into infrastructure of all Army Working Capital Fund  
2 (AWCF) facilities. Over \$600 million of identified associated capital equipment is included in  
3 this MCA effort (PN640126).

#### 4 **2.1.1 Construction of the Powertrain PN64026 Project**

5 The Powertrain PN64026 Project, as detailed in PN64026 and NASCC Site Approval SA23-13  
6 (Appendix B) and depicted in Figure 2-1, includes construction of the following components:

- 7     ▪ CEP – 11,800 ft<sup>2</sup> of a separate building to provide mechanical support to the DCRF  
8        (Building 1700).
- 9     ▪ PPS – a 150,900-ft<sup>2</sup> addition on the eastern side of the DCRF (Building 1700).
- 10    ▪ Paving and associated utilities around the PPS and CEP.
- 11    ▪ Two new underground electrical feeders from an existing substation located off NASCC  
12        to the existing portion of the DCRF (Building 1700) and the relocation of six electrical  
13        feeders located within two existing conduits.
- 14    ▪ Site drainage and stormwater conveyance features to connect the Powertrain PN64026  
15        Project with the existing swale that flows into Laguna Madre. Stormwater management  
16        will also include the construction of a temporary stormwater detention basin onsite within  
17        the footprint of Building 1746.

#### 18 ***Powertrain Process Shops***

19 Construction of the PPS would incorporate straightforward, repetitive structural and architectural  
20 “modules” to allow similar construction systems and techniques to be used in this and future  
21 phases (USACE, 2009). The Powertrain PN64026 Project includes the construction of a  
22 150,900-ft<sup>2</sup> Powertrain Building appending the eastern side of the current DCRF Building  
23 (Building 1700). The new facility would be constructed to match the architecture of the existing  
24 DCRF Building (Building 1700) and will be separated by a continuous expansion joint (Merrick  
25 & Company, 2014). The design will be in accordance with UFC 1-200-02 High Performance  
26 Sustainable Building Requirements. Construction will meet the more stringent requirements of  
27 USACE and NAVFAC SE Interim Design Guidance and will be constructed to Leadership in  
28 Energy and Environmental Design<sup>®</sup> (LEED) Silver standards (Merrick & Company, 2014). Fill  
29 will be used to construct the PPS at an elevation above the Category 5 threshold surge of a  
30 hurricane storm event and matching the existing DCRF Building. Construction of the facility

1 would consist of a reinforced concrete foundation with approximately 36-foot (ft)-high concrete  
2 masonry unit (CMU) walls with extensive high windows and a built-up roof. Additionally, two  
3 three-level 50 x 75-ft “towers” would be constructed to house facilities for production workers  
4 on the first level, office space and electrical/telecommunication equipment on the second level,  
5 and an open mezzanine with air handling equipment on the third level. This modular planning  
6 concept allows for subsequent additions to be identical in layout and system capacity to Building  
7 1700, resulting in a homogeneous final facility to accommodate CCAD operations (USACE,  
8 2009).

### 9 **Central Energy Plant**

10 The Powertrain PN64026 Project, as depicted in Figure 2-1, would also include the construction  
11 of the CEP. The CEP would be a separate 11,800-ft<sup>2</sup> building that would provide mechanical  
12 support to the Powertrain Facility and serve as the mechanical port or “Central Plant.” The CEP  
13 would be constructed in the same modular fashion as the Powertrain Facility described above  
14 (USACE, 2009). The CEP would also include production of chilled water, heating water,  
15 process water, grid and backup electrical power, fire suppression water, compressed air, and  
16 vacuum (Merrick & Company, 2014).

### 17 **Supporting Utilities**

18 The Powertrain PN64026 Project would involve constructing utility infrastructure to support the  
19 proposed completed Powertrain Facility (1,300,000 ft<sup>2</sup>) and associated inter-connects to the  
20 existing NASCC infrastructure. Areas surrounding the CEP and PPS would be built up to match  
21 the existing DCRF elevations and would be paved (approximately 129,000 ft<sup>2</sup>). Additionally,  
22 existing parking structures on D and E Streets, near Midway Street, would be expanded and  
23 paved (232,398 ft<sup>2</sup>) to accommodate 410 parking spaces. Utilities to be constructed are  
24 presented in Table 2-1 and depicted in Figure 2-1, including communications, electricity, gas,  
25 and water.

1  
2

**Table 2-1  
Proposed Utility Construction**

Type	Description	Location
Communications	Four fiber-optic cable conduits (comprised of two copper cabling and two fiber-optic cabling).	From existing lines located within the DCRF Main Telecommunication Equipment Room to the PPS and CEP.
Electrical	Two (4-inch) buried ducts containing electrical feeders.	From existing substation located off installation on Naval Air Station Drive to Project Area.
Gas	Lines would be installed to be compatible with the existing NASCC system. A 500,000-gallon water storage tank is also anticipated to meet fire flow demand.	From existing 8-inch-high pressure-line located along the southern boundary of the Project Area.
Potable Water		Domestic and sanitary sewer lines will extend from those installed as part of the DCRF project. Length of additional lines to be determined during final NASCC utilities identification and permit review process.
Sewage Water Collection		

\*Lengths for proposed utilities will be determined during the final design process.

3 Two new, 12.47 kilovolt (kv) electrical feeders would serve the new facility and improve power  
4 reliability for the existing facilities. The feeders would be routed underground and connect the  
5 existing substation located off the NASCC installation, on Naval Air Station Drive, to the  
6 existing switch station at the DCRF (Building 1700). The route would extend approximately  
7 1,500 ft northwest from the existing substation, then parallel Lexington Blvd, west of existing  
8 facilities for approximately 2,000 ft, and then follow on the eastern side of 1<sup>st</sup> Street to the  
9 terminus at the existing switch station (Figure 1-1). In addition, six existing electrical feeders  
10 would be relocated within two existing conduits to maintain existing facilities.

11 Additional utilities proposed as part of the Powertrain PN64026 Project include the construction  
12 of LID features for site drainage and stormwater conveyance off of CCAD and NASCC. The  
13 proposed stormwater conveyance would include construction of LID and swales features to  
14 connect the Powertrain PN64026 Project with an existing stormwater swale system that flows  
15 into Laguna Madre. Stormwater management would also include the construction of a  
16 temporary stormwater detention basin onsite within the footprint of Building 1746. The final  
17 configuration and design of the stormwater features will be determined through the Navy site  
18 approval and design process.

19 It is anticipated that the portions of Building 8 to be demolished will be redeveloped at a future  
20 date as parking to support the operation of the new CEP and PPS facilities. However, this

1 parking is not included in this Proposed Action as the final site design, assessment, and approval  
2 with NASCC are not yet completed.

### 3 **2.1.2 Demolition and Relocation of Existing Facilities**

4 As part of the Proposed Action, six CCAD buildings, a portion of one CCAD building, five  
5 NASCC buildings, and the NASCC tennis courts would be demolished, primarily because they  
6 are located within the footprint of new construction of the Proposed Action. Locations for the  
7 proposed NASCC facilities to be relocated were assessed and selected during NASCC Master  
8 Planning (NAVFAC SE, 2011), CCAD Area Development Planning (USACE, 2012), and during  
9 a recent NASCC scoping meeting held 20 April 2015. These locations are depicted in the  
10 NASCC Master Plan and the CCAD Area Development Plan (ADP). Specifically, the locations  
11 of the Auto Hobby Shop and the Arts & Crafts Shop were selected to be within walking distance  
12 to the residential area, and the location of the Navy Exchange (NEX) Tire and Lube building was  
13 selected for proximity to the fuel station and compatibility with potential future land use and  
14 zoning. The proposed locations were revised during additional NASCC planning discussions,  
15 and these revised locations are shown on Figure 2-2 and listed in Table 2-2.

16  
17

**Table 2-2  
Proposed Building Demolition and Relocation**

<b>Building Number</b>	<b>Building Name</b>	<b>Building User</b>	<b>Year Constructed</b>	<b>Approximate Size (ft<sup>2</sup>)</b>	<b>Proposed Relocation</b>
8	Building 8 – (portion south of Hangar Line)	CCAD	1941 (originally) and multiple phases	865,000	Within the recently constructed DCRF (Building 1700), CEP, PPS, and completed Powertrain Facility.
358	Hazardous Waste Storage Area	CCAD	1993	1,200	Areas will be identified once Powertrain Facility is complete.
362	Hazardous Waste/Material Temporary Storage	NASCC	1988	440	Inactive facility to be decommissioned and closed by NASCC (i.e., will not be relocated). Closure plan will be developed and implemented by Navy prior to Army demolition.

## DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Building Number	Building Name	Building User	Year Constructed	Approximate Size (ft <sup>2</sup> )	Proposed Relocation
1152	General Administration and Engineering Shops	CCAD	1944	7,364	Areas will be identified once Powertrain Facility is complete.
1209			1984	7,516	
1219			1946	3,648	
1277	NEX Tire and Lube	NASCC	1965	2,856	New MWR/NEX Joint Car Care Facility to be located on the northeast corner of Skyray Drive and E Street behind the existing Building 2.
1713	Auto Maintenance Hobby Shop	NASCC	2003	4,221	
1737	Auto Maintenance Hobby Shop	NASCC	1971	2,693	
1738	Navy/Marine Corps Relief Thrift Shop	NASCC	1971	7,650	Navy/Marine Corps Relief Thrift Shop and Arts & Crafts Shop to be collocated within the new MWR/NEX Car Care Facility.
	Arts & Crafts Shop				
1743	Golf Course Storage	NASCC	1973	4,000	New Golf Course Storage to be located on the adjacent to existing Building 1725 on the southeast corner of Iwo Jima and Dimmit/Pelican Road.
1746	Bachelor Enlisted Quarters (used as engineering and administrative offices)	CCAD	1973	87,870	Engineering and Administrative offices to be located in the existing Building 250 located on D Street.
124	Tennis Courts	NASCC	1942	18,750	Tennis Courts to be located adjacent to baseball fields on the northeast corner of E Street and Dimmit Drive.
CCAD Subtotal				972,598	
NASCC Subtotal				40,610	
<b>TOTAL</b>				<b>1,013,208</b>	

### 1 **CCAD Facilities**

2 As listed in Table 2-2 above, a portion of the existing CCAD Building 8 is proposed to be  
3 demolished as part of the Proposed Action. Approximately 865,000 ft<sup>2</sup> of Building 8 (south of  
4 the Hangar line and as depicted in Figure 2-1) would be demolished, and activities within these

1 areas would be relocated to Building 1700. As discussed in Section 2.1; the demolition of  
2 portions of Building 8 is anticipated to be conducted following the completion of all five  
3 subsequent phases and after the completed construction of all phases of the Powertrain Project in  
4 2024. The portion of Building 8 located northeast of the hangar line will remain intact, and a  
5 new exterior wall will be constructed. This EA will assess the portion of Building 8 to be  
6 demolished and taken down to the existing slab. Further assessment of the trichloroethene plume  
7 beneath Building 8 will be conducted prior to converting the area into a parking lot. However,  
8 assessment of the trichloroethene plume beneath Building 8 and the conversion to a parking lot  
9 are not included as part of this EA. Future development of the demolished areas of Building 8  
10 will be assessed by CCAD at a later date based upon further refined design and development  
11 planning.

12 Additional CCAD facilities planned for demolition under the Proposed Action include five small  
13 buildings located in the vicinity of Building 8. As shown in Table 2-2, the facilities include the  
14 Hazardous Waste Storage Area (Building 358), General Administration and Engineering Shops  
15 (Buildings 1152, 1209, 1219), and the Bachelor Enlisted Quarters (BEQ) (Building 1746).  
16 Demolition of Building 1746 is expected to occur before the construction of the Powertrain  
17 PN64026 project. The demolition of the remaining CCAD facilities is expected to be conducted  
18 in conjunction with demolition of the portion of Building 8 proposed for demolition as part of the  
19 Proposed Action. After demolition, this area is expected to be used as parking for the Powertrain  
20 Building.

### 21 **NASCC Facilities**

22 As listed in Table 2-2, five NASCC buildings (a total of approximately 21,860 ft<sup>2</sup>) and  
23 associated paved parking (including covered parking), tennis courts (approximately 18,750 ft<sup>2</sup>),  
24 and access areas (approximately 67,200 ft<sup>2</sup>) would be demolished. As detailed in the 2009  
25 Building 8 Replacement Facility EA, the NASCC facilities will be transferred to CCAD prior to  
26 demolition, and the MILCON project will be responsible for properly disposing of and/or  
27 recycling the resulting demolition debris. The Army will also be responsible for relocating any  
28 impacted NASCC functions before required demolition begins. While the Proposed Action in  
29 this EA includes the relocation of NASCC facilities (Table 2-2), the analyses conducted in this  
30 assessment are only for site selection, as depicted in Figure 2-1, and the general use of those

1 selected sites by NASCC. This assessment does not include analyses of specific designs or  
2 potential building layouts of the Crafts Shop, Golf Course Storage, or the Morale, Welfare, and  
3 Recreation (MWR)/NEX Joint Car Care Facility. The Navy would be responsible for conducting  
4 separate analyses for the designs and layouts of these facilities. As part of the Powertrain  
5 PN64026 Project, the Army would be responsible for providing funds to the Navy to conduct  
6 these relocations. Following CCAD receipt of site approvals for these relocated NASCC  
7 facilities from the Navy, the USACE and Army would provide funds to the Navy. The Navy  
8 would be responsible for managing the design oversight of the relocated NASCC facilities with  
9 continued involvement from CCAD, Army, and USACE. For the purposes of this assessment, it  
10 is assumed that facilities will be replaced in like kind, i.e., single-story facilities with similar  
11 square footage or relocated into existing facilities that would be renovated to support the NASCC  
12 operations. Should the final design and location of these relocated facilities vary significantly  
13 from the assumptions included in this analysis, those projects may be subject to further  
14 environmental planning by the Navy as necessary.

### 15 ***NASCC Utilities***

16 During the demolition of the facilities listed in Table 2-2, existing utilities associated with those  
17 facilities would also be decommissioned and demolished. Specifically, six existing electrical  
18 feeders to the NASCC buildings would be removed after installation and activation of their  
19 replacements.

### 20 **2.1.3 Proposed Action Phasing**

21 As part of the tenant agreement with NASCC, and as stated in NASCC site approval SA23-13,  
22 CCAD must relocate all NASCC facilities prior to any demolition activities. Therefore, the  
23 relocation of the NASCC facilities by the Navy, shown in Table 2-2, would be completed prior  
24 to any demolition or construction activities in this Proposed Action. Additionally, as discussed  
25 above in Section 2.1.2.1, the portion of Building 8 (and associated nearby CCAD facilities)  
26 proposed for demolition as part of the Proposed Action would be demolished after all  
27 construction of all phases of the Powertrain Project is complete.

## 1   **2.2   ALTERNATIVE 2: NO ACTION ALTERNATIVE**

2   The No Action Alternative is required to be considered under NEPA and establishes a baseline  
3   for comparing the present environmental conditions with the environmental consequences of the  
4   action alternative. The continuation of current conditions and trends of the existing environment  
5   are considered to represent the impacts from the No Action Alternative. Under the No Action  
6   Alternative, no construction or demolition activities associated with the Powertrain PN64026  
7   Project presented in this analysis would be conducted. Activities would continue as presented in  
8   the 2009 Building 8 Replacement Facility EA. While the 2009 Building 8 Replacement Facility  
9   EA did assess the demolition of 23 NASCC facilities, it did not assess any relocation efforts of  
10   these NASCC facilities, including those facilities detailed in Table 2-2. Therefore, under the No  
11   Action Alternative of this assessment, those facilities in Table 2-2 would not be relocated, and  
12   the Army would not be able to continue the construction of subsequent phases of the Powertrain  
13   Facility until other appropriate sites for relocated Navy facilities are identified, approved, and  
14   constructed. If other suitable sites for NASCC facilities cannot be determined, the Powertrain  
15   Facility could not be completed as conceived, and neither the purpose and need of this EA nor  
16   that of the 2009 Building 8 Replacement Facility EA would be fulfilled.

17   Additionally, under the No Action Alternative, CCAD operations would be split between the  
18   existing Building 8 and the recently constructed Building 1700. The No Action Alternative  
19   would not allow CCAD to maintain the current production capabilities or enable upgrades to  
20   existing tooling facilities. This inefficient process would be detrimental to the CCAD military  
21   mission, and the goals detailed in the current CCAD Vision and Mission Statement could not be  
22   met. Specifically, CCAD would no longer be able to achieve the following:

- 23       ▪   Return rotary wing aircraft and components to the Department of Defense and other  
24       government organizations with uncompromising quality, at the lowest possible cost, in  
25       the shortest amount of time possible.
- 26       ▪   Provide our Nation the best value solution for modification, repair, and overhaul of rotary  
27       wing components and aircraft.

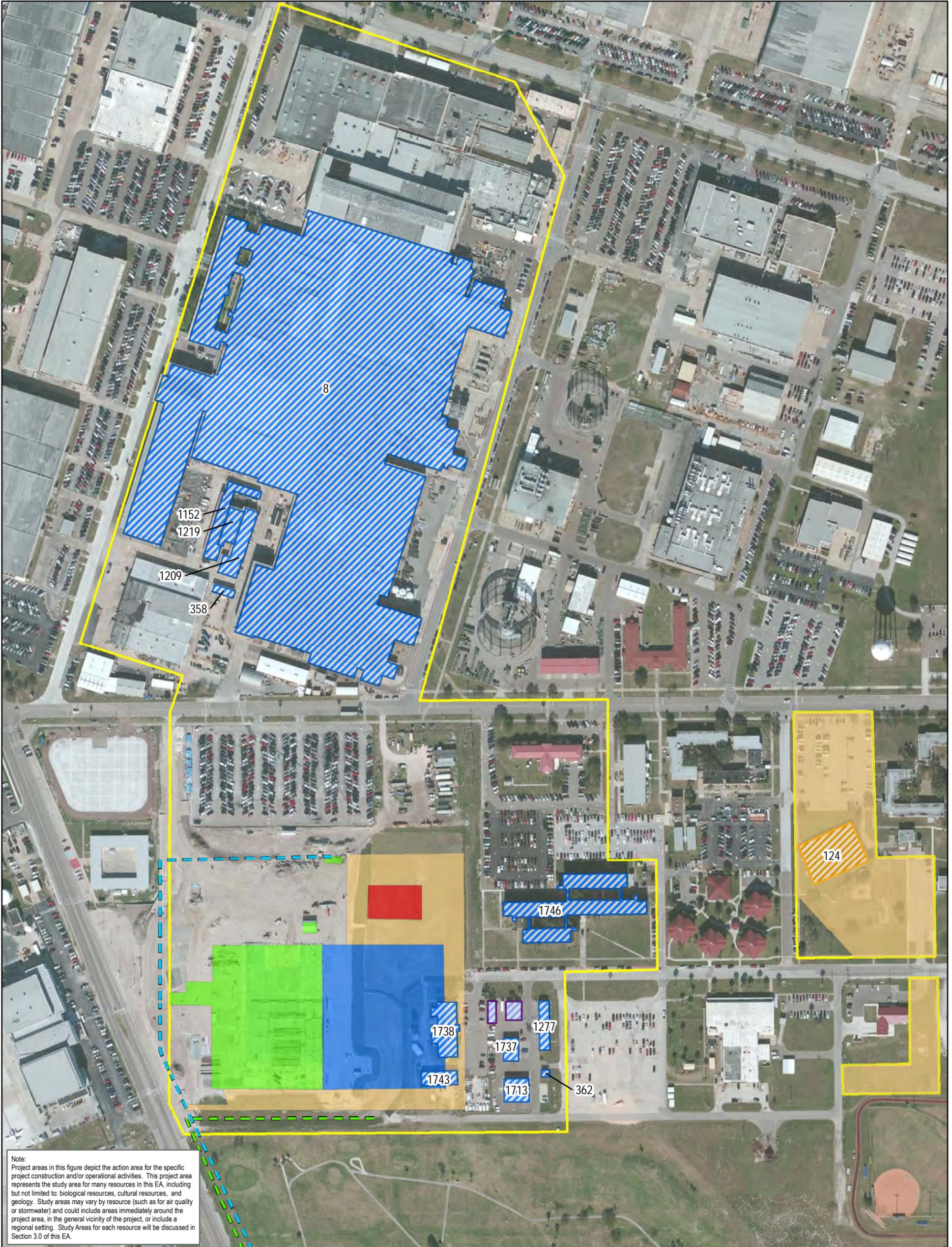
### 2.3 ALTERNATIVES CONSIDERED AND ELIMINATED FROM FURTHER CONSIDERATION

Five potential alternatives were eliminated from further consideration. Four of these five potential alternatives were discussed in the 2009 Building 8 Replacement Facility EA and included repairing, renovating, and expanding the existing Building 8; leasing or otherwise acquiring another facility on NASCC; leasing a new facility off-post; and outsourcing services. These alternatives were eliminated in the 2009 EA as they were either deemed impractical and/or made it impossible to continue to support the mission and operations of CCAD. A full description of these reasons for elimination is included in the 2009 Building 8 Replacement Facility EA (USACE, 2009). Those conclusions continue to hold true for the currently proposed actions.

The fifth potential alternative eliminated from further consideration included similar construction of the Powertrain Facility as the construction discussed in this Powertrain PN64026 EA, but required relocation of the back nine holes of the Gulf Winds Golf Course for construction of parking and stormwater control features. This alternative was deemed impractical due to the extensive disruption of the Gulf Winds Golf Course operations and MWR on NASCC.

Several alternative locations for the proposed electrical transmission line route were eliminated from further consideration. The alternative route locations eliminated included routes that would require construction within the Gulf Winds Golf Course. Therefore, these alternative locations were deemed impractical due to the disruption of golf course operations and MWR on NASCC.

Additional alternative locations were assessed for the MWR/NEX Joint Car Care and the Golf Course Storage Facilities. An alternative location for the MWR/NEX Joint Car Care facility was located on D Street, north of the intersection of Guadalcanal Street and D Street. An alternative location of the Golf Course Storage Facility was located on the western side on Road H near the Golf Course (Hole No. 6) and south of Essex. However, these locations were deemed impractical during the 20 April 2015 NASCC scoping meeting due to incompatibilities with proposed future land uses and zoning. Therefore, these alternative locations for NASCC facilities have not been assessed in further detail in this EA.



Note:  
 Project areas in this figure depict the action area for the specific project construction and/or operational activities. This project area represents the study area for many resources in this EA, including but not limited to: biological resources, cultural resources, and geology. Study areas may vary by resource (such as for air quality or stormwater) and could include areas immediately around the project area, in the general vicinity of the project, or include a regional setting. Study Areas for each resource will be discussed in Section 3.0 of this EA.

**LEGEND**

- Proposed Underground Electrical Line
- Proposed Stormwater Conveyance
- Powertrain PN64026 Project Area
- Buildings to be Demolished
- Covered Parking to be Demolished
- Tennis Court to be Demolished
- NASCC Boundary
- Existing Dynamic Component Rebuild Facility
- Proposed Central Energy Plant
- Proposed Powertrain Process Shops
- Proposed Pavement

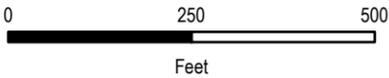


FIGURE 2-1  
 POWERTRAIN PN64026  
 PROPOSED ACTION  
 CORPUS CHRISTI ARMY DEPOT  
 CORPUS CHRISTI, TEXAS

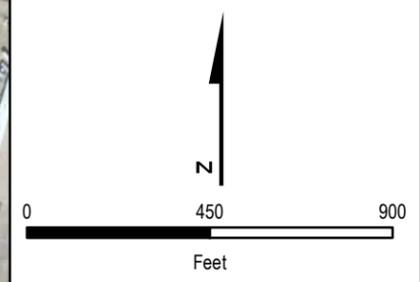
DATE JUN 2015	PROJECT NO 03886.544.012.0002.20	SCALE AS SHOWN
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- LEGEND**
- Buildings to be Demolished
  - Covered Parking to be Demolished
  - Tennis Court to be Demolished
  - Proposed CCAD Relocations
  - Proposed NASCC Relocations
  - Powertrain PN64026 Project Area
  - NASCC Boundary



Note:  
 Project areas in this figure depict the action area for the specific project construction and/or operational activities. This project area represents the study area for many resources in this EA, including but not limited to: biological resources, cultural resources, and geology. Study areas may vary by resource (such as for air quality or stormwater) and could include areas immediately around the project area, in the general vicinity of the project, or include a regional setting. Study Areas for each resource will be discussed in Section 3.0 of this EA.



SOURCE: Aerial provided by ESRI



**FIGURE 2-2**  
**POWERTRAIN PN64026**  
**PROPOSED ACTION RELOCATIONS**  
**CORPUS CHRISTI ARMY DEPOT**  
**CORPUS CHRISTI, TEXAS**

DATE	PROJECT NO	SCALE
JUN 2015	03886.544.012.0002.20	AS SHOWN

### 1 3. AFFECTED ENVIRONMENT

#### 2 3.1 GENERAL SETTING

3 CCAD is located within NASCC along the central Gulf of Mexico coastline in Corpus Christi,  
 4 Nueces County, Texas. The installation is approximately 10 miles southeast of downtown  
 5 Corpus Christi, 150 miles south-southeast of San Antonio, and 200 miles southwest of Houston.  
 6 The study area for this assessment is limited to areas included within the Powertrain PN64026  
 7 Project Area (Figure 1-1). The buildings currently located within the Project Area are as  
 8 provided in Table 3-1.

9 **Table 3-1**  
 10 **Buildings Within the Powertrain PN64026 Project Area**

Building Number	Building Name
8	CCAD Main Plant
34	DAPS/ Photo Studio and Storage
124	Tennis Courts
250	CCAD Administrative Building
358	Hazardous Waste Storage Area
359	Hazardous Materials Temporary Storage
362	Hazardous Waste/Material Temporary Storage
1152	General Administration and Engineering Shops
1209	General Administration and Engineering Shops
1219	General Administration and Engineering Shops
1246	CCAD Storage – Aircraft Parts
1277	NEX Tire and Lube
1713	Automotive Maintenance Hobby Shop
1737	Automotive Maintenance Hobby Shop
1738	Navy/Marine Corps Relief Thrift Shop / Arts & Crafts Shop
1743	Golf Course Storage
1746	Bachelor Enlisted Quarters (used as engineering and administrative offices)
1825	CCAD Storage (Condemned Aircraft Parts Storage)

1 In addition to the buildings listed above, several storage sheds are located within the proposed  
2 Project Area. Building locations are shown on Figure 3-1.

### 3 **3.1.1 History**

4 CCAD was originally established in 1961 as the U.S. Army Transportation Aeronautical Depot  
5 Maintenance Center (ARADMAC) to perform in-house maintenance of aircraft. Prior to this,  
6 the Army did not have facilities to perform overhaul or repair work on rotary wing aircraft  
7 (CCAD, 2013). ARADMAC's mission to overhaul and repair fixed wing aircraft was later  
8 phased out in 1967 to refocus repair efforts on helicopter airframes, engines, and components  
9 (USACE, 2009). The ARADMAC was redesignated as CCAD in 1974 and began reporting  
10 directly to the AMC. The depot expanded their capabilities to work on a variety of aircraft types  
11 throughout the 1980s and 1990s (CCAD, 2013). It is now the largest tenant organization at  
12 NASCC and includes approximately 2.3 million ft<sup>2</sup> of industrial space. It is the largest employer  
13 for the South Texas region and employs a workforce of over 5,300 personnel (CCAD, 2013).

### 14 **3.1.2 Current Mission**

15 The CCAD facility operates to provide repair and overhaul services for helicopters, engines, and  
16 components in Army Aviation for a variety of aircraft, including the following: UH-60 Black  
17 Hawk, CH-47 Chinook, AH-64 Apache, OH-58 Kiowa Warrior, Air Force HH-60 Pave Hawk,  
18 and RQ-7 Shadow. The current CCAD Mission is as follows:

- 19     ▪ Return Army rotary wing aircraft and components to the Department of Defense  
20     and other government organizations with uncompromising quality, at the lowest  
21     possible cost, in the shortest amount of time possible.
- 22     ▪ Safeguard the workforce. Integrate safety and risk mitigation into every aspect of  
23     depot operations.
- 24     ▪ Support the Army's accident investigation processes worldwide with materials  
25     expertise and laboratory analysis.
- 26     ▪ Assess, evaluate, and repair forward-deployed aircraft and components  
27     worldwide. Provide onsite depot capacity to the U.S. Army Aviation Center of  
28     Excellence at Fort Rucker.
- 29     ▪ Support Active, Reserve, and National Guard aviation maintenance skill  
30     development with hands-on training at the depot (CCAD, 2013).

## 1   **3.2   PHYSICAL ENVIRONMENT**

2   The physical environment characteristics considered for this EA include a description of the  
3   geology, soils, and water resources for the Project Area.

### 4   **3.2.1   Geology**

5   The Corpus Christi Bay area is part of the western gulf section of the Coastal Plains  
6   geographical region where sedimentary formations dip gulfward at low angles. The geology  
7   of the Texas Coastal Zone is comprised of several active environments: the fluvial-deltaic,  
8   barrier-strandplain-chenier, and the bay-estuary-lagoon systems, as well as an eolian (wind)  
9   system. Most of the Corpus Christi Bay area is underlain by sediments of the Beaumont  
10   Formation, which is composed mostly of fresh-water sediments that were deposited by rivers  
11   during the Pleistocene epoch (USDA NRCS, 1965).

12   The proposed Project Area is “located on a Pleistocene barrier-strandplain depositional  
13   environment on the Encinal Peninsula” (NASCC, 2013). The peninsula represents the remnants  
14   of Quaternary barrier island deposits, often referred to as the Ingleside Barrier island system,  
15   which extends discontinuously along the Texas Coastal Bend (USGS, 2015). These deposit  
16   surfaces are slightly higher than that of the surrounding deposits and consist of mostly fine-  
17   grained sand “characterized by numerous pimple mounds and poorly defined relict beach ridges”  
18   with a total thickness reported to be fewer than 60 feet (NASCC, 2013; USGS, 2015). The area  
19   is underlain by sediments of the Beaumont Formation ranging from clay to gravelly sands.  
20   Beaumont Formation clay consists of predominantly low permeability, plastic, compressible clay  
21   and mud deposited in flood basins, coastal lakes, and former stream channels on a deltaic plain.  
22   Beaumont Formation sand consists of interbedded very fine to fine-grained quartz sand, silt, and  
23   minor fine gravel from marine delta front sand and near-shore marine sand. This formation  
24   contains beds and lenses of decayed organic matter and “organic-rich oxidized soil zones that  
25   contain calcareous and ferruginous nodules” (USGS, 2015). According to the 1975 Geologic  
26   Atlas of Texas, Corpus Christi Sheet, the extreme northwest, north, and northeast portions of  
27   NASCC are mapped as “Fill.” Fill is described as “material dredged for raising land surface  
28   above alluvium and barrier island deposits and for creating land” (UTABEG, 1975; NRCS,  
29   2015).

### 1 3.2.2 Soils

2 Underlying the Project Area is Galveston and Mustang fine sands and Ijam clay loam. The  
3 Galveston fine sands are eolian sediments of Holocene age that form dune fields, are excessively  
4 drained, and have a high to very high capacity to transmit water. The Mustang fine sands are  
5 eolian and storm washover sediments of Holocene age that form depressions on barrier flats, are  
6 poorly drained, and have a high to very high capacity to transmit water. Ijam clay loam soils are  
7 considered made land, poorly drained, and are typically found on flats. These soils, also  
8 common to the Corpus Christi Bay area, are characterized by rapid permeability and slow  
9 surface runoff. During heavy rain events, the water table rises close to the surface and in  
10 Mustang soils, and in some places, these soils are marshy (USDA, 1965). Figure 3-2 depicts soil  
11 type and distribution across the Project Area.

12 Approximately 2,156 acres of the total 2,677 acres of the NASCC facility are Galveston-  
13 Mustang sediments. This soil occurrence encompasses the entire PN64026 Project Area and the  
14 majority of the proposed NASCC and CCAD relocations. The main project area covers 71.6  
15 acres, the parking lots areas cover 5.4 acres, the proposed MWR/NEX Joint Car Care Facility  
16 relocation footprint covers 0.7 acre, and the Golf Course Storage Building relocation footprint  
17 covers 0.3 acre; all are located on Galveston Mustang sediments. Of the proposed buildings and  
18 covered parking areas to be demolished, all are within the main project area and are located on  
19 Galveston-Mustang soil profile. However, the relocation area for the tennis courts is  
20 approximately 0.4 acre and located in Ijam clay loam soil profile (NRCS, 2015).

21 Site elevations range from 5 to 25 feet above mean sea level (amsl) with most of the NASCC  
22 facility at 10 to 15 feet amsl. The topography is generally flat over the entire facility with the  
23 lowest elevations along the shoreline to the northern and eastern boundaries. The highest relief  
24 is on the southwest portions of the facility adjacent to Oso Bay (USGS, 1968, 2013).

25 The FPPA was enacted by Congress as a subtitle of the 1981 Farm Bill. The purpose of the law  
26 was to “[...] minimize the extent to which Federal programs contribute to the unnecessary  
27 conversion of farmland to nonagricultural uses [...]” (P.L. 97-98, Sec. 1539-1549; 7 U.S. Code  
28 [U.S.C.] 4201, et seq.). The majority of the Project Area has been previously developed, and  
29 therefore, would not constitute a conversion of farmland. In conjunction, the USDA Natural

1 Resource Conservation Service (NRCS) Web Soil Survey database indicates that there are no  
2 soils in the Project Area that are classified as prime or other important farmlands (NRCS, 2015).

### 3 **3.2.3 Water Resources**

4 NASCC is located within the Nueces-Rio Grande Coastal Basin bounded to the north and east by  
5 Corpus Christi Bay and to the west by Oso Bay. The water body adjacent to the southeast is  
6 commonly referred to as Laguna Madre. However, the TCEQ identifies this portion of the water  
7 body to the southeast, and northwest of the JFK Causeway, as part of the Corpus Christi Bay  
8 (TCEQ, 2000). This designation will be carried forward for the purposes of this report. Figure  
9 3-3 presents TCEQ identification numbers assigned to classified basins, segments, and  
10 assessment units surrounding NASCC (TCEQ, 1999).

11 Both Corpus Christi Bay and Oso Bay receive surface water runoff from the NASCC; however,  
12 the stormwater management system diverts all runoff from the Project Area to Corpus Christi  
13 Bay. Stormwater is further discussed in Section 3.7.1 of this report and in the Stormwater  
14 Evaluation Report attached as Appendix C.

#### 15 **3.2.3.1 Coastal Management**

16 The Coastal Zone Management Act (CMZA) of 1972, administered by the National Oceanic and  
17 Atmospheric Administration (NOAA), was passed by Congress to “preserve, protect, develop,  
18 and where possible, to restore or enhance resources of the nation’s coastal zones” (NOAA,  
19 2015). In 1996, the Texas Coastal Management Program (CMP) was approved by means of an  
20 EIS and NOAA under the jurisdiction of the Coastal Coordination Council. The EIS set forth  
21 goals of the Texas CMP to manage impacts to natural resources, which include:

- 22       ▪ To protect, preserve, restore, and enhance the diversity, quality, quantity,  
23       functions, and values of coastal natural resource areas (CNRAs);
- 24       ▪ To ensure sound management of all coastal resources by allowing for compatible  
25       economic development and multiple human uses of the coastal zone;
- 26       ▪ To minimize loss of human life and property due to the impairment and loss of  
27       protective features of CNRAs;

- 1       ▪ To ensure and enhance planned public access to and enjoyment of the coastal  
2       zone in a manner that is compatible with private property rights and other uses of  
3       the coastal zone;
- 4       ▪ To balance the benefits from economic development and multiple human uses of  
5       the coastal zone, the benefits from protecting, preserving, restoring, and  
6       enhancing CNRAs, the benefits from minimizing loss of human life and property,  
7       and the benefits from public access to and enjoyment of the coastal zone;
- 8       ▪ To coordinate agency and subdivision decision-making affecting CNRAs by  
9       establishing clear, objective policies for the management of CNRAs;
- 10      ▪ To make agency and subdivision decision-making affecting CNRAs efficient by  
11      identifying and addressing duplication and conflicts among local, state, and  
12      federal regulatory and other programs for the management of CNRAs;
- 13      ▪ To make agency and subdivision decision-making affecting CNRAs more  
14      effective by employing the most comprehensive, accurate, and reliable  
15      information and scientific data available and by developing, distributing for  
16      public comment, and maintaining a coordinated, publicly accessible geographic  
17      information system of maps of the coastal zone and CNRAs at the earliest  
18      possible date;
- 19      ▪ To make coastal management processes visible, coherent, accessible, and  
20      accountable to the people of Texas by providing for public participation in the  
21      ongoing development and implementation of the Texas CMP; and
- 22      ▪ To educate the public about the principal coastal problems of state concern and  
23      technology available for the protection and improved management of CNRAs  
24      (NOAA, 1996).

25      The Council is led by the Texas General Land Office (TGLO) and consists of other State and  
26      Local representatives (NOAA, 2015). The Project Area is located within the Texas coastal zone  
27      according to the CMP.

28      Section 307 of the CZMA stipulates that federal projects initiating reasonably foreseeable impacts  
29      on coastal resources or uses, the federal action must be consistent to the maximum extent  
30      practicable with the enforceable policies of the affected state's federally approved coastal zone  
31      management plan.

### 32      **3.2.3.2      Corpus Christi Bay**

33      Corpus Christi Bay is located at the confluence of three Texas river basins: the San Antonio-  
34      Nueces Coastal Basin, the Nueces River Basin, and the Nueces-Rio Grande Coastal Basin

1 (TCEQ, 1999). Corpus Christi Bay is bounded by Redfish Bay to the northeast, Nueces Bay to  
 2 the northwest, Oso Bay and Laguna Madre to the south, and the barrier islands of the Gulf of  
 3 Mexico to the southeast.

4 TCEQ identifies the Corpus Christi Bay as Segment 2481 and recognizes four sub segments, or  
 5 assessment units, within Corpus Christi Bay. As depicted in Figure 3-3, three of the four  
 6 assessment units bound NASCC; however, only two of them receive surface water runoff from  
 7 the Project Area. Table 3-2 summarizes the designated uses and attainment status of these two  
 8 Corpus Christi Bay assessment units.

9 **Table 3-2**  
 10 **Corpus Christi Bay Designated Uses and Attainment Status**

Assessment Unit ID	Designated Use	Designated Use Group	Attainment Status
2481-02	Aquatic Life	Fish, Shellfish, and Wildlife Protection and Propagation	Good
	Fish Consumption	Aquatic Life Harvesting	Not Assessed
	General	Fish, Shellfish, and Wildlife Protection and Propagation	Good
	Primary Recreation/ Swimming	Recreation	Good
2481-04	Aquatic Life	Fish, Shellfish, and Wildlife Protection and Propagation	Not Assessed
	Fish Consumption	Aquatic Life Harvesting	Not Assessed
	General	Fish, Shellfish, and Wildlife Protection and Propagation	Good
	Primary Recreation/ Swimming	Recreation	Good

Source: USEPA, 2010c

11 As indicated by the attainment status, which corresponds with the 2010 Texas 303(d) List,  
 12 neither of the assessment units receiving surface water runoff from the Project Area is impaired.

13 The Project Area will discharge stormwater and treated industrial and sanitary wastewater from  
 14 project operations to the bay through one existing, currently permitted outfall. Stormwater and  
 15 wastewater are further discussed in Sections 3.7.1 and 3.7.3, respectively (USACE, 2009).

### 16 **3.2.3.3 Floodplain**

17 Federal agencies are required by EO 11988, Floodplain Management, to:

1            *avoid to the extent possible the long and short-term adverse impacts associated*  
2            *with the occupancy and modification of flood plains and to avoid direct and*  
3            *indirect support of floodplain development wherever there is a practicable*  
4            *alternative.* (FEMA, 2014)

5            According to the Federal Emergency Management Agency (FEMA) flood insurance rate map  
6            (FIRM) for the area, only minimal flooding is anticipated at NASCC (FEMA, 1985). Although  
7            these floodplains indicate a possibility of minor flooding only, coastal flooding during hurricanes  
8            and tropical storms is considered. Surges from a 100-year storm are estimated to be 10 to 13 ft  
9            amsl, whereas the average elevation on NASCC is 19 ft amsl (NAVFAC SE, 2011). Based on  
10           FEMA FIRMs, only the proposed relocation area for the tennis courts is within the 100-year  
11           floodplain and the 500-year floodplain. Figure 3-4 presents the 100- and 500-year floodplains  
12           (FEMA, 1985).

#### 13            **3.2.3.4      Groundwater**

14           The Gulf Coast Aquifer is located beneath NASCC. It parallels the Texas coast from Louisiana  
15           to Mexico and vertically consists of the Chicot, Evangeline, and Jasper Aquifers (TWDB, 2011).  
16           The Chicot Aquifer is the shallowest unit, consisting of the Willis Sand, Bentley and  
17           Montgomery formations, Beaumont Clay, and alluvial deposits at the surface. The Evangeline  
18           Aquifer lies just beneath and is made up of the Goliad Sand. Below all is the Jasper Aquifer,  
19           which consists of the Oakville Sandstone and the Flemming formation (TWDB, 2006).

20           Shallow groundwater in the NASCC area can be found mostly below 4 feet and is subject to salt  
21           water intrusion due to proximity to saline and hypersaline water bodies (NASCC, 2013). The  
22           flow direction is generally toward Corpus Christi Bay (NASCC, 2013).

23           NASCC is located within the Groundwater Management Area 16 as delineated by the Texas  
24           Water Development Board (TWDB), the Corpus Christi Aquifer Storage and Recovery  
25           Conservation District, and the Coastal Bend Regional Water Planning Area also known as  
26           Region N (TWDB, 2010). The City of Corpus Christi water treatment plant that provides  
27           drinking water to Region N, including NASCC and CCAD, is supplied by surface water.  
28           However, although groundwater in the NASCC and CCAD area is not currently a direct source  
29           of drinking water, groundwater to surface water interaction has been reported in the region due to

1 shallow groundwater and groundwater is being considered for future drinking water supply by  
2 the Coastal Bend Regional Water Planning Group (TWDB, 2010).

### 3 **3.3 BIOLOGICAL ENVIRONMENT**

4 The biological environment characteristics considered for this EA include a description of the  
5 terrestrial habitats, aquatic habitats, wildlife, protected species, and migratory birds within the  
6 Project Area.

#### 7 **3.3.1 Terrestrial Habitat**

8 The proposed Project Area falls within the Gulf Prairies and Marshes vegetation region of Texas  
9 (TPWD, 2011); an area characterized by a coastal plain fewer than 150 ft amsl and barrier  
10 islands off the coast. Native vegetation within this region was historically characterized by tall  
11 grass prairies, salt grass marshes, post oak savannahs, and live oak woodlands (TPWD, 1996).

12 As detailed in the 2013 Integrated Natural Resources Management Plan (INRMP), seven natural,  
13 semi-natural, and select non-native plant communities are identified on NASCC (NASCC,  
14 2013). The identified communities are as follows:

- 15     ▪ Live Oak - Redbay Woodland (*Quercus virginiana* – *Persea borbonia*)
- 16     ▪ Little Bluestem - Brownseed Paspalum Herbaceous Vegetation (*Schizachyrium*  
17         *scoparium* - *Paspalum plicatulum*)
- 18     ▪ Mesquite Woodland (*Prosopis glandulosa*)
- 19     ▪ Popinac - Honey Mesquite - Retama Woodland (*Prosopis glandulosa*)
- 20     ▪ Gulf Cordgrass - Key Grass - Southern Sea-Blite Herbaceous Vegetation (*Leaucana*  
21         *leucocephala* - *Prosopis glandulosa* - *Parkinsonia aculeate*)
- 22     ▪ Saltgrass - Cordgrass Tidal Herbaceous Vegetation (*Distichlis spicata* - *Spartina* spp)
- 23     ▪ Spikerush-Rush-Umbrella-sedge Seasonally Flooded Herbaceous Vegetation (*Eleocharis*  
24         spp. - *Juncus* spp. - *Fuirena* spp.)

25 Botanical field surveys were conducted at NASCC in 1996, 1998, 2004, 2007, 2010, 2011, and  
26 2012 (NASCC, 2013). Additional biological surveys were conducted on behalf of CCAD in July  
27 2012 (Appendices D and E). The findings of the July 2012 were also verified during a site visit  
28 of the Powertrain PN64026 Project area in October 2014. None of the above-listed vegetation

1 communities were identified as falling within the Project Area in previous biological surveys, the  
2 biological survey conducted in July 2012.

3 Historically, vegetation within the Project Area was likely a mosaic of scrub-oak-redbay  
4 woodlands and mid- to-tall grass openings (NASCC, 2013). Little of the original habitat types  
5 remain; most of the area consists of developed urban land with fewer than 5 acres of frequently  
6 mown lawns. The mown lawn areas on NASSC and CCAD are populated with introduced  
7 grasses such as Bermuda grass (*Cynodon dactylon*) and St. Augustine (*Stenotaphrum*  
8 *secundatum*). Some areas less frequently mowed may also be vegetated with mostly non-native,  
9 grass species such as Kleberg bluestem (*Dichanthium annulatum*), silky bluestem (*D. sericeum*),  
10 and King Ranch bluestem (*Bothriochloa ischaemum* var. *songarica*) (NASCC, 2013). As shown  
11 in Table 3-3, disturbed and maintained areas include 96.9% of the Project Area. The Project  
12 Area would also incorporate a currently undeveloped area for relocation of the Joint Car Care  
13 Facility and tennis courts totaling 3.1% of the total Project Area.

14 **Table 3-3**  
15 **Land Type Areas and Percentages within the Project Area**

Land Type	Area (acres)	Percent of Project Area
Developed Urban Land	75.9	96.9
Undeveloped Area	2.5	3.1
Total Project Area	78.4	100.0

16 Nine Texas endemic species identified as species of interest were identified during the 1997  
17 Nature Conservancy survey on NASCC property (NASCC, 2013). None of these species were  
18 identified within the Project Area on CCAD during the July 2012 biological surveys or the  
19 October 2014 site visit.

### 20 **3.3.2 Aquatic Habitat**

21 NASCC is adjacent to Corpus Christi Bay which is located within the southern Texas Coastal  
22 Bend Bay System. The Texas Coastal Bend Bay System also includes Oso Bay, Nueces Bay,  
23 and the Laguna Madre (NASCC, 2013). The Texas Coastal Bend Bay System was designated as

1 an Estuary of National Significance by the National Estuary Program (NEP). The NEP was  
2 established by the U.S. Congress through the Water Quality Act of 1987 in an effort to improve  
3 the quality of estuaries of national importance. Under the USEPA, the NEP develops  
4 management plans for each bay system within Estuaries of National Significance. Goals for the  
5 management plan for the Texas Coastal Bend Bay System include reducing debris in the Coastal  
6 Bend, ensuring the quality of seafood produced in the system, and minimizing the impacts of  
7 development to bay resources. No aquatic habitat, including seagrass beds, is located within the  
8 Project Area.

### 9 **Wetlands**

10 According to U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI)  
11 maps, NASCC has both palustrine and estuarine wetlands on its grounds (USFWS, 2014). The  
12 July 2012 biological survey identified no wetland habitat within the Project Area. An 11.54  
13 acre-feet stormwater feature adjacent to Building 1700 is located within the project area.  
14 However, this feature is a constructed, permitted, temporary stormwater detention feature, and  
15 while it meets the USACE definition of a wetland from the 1987 USACE Guidance, it is not  
16 considered to be a wetland under USACE Section 404 CWA jurisdiction. Wetland habitats are  
17 discussed in more detail in Section 3.3.2 of this report

18 During a 2004 wetland delineation conducted at NASCC, 338 acres of jurisdictional wetlands  
19 were identified (NASCC, 2013). Typical types of wetlands at NASCC include salt marsh,  
20 vegetated tidal flats, and freshwater marsh. Vegetation in these areas includes gulf cordgrass  
21 (*Spartina spartinae*), sea oxeye (*Borrchia frutescens*), saltgrass (*Distichlis spicata*), saltwort  
22 (*Batis maritima*), saltmarsh cordgrass (*Spartina alterniflora*), salt meadow cordgrass (*S. patens*),  
23 bull rush (*Scirpus* spp.), and marsh elder (*Iva* spp.). All of these sites are designated as special  
24 aquatic sites and protected under Section 404 of the CWA because they are valuable aquatic  
25 ecosystems (NASCC, 2013). Tidal flats provide a foraging habitat for species of shorebirds.  
26 Seagrass beds are an essential fishery habitat, as they provide nursery areas, cover, and foraging  
27 for many species of commercially valuable fish and shellfish. Marshes along the shoreline also  
28 provide a valuable habitat to fish and shellfish (USACE, 2009).

1 During the July 2012 surveys of the Project Area, no wetlands were identified within the survey  
2 area (Figure 3-5). The Project Area contains an approximately 11.54 acre-foot stormwater  
3 feature adjacent to Building 1700 with typical species of vegetation that included cattails (*Typha*  
4 spp.) and spike rush (*Eleocharis* spp). However, this feature is a constructed, permitted,  
5 temporary stormwater detention feature, and while it meets the USACE definition of a wetland  
6 from the 1987 USACE Guidance, it is not considered a wetland under USACE Section 404  
7 CWA jurisdiction. No estuarine wetland habitat was identified during the 2012 survey. The  
8 wetland areas on NASCC are discussed in more detail in Appendix D of this report.

### 9 **Seagrass Beds**

10 As previously described in the 2009 Building 8 Replacement Facility EA, seagrasses are highly  
11 specialized marine flowering plants rooted and submersed in higher salinity water and found in  
12 most Texas bays and estuaries. The five genera generally occurring in Texas coastal waters  
13 include *Halodule*, *Thalassia*, *Syringodium*, *Halophila*, and *Rappiaceae* (NASCC, 2013). Like  
14 wetlands, seagrass beds are considered “special aquatic sites” under CWA Section 404(b)1  
15 guidelines and are generally recognized as significantly influencing or positively contributing to  
16 the general overall health or vitality of any ecosystem (40 CFR 230). In addition, the Texas  
17 CMP has designated vegetated shallows (seagrass beds) as critical areas to be avoided unless  
18 there are no practicable alternatives (31 TAC Section 501). The TCEQ has also added  
19 seagrasses as a beneficial aquatic-life use in the Texas Surface Water Quality Standards  
20 (NASCC, 2013).

21 Aerial photography indicates the presence of extensive seagrass beds in the shallow waters of  
22 Corpus Christi Bay and the Laguna Madre along the northern and eastern shorelines of NASCC  
23 as depicted in Figure 3-6 (NASCC, 2013). While no seagrass beds are located within the Project  
24 Area, there are seagrass beds located within a half mile of the Project Area, to the north and east  
25 within Corpus Christi Bay and further east along the edge of Laguna Madre (NASCC, 2013).  
26 Though these areas fall outside the Project Area, stormwater discharge from the Project Area has  
27 the potential to impact these seagrass beds and is discussed in greater detail in Section 4.3.2.2.

## 1 ***Essential Fish Habitat***

2 The U.S. Department of Commerce defines essential fish habitat (EFH) as “the waters and  
3 bottom (such as sand, seagrass, or coral) that are necessary to a species’ spawning, breeding,  
4 feeding, or growth to maturity – its full life cycle.” The Magnuson-Stevens Act requires that any  
5 Federal activity that may have an impact on EFH be coordinated with the NMFS, and that if such  
6 activities would adversely affect any EFH identified under the Magnuson-Stevens Act, then the  
7 Secretary of Commerce shall recommend measures that can be taken to conserve the EFH in  
8 question (16 U.S.C. §§1801 – 1884; NMFS, 2011).

9 EFH has been identified throughout Corpus Christi Bay, Oso Bay, and the Laguna Madre  
10 (NASCC, 2013). While no EFH is located within the Project Area, EFH in Corpus Christi Bay is  
11 located immediately adjacent NASCC, near the proposed stormwater outfall, and stormwater  
12 discharge from the Project Area has the potential to impact EFH, as discussed in greater detail in  
13 Section 4.3.2.3.

## 14 ***NASCC Shoreline Management Program***

15 NASCC has developed a Shoreline Management Program for approximately 155 acres adjacent  
16 to the Corpus Christi Bay (NASCC, 2013). This area is known as the Shoreline Management  
17 Unit. The primary objective of the Shoreline Management Program at NASCC is two-fold: to  
18 identify and map sensitive habitats; and to improve the natural values and aesthetic qualities of  
19 shoreline areas (NASCC, 2013). The Project Area is not included in the Shoreline Management  
20 Unit.

21 The Shoreline Management Unit holds several habitat types, including tidal flats, seagrass beds,  
22 and salt marshes. As previously discussed, these areas are designated as special aquatic sites and  
23 protected under Section 404 of the CWA because they are valuable aquatic ecosystems (NASCC,  
24 2013) and provide foraging habitats for many species of shorebirds and nursery areas, cover,  
25 and foraging habitat for many species of commercially valuable fish and shellfish (NASCC,  
26 2013).

### 1 **3.3.3 Wildlife**

#### 2 ***Birds***

3 South Texas is world renowned for the variety of bird species that reside or migrate through the  
4 state, to and from wintering habitats in Central and South America (NASCC, 2013). Texas is  
5 located at the southernmost point of the Central Flyway migration route in the U.S. (TPWD,  
6 2015). The Flyway extends north into the Canadian states of Alberta, Saskatchewan, the  
7 Northwest territories, and south into Mexico. NASCC maintains a checklist of bird species  
8 observed on base, with over 330 bird species listed to date (NASCC, 2013). The largest  
9 concentrations of birds are present in the less disturbed coastal areas of the installation. The  
10 coastal forests, grasslands, and marshes are valuable feeding, nesting, and resting areas for  
11 songbirds, waterfowl, raptors, wading birds, and shorebirds. The remainder of the installation,  
12 including the Project Area, supports species that have adapted to existing in developed and  
13 disturbed areas and may include species such as the house sparrow (*Passer domesticus*), starling  
14 (*Sturnus vulgaris*), boat-tailed grackle (*Quiscalus major*), brown-headed cowbird (*Molothrus*  
15 *ater*), rock dove (*Columba livia*), and American robin (*Turdus migratorius*) (USACE, 2009).  
16 Many of the species adapted to disturbed habitats, like that of the Project Area, are non-native.  
17 NASCC maintains a BASH program to prevent the potential for bird strikes by aircraft utilizing  
18 the base. Management practices outlined in the plan include habitat management techniques  
19 such as the removal of vegetation that attracts birds to areas close to runways, mowing grass near  
20 runways to discourage avian activity, and the removal of standing water near runways to prevent  
21 attracting wildlife. Additional techniques used to reduce the potential for bird strikes include  
22 pest control to lower the population of prey species near runway areas, the removal of dead  
23 vegetation that could be used as habitat, and the application of herbicide to kill plant species that  
24 are attractive to birds. NASCC has no direct control over properties off base; however, if nearby  
25 developments pose a bird air strike risk, NASCC will contact the lead agency in writing  
26 addressing those concerns.

#### 27 ***Fish***

28 Several species of economically valuable fish are known to use the waters of Corpus Christi Bay,  
29 Oso Bay, and Laguna Madre, including several species of concern (SOC) such as white shrimp,  
30 pink shrimp, brown shrimp, and Spanish mackerel, red drum, and gulf stone crab (*Menippe*

1 *adina*) (NASCC, 2013). Common fish species found in Corpus Christi Bay, Oso Bay, and  
2 Laguna Madre include alligator gar (*Atractosteus spatula*), American eel (*Anguilla rostrata*),  
3 black drum (*Pogonias cromis*), common carp (*Cyprinus carpio*), longnose gar (*Lepisosteus*  
4 *osseus*), and red snapper (*Lutjanus campechanus*) (CCCVB, 2015).

5 No freshwater habitat suitable for fish species was identified within the Project Area on the  
6 CCAD installation. However, stormwater discharge from CCAD has the potential to impact fish  
7 habitat in the Corpus Christi Bay and the hydrologically connected Laguna Madre to the south.  
8 These impacts are discussed further in Section 4.3.3.1 of this report.

### 9 **Mammals**

10 Mammalian species known or expected on NASCC include species adapted to developed areas.  
11 Medium and large mammals such as coyotes (*Canis latrans*), gray fox (*Urocyon*  
12 *cinereoargenteus*), white-tailed deer (*Odocoileus virginianus*), javelina (*Tayassu tajacu*), and  
13 feral pigs (*Sus scrofa*) have been observed in the undeveloped areas on and around NASCC. The  
14 1998 survey conducted by The Nature Conservancy observed a resident population of gray foxes  
15 on NASCC. Several house cats, likely feral, were observed freely roaming in 2000 on the  
16 eastern side of the NASCC (NASCC, 2013). In addition to feral felines, several individual  
17 spotted ground squirrels (*Spermophilus spilosoma*) and associated burrows have been observed  
18 in lawn areas on CCAD and NASCC.

19 Many species of mammals have been sighted on NASCC; however it is not expected to see the  
20 majority of them in the Project Area. Mammals commonly associated with the urban or  
21 suburban environment include opportunistic scavengers such as the raccoon (*Procyon lotor*),  
22 striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), Norway rat (*Rattus*  
23 *norvegicus*), roof rat (*Rattus rattus*), and the house mouse (*Mus musculus*) (NASCC, 2013) have  
24 the highest likelihood of existing within the Project Area.

### 25 **Marine Mammals**

26 A total of 28 species of marine mammals have ranges that include the Gulf of Mexico, with six  
27 of these species Federally listed as threatened or endangered (NASCC, 2013). Of the 28 species,  
28 only the Atlantic bottlenose dolphin (*Tursiops truncatus*) is likely to occur in the waters adjacent

1 to NASCC. The dolphins prefer shallow bays and lagoons along the Gulf Coast and are common  
2 on the continental shelf and near shore waters. They have been known to enter estuaries of large  
3 river systems, such as Corpus Christi Bay, in search of fish (NASCC, 2013).

4 Though no habitat exists for marine mammals on CCAD, stormwater discharge from the Project  
5 Area has the potential to impact potential habitat in Corpus Christi Bay and the hydrologically  
6 connected Laguna Madre 1½ miles to the south. These impacts are discussed further in Section  
7 4.3.3.1 of this report.

### 8 ***Reptiles and Amphibians***

9 The distribution and relative abundance of reptiles and amphibians, collectively called herptiles  
10 or herpetofauna, on NASCC are not well known. More than 70 species of reptiles and  
11 amphibians are present in Nueces County, representing 24 families within the classes Amphibia  
12 and Reptilia (NASCC, 2013).

### 13 **3.3.4 Protected Species**

#### 14 ***Threatened and Endangered Species***

15 Special status species are species of plants and animals that, because of their scarcity or  
16 documented declining population numbers in the state or nation, have been placed on lists of  
17 endangered, threatened, proposed, candidate, or otherwise sensitive species. The USFWS and  
18 TPWD maintain such lists. The USFWS has the authority to list species of plants and animals as  
19 endangered or threatened for protection under the Endangered Species Act (ESA) (16 U.S.C.  
20 1531 et seq.) of 1973, as amended. Species that are proposed for listing as endangered or  
21 threatened are also protected by the ESA. All federal agencies are required to consult with the  
22 USFWS if actions they propose may affect a listed species.

23 During the plant and animal survey conducted by The Nature Conservancy at NASCC in 1998  
24 and the survey conducted in 2012, no Federally-listed threatened or endangered species were  
25 observed (NASCC, 2013). The following is a brief discussion of the rare, threatened, and  
26 endangered flora and fauna species known historically from Nueces County that have the  
27 potential to be found on NASCC. A full list of Federal- and state-listed threatened and  
28 endangered species found in Nueces County is presented in Appendix E.

1  
2

**Table 3-4  
Threatened and Endangered Species with Potential to Occur on NASCC**

Common Name	Scientific Name	Federal Status	State Status	Suitable Habitat Occurrence in the Project Area	Potential Species Presence
<b>AMPHIBIANS</b>					
Black-spotted Newt	<i>Notophthalmus meridionalis</i>	--	T	<b>Yes</b> - wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods.	Possible Resident in Area
Sheep Frog	<i>Hypopachus variolosus</i>	--	T	<b>No</b> - open woodlands or pasturelands with abundant short-grass cover. Also are commonly found in vegetative debris near ponds and irrigation ditches.	Possible Resident in Area
<b>BIRDS</b>					
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	--	T	<b>Yes</b> - winters along coast and farther south; occupies wide range of habitat during migration, including urban, concentrations along coast and barrier islands.	Possible Migrant Over Area
Eskimo Curlew	<i>Numenius borealis</i>	LE	E	<b>Yes</b> - grasslands, pastures, plowed fields, and less frequently, marshes and mudflats.	Possible Migrant Over Area
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	E	E	<b>Yes</b> - open country, especially savanna and open woodland, and sometimes in very barren areas; grassy plains and valleys with scattered mesquite, yucca, and cactus.	Possible Migrant Over Area
Peregrine Falcon	<i>Falco peregrinus</i>	--	T	<b>Yes</b> - include grain croplands and riparian areas along rivers, ponds, marshes, and meadows.	Possible Migrant Over Area
Piping Plover	<i>Charadrius melodus</i>	T	T	<b>No</b> - beaches and bayside mud or salt flats.	Possible Transient over Area
Reddish Egret	<i>Egretta rufescens</i>	--	T	<b>No</b> - brackish marshes and shallow salt ponds and tidal flats; nests on ground or in trees or bushes, on dry coastal islands and brushy thickets of yucca and prickly pear.	Possible Migrant Over Area
Red Knot	<i>Calidris canutus rufa</i>	T		<b>No</b> - long distance migrant that prefers coastal sandy areas.	Possible Migrant Over Area
Sooty Tern	<i>Sterna fuscata</i>	--	T	<b>Yes</b> - rarely lands except when roosting; does not dive, but snatches small fish and squid with bill as it flies or hovers over water.	Possible Migrant Over Area
Sprague's Pipit	<i>Anthus spragueii</i>	C	-	<b>No</b> - wintering migrant found typically in native upland prairie and coastal grasslands. However, sensitive to patch size and avoids edges.	Possible Migrant Over Area

Common Name	Scientific Name	Federal Status	State Status	Suitable Habitat Occurrence in the Project Area	Potential Species Presence
<b>BIRDS (cont.)</b>					
Texas Botteri's Sparrow	<i>Aimophila botterii texana</i>	--	T	<b>Yes</b> - grassland and short-grass plains with scattered bushes and shrubs, sagebush, mesquite, or yucca.	Possible Migrant Over Area
White-Face Ibis	<i>Plegadis chihi</i>	--	T	<b>Yes</b> - freshwater wetlands, including ponds, swamps, and marshes with pockets of emergent vegetation; also uses flooded hay meadows and agricultural fields as feeding locations.	Possible Migrant Over Area
White-Tailed Hawk	<i>Buteo albicaudatus</i>	--	T	<b>No</b> - near coast on prairies, cordgrass flats, and scrub-live oak; further inland on prairies, mesquite and oak savannas, and mixed savanna-chaparral.	Possible Migrant Over Area
Whooping Crane	<i>Grus americana</i>	E	E	<b>No</b> - potential migrant via plains throughout most of state to coast.	Possible Migrant Over Area
Wood Stork	<i>Mycteria americana</i>	--	T	<b>Yes</b> - forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt water; usually roosts communally in snags.	Possible Migrant Over Area
<b>FISH</b>					
Opossum Fish	<i>Microphis brachyurus</i>	--	T	<b>No</b> - brooding adults found in fresh or low salinity waters and young move into or are carried into more saline waters after birth.	Not Likely in Project Area,
Smalltooth Sawfish	<i>Pristis pectinata</i>	LE	E	<b>No</b> - young found very close to shore in muddy and sandy bottoms; in sheltered bays, on shallow banks, and in estuaries or river mouths; adult sawfish are encountered in various habitats such as mangrove reef, seagrass, and coral in varying salinity regimes and temperatures at various depths.	Not Likely in Project Area,
<b>MAMMALS</b>					
Gulf Coast Jaguarundi	<i>Herpailurus yagouaroundi cacomitli</i>	E	--	<b>No</b> - typically dense, thorny shrublands near water.	Not Likely
Ocelot	<i>Leopardus pardalis</i>	E	E	<b>No</b> - dense chaparral thickets; mesquite-thorn scrub and live oak mottes; avoids open areas.	Not Likely
Red Wolf	<i>Canis rufus</i>	LE	E	<b>No</b> - extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies.	Not Likely
Southern Yellow Bat	<i>Lasiurus ega</i>	--	T	<b>Yes</b> - associated with trees, such as palm trees, which provide them with daytime roosts.	Possible Transient Over Area

Common Name	Scientific Name	Federal Status	State Status	Suitable Habitat Occurrence in the Project Area	Potential Species Presence
<b>MAMMALS (cont.)</b>					
West Indian Manatee	<i>Trichechus manatus</i>	E	E	<b>No</b> - gulf and bay system.	Not Likely in Project Area, Possible in Corpus Christi Bay.
White-Nosed Coati	<i>Nasua narica</i>	--	T	<b>No</b> - woodlands, riparian corridors, and canyons.	Not Likely
<b>PLANTS</b>					
Slender Rushpea	<i>Hoffmannseggia tenella</i>	E	E	<b>No</b> - Texas endemic; coastal prairie grasslands on level uplands and gentle slopes along drainages, usually in areas of shorter or sparse vegetation; soils Blackland clay, but at some soils are coarser and lighter than typical heavy coastal prairies.	Not Likely
South Texas Ambrosia	<i>Ambrosia cheiranthifolia</i>	E	E	<b>No</b> - grasslands and mesquite-dominated shrublands on various soils ranging from heavy clays to lighter textured sandy loams, mostly over Beaumont Formation on the Coastal Plain; in modified unplowed sites such as railroad and highway right-of-ways, cemeteries, mowed fields, and erosion areas along small creeks.	Not Likely
<b>REPTILES</b>					
Atlantic hawksbill Sea Turtle	<i>Eretmochelys imbricate</i>	E	E	<b>No</b> - wide range of tropical and subtropical habitats, including shallow coast waters with rocky bottoms, coral reefs, beds of sea grass or algae, mangrove bordered bays and estuaries, and submerged mudflats. Nesting occurs on undisturbed, deep sand, insular or mainland beaches, from high-energy ocean beaches to tiny pocket beaches.	Not Likely in Project Area, but Possible in Corpus Christi Bay.
Green Sea Turtle	<i>Chelonia mydas</i>	T	T	<b>No</b> - feeding occurs in shallow, low-energy waters with abundant submerged vegetation and in the convergence zone of the open ocean. Migration traverses open seas. Adults are tropical in distribution whereas juveniles prefer temperate waters. Nesting occurs on beaches, usually on islands but also on the mainland. Most nesting occurs on high-energy beaches with deep sand.	Not Likely in Project Area, but Possible in Corpus Christi Bay.
Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	E	E	<b>No</b> - shallow coastal and estuarine waters, often over sandy or muddy bottoms where crabs are numerous. Most adults stay in Gulf of Mexico. Nesting occurs on well-defined elevated dune areas, especially on beaches backed up by large swamps or bodies of open water having seasonal, narrow ocean connections.	Not Likely in Project Area, Possible in Corpus Christi Bay.

Common Name	Scientific Name	Federal Status	State Status	Suitable Habitat Occurrence in the Project Area	Potential Species Presence
<b>REPTILES (cont.)</b>					
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	E	E	<b>No</b> - marine, open ocean, often near edge of continental shelf; also seas, gulfs, bays, and estuaries. Mainly pelagic, seldom approaching land except for nesting. Nests on sloping sandy beaches backed up by vegetation, often near deep water and rough seas.	Not Likely in Project Area, but Possible in Corpus Christi Bay.
Loggerhead Sea Turtle	<i>Caretta caretta</i>	T	T	<b>No</b> - Open sea to more than 500 miles from shore, mostly over continental shelf, and in bays, estuaries, lagoons, creeks, and mouths of rivers; mainly warm temperate and subtropical regions not far from shorelines.	Not Likely in Project Area, but Possible in Corpus Christi Bay.
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	--	T	<b>No</b> - open, arid, and semi-arid regions with sparse vegetation, including grass, cactus, and scattered brush or scrubby trees.	Not Likely
Texas Indigo Snake	<i>Drymarchon melanurus erebennus</i>	--	T	<b>No</b> - thornbush-chaparral woodlands.	Not Likely
Texas Scarlet Snake	<i>Cemophora coccinea lineri</i>	--	T	<b>No</b> - mixed hardwood scrub on sandy soils.	Not Likely
Texas Tortoise	<i>Gopherus berlandieri</i>	--	T	<b>No</b> - open brush with a grass understory is preferred; open grass and bare ground are avoided.	Not Likely

USFWS, 2015 & TPWS, 2012

- 1 No Federally-listed threatened or endangered species of plants have been encountered on  
2 NASCC (NASCC, 2013). Likewise, no plants considered species of conservation concern by the  
3 USFWS, Biological Conservation Data System of TPWD, or the Texas Organization for  
4 Endangered Species were observed during NASCC surveys.
- 5 A survey conducted by The Nature Conservancy in 1998 did not document any Federally-listed  
6 species of reptiles or amphibians on NASCC (NASCC, 2013). Endangered species were not  
7 observed within CCAD during the July 2012 biological surveys. However, potential habitat for  
8 the state-threatened black-spotted newt (*Notophthalmus meridionalis*) exists in several wetlands  
9 on NASCC. In addition, the sheep frog (*Hypopachus variolosus*), may occur in grasslands and  
10 savannahs or moist sites in arid areas similar to some found in undeveloped areas of NASCC

1 (NASCC, 2013). Several species of threatened or endangered birds are known to use habitats in  
2 the immediate vicinity of NASCC and possibly on the installation itself (USACE, 2009).  
3 Historically, reddish egrets (*Egretta rufescens*), white-face ibises (*Plegadis chihi*), and piping  
4 plovers (*Charadrius melodus*) have all been observed utilizing habitat adjacent or near NASCC.  
5 The habitats on NASCC are used mainly for feeding and resting and do not provide large  
6 quantities of habitat suitable for nesting by most of these species. No threatened or endangered  
7 species of birds were observed in the Project area during the July 2012 biological surveys or  
8 October 2014 site visit.

### 9 **State of Texas Species of Concern**

10 While state threatened and endangered species laws are not enforceable against federal  
11 government agencies and coordination with state agencies is not required for state-listed species  
12 on federation action, OPNAV M-5090.1, also states that “potential effects to state listed species  
13 and their habitats shall be evaluated and mitigations proposed in environmental planning  
14 documents as appropriate.” The TPWD designates plant and wildlife species with limited  
15 distribution and/or rare occurrence as species of concern (SOC) and seeks to identify and  
16 minimize potential conservation threats. A list of Texas SOC is included in Appendix E as part  
17 of the Threatened and Endangered Species Report. Based on the 1998 TNC survey of NASCC,  
18 the maritime pocket gopher (*Geomys personatus maritimus*) is present in parts of CCAD and the  
19 surrounding areas (NASCC, 2013). The deep, sandy soils of the Encinal Peninsula are well  
20 suited for pocket gopher habitat, and active individuals are often identified in the presence of  
21 large, fan-shaped mounds. Gopher mounds have been observed throughout NASCC on athletic  
22 fields, the golf course, residential areas, and in vacant lots (NASCC, 2013). As noted in  
23 Appendix E, while the vast majority of known gopher mounds are located outside the Project  
24 Area, a few mounds were identified within the Project Area in the 2013 Installation Natural  
25 Resources Management Plan (INRMP) (NASCC, 2013). Two mounds identified are in the area  
26 immediately adjacent to Building 1700. The 2007 Maritime Pocket Gopher Management Plan  
27 developed by NASCC found that gophers prefer grassy areas, especially those that are frequently  
28 disturbed by mowing or grazing, to areas with abundant woody vegetation (NASCC, 2007).

29 Despite its limited distribution, the maritime pocket gopher can come into conflict with humans  
30 and development. Their burrows are considered damaging to lawns and golf courses, and they

1 have been known to chew through underground wires (NASCC, 2013). Measures to not only  
2 protect the maritime pocket gopher, but also protect installation resources have been  
3 implemented by NASCC as detailed in the INRMP (NASCC, 2013). These measures include  
4 monitoring gopher populations' sizes and distribution, including the use of penetrating radar to  
5 map pocket gopher burrows (NASCC, 2007). Efforts are also underway to educate the public  
6 about the gopher in an attempt to remove the stigma of being a "pest" species.

### 7 **3.3.5 Migratory Birds**

8 NASCC and CCAD are located within the Central Flyway migratory route (TPWD, 2015). The  
9 Central Flyway extends from northern Alaska, down through Canada, through the central U.S.,  
10 and through Texas into northern Mexico. Because of its location at the southernmost end of the  
11 Central Flyway, south Texas is a major hub of migratory bird activity. Bird species present in  
12 the CCAD area can vary greatly depending on the time of year and which species are migrating  
13 through the vicinity. Migratory birds are protected by the Migratory Bird Treaty Act (16 U.S.C.  
14 §703) as well as EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds).  
15 Illegal actions against migratory bird species are defined by the Migratory Bird Treaty act as any  
16 "attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird,  
17 nest, egg, or part thereof" (USFWS, 2015).

18 Based on the findings of the July 2012 biological survey, there is negligible appropriate habitat  
19 for most migratory species on CCAD. Some species of migratory birds may utilize surface water  
20 as a resting or foraging habitat, but there is additional habitat available outside the Project Area  
21 on nearby properties. However, killdeer (*Charadrius vociferous*) and meadowlark (*Sturnella*  
22 *spp*)—two species protected by the Migratory Bird Treaty Act—are known to nest in areas with  
23 freshly cleared soil such as construction sites. Nesting season occurs in the spring between late  
24 February and August for the killdeer and between late April and early August for the  
25 meadowlark (Jones et al, 2010). Special precautions should be taken to prevent impacts and  
26 avoid the nests of these species once they have been established, as the birds are very sensitive to  
27 human disturbance during the breeding season. Since nesting sites for some species of migratory  
28 birds can change from year to year, nests for migratory birds could be constructed within the  
29 Project Area during future breeding seasons.

### 1 3.4 CULTURAL RESOURCES

2 According to the NASCC Integrated Cultural Resource Management Plan (ICRMP), a cultural  
3 resources survey was conducted by Garrow and Associates in 1993 and found low overall  
4 potential for archeological resources within surveyed areas of NASCC due to previous  
5 construction and infrastructure development. However, the 1993 survey did not investigate the  
6 entire installation. Therefore, as stated in the ICRMP, there remains some possibility that as-yet  
7 unidentified archeological sites and artifacts could be present.

8 The majority of the Project Area is currently developed and contains standing structures and built  
9 environment features that have likely already compromised surface integrity. Archeological site  
10 potential over much of the Project Area is considered low, since most sites are expected to be on  
11 the surface or near the surface. No previously recorded archeological sites are known to exist  
12 within the Project Area.

13 Seven historic districts and one individual property are located on NASCC. The Proposed  
14 Project area is not located within any of the seven historic districts.

15 In accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966,  
16 consultation was initiated with the Texas State Historic Preservation Office (SHPO) in December  
17 2008, and continued through February 2013 for the initial Building 8 Replacement Facility  
18 analyzed in the 2009 EA. Additional coordination was initiated as part of this EA for the  
19 following components not previously covered in the 2009 EA:

- 20     ▪ Demolition of 865,000 ft<sup>2</sup> of Building 8.
- 21     ▪ Expansion and paving of existing parking structures on D and E Streets, near Midway  
22       Street to accommodate 410 parking spaces (232,398 ft<sup>2</sup>).
- 23     ▪ Two new underground electrical feeders from an existing substation located off NASCC  
24       to the existing portion of the DCRF (Building 1700) and the relocation of six electrical  
25       feeders located within two existing conduits.
- 26     ▪ Site drainage and stormwater conveyance features to connect the Powertrain PN64026  
27       Project with the existing swale that flows into Laguna Madre. Stormwater management  
28       will also include the construction of a temporary stormwater detention basin onsite within  
29       the footprint of Building 1746.
- 30     ▪ Construction of Navy facilities to be relocated including the following:

- 1           - MWR/NEX Joint Car Care Facility
- 2           - Crafts Shop
- 3           - Golf Course Storage
- 4           - Tennis Courts

### 5   **3.5   SOCIOECONOMICS**

6   The socioeconomic characteristics considered for this EA include a description of the  
7   demographics and local economy of the City of Corpus Christi, Texas.

#### 8   **3.5.1   Demographics**

9   According the U.S. Census Bureau, the total population of Corpus Christi, the county seat of  
10   Nueces County, is 283,843 people (USCB, 2010a). The population for NASCC is 31,206, with  
11   active duty military personnel accounting for 2,528 of the total NASCC population (NAVFAC  
12   SE, 2011).

13   Corpus Christi has a total of 116,751 housing units (USCB, 2010a), with a median value of  
14   \$113,300 (USCB, 2013). Table 3-5 in Section 3.5.4 summarizes the census data for minority  
15   and Hispanic/Latino populations in Corpus Christi, Nueces County, and the Census Tracts  
16   affected by the Proposed Action.

#### 17   **3.5.2   Local Economy**

##### 18   ***CCAD Economic Activity and Contribution***

19   CCAD is the largest civilian industrial employer in the region, and has economic influences that  
20   are geographically far-reaching. The surrounding communities and CCAD depend on one  
21   another for employment, goods, and services. The joint services facility generates economic  
22   activity in the region through employee payrolls, service contracts, construction programs, local  
23   procurements, and other expenditures.

24   CCAD has a workforce of over 4,000 civilian employees, 14 active duty military, 1,400  
25   contractors, and three reservists for an approximate total of 5,500 people and \$539.19 million in  
26   total payroll. The total direct spending for CCAD in 2013 was \$819.49 million, which directly  
27   impacts the Texas economy (Texas Military Preparedness Commission, 2013).

## 1 **Regional Employment and Income**

2 The total labor force population of Corpus Christi is 138,990 people, of which 136,383 are in the  
3 civilian labor force and 2,607 represent the Armed Forces (USCB, 2010b). According to the  
4 U.S. Census Bureau, the per capita income of Corpus Christi is \$22,318 (USCB 2010b), as  
5 compared to the U.S. per capita income of \$27,915. The unemployment rate is 4.5 percent,  
6 which is lower than the state average (5.3 percent) and below the U.S. average (5.9 percent)  
7 (USDL 2014a, USDL 2014b, and USDL 2014c).

8 In Corpus Christi, the leading non-governmental industries are educational services, health care,  
9 and social assistance (24.9 percent of the working civilian population); retail trade (11.2 percent  
10 of the working civilian population); and arts, entertainment, recreation, accommodations, and  
11 food services (9.8 percent of the working civilian population) (USCB 2010b).

### 12 **3.5.3 Environmental Justice**

13 EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-*  
14 *Income Populations*, specifies that “each Federal Agency shall make achieving environmental  
15 justice part of its mission by identifying and addressing, as appropriate, disproportionately high  
16 and adverse human health or environmental effects of its programs, policies, and activities on  
17 minority populations and low-income populations.” In an accompanying Presidential  
18 memorandum, the President specified that federal agencies shall analyze the environmental  
19 effects of their actions on minority and low income communities, including human health,  
20 economic, and social effects when such analysis is required by NEPA.

21 EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, mandates  
22 the investigation of environmental effects on children. This EO acknowledges that children may  
23 suffer disproportionately from environmental health risks and safety risks; therefore, each federal  
24 agency is required to make it a priority to identify and assess environmental health and safety  
25 risks to children and ensure that its policies, programs, activities, and standards address  
26 disproportionate risks to children that result from environmental health or safety risks.

### 1 3.5.4 Existing Conditions

2 The Proposed Action is located within Census Tract 29. The census tracts potentially affected by  
3 the Proposed Action are Census Tracts 29 and 30. The two census tracts potentially affected by  
4 the Proposed Action were used to determine presence of an environmental justice community.  
5 This section presents data summarizing the existing conditions of these census tracts.

6 To determine if minority and low-income populations or children are disproportionately  
7 impacted by the Proposed Action, the following two areas of comparison must first be  
8 determined:

- 9     ▪ The area potentially affected by impacts from resources or Region of Influence (ROI)  
10     (i.e., air quality, noise, land use).
- 11     ▪ The larger regional community that includes the affected area and serves as a Community  
12     of Comparison (CoC).

13 Impacts to Environmental Justice communities would be directly related to impacts from other  
14 resource areas covered in this EA. The ROI for the environmental justice analysis includes the  
15 two census tracts that encompass impacts from resource areas. The CoC is the regional area  
16 surrounding the ROI that is the demographic area used to compare and analyze the potential  
17 environmental justice impacts that result in the identification of an environmental justice  
18 community.

19 Disadvantaged groups within the ROI and CoC, including low-income and minority  
20 communities, are specifically considered to assess the potential for disproportionate occurrence  
21 of impacts.

- 22     ▪ *Minority Population:* Black or African Americans; American Indians and Alaska Native;  
23     Asian; Native Hawaiian and Other Pacific Islander; and some other race. For the 2010  
24     U.S. Census, race and Hispanic origin (ethnicity) were considered two separate concepts  
25     and were recorded separately. For the purposes of this analysis, the total minority race  
26     population will be separate from the total Hispanic population to determine total minority  
27     race population from the Hispanic total within the affected areas.
- 28     ▪ *Low-Income Population:* Persons living below the poverty level, according to income  
29     data collected in U.S. Census 2010.

1 Table 3-5 summarizes census data for minority and low income populations for Census Tracts 29  
 2 and 30. Additional information for comparison is provided for the City of Corpus Christi,  
 3 Nueces County, the State of Texas, and the U.S.

4 At least one of the following criteria must be met to determine if an environmental justice  
 5 community is present:

- 6     ▪ If the affected area's percentage of minority or low-income population is greater than that  
 7       of the general population, then the affected area is considered to be a minority or low-  
 8       income population.
- 9     ▪ If the minority population (including Hispanics or Latinos) or low-income population is  
 10      greater than 50 percent, then this is considered a majority-minority or majority low-  
 11      income population.

12 According to the percentages listed in Table 3-5, an environmental justice community is present  
 13 in both Census Tracts due to a higher percent minority population than that of the general  
 14 population in Census Tracts 29 and 30, and a higher low income population than that of the  
 15 general population in Census Tract 30. Therefore, the analysis presented in Section 4 will  
 16 determine if any impacts generated from the Proposed Action would have a disproportionate and  
 17 adverse effect on these environmental justice communities.

18 **Table 3-5**  
 19 **Percent Minority Population and Low-Income Population**

Demographic Area	Total Population	Total Hispanic/Latino Population	Percent Hispanic/Latino	Total Minority Race Population	Percent Minority Race <sup>a</sup>	Total Low-Income Population	Percent Low Income
<b>Region of Influence (ROI)</b>							
Census Tract 29	1,532	14	0.9	412	<b>26.9</b>	67	4.4
Census Tract 30	9,411	3,653	38.8	1,929	<b>20.5</b>	2,908	<b>30.9</b>

Demographic Area	Total Population	Total Hispanic/Latino Population	Percent Hispanic/Latino	Total Minority Race Population	Percent Minority Race <sup>a</sup>	Total Low-Income Population	Percent Low Income
<b>Community of Comparison (CoC)</b>							
City of Corpus Christi	283,843	164,589	58	55,349	19.5	53,930	19
Nueces County	319,703	188,946	59.1	60,744	19	62,981	19.7
Texas	24,774,187	9,216,240	37.2	6,680,975	27	4,211,612	17.0
United States	306,603,772	49,215,563	16.1	79,436,759	25.9	43,844,339	14.3

Source: USCB 2010a and USCB 2010b

Notes:

<sup>a</sup> Minority Race includes Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; and some other race.

Bold text notates the presence of an Environmental Justice population.

### 1 **3.6 LAND USE**

2 The NASCC property is Federally-owned Navy lands under the control of CNRSE and CNIC,  
3 with local NASCC operations and maintenance. CCAD operations, including the Powertrain  
4 PN64026 Project Area, are conducted on NASCC property leased by CCAD through the  
5 Installation Services Support Agreement (ISSA) Number N69450-1274C001-000 (which  
6 replaces the previous agreement N00216-01228-005). The ISSA guides services for CCAD  
7 occupied space and building support, including funding for facility and environmental support.  
8 A copy of the ISSA is provided in Appendix G, and environmental services considered in the  
9 ISSA include the following:

- 10       ▪ Hazardous waste receiving, storage, and disposal services.
- 11       ▪ Oversight of the quality of wastewater discharge.
- 12       ▪ Spill response services.
- 13       ▪ Environmental compliance and conservation programs.

14 Land use refers to the activities that take place in a particular area and generally describes the  
15 human modification of land, often for residential or economic purposes. Management plans and  
16 zoning regulations are used to determine the type and extent of land use allowable in areas and  
17 are often intended to protect environmentally sensitive areas. NASCC utilizes 11 land use  
18 designations at the installation, including the following: airfield, training, depot maintenance

1 operations, industrial, medical, administration, community support, combined bachelor quarters  
 2 (CBQ), housing, recreational, and open space (NAVFAC SE, 2011). The land use designations  
 3 for the Powertrain PN64026 Project Area are shown in Table 3-6 and on Figure 3-7.

4 **Table 3-6**  
 5 **Land Use Designations within the Project Area**

Land Use Designation	Area within Project Area (acres)	Percent within Project Area (%)
Administration	6.2	7.9
Depot Maintenance Operations	69.4	88.6
Airfield	< 0.1	<0.1
Industrial	0.3	0.4
Open Space	0.7	0.9
Recreation	1.7	2.2
<b>Total</b>	<b>78.4</b>	<b>100.0</b>

Source: Calculated from NAVFAC SE, 2011

### 6 **3.6.1 Restricted Land Uses**

7 Land use on NASCC and CCAD may be restricted in areas due to airfield operations and/or  
 8 location within an AICUZ. Such land may include Accident Potential Zones (APZ), which are  
 9 located adjacent to the ends of runways and may experience an increase of potential aircraft  
 10 accidents, or Clear Zones, which are areas with an increased potential for aircraft accidents, are  
 11 adjacent to the ends of runways, and are kept clear of obstructions to flight by the government.  
 12 Structures within the proposed Project Area are located outside APZs and Clear Zones. A  
 13 portion of the existing stormwater conveyance feature and a portion of the proposed electrical  
 14 transmission line are located within APZ 1, defined as “the area beyond the Clear Zone which  
 15 possesses significant potential for accidents.” The proposed project area does not extend into  
 16 APZ 2, defined as the “area beyond APZ 1 having measurable potential for accidents”  
 17 (NAVFAC SE, 2011). There are approximately 631 acres of land within NASCC that are  
 18 designated as a Clear Zone (NAVFAC SE, 2011). Locations of AICUZ areas are shown on  
 19 Figure 3-8.

1 Explosive Safety Quantity Distance (ESQD) arcs are designated to identify the minimum  
2 permissible distance between a potential explosion and inhabited buildings, public transportation  
3 routes, or installation boundaries and may limit land use in some areas. No ESQD arcs are  
4 located within the Project Area. ESQD arcs are also shown on Figure 3-8.

5 In addition to AICUZ and ESQD arc areas, Installation Restoration Program (IRP) sites may  
6 pose constraints on land use. IRP sites are areas that are undergoing remediation from previous  
7 contamination. Construction activities within these zones may require additional expenditure for  
8 containment or remediation of contamination. Buildings 8, 358, 1152, 1209, and 1219, located  
9 within the Project Area, are located within the institutional control boundaries of an IRP site.  
10 IRP sites are discussed in further detail in Section 3.8.3.

### 11 **3.7 UTILITIES AND INFRASTRUCTURE**

12 The utilities and infrastructure considered for this EA include a description of the stormwater,  
13 water, wastewater, electricity, natural gas, telecommunications, transportation, and solid waste  
14 for the Project Area. Figures depicting the location of the utilities discussed in the Section are  
15 not included in this EA, as this information has been deemed critical to mission operation, safety,  
16 and success.

#### 17 **3.7.1 Stormwater**

18 The majority of stormwater at NASCC is managed with a storm sewer system consisting of  
19 approximately 195,000 linear feet (LF) of pipe, over 463 manholes, 210 junction inlets, 225 area  
20 inlets, and 265 curb inlets (NAVFAC SE, 2014). Other stormwater runoff is conveyed by open  
21 channel or sheet flow or is stored in 11.54-acre-ft infiltration pond on the south side of the DCRF  
22 building. Both Corpus Christi Bay and Oso Bay receive surface water runoff from NASCC;  
23 however, the stormwater management system diverts all runoff from the Project Area to Corpus  
24 Christi Bay. Stormwater within the proposed Project Area is further discussed in the Stormwater  
25 Evaluation Report attached as Appendix C.

26 As previously discussed in Section 3.2.3 of this report, the current water quality of Corpus  
27 Christi Bay, NASCC runoff receiving waters, is generally good. To maintain and improve the  
28 status of water quality of receiving waters, the National Pollutant Discharge Elimination System

1 (NPDES) permit program, authorized by the CWA and regulated by the USEPA, controls  
2 pollutant discharges into waters of the U.S. In Texas, the TCEQ has Federal regulatory authority  
3 to administer the NPDES under the TPDES program.

4 NASCC has been issued authorization by TCEQ to manage and discharge stormwater under two  
5 TPDES permits: the Small Municipal Separate Storm Sewer System (MS4) General Permit  
6 (TXR040000) and the Multi-Sector General Permit (MSGP) (TXR050000). A Stormwater  
7 Management Plan (SWMP) is maintained to comply with the TPDES program under MS4  
8 permit TXR04000. The SWMP must include the following six minimum control measures  
9 (MCMs):

- 10 1. Public education and outreach on stormwater impacts.
- 11 2. Public involvement/participation.
- 12 3. Illicit discharge detection and elimination.
- 13 4. Construction site stormwater runoff control.
- 14 5. Post-construction stormwater management in new development and redevelopment.
- 15 6. Pollution prevention/good housekeeping for municipal operations.

16 A SWPPP is maintained by NASCC to comply with the TPDES program under MSGP No.  
17 TXR050000. The three key elements of the 2013 NASCC SWPPP include the following:

- 18 1. Identification and monitoring of potential stormwater pollution sources.
- 19 2. Description of BMPs to be implemented.
- 20 3. Compliance with the MSGP (NAVFAC SE, 2011).

21 The SWMP and 2013 NASCC SWPPP are further discussed in the Stormwater Evaluation  
22 Report attached as Appendix C.

### 23 **3.7.2 Water**

24 The City of Corpus Christi provides potable water to NASCC and all NASCC tenants including  
25 CCAD (NASCC, 2014). Water from the City comes from surface water sources, primarily the  
26 Nueces River. Lake Corpus Christi is fed by the Nueces River, and the water levels within the  
27 lake are controlled by dams (NASCC, 2011).

28 The City of Corpus Christi treatment plant providing potable water to NASCC has a peak daily  
29 production of 110 million gallons per day (MGD) and a capacity of 167 MGD (NAVFAC SE,  
30 2011b). The plant produces an average of 80 MGD of water (COCC, 2015b). Though the water

1 purchased from the City is treated, NASCC disinfects the purchased water as needed (NASCC,  
2 2014). It was reported in the 2011 NASCC Master Plan that the water supply was adequate at  
3 the time for existing and projected needs (NAVFAC SE, 2011).

4 As of 2014, the water demand at NASCC, including all tenants, was approximately 943,349  
5 gallons per day and approximately 344,337,000 gallons per year (NASCC, 2014).

6 The City of Corpus Christi delivers water to NASCC through a 20-inch water line that enters  
7 NASCC property from the west and carries water at a pressure of approximately 50 pounds per  
8 square inch (psi) (NAVFAC SE, 2001a). The water passes through a City of Corpus Christi  
9 master meter and is then stored in the 2,000,000-gallon W-7 underground storage tank (UST).  
10 W-7 is located near the NASCC water pumping station (W-1). There are two additional storage  
11 tanks near W-1, but they are no longer in use. Water stored is sufficient to meet TCEQ  
12 minimum water system capacity requirements, as outlined in 30 TAC 290.45 (NAVFAC SE,  
13 2001a).

14 The majority of NASCC's water system is over 40 years old and is composed primarily of  
15 materials including ductile iron, asbestos cement, and polyvinyl chloride (PVC). Due to the age  
16 of the system, there are frequent water main issues including breakages. Breakage is most  
17 common during times when more than one high-service pump is in operation at once. The water  
18 system is composed of approximately 230,400 feet of 1- to 16-inch pipe (NAVFAC SE, 2001a).

19 Domestic water lines in the vicinity of the project area were installed during construction of the  
20 DCRF. The existing system does not have adequate flow or pressure to support future projects.

### 21 **3.7.3 Wastewater**

22 CCAD is serviced by the NASCC wastewater system, which is divided into domestic and  
23 industrial branches that convey flows to two treatment plants located in the northwest corner of  
24 the base on Saipan Street. The domestic and industrial wastewater streams enter respective  
25 treatment plants separately and are treated independently with biological processes.

26 On 29 July 2005, TCEQ issued NASCC a permit (USEPA I.D. No. TX0007889; State Permit  
27 No. WQ0002317000) under the TPDES program and Chapter 26 of the Texas Water Code:

1 Water Quality Control, authorizing treatment and discharge of wastes directly to the Corpus  
 2 Christi Bay through associated Outfalls 001 and 101. The permit was renewed on 27 May 2010  
 3 and will expire on 1 April 2015. Outfall 001 is located approximately 800 feet northeast of the  
 4 North Gate (Ocean Drive) entrance and discharges treated domestic wastewater effluent. Outfall  
 5 101 is located approximately 700 feet northeast of the North Gate (Ocean Drive) entrance and  
 6 discharges treated industrial wastewater effluent. The permit includes specific effluent  
 7 limitations for each outfall and monitoring requirements established by TCEQ. Discharge limits  
 8 stated in the permit include a daily average flow of effluent not to exceed 1.5 MGD and a daily  
 9 maximum flow not to exceed 3.75 MGD (TCEQ, 2010).

10 The two wastewater streams merge for ultraviolet (UV) ray disinfection to produce a single  
 11 effluent stream that discharges to Corpus Christi Bay (NAVFAC SE, 2001b). Table 3-7 presents  
 12 the most recent wastewater loads provided by NASCC from 2014.

13 **Table 3-7**  
 14 **Wastewater Loads**

Type	Water volume (KGal's for 2012)	Fresh water volume (%)	Water volume (KGal's for 2013)	Fresh water volume (%)
Total	386,232	41.51	348,172	43.45
Domestic	116,822	30.25	116,862	33.56
Industrial	43,490	11.26	34,441	9.89

Source: NASCC, 2014

15 The digested sludge produced from the treatment process is dewatered using sludge drying beds.  
 16 The decanted water from the sludge drying beds is recirculated to the head of the wastewater  
 17 treatment plant. The digested sludge is then hauled off-site for landfill disposal (NAVFAC SE,  
 18 2001b).

### 19 **Domestic Wastewater**

20 Within the Project Area, domestic wastewater at CCAD is serviced by the NASCC domestic  
 21 wastewater system. Constructed in 1942, it consists of a collection system, four lift stations, and  
 22 a treatment plant (NAVFAC SE, 2001b).

1 The domestic wastewater collection system at NASCC consists of approximately 150,000 LF of  
2 clay pipe and four lift stations: LS176, LS177, LS288, and LS1779. It has a collection capacity  
3 of 14.6 MGD and discharges by gravity to the respective treatment plant through a 24-inch pipe  
4 (NAVFAC SE, 2001b).

5 The domestic wastewater treatment plant (DWTP) has a plant capacity of 2.75 MGD, although it  
6 operates on average at approximately 0.4 to 0.5 MGD, leaving plenty of capacity for additional  
7 wastewater loads (NAVFAC SE, 2001b). The large difference between the capacity and average  
8 operating rate is primarily due to a significant decrease in population at NASCC since design and  
9 construction of the plant. As a result, the plant alternates the use of several of its process tanks.  
10 The manhole at the head of the plant contains a plant bypass to outfall (001), which discharges  
11 through the UV disinfection system to the bay (NAVFAC SE, 2001b).

12 Domestic wastewater at NASCC is treated through the following process:

- 13 1. Wastewater flows through a comminutor at the head of the wastewater treatment plant  
14 and is then pumped into an aerated splitter box.
- 15 2. From the splitter box, the water travels into a degritter.
- 16 3. The water is divided and flows through one of two primary clarifiers.
- 17 4. Sludge from the primary clarifiers is pumped into one of two anaerobic digesters.
- 18 5. Water flows from the primary clarifiers through a trickling filter into secondary clarifiers.
- 19 6. Sludge from the secondary clarifiers is diverted to the head of the plant to maintain the  
20 biological treatment process.
- 21 7. Water from the secondary clarifiers combines with water from the industrial wastewater  
22 treatment plant (IWTP).
- 23 8. The combined effluent is sent through a UV disinfection unit.

24 The wastewater discharges into the bay through a 24-inch pipe (Outfall 001) (NAVFAC SE,  
25 2001b).

### 26 ***Industrial Wastewater***

27 The industrial wastewater system at NASCC was constructed in 1973 and is owned and operated  
28 by the Navy. It consists of a collection system, two lift stations, a treatment plant, and an

1 emergency generator. The majority of industrial wastewater is generated by various CCAD  
2 operations that take place in and around parts of Building 8 that are not included within the  
3 Project Area. Only minor industrial wastewater discharges originate from within the Project  
4 Area and include condensate from sources such as air-conditioning units. CCAD pre-treats  
5 industrial wastewater to remove heavy metals, cyanide, oil, and grease prior to discharging it to  
6 the collection system under an inter-service agreement (NAVFAC SE, 2001b).

### 7 **3.7.4 Electricity**

8 NASCC's electric service was privatized in 2007. The contract was awarded to Nueces Electric  
9 Cooperative, Robstown, Texas, including conveyance of electrical distribution systems at  
10 NASCC for 50 years. Contract work includes modifications required to bring the system up to  
11 industry standards (USACE, 2009).

12 Electricity at CCAD is provided by four incoming feeds. The site is served by two medium  
13 voltage power lines crossing the golf course, and distribution voltage to substations is 12.47kV1  
14 3-phase. Electricity distribution is via an underground duct system, overhead distribution and  
15 transmission lines. Conduits are shielded copper. One backup generator serves Building 8  
16 (USACE, 2009). The proposed project area is served by a network of overhead and underground  
17 electrical lines. An overhead transmission line was installed to service the newly constructed  
18 Building 1700. In addition, several transformers are located throughout the proposed project  
19 area.

20 Electricity use reported by CCAD for fiscal year (FY) 14 is 77,726 megawatt hours (MWH), an  
21 approximate 14% decrease from FY13 (89,934 MWH) (CCAD, 2014a).

### 22 **3.7.5 Natural Gas**

23 The City of Corpus Christi provides natural gas to NASCC. The underground distribution  
24 system is at least 40 years old, though portions of the original system have been replaced with  
25 flexible plastic pipe (NASCC, 2014). Although no updated demands have been provided, it was  
26 reported in the 2011 NASCC Master Plan that gas supply is adequate for existing and projected  
27 needs (NAVFAC SE, 2011a). An existing gas line is present south of the proposed project area.

1 In addition, gas lines are currently connected to Buildings 8, 1737, and 1738. A natural gas line  
2 is not currently connected to Building 1700.

3 Natural gas use reported by CCAD for FY14 is 95,991 MBTU, an approximate 13% increase  
4 from FY13 use (84,607 MBTU) (CCAD, 2014a).

### 5 **3.7.6 Telecommunications**

6 The NASCC telecommunications system is partially privatized, though some infrastructure is  
7 still government owned. Telecommunications infrastructure, including fiber and copper  
8 telecommunication lines, is maintained by the Base Communications Office (BCO). The Navy  
9 Marine Corps Intranet (NMCI) provides network access support, and AT&T provides support for  
10 local exchange services. Sprint provides cellular support to CCAD and maintains an antenna in  
11 Building 8 (US Navy, 2015).

### 12 **3.7.7 Transportation**

13 Access to NASCC can be gained through two gated entrances. The Main/South Gate is located  
14 on Lexington Boulevard at the installation boundary to the south. Traffic can access this gate  
15 from the south by four-lane, undivided State Route 358—a spur off of South Padre Island Drive  
16 (also known as Naval Air Station Drive) that turns into Lexington Boulevard. The North Gate is  
17 located on coastal Ocean Drive at the installation boundary to the northwest. Traffic can access  
18 this gate from the west after crossing a bridge that divides Oso Bay and Corpus Christi Bay. The  
19 transportation network onsite at NASCC consists of three major roads—Lexington Boulevard,  
20 Ocean Drive, and Dimmit Drive—interconnected with a number of minor roads. Traffic  
21 congestion at NASCC only takes place during peak traffic hours, and delays are considered  
22 insignificant (NAVFAC SE, 2011).

23 A traffic study, conducted in 2005 and included in the 2006 NASCC Master Plan, consisted of  
24 assessments and recommendations for the Main/South Gate, North Gate, and intersection of  
25 Lexington Boulevard and Dimmit Drive. During the 2005 study, traffic was observed and  
26 counted during morning, midday, and afternoon rush hours. At the Main/South Gate, results  
27 indicated that the highest traffic flow was experienced during afternoon rush hour and that  
28 security and road barriers were the main constraints. At the North Gate, results indicated that the

1 highest traffic flow was experienced during morning rush hour and that security and road barriers  
2 were also the main constraints. However, the North Gate is only subjected to approximately  
3 20% of the traffic flow that the Main/South Gate experiences. Results from observations at the  
4 intersection of Lexington Boulevard and Dimmit Drive, located approximately 0.5 mile  
5 southeast of Building 1700, indicate that the highest traffic flow was experienced during the  
6 afternoon rush hour. Additionally, of the three study areas in the 2005 assessment, this  
7 intersection was found to be subjected to the most traffic throughout the day. Recommendations  
8 included installation of a traffic light, a left turn lane on Lexington Boulevard on the south side  
9 of the intersection to accommodate traffic turning north onto Dimmit Drive, a raised median on  
10 Lexington Road in the intersection, and additional signage and signals (NASCC, 2006).

11 Since the 2005 traffic study, many plans have been implemented, as recommended, to make  
12 improvements to the Main/South Gate, including new guard houses, additional entry lanes, a  
13 raised median, and an installation identification facility with 34 parking spaces. North Gate  
14 improvement plans have also been implemented and included similar features (NASCC, 2006).

15 The major roads providing access to the proposed project area are 1<sup>st</sup> Street to the south and west  
16 and Ocean Drive to the north. Avenue D, located within the proposed project area, extends  
17 along the southern portion of Building 8 and north of Building 1700.

### 18 **3.7.8 Solid Waste**

19 Solid waste from NASCC, including tenants, is sent to the Cefe Valenzuela Landfill, which  
20 opened in October 2007 under permit number MSW2269 and was approved 25 March 1999.  
21 The Cefe Valenzuela Landfill property is located at the intersection of Farm to Market Road  
22 2444 and County Road 20 in Nueces County, on approximately 2,274 acres of land. The landfill  
23 consists of two units, measuring approximately 810 acres each, and is classified as a Type I  
24 Municipal Solid Waste Management Facility (COCC, 2015a). This classification allows for the  
25 disposal of Municipal Solid Waste, Class 1 Nonhazardous Industrial Waste, Class 2 Industrial  
26 Waste, Class 3 Industrial Waste, and Special Waste.

27 The Cefe Valenzuela Landfill is permitted to accept about 500,000 tons of waste per year, with a  
28 maximum acceptance rate of 1,000,000 tons per year (tpy). The total volume permitted is  
29 130,495,000 cubic yards, including landfill cover material, and the maximum allowed elevation

1 of waste is 297.5 feet amsl. Based on these values, the expected life of the landfill is  
2 approximately 100 years (COCC, 2015a).

3 In 2013, 423,523 tons of waste was disposed of in the landfill. Based on 2013 data, the expected  
4 remaining life of the landfill is 96 years, and the landfill can accept an additional 73,917,787 tons  
5 of waste over the remaining life (TCEQ, 2014).

### 6 **3.8 HAZARDOUS MATERIALS AND WASTE**

7 The hazardous materials and waste considered for this EA include a description of the hazardous  
8 materials, hazardous waste, solid waste management units/installation restoration sites, asbestos-  
9 containing materials, lead-containing paint, and occupational health and safety for the Project  
10 Area.

#### 11 **3.8.1 Hazardous Materials**

12 CCAD provides helicopter and helicopter component repair and servicing to all U.S. military  
13 services and some foreign military organizations. Solvents, sealants, paints, greases, lubricating  
14 oils, and other types of hazardous materials are used in maintenance, repair, and overhaul  
15 activities at CCAD (NAVFAC SE, 2011).

#### 16 ***Petroleum Product Storage***

17 Title 40 (Protection of Environment) CFR, Part 112 (40 CFR 112) (Oil Pollution Prevention),  
18 was issued pursuant to Section 311(j)(1)(c) of the Federal Water Pollution Control Act  
19 (FWPCA) (as amended) and applies to facilities that store oil and oil products in excess of 1,320  
20 gallons aboveground and/or facilities that store more than 42,000 gallons of petroleum materials  
21 underground not regulated by 40 CFR 280 or an equivalent state-run program. The National  
22 Contingency Plan (NCP) was established under the CWA, as amended, and the Comprehensive  
23 Environmental Response, Compensation and Liability Act (CERCLA). The NCP requires  
24 Federal agencies to plan for emergency response to spills of oil and hazardous materials for  
25 which they are responsible. Army Regulation (AR) 200-1 (Environmental Protection and  
26 Enhancement) states that it is Army policy to provide for prompt, effective response to contain  
27 and clean up spills that might occur (USACE, 2010).

1 NASCC has prepared a Spill Prevention, Control, and Countermeasure Plan (SPCCP) in  
2 accordance with 40 CFR 112 and OPNAVINST 5090.1D (NAVFAC SE, 2014a). The SPCCP  
3 establishes procedures, methods, equipment, and other criteria to prevent the discharge of oil  
4 products to navigable water of the U.S. or adjoining shorelines. As a NASCC tenant, CCAD has  
5 adopted and operates under the NASCC SPCCP (NAVFAC SE, 2014a), which includes as an  
6 appendix CCAD's Pollution Prevention Guidance.

7 Oil products are stored throughout CCAD and NASCC. The majority of products are stored  
8 within or in close proximity to the proposed project area. Minimal storage of hazardous or  
9 petroleum materials is located on the eastern portion of NASCC. The oil products are stored in a  
10 variety of containers including aboveground storage tanks (ASTs), USTs, oil water separators,  
11 mobile tanks, drums, emergency generators, and transformers. The 2014 NASCC SPCCP  
12 summarizes the petroleum product storage containers subject to Spill Prevention, Control, and  
13 Countermeasure (SPCC) requirements. The ASTs consist of double-walled stainless steel tanks  
14 or concrete ASTs with integrated secondary containment and single-walled stainless ASTs  
15 situated inside of secondary containment. Other storage containers include 55-gallon steel and  
16 poly drums and stationary back-up generators. Accumulation sites for used oil are located  
17 throughout CCAD and NASCC. The location of oil storage containers, procedures, and  
18 equipment used to prevent and clean up a release is included in the SPCCP. CCAD performs  
19 minimal oil transfer operations. Transfer operations include transfer of diesel and fuel storage  
20 tanks to Building 8 operations and to emergency generators. Elevated aboveground piping  
21 currently runs from the Tank Farm ASTs to Building 8 without secondary containment. Details  
22 on the size, location, and contents of oil-containing equipment are provided in the NASCC  
23 SPCCP.

24 ASTs identified in the 2014 NASCC SPCCP for storage of petroleum/oil storage located within  
25 the proposed project area are presented in Table 3-8. Drum storage locations within the project  
26 area are presented in Table 3-9.

1  
2

**Table 3-8  
Aboveground Storage Tanks**

Building	Tank ID	Contents	Capacity (gallons)
8	227	JP-8	10,000
8	228	JP-8	10,000
8	229	JP-8	10,000
8	230	VAR SOL	2,000
8	231	VAR SOL	2,000
8	232	Turbine Oil	2,000
8	233	Preservation Oil	2,000
Unmarked building west of Building 1700	1700-1	ULSD	250
Emergency generator west of Building 1700	1700-2	ULSD	450
1737	1737-1	Used Oil	500
1743	1743-1	Gasoline (out of service)	250
1804	1804-1	ULSD	1,000

Note: ULSD – ultra-low sulfur diesel

Source: NAVFAC SE, 2014a

3  
4

**Table 3-9  
Drum Storage Locations**

Building	Contents	Containment
8	Petroleum Products	Drip Containment pallets inside building
358	Petroleum Products	Containment Sump

Source: NAVFAC SE, 2014a

### 5 **Hazardous Material Storage**

6 Hazardous materials used on NASCC include jet fuel, lubrication and hydraulic fluids, batteries,  
7 solvents, acids, caustics, and refrigerants. The generation of solid, municipal, and hazardous  
8 waste is regulated by programs and policies currently implemented at NASCC (USACE, 2009).

9 CCAD uses the Hazardous Materials Management System (HMMS) program to control and  
10 record hazardous materials. The system limits the handling of hazardous materials to authorized  
11 personnel. Hazardous materials are stored in Hazardous Materials Distribution Support Centers

1 (HDSCs) located throughout CCAD. These areas are locked and require authorized access by  
 2 personnel responsible for inventory control. With the exception of some bulk quantities of  
 3 materials used in specific locations, all hazardous materials are issued in daily use quantities  
 4 from one of 17 HDSCs. The proposed project area includes five HDSCs located within Building  
 5 8. In addition, two HDSCs are located in the DCRF (CCAD, 2014b).

6 CCAD has developed a Total Toxic Organics (TTO) and Solvent Management Plan in  
 7 accordance with the Metal Finishing Standards in 40 CFR 433. The plan specifies the toxic  
 8 organic compounds to be used, the method of disposal, and procedures for ensuring that toxic  
 9 organic materials do not spill or discharge into wastewater and surface water (CCAD, 2014b).  
 10 Maintenance of the plan is also required in accordance with TCEQ permit WZ0002317111,  
 11 which authorizes NASCC to operate an industrial wastewater treatment plant under the TPDES.  
 12 According to the 2014 TTO and Solvent Management Plan, over 20,000 pounds TTO products  
 13 were stored and used at CCAD in CY 2013 as shown in Table 3-10.

14  
 15

**Table 3-10**  
**CCAD Toxic Organic Products**

Chemical	2013 Usage (lbs)
Toluene	13,482
Methanol	1,631
Ethylbenzene	4,504
1,2-trans-dichloroethylene	3
Naphthalene	26
Phenol	797
Di-n-butyl phthalate	42
Methylene Chloride	29
Bis (2-ethylhexyl) phthalate	0.10
Trichloroethylene	0.17
Benzene	0.01
Dimethyl phthalate	-
<b>Total</b>	<b>20,513.32</b>

Source: CCAD, 2014

### 1 **3.8.2 Hazardous Waste**

2 The 2014 CCAD TTOs and Solvent Management Plan identifies the toxic organic compounds  
3 (mixed solvent-containing hazardous wastes) that are disposed off-site. The plan includes the  
4 types and quantities of TTOs disposed as mixed, solvent-containing hazardous waste in 2010  
5 (CCAD, 2014b). CCAD disposes of most of the solvents/TTOs as process waste. In 2013, the  
6 total amount of mixed, solvent-containing hazardous wastes disposed off-site through DLA was  
7 407,129 pounds.

8 In accordance with OPNAVINST 5090.1, NASCC has developed and implemented a hazardous  
9 waste management program. NASCC is associated with EPA generator identification number  
10 TX7170022787 and Hazardous Waste Permit 50038 which expires 4 May 2017 (NAVFAC SE,  
11 2013a). Based on NASCC's capacity for storage of oil in aboveground and underground storage  
12 tanks, NASCC is also required to implement an SPCC Plan.

13 Additionally, hazardous waste management at NASCC is subject to Federal and state  
14 regulations. NASCC has a permit with TCEQ for specific waste activities. Waste management  
15 procedures for regulated waste generated by all station departments, tenant commands, and  
16 contractors are described in the 2013 NASCC Hazardous Waste Management Plan (HWMP)  
17 (NAVFAC SE, 2013a). CCAD has adopted this NASCC HWMP.

18 Waste storage areas are located throughout NASCC, including CCAD. Conforming storage  
19 areas are permitted by the TCEQ for storage of specified hazardous wastes for a period of one  
20 year. NASCC has one conforming storage area located in Building 257 that is not included in  
21 the proposed Project Area. Waste containers include primarily 55-gallon drums on pallets or  
22 500-gallon tote tanks. One temporary storage area (fewer than 90 days) is located at Building 8  
23 (Facility 46) and has a capacity of 300 gallons (SPCC). Building 362, also located within the  
24 project area is an inactive hazardous material/waste storage facility proposed for demolition  
25 under the Proposed Action.

### 26 **3.8.3 Solid Waste Management Units/Installation Restoration Sites**

27 Solid waste management units (SWMUs) are areas that have been identified with contamination  
28 resulting from previous releases of chemicals or petroleum products or may contain unexploded

1 ordnance. SWMUs are usually included in the IRP. There are seven SWMU/IRP sites located at  
2 NASCC. Four of the sites are located on or adjacent to the proposed Project Area: IRP Sites 1,  
3 3, and 4; and the existing Building 8 (IRP Site 2). Portions of the proposed Project Area located  
4 within IRP sites are shown on Figure 3-9. An Affected Property Assessment Report (APAR)  
5 was completed for NASCC in 2001 for IRP Sites 1, 2 (Building 8), 3, and 4 (EnSafe, 2001).  
6 Four Protective Concentration Level Exceedance (PCLE) zones were identified in the APAR and  
7 are summarized below.

8     ▪ Building 8 (IRP Site 2; SWMU 05)

- 9         - Building 8 is leased by CCAD and houses CCAD's primary operations (NAVFAC  
10         SE, 2011).
- 11         - Elevated pH was previously identified in shallow groundwater on the east side of  
12         Building 8 in the vicinity of the former industrial wastewater pretreatment plant. The  
13         elevated pH resulted from a release from an underground caustic line. The caustic  
14         line was removed, and the area of elevated pH has not increased in size (US Navy,  
15         2003a).
- 16         - Trichloroethylene was previously detected in groundwater north of Building 8 at  
17         concentrations above the critical protective concentration level (PCL). This area was  
18         designated a groundwater PCLE zone (US Navy, 2003a)
- 19         - Due to the sensitive nature of operations in Building 8, sampling through the floor of  
20         the building was not conducted. The soil beneath Building 8 was declared a PCLE  
21         zone without investigation (US Navy, 2003a).
- 22         - Monitored natural attenuation is currently being implemented as the remediation  
23         method, and annual groundwater sampling is being conducted (NAVFAC SE, 2011).
- 24         - Institutional controls and physical controls have been implemented to prevent  
25         exposure to constituents of concern (COCs) in groundwater and soil. Institutional  
26         controls limit the land use to an industrial classification and prohibit use of shallow  
27         groundwater. The physical controls include the engineered cap that is identified as  
28         the in-place concrete floor of Building 8. The shallow aquifer meets Class 3 criteria  
29         and is not presently used for any purpose. All ground-disturbing activities at NASCC  
30         must be cleared through the Public Works Environmental office, where the  
31         construction location is compared to PCLE zone locations. Contractors are notified  
32         prior to construction that subsurface media contains COCs (US Navy, 2003a).
- 33         - The response actions identified in the APAR and Response Action Plan (RAP) will  
34         remain in place as long as operations within Building 8 continue. When operations  
35         cease, additional investigation will be conducted to determine if any additional  
36         response actions are necessary (US Navy, 2003a).

- 1           - Concentrations of TCE have been reported as increasing in one well that is therefore  
2 recommended for continued monitoring (NAVFAC SE, 2014b. NASCC continues to  
3 monitor the plume and performed groundwater sampling for analysis of TCE, 1,2-  
4 dichloroethane, vinyl chloride, and underlying constituents in November 2014. At  
5 the time of this EA, results of the investigation have not been provided.
- 6 IRP Sites 1, 3, and 4 are located south of First Street, as shown on Figure 3-9. Although the IRP  
7 sites are located south of First Street, contamination from these IRP sites extends north across  
8 First Street and is situated under the south side of the existing golf course within the proposed  
9 Project Area.
- 10           ▪ IRP Site 1 (SWMU 01) – Defense Property Disposal Office (DPDO) Landfill
- 11           - DPDO landfill is an approximate 13-acre grass-covered field located 400 ft west-  
12 northwest of the CCAD liquid waste disposal landfill (IRP Site 3). The landfill  
13 operated between 1948 and the early 1960s and was reportedly used for disposal of  
14 bulk chemical waste generated by CCAD (US Navy, 2003b). Previous studies and  
15 sampling have confirmed releases of volatile organic compounds (VOCs), poly-  
16 chlorinated biphenyls (PCBs), trichloroethylene, chlorobenzene, and inorganic  
17 constituents to groundwater (US Navy, 2003b).
- 18           - Monitored natural attenuation is being applied as the remediation method, and annual  
19 groundwater sampling is being conducted (NAVFAC SE, 2011).
- 20           ▪ IRP Site 3 (SWMU 02) - CCAD Liquid Waste Disposal Landfill
- 21           - The CCAD landfill was reportedly active between 1960 and 1982 and was the  
22 primary disposal area for bulk chemical waste generated at CCAD. IRP Site 3 is a  
23 15-acre mounded field. IRP Site 3 is bound by First Street on the northeast; a  
24 gasoline station and former commissary on the southeast; a Defense Logistics Agency  
25 (DLA) yard and frontage road on the northwest; and a gravel road, IRP Site 4, and a  
26 UST on the southwest (US Navy, 2003b).
- 27           - VOCs were detected in a light non-aqueous phase liquid (LNAPL) and included  
28 chlorobenzenes; 1,4-dichlorobenzene; ethylbenzene; tetrachloroethylene; toluene; and  
29 trichloroethylene. PCBs and total metals were also identified exceeding the PCL (US  
30 Navy, 2003b).
- 31           - Pumping and treating of groundwater (and long-term monitoring) began in the 1980s.  
32 Monitored natural attenuation is currently being implemented as the remediation  
33 method, and annual groundwater sampling is being conducted (NAVFAC SE, 2011).
- 34           ▪ IRP Site 4 (SWMU 04) – Firefighting Training Area (FFTA)
- 35           - The FFTA operated from the 1960s until 1991. The site is adjacent to IRP Site 3 and  
36 is located over a former nonhazardous waste landfill. IRP Site 4 is an approximately

1 17,000-ft<sup>2</sup> circular area with a bare gravel surface. Training activities included  
2 discharging and igniting fuel for practice extinguishing the blaze. Approximately  
3 3,000 gallons per month of fuel were used approximately five to six months per year.  
4 (US Navy, 2003b).

5 - Trichloroethylene and tetrachloroethylene were previously identified in the  
6 groundwater in 1993 (US Navy, 2003b).

7 - No further action requirements for the site have been met due to constituents reported  
8 below the closure requirements. Recommendations have been made to discontinue  
9 groundwater monitoring and close monitoring wells (NAVFAC SE, 2014b).

10 A drainage channel is located on the existing back nine holes of the Gulf Winds Golf Course and  
11 wraps around the west and south sides of IRP Sites 1, 3, and 4. Surface water runoff and  
12 affected groundwater discharge from the three IRP sites flows towards this channel. A  
13 groundwater interceptor trench, to be activated when nearby surface drainage ditches have  
14 standing water in them, was built and went into operation in 2004. For a brief time, groundwater  
15 from this interceptor trench was pumped through the granular activated charcoal (GAC)  
16 treatment unit, and then through the base sanitary sewer treatment system (NAVFAC SE,  
17 2014a). However, this system is no longer in use (NASCC, 2013). Low-levels of  
18 chlorobenzene; 1,3 dichlorobenzene; cis 1,2 dichloroethene; benzene; and vinyl chloride have  
19 been detected in wells located in the Gulf Winds Golf Course along First Street. Based on  
20 analytical results from groundwater sampling activities conducted in 2011, 2012, and 2013, low  
21 levels of these COCs were detected, but none were above the protective concentration limits  
22 (PCLs) (NAVFAC SE, 2013b). The institutional control boundary for IRP Sites 1, 3, and 4  
23 extends across First Street and the proposed underground electrical line, which is within the  
24 proposed Project Area (Figure 3-9).

25 Areas of contamination are present to the north of Building 8, but these areas are not located in  
26 the proposed Project Area. The areas of contamination for IRP Sites 1, 3, and 4 are adjacent to  
27 the existing stormwater conveyance and the proposed electrical line under the proposed action.  
28 Continuous review and oversight for the management of these sites is provided by USEPA and  
29 TCEQ (US Navy, 2003b).

30 Additional potential areas of contamination, not identified as SWMU/IRP sites, are identified in  
31 the NASCC Master Plan. These sites consist of several USTs, including:

- 1       ▪ Fuel Farm 217, located in the far eastern portion of NASCC outside the proposed project  
2       area.
- 3       ▪ Fuel Farm 244, located on the west side of First Street and west of the proposed Project  
4       Area.

5 No details for these two potential areas of contamination are provided in the NASCC Master  
6 Plan. These sites are shown on Figure 3-9.

### 7 **3.8.4 Asbestos-Containing Materials**

8 The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910 for  
9 general industry and 29 CFR 1926 for construction requires owners to know the condition of  
10 asbestos in their buildings and if tenants and employees are being exposed to asbestos. Prior to  
11 renovation and/or deconstruction, USEPA regulations under National Emission Standards for  
12 Hazardous Air Pollutants (NESHAP), 40 CFR 61, Part M, require an owner to know the extent  
13 of asbestos in the building prior to the start of work.

14 The buildings proposed for demolition were constructed between 1941 and 2003. Limited  
15 surveys for asbestos-containing materials (ACM) were conducted for the following CCAD  
16 buildings located within the proposed Project Area:

- 17       ▪ Building 250 (CCAD Administration) – Shingled roofing materials and contaminated soil  
18       (CCAD, 2014c). Electronic correspondence from the CCAD Asbestos Program  
19       Management Specialist indicates that the asbestos survey conducted is not sufficient for  
20       demolition purposes and that additional survey activities will need to be conducted prior  
21       to demolition (CCAD, 2014d).
- 22       ▪ Building 1746 – A pre-renovation and pre-deconstruction survey was conducted for  
23       Building 1746 in January 2006. The survey identified ACM in floor tile and mastic,  
24       ceiling tiles, joint compound, and pipe wrap. Analytical results from representative  
25       composite samples collected during a previous survey in 2000 indicated that the  
26       deconstruction waste stream was likely to be characterized as a nonhazardous waste  
27       (CAPE, 2006).
- 28       ▪ Building 8 Old Engine Cleaning Shop – An asbestos survey was conducted 6 August  
29       2008 and included collection of two samples from the hot process steam line and from  
30       the insulation located at ceiling level for ACM analysis. No regulated levels of asbestos  
31       were detected in either sample (WESTON, 2008a).

32 Information was not available on potential ACM in the buildings managed by NASCC, but  
33 buildings constructed prior to 1980 may contain ACM.

### 1 **3.8.5 Lead-Containing Paint**

2 Based on the age of the buildings scheduled for deconstruction, lead-containing paint (LCP) may  
3 be present in the buildings constructed prior to 1980.

4 A pre-renovation and pre-deconstruction survey for LCP was conducted for Building 1746,  
5 located within the proposed Project Area, in January 2006. The survey identified LCP in metal  
6 door casings throughout the building and structural steel throughout the building. The Toxicity  
7 Characteristic Leaching Procedure (TCLP) analytical results suggested that the anticipated  
8 deconstruction waste stream was unlikely to exceed the RCRA regulatory threshold of 5.0 mg/L  
9 for lead and was likely to be characterized as a nonhazardous solid waste.

10 A Lead Based Paint Risk Assessment was conducted at the Building 8 Old Engine Cleaning  
11 Shop in August 2008. One component containing more than the Department of Housing and  
12 Urban Development risk assessment limit of 1.0 mg/cm<sup>2</sup> lead was identified in white paint  
13 located on Vat HL-6 (WESTON, 2008b).

14 With the exception of B1746 and the Building 8 Old Engine Cleaning Shop, surveys for LCP  
15 have not been conducted.

### 16 **3.8.6 Occupational Health and Safety**

17 Each installation is required to comply with OSHA regulation 29 CFR 1910.1200 (Hazard  
18 Communication Standard). In addition, NASCC personnel that conduct operations at treatment,  
19 storage, and disposal (TSD) facilities are required to complete hazardous waste operations and  
20 emergency response (HAZWOPER) training under 29 CFR 1910.120 (NAVFAC SE, 2013a).

21 Hazardous waste coordinators are required to attend OSHA/Resource Conservation and  
22 Recovery Act (RCRA) hazardous waste and material safety training. NASCC hazardous waste  
23 personnel are trained in cleanup and disposal procedures in case of spills. Weekly inspections of  
24 hazardous chemical and waste accumulation/storage areas are conducted by the NASCC  
25 Hazardous Waste Coordinator (NAVFAC, 2013a).

26 To protect workers from noise-related risks, CCAD and NASCC comply with OSHA noise  
27 regulations. Noise generated onsite is carefully controlled by CCAD. Data on noise generated

1 during test flights and the control of this noise is described in NASCC Air Station Operations  
2 Manual and the Air Installation Compatible Use Zone Study and is also included in this EA  
3 under Section 3.9. Helicopter maintenance test flights over adjacent areas produce transitory  
4 noise impacts. These impacts, however, are not considered to be significant and, to date, no  
5 objections have been raised by either the State of Texas or the local community surrounding the  
6 installation (US Navy, 2009).

### 7 **3.9 NOISE**

8 According to the Noise Control Act of 1972 (PL 92-574), major sources of noise include  
9 transportation vehicles and equipment, machinery, appliances, and other products in commerce.

10 Sound varies by both intensity and frequency. Sound pressure level (SPL), described in decibels  
11 (dB), is used to quantify sound intensity. A-weighted decibel (dBA) SPLs are typically used to  
12 account for the frequency response of the human ear. It is normally unacceptable for noise levels  
13 to reach 65 dBA at noise-sensitive receptors such as residences, schools, churches, and hospitals  
14 (USEPA, 1974). Additionally, the potential for permanent hearing loss arises from direct  
15 exposure to noise on a regular, continuing long-term basis (16 hours a day for 40 years) to levels  
16 above 75 dBA day-night sound level (DNL). Most interior noise levels are reduced by 15 to 25  
17 dBA due to the attenuation of the sound energy by the structure (USEPA, 1974).

#### 18 **3.9.1 Existing Baseline**

##### 19 ***Existing Environment***

20 The DOD uses the AICUZ Program to assess noise related specifically to aircraft and range  
21 operations. The goal of the AICUZ program is to prevent encroachment of incompatible uses in  
22 the surrounding areas in a way that ultimately compromises the viability of the installation. As a  
23 result of the assessments, noise exposure contours are defined for the installation and, if  
24 necessary, the surrounding area. A noise level contour map was prepared for the NASCC Master  
25 Plan (NAVFAC SE, 2011).

##### 26 ***Construction Noise***

27 Noise associated with the operation of machinery on construction sites is typically short-term,  
28 intermittent, and highly localized. The dBA DNL that would result from operating construction

1 equipment is a function of the frequency, duration, and time of day during which the activity  
 2 occurs. The loudest machinery generally produces peak SPLs ranging from 86 to 95 dBA at 50  
 3 feet from the source (Table 3-11). For example, a bulldozer that generates 95 dBA at 50 feet and  
 4 is operating continuously for 365 days from 0600 hours to 2200 hours for an entire year would  
 5 be operating during all 15 “day” hours and one “night” hour of the DNL metric. Absent other  
 6 sources of noise (e.g., aircraft operations), such operation would create a predicted noise  
 7 exposure of 64 dBA DNL.

8  
 9

**Table 3-11  
 Peak Sound Pressure Level of Heavy Equipment**

Equipment	Specification <sup>a</sup> Limit L <sub>max</sub> (dBA)	Actual Measured <sup>b</sup> Limit L <sub>max</sub> (dBA)
Backhoe	80	78
Chain Saw	85	84
Compactor (ground)	80	83
Compressor (air)	80	78
Dozer	85	82
Dump Truck	84	76
Front End Loader	80	79
Grader	85	NA
Pickup Truck	55	75
Scraper	85	84
Tractor	85	NA

Source: FHA, 2006.

Notes: <sup>a</sup> Specification - refers to the specifications defined by manufacturers for the equipment measured from a distance of 50 feet from the loudest side of the equipment, and expressed as an L<sub>max</sub> level in dBA.

<sup>b</sup> Actual Measured – refers to actual noise emission levels measured and averaged together from a distance of 50 feet from the equipment from the loudest side of the equipment.

dBA = A-weighted

L<sub>max</sub> = maximum sound level

NA = Not Applicable

## 10 **Facility Operations**

11 Noise levels from facility operations include airfield activities from overhead planes and the  
 12 NASCC landing strip used by the Army, Navy, and Coast Guard; noise from existing repair  
 13 facilities such as the helicopter rotor blade testing facility; and other operations at the facility  
 14 within buildings and in outside areas. The noise contour map prepared for the 2011 Navy Master

1 Plan depicts the baseline levels for the installation (NAVFAC SE, 2011). Current noise contour  
2 levels at the installation range from 60 to 85 dB. The current noise levels associated with the  
3 proposed Project Area range from 60 to 65 dB, considered within acceptable levels for noise-  
4 sensitive receptors, such as the golf course, senior officer housing (“Rock House”), or churches.

### 5 **3.10 AIR QUALITY**

6 The air quality characteristics considered for this EA include a description of the air quality  
7 standards and regulations, existing conditions, regional air quality, and greenhouse gasses for the  
8 regional Project Area.

#### 9 **3.10.1 Air Quality Standards and Regulations**

10 USEPA has established primary and secondary National Ambient Air Quality Standards  
11 (NAAQS) under the Clean Air Act Amendments of 1990 (CAAA). The CAAA also set  
12 emission limits for certain air pollutants from specific sources, set new source performance  
13 standards based on best demonstrated technologies, and established national emission standards  
14 for hazardous air pollutants.

15 Federal air quality standards are currently established for six pollutants (known as criteria  
16 pollutants), including carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur oxides  
17 (SO<sub>x</sub>, commonly measured as sulfur dioxide, SO<sub>2</sub>), lead, particulate matter equal to or fewer than  
18 10 micrometers in aerodynamic diameter (PM<sub>10</sub>) and particulate matter equal to or fewer than 2.5  
19 micrometers in aerodynamic diameter (PM<sub>2.5</sub>). Although O<sub>3</sub> is considered a criteria pollutant and  
20 is measurable in the atmosphere, it is often not considered a pollutant when reporting emissions  
21 from specific sources, because O<sub>3</sub> is not typically emitted directly from most emissions sources.  
22 Ozone is formed in the atmosphere from its precursors, nitrogen oxides (NO<sub>x</sub>) and volatile  
23 organic compounds (VOCs), and is directly emitted from various sources. Thus, emissions of  
24 NO<sub>x</sub> and VOCs are commonly reported instead of O<sub>3</sub>.

25 The NAAQS for the six criteria pollutants are shown in Table 3-12. Units of measure for the  
26 standards shown in this table are micrograms per cubic meter of air (µg/m<sup>3</sup>), except for ozone,  
27 which is in parts per million (ppm).

1  
2

**Table 3-12**  
**National Ambient Air Quality Standards**

Pollutant	NAAQS Value ( $\mu\text{g}/\text{m}^3$ ) <sup>a</sup>
CO	
1-hr average	40,000
8-hr average	10,000
NO <sub>2</sub>	
1-hr average	188 <sup>b</sup>
Annual average	100
O <sub>3</sub>	
1-hr average	-
8-hr average	0.075 <sup>c</sup>
Lead	
30-Day Average	-
Rolling	
3 month Average	0.15
Quarterly average	1.5
PM <sub>10</sub>	
24-hr average	150 <sup>d</sup>
Annual average	-
PM <sub>2.5</sub>	
24-hr average	35 <sup>e</sup>
Annual average	12 <sup>f</sup>
SO <sub>2</sub>	
1-hr average	196 <sup>g</sup>

CO=carbon monoxide

 $\mu\text{g}/\text{m}^3$ =micrograms per cubic meterNO<sub>2</sub>=nitrogen dioxideO<sub>3</sub>=ozoneSO<sub>2</sub>=sulfur dioxidePM<sub>2.5</sub>=particulate matter equal to or fewer than 2.5 micrometers in diameterPM<sub>10</sub>= particulate matter equal to or fewer than 10 micrometers in diameter<sup>a</sup> Units for ozone are ppm.<sup>b</sup> The 98<sup>th</sup> Percentile, averaged over 3 years.<sup>c</sup> To attain the 8-hour ozone 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.<sup>d</sup> The 24-hour standard for PM<sub>10</sub> is not to be exceeded more than once per year on average over 3 years.<sup>e</sup> The PM<sub>2.5</sub> 24-hour standard is based on the 3-year average 98<sup>th</sup> percentile of 24-hour concentrations at each population-oriented monitor.<sup>f</sup> The PM<sub>2.5</sub> annual standard is based on 3-year average of weighted annual mean concentration from single or multiple community monitors.<sup>g</sup> The 99<sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years.

3 The USEPA classifies the air quality within an Air Quality Control Region (AQCR) according to  
4 whether the region meets federal primary and secondary air quality standards. An AQCR or

1 portion of an AQCR may be classified as attainment, non-attainment, or unclassified with regard  
2 to the air quality standards for each of the criteria pollutants. An area may have all three  
3 classifications for different criteria pollutants.

4 The CAAA requires federal actions to conform to any applicable state implementation plan  
5 (SIP). USEPA has promulgated regulations implementing this requirement (USEPA, 2010a  
6 Subpart B and USEPA, 2010b Subpart W). General conformity refers to federal actions other  
7 than those conducted according to specified transportation plans (which are subject to the  
8 Transportation Conformity Rule) and is set forth in 40 CFR 51 Subpart W – Determining  
9 Conformity of General Federal Action to State and Federal Implementation Plans. According to  
10 40 CFR 51.853(b), federal actions require a conformity determination for each pollutant where  
11 the total of direct and indirect emissions in a nonattainment or maintenance area caused by a  
12 federal action would equal or exceed any of the rates in paragraphs 40 CFR 51.853(b)1 or 2.

### 13 **3.10.2 Existing Conditions**

14 CCAD is an existing major stationary source as defined by the CAAA. Permitted emissions do  
15 have the potential to emit over 100 tons per year major source threshold for criteria pollutants.  
16 CCAD stationary source emissions are from external combustion equipment, internal  
17 combustion equipment, abrasive blasting operations, surface coating, open painting,  
18 woodworking operations, welding operations, solvent cleaning, jet engine test cells, chromium  
19 electroplating/anodizing operations, metal spray operations, and fugitive emissions from above  
20 ground storage tanks. Table 3-13 presents the CCAD 2014 actual air emissions from stationary  
21 sources.

22

1 **Table 3-13**  
 2 **CCAD 2014 Actual Air Emissions from Stationary Sources**

Pollutant	Actual Emissions (tpy)
Carbon Monoxide	17.29
HAPs	5.54
Lead	0.0002
Nitrogen Oxides	17.29
PM <sub>10</sub>	4.39
PM <sub>2.5</sub>	4.075.4
Sulfur Oxides	1.07
VOC	55.91

Source: 2014 Emissions Inventory Questionnaire for CCAD

HAP = hazardous air pollutants

PM<sub>2.5</sub> = particulate matter equal or fewer than 2.5 micrometers in diameter

PM<sub>10</sub> = particulate matter equal or fewer than 10 micrometers in diameter

tpy = tons per year

VOC = volatile organic compounds

### 3 3.10.3 Regional Air Quality

4 CCAD is located within the Corpus Christi-Victoria Interstate AQCR (AQCR-214), which  
 5 consists of the counties of Aransas, Bee, Brooks, Calhoun, De Witt, Duval, Goliad, Gonzales,  
 6 Jackson, Jim Wells, Kenedy, Kleberg, Lavaca, Live Oak, McMullen, Nueces, Refugio, San  
 7 Patricio, and Victoria. The Corpus Christi Metropolitan Statistical Area (MSA) (Aransas,  
 8 Nueces, and San Patricio Counties) is USEPA-designated as an attainment area for all criteria  
 9 pollutants. Therefore, CCAD is not subject to the General Conformity regulations (40 CFR Parts  
 10 6, 51, and 93).

### 11 3.10.4 Greenhouse Gases

12 There are six primary Greenhouse Gases (GHGs) of concern: carbon dioxide (CO<sub>2</sub>), methane  
 13 (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur  
 14 hexafluoride (SF<sub>6</sub>). The emissions of each GHG are measured based on their global warming  
 15 potential (GWP), the universal unit of measurement to express how much a given mass of  
 16 greenhouse gas is estimated to contribute to climate change. Table 3-14 lists the GWPs  
 17 (USEPA, 2013) of the six primary GHGs.

1  
2

**Table 3-14**  
**Global Warming of GHGs**

Gas	Chemical Formula	GWP
Carbon dioxide	CO <sub>2</sub>	1
Methane	CH <sub>4</sub>	21
Nitrous oxide	N <sub>2</sub> O	298
Hydrofluorocarbons	HFCs	various
Perfluorocarbons	PFCs	various
Sulfur hexafluoride	SF <sub>6</sub>	22,800

GHGs = Greenhouse Gases  
GWP – Global Warming Potential

3 Only three of the GHGs, are considered in the emissions from the Proposed Action. These three  
4 GHGs (CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O) represent the majority of carbon dioxide equivalents (CO<sub>2eq</sub>)  
5 associated with the alternative operations. The other GHGs were not considered in the potential  
6 emissions from the Proposed Action as they are presumed to be not emitted: HFCs are most  
7 commonly used in refrigeration and air conditioning systems; PFCs and SF<sub>6</sub> are predominantly  
8 emitted from various industrial processes including aluminum smelting, semiconductor  
9 manufacturing, electric power transmission and distribution, and magnesium casting, none of  
10 which are part of the Proposed Action.

11 Direct emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O occur naturally to the atmosphere but human activities  
12 have increased global GHG atmospheric concentrations. The 2012, total U.S. GHG emissions  
13 were 6,526,000,000 metric tons of CO<sub>2eq</sub> (USEPA, 2014). U.S. total GHG emissions decreased  
14 by 3.4 percent from 2011 to 2012 (USEPA, 2014).

15 CCAD is not subject to the annual reporting requirements of CO<sub>2eq</sub> from stationary source fuel  
16 combustion, as required by 40 CFR Part 98 - Mandatory Greenhouse Gas Reporting.

### 17 **3.11 VISUAL AND SCENIC**

18 CCAD is located in the eastern portion of the City of Corpus Christi, Nueces County, Texas,  
19 within the boundaries of NASCC. The proposed Project Area is 78.4 acres and includes  
20 approximately 2.5-acres of maintained undeveloped coastal grassland and approximately 76-

1 acres of primarily developed and maintained land. The proposed Project Area is situated within  
2 the southeastern portion of NASCC. Views of the Project Area are available from within the  
3 boundaries of NASCC, from NASCC golf course, and from the JFK Memorial Causeway of  
4 State Highway 358 (Figure 3-10).

### 5 **3.11.1 Views from Within NASCC**

6 The flat terrain and the existing installation development limit the range of available views. The  
7 proposed Project Area can be viewed from roads, open areas, and buildings adjacent to the  
8 Project Area. Views of the proposed Project Area from all directions are dominated by  
9 development, including industrial buildings ranging in height from one to three stories in height,  
10 parking areas, and maintained undeveloped areas between industrial buildings. As described in  
11 Section 3.3, the vegetative cover within the proposed Project Area consists of mowed grass and  
12 forbs in maintained golf courses and as landscaped areas along roadways, parking lots, and  
13 structures.

14 The Project Area can be viewed from the northern sections of the 130-acre golf course. The  
15 view of the Project Area from the golf course includes buildings and related development. The  
16 Corpus Christi Bay is not within sight distance of the Project Area.

17 The proposed Project Area also includes the relocation of three facilities to two existing  
18 buildings and one new facility to be constructed on undeveloped land—all three new locations  
19 will be outside of the main project area. As shown on Figure 2-2, the view of the building 34  
20 location and the golf course storage location are of existing buildings, parking lots, roads, and  
21 maintained coastal grasslands. The third facility relocation area is along an existing road and is a  
22 portion of a large maintained field. The view of the location includes maintained coastal  
23 grasslands with buildings in the distance.

### 24 **3.11.2 Views from Corpus Christi Bay and JFK Memorial Causeway**

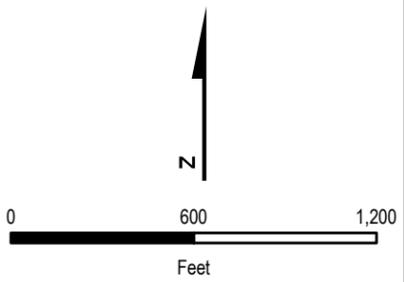
25 The proposed electrical distribution line and stormwater conveyance are approximately 1,000  
26 feet from Laguna Madre, a channel of the Corpus Christi Bay between the barrier islands and  
27 Corpus Christi. The view of NASCC from the bay is dominated by dense and tall vegetation  
28 (approximately 30 ft in height) outside the perimeter of a 10-ft chain-link security fence. For

1 security purposes, the vegetation along the shoreline is unaltered from its natural state by  
2 CCAD/NASCC to prevent the ability to view the facility from the adjacent water. Because the  
3 project area is not adjacent to the shoreline, it is not viewable from the bay.

4 Although much of NASCC is viewable from the JFK Memorial Causeway, the causeway is at  
5 the same approximate elevation as the Project Area and the view of the Project Area is distant  
6 (approximately 1 mile) and is limited by the heavily vegetated shoreline described above.



- LEGEND**
- Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - Proposed Underground Electrical Line
  - Building Existing
  - Powertrain PN64026 Project Area
  - NASCC Boundary



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers  
 USDA Natural Resources Conservation Service Soils Data



**FIGURE 3-1**  
 BUILDINGS WITHIN COMBINED  
 PHASE 1 AND 2 POWERTRAIN  
 PROPOSED PROJECT AREA  
 CORPUS CHRISTI ARMY DEPOT  
 CORPUS CHRISTI, TEXAS

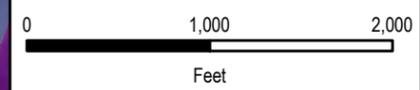
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- LEGEND**
- Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - - - Proposed Underground Electrical Line
  - Powertrain PN64026 Project Area
  - Galveston and Mustang fine sands
  - Ijam clay loam
  - Tidal flats
  - Water



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers  
 USDA Natural Resources Conservation Service Soils Data



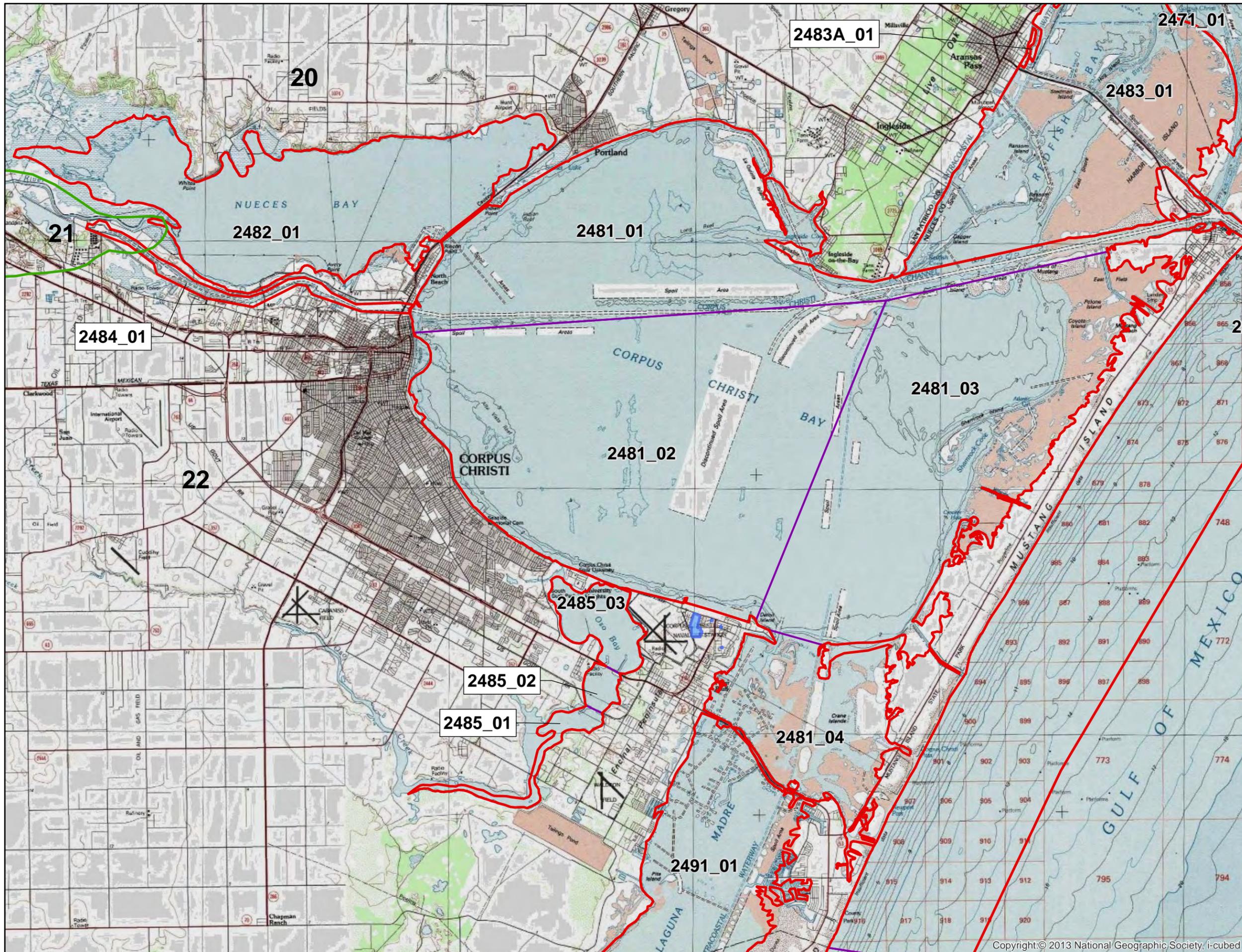
FIGURE 3-2  
 SOILS MAP

CORPUS CHRISTI ARMY DEPOT  
 CORPUS CHRISTI, TEXAS

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- LEGEND**
- ▬ TCEQ Classified Segment
  - ▬ TCEQ AU Division
  - ▬ Texas River Basins
  - ▬ Powertrain PN64026 Project Area

Basins	
ID	Name
20	San Antonio-Nueces Coastal Basin
21	Nueces River Basin
22	Nueces-Rio Grande Coastal Basin
24	Bays and Estuaries

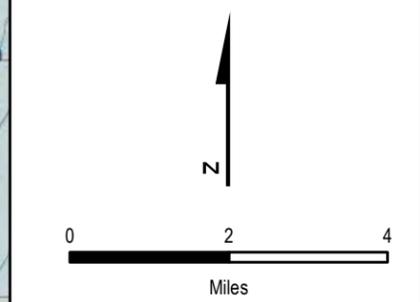
Source: TCEQ, 1999

Bays and Estuaries		
ID	Segments	Assessment Unit IDs
	Name	
2481	Corpus Christi Bay	2481-01
		2481-02
		2481-03
		2481-04
2482	Nueces Bay	2482-01
		2484-01
2484	Corpus Christi Inner Harbor	2485-01
		2485-02
2485	Oso Bay	2485-03
		2491-01
2491	Laguna Madre	

Source: TCEQ, 1999

- Notes:**
1. Bays and Estuaries table not inclusive of all segments or assessment units mapped.
  2. AU = Assessment Unit

**DRAFT: For Review purposes only.**



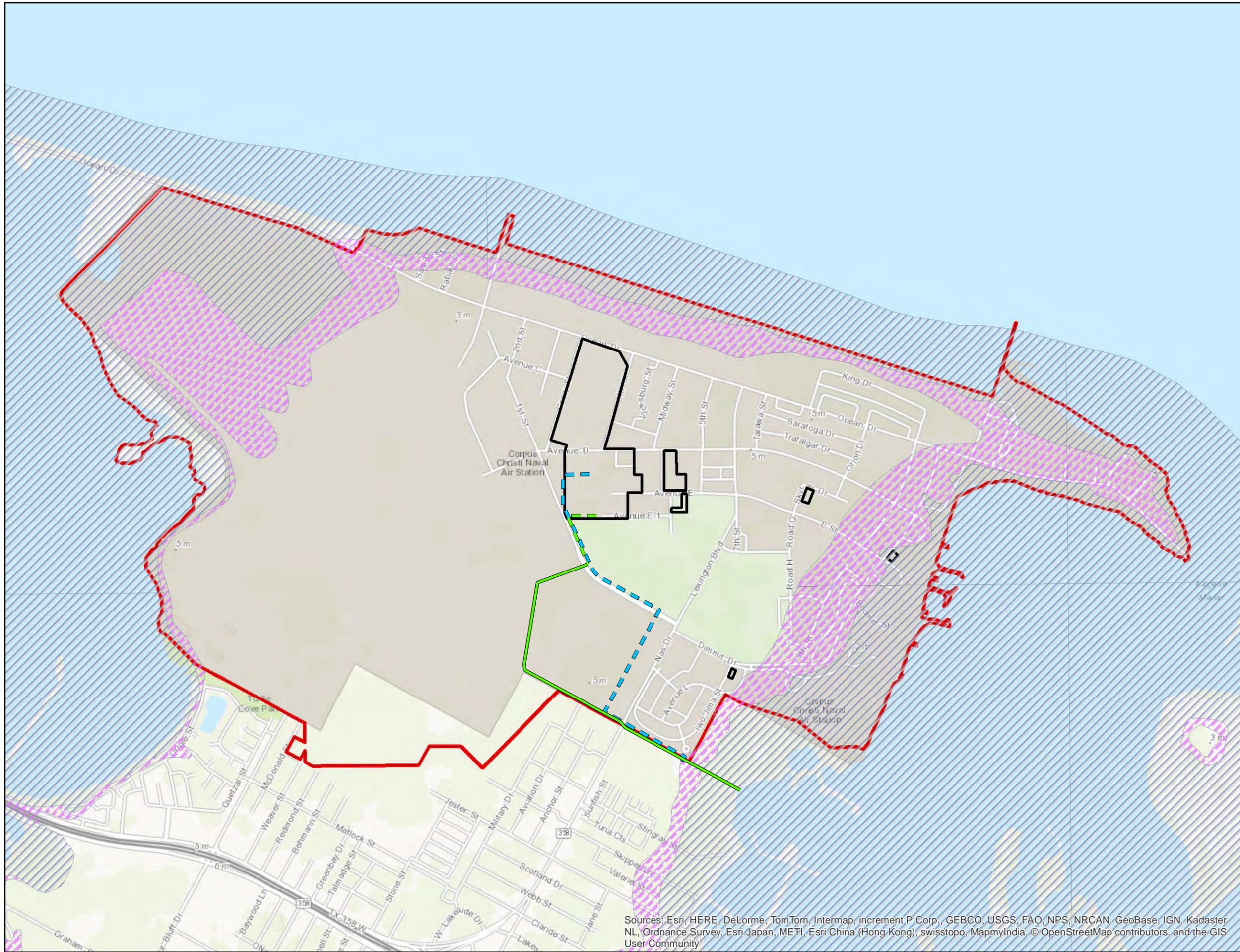
**SOURCE:**  
 1. (c) 2010 Microsoft Corporation and its data suppliers  
 2. TCEQ. 2000. Atlas of Texas Surface Waters.  
 [Online] Accessed 8 August 2012  
<http://www.tceq.texas.gov/publications/gi/gi-316/index.html>



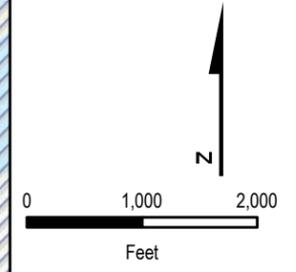
**FIGURE 3-3**  
**CLASSIFIED SURFACE WATERS**  
**CORPUS CHRISTI ARMY DEPOT**  
**CORPUS CHRISTI, TEXAS**

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- LEGEND**
-  100-Year Flood Plain
  -  500-Year Flood Plain
  -  Proposed Stormwater Conveyance
  -  Existing Stormwater Conveyance
  -  Proposed Underground Electrical Line
  -  Powertrain PN64026 Project Area
  -  NASCC Boundary



SOURCE:(c) 2010 Microsoft Corporation and its data suppliers



**FIGURE 3-4**  
**FLOODPLAIN MAP**  
**CORPUS CHRISTI ARMY DEPOT**  
**CORPUS CHRISTI, TEXAS**

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

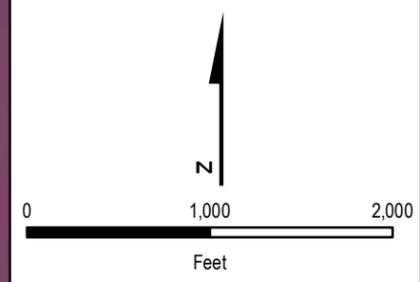
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- LEGEND**
- Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - - - Proposed Underground Electrical Line
  - Powertrain PN64026 Project Area
  - Wetland
  - Water Bodies
- NWI Wetlands**
- Estuarine and Marine Deepwater
  - Estuarine and Marine Wetland
  - Freshwater Emergent Wetland
  - Freshwater Pond

**Temporary Stormwater**

**Palustrine Forested**



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers



**FIGURE 3-5  
IDENTIFIED WATER BODIES  
AND WETLAND MAP**

**CORPUS CHRISTI ARMY DEPOT  
CORPUS CHRISTI, TEXAS**

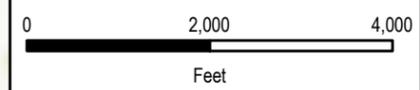
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- LEGEND**
- Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - - - Proposed Underground Electrical Line
  - Powertrain PN64026 Project Area
  - Continuous vegetation
  - Patchy (sparse vegetation)
  - Wrack (dead plant detritus and patchy)



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers  
Texas General Land Office with Texas Parks and Wildlife Dept.



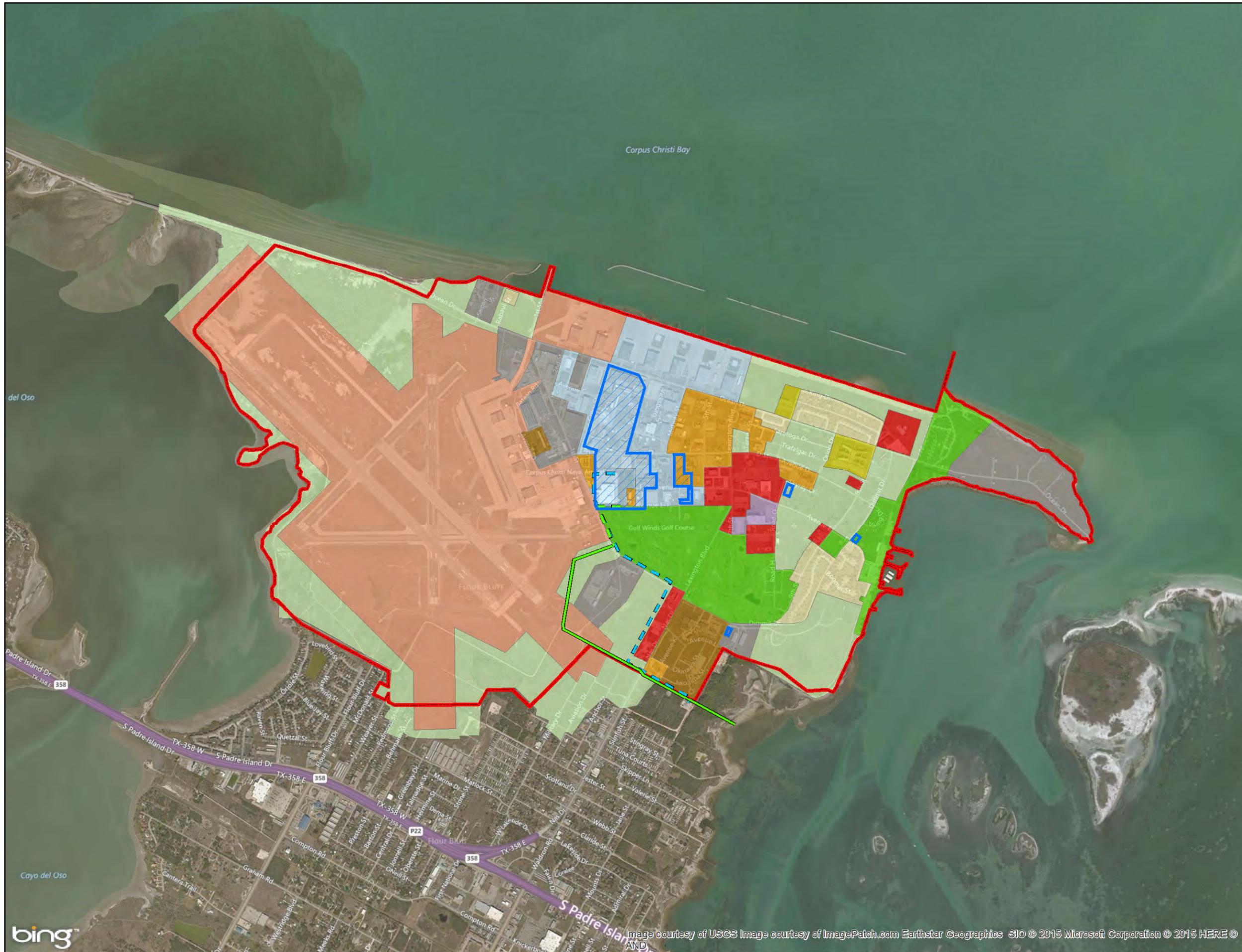
FIGURE 3-6

SEAGRASS BEDS

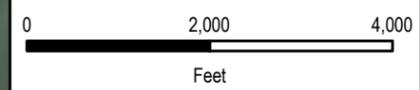
CORPUS CHRISTI ARMY DEPOT  
CORPUS CHRISTI, TEXAS

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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- LEGEND**
- CBQ
  - ADMINISTRATION
  - AIRFIELD
  - COMMUNITY
  - HOUSING
  - INDUSTRIAL
  - DEPOT MAINTENANCE
  - MEDICAL
  - OPEN SPACE
  - RECREATION
  - TRAINING
  - Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - Proposed Underground Electrical Line
  - Powertrain PN64026 Project Area
  - NASCC Boundary



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers  
 USDA Natural Resources Conservation Service Soils Data



FIGURE 3-7

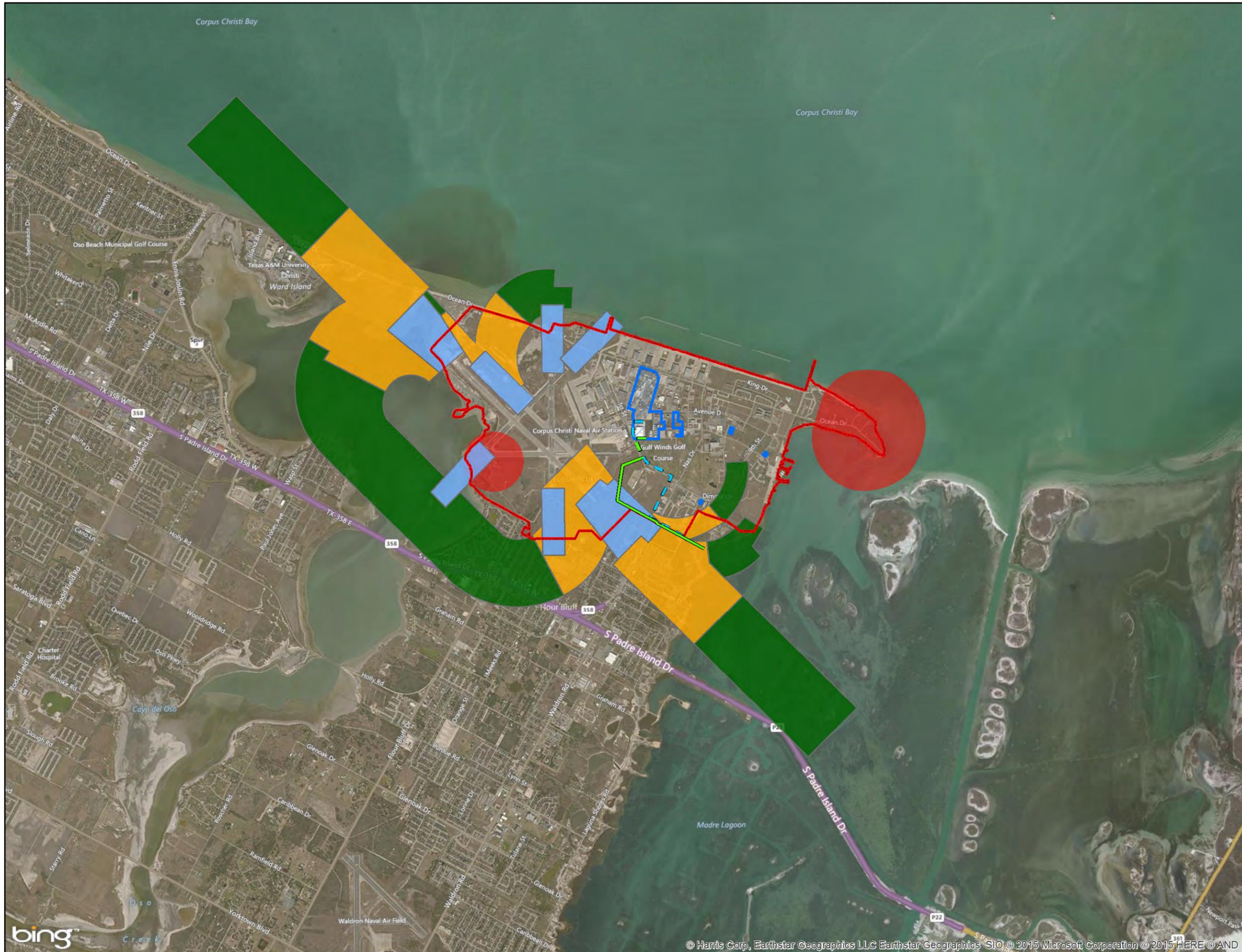
LAND USE MAP

CORPUS CHRISTI ARMY DEPOT  
 CORPUS CHRISTI, TEXAS

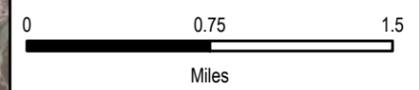
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- LEGEND**
- Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - Proposed Underground Electrical Line
  - ▨ Powertrain PN64026 Project Area
  - ▭ NASCC Boundary
- Accident Potential Zones**
- ▭ APZ I
  - ▭ APZ II
  - ▭ Clear Zone
  - Explosive Quantity Safety Distance Arcs



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers  
 USDA Natural Resources Conservation Service Soils Data



**FIGURE 3-8**  
**AIR INSTALLATION COMPATIBLE USE ZONES MAP**

**CORPUS CHRISTI ARMY DEPOT**  
**CORPUS CHRISTI, TEXAS**

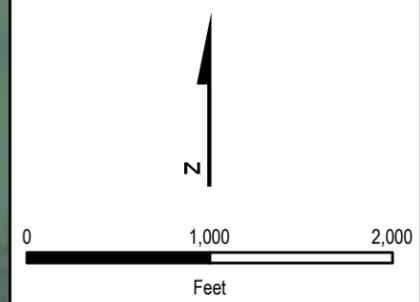
DATE	PROJECT NO	SCALE
MAY 2015	03886.544.012.0002.20	AS SHOWN



**LEGEND**

- IR Sites
- Potentially Contaminated Sites
- Institutional Control Boundary
- Proposed Stormwater Conveyance
- Existing Stormwater Conveyance
- Proposed Underground Electrical Line
- Powertrain PN64026 Project Area
- NASCC Boundary

- IRP Sites (SWMUs)
1. Aircraft Training Area (SWMU 4)
  2. Building 8 (SWMU 5)
  3. CCAD Liquid Waste Disposal (SWMU 02)
  4. Defense Property Disposal Office Land Fill (SWMU 01)



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers  
 USDA Natural Resources Conservation Service Soils Data



**FIGURE 3-9**  
**INSTALLATION RESTORATION**  
**PROGRAM SITES**

**CORPUS CHRISTI ARMY DEPOT**  
**CORPUS CHRISTI, TEXAS**

DATE	PROJECT NO	SCALE
MAY 2015	03886.544.012.0002.20	AS SHOWN

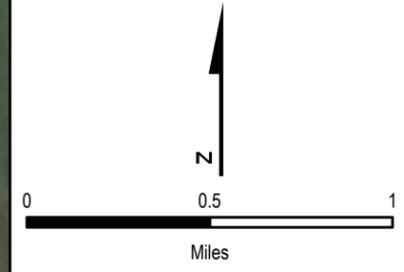




- LEGEND**
- Proposed Stormwater Conveyance
  - Existing Stormwater Conveyance
  - - - Proposed Underground Electrical Line
  - NASCC Boundary
  - ▨ Powertrain PN64026 Project Area



**Note:**  
 Project areas in this figure depict the action area for the specific project construction and/or operational activities. This project area represents the study area for many resources in this EA, including but not limited to: biological resources, cultural resources, and geology. Study areas may vary by resource (such as for air quality or stormwater) and could include areas immediately around the project area, in the general vicinity of the project, or include a regional setting. Study Areas for each resource will be discussed in Section 3.0 of this EA.



SOURCE: (c) 2010 Microsoft Corporation and its data suppliers



**FIGURE 3-10**  
**PROJECT AREA VIEWSHED**  
**CORPUS CHRISTI ARMY DEPOT**  
**CORPUS CHRISTI, TEXAS**

DATE	PROJECT NO	SCALE
MAY 2015	03886.544.012.0002.20	AS SHOWN

## 1    **4.    ENVIRONMENTAL CONSEQUENCES**

### 2    **4.1    SUMMARY OF IMPACTS DETERMINATIONS**

3    This section describes environmental and socioeconomic impacts that may occur as a result of  
4    the implementation of the No Action or Proposed Action alternatives. For the purpose of this  
5    EA, impacts are determined to be direct, indirect, or cumulative. Descriptions of impact types  
6    are as follows:

- 7       ▪ *Direct effects* are caused by the action and occur at the same time and place (40 CFR  
8       1508.8).
- 9       ▪ *Indirect effects* are caused by the action and occur later in time or farther removed in  
10      distance, but are still reasonably foreseeable.
- 11      ▪ *Cumulative impacts* result from incremental impacts of actions when added to other past,  
12      present, and future actions regardless of what person or agency (Federal or non-Federal)  
13      undertakes those actions. Cumulative impacts can result from individually minor, but  
14      collectively significant, actions taking place over a period of time (40 CFR 1508.7).

15    Additionally, the duration and frequency of the impacts are considered to be either short-term  
16    (temporary) or long-term (permanent or long lasting). Significance of potential impacts  
17    identified in this EA is also considered for each resource section. Criteria and assumptions used  
18    to evaluate potential impacts are discussed at the beginning of each section. For the purpose of  
19    this EA, the No Action Alternative is considered the baseline for comparison to the Proposed  
20    Action Alternative.

### 21    **4.2    PHYSICAL ENVIRONMENT**

#### 22    **4.2.1    Geology**

23    Impacts on geology would be significant if they altered the lithology, stratigraphy, and  
24    geological structures that control groundwater quality, distribution of aquifers and confining  
25    beds, and if groundwater availability were extensively altered within the environment.

#### 26    ***No Action Alternative***

27    Under the No Action Alternative, no impact to geology would be expected; current geology of  
28    the proposed Project Area is described in Section 3.2.1.

### 1 ***Proposed Action Alternative***

2 Implementation of the Proposed Action Alternative would be expected to have no appreciable  
3 affect or to alter the geology of the Project Area. Facilities would be constructed at or above  
4 grade, of standard size and engineering requirements, and at a depth that avoids disturbance to  
5 geology of the Project Area. Soils

6 Protection of existing soils, minimization of soil erosion and topographic alterations are  
7 considered when evaluating potential impacts of the Alternatives on physical resources.  
8 Generally, impacts can be avoided or minimized if proper construction techniques, erosion  
9 control measures, and structural engineering designs are incorporated into project development.  
10 Alternative actions that can impact surface gradients, stormwater runoff and surface water  
11 distribution, groundwater recharge and availability, or result in long-term erosion would be  
12 considered significant. Effects on soils would be significant if activities associated with the  
13 alternatives alter soil composition, structure, or stability such that long-term erosion results.

#### 14 **4.2.2 Soils**

15 Impacts on soils would be significant if the result is long-term erosion without the  
16 implementation of management techniques.

### 17 ***No Action Alternative***

18 Under the No Action Alternative, no change in the use of the soil in the Project Area would be  
19 expected, as construction or demolition activities would not take place. Current use of soil is  
20 described in Section 3.2.2.

### 21 ***Proposed Action Alternative***

22 Soils located within the Powertrain PN64026 Project Area are disturbed due to historic  
23 developments within the Project Area. The proposed Project Area is highly developed and  
24 disturbed, with many areas of impermeable surface. Project related impacts to soils would not be  
25 considered significant because soil composition, structure, or function within the environment  
26 has been previously altered by the construction of existing buildings.

1 Prime or unique farmlands are not present in the area. A change in the use of the soil based on  
2 the Proposed Action would not be expected, and a change in the soil composition in areas where  
3 proposed NASCC relocations would occur would be negligible. Historic aerial photographs  
4 from 1956 and 1961 illustrate building structures at the proposed NASCC relocations, indicating  
5 that native soils have been previously disturbed from original conditions (Google Earth, 2015).  
6 Construction of the Powertrain Facility would occur above grade, requiring the significant use of  
7 fill that could affect soil composition. The PPS and CEM will be built to match the grade of the  
8 DCRF (Building 1700), which is at a 7-foot grade elevation. As fill materials used would be  
9 clean and would be compliant with environmental and engineering requirements, this impact  
10 would not be expected to be significant. Minor impacts to topography associated with this  
11 relocation would occur (e.g., minor site grading). Permanent impacts to soil composition would  
12 not be expected to be significant.

13 Temporary disturbance of soils within construction sites would occur during demolition and  
14 construction as a result of vegetation removal, excavation, displacement of soil, compaction,  
15 disturbance from construction equipment, addition of fill material, etc. Given authorization by  
16 the TCEQ to operate under the TPDES Construction General Permit TXR150000, construction  
17 activities that will disturb greater than or equal to one acre are required to integrate erosion  
18 control measures to minimize impacts to soils surrounding the construction site with the  
19 development and implementation of a SWPPP. In addition, the permit requires stabilization of  
20 soils within the construction site upon completion of construction and prior to termination of  
21 permit coverage. Best Management Practices implemented during construction will generally  
22 mitigate impacts to soil, such as the use of silt fences and berms to prevent soil runoff, and  
23 wetting of exposed soils to minimize soil erosion due to wind.

24 A slight increase of impervious surface cover, such as paved surfaces and new building  
25 foundations, may reduce groundwater recharge and availability and result in soil subsidence, but  
26 considering the footprint size of the proposed building relocations to the total undeveloped area  
27 ratio across the Base, the impact would be minimal to insignificant.

### 1 **4.2.3 Water Resources**

2 Significance of impacts to water resources as a result of the proposed project is established  
3 within this section. To analyze impacts, changes to facilities, operations, and population in the  
4 proposed Project Area are considered and activities associated with project demolition and  
5 construction have also been taken into account.

#### 6 **4.2.3.1 Coastal Management**

7 Impacts to coastal management would be considered significant if coastal resources were  
8 affected in contrast with the goals of the Texas CMP, as described in Section 3.2.3.1. The  
9 proposed project is located within the Texas coastal zone, and all affected natural resources have  
10 been considered within this EA and compared to goals of the Texas CMP to analyze impacts to  
11 coastal management.

#### 12 **No Action Alternative**

13 Implementation of the No Action Alternative would not affect natural resources in the proposed  
14 Project Area; therefore, no significant impact to coastal management would be expected.

#### 15 **Proposed Action Alternative**

16 It is anticipated that no appreciable effect to coastal management resources would occur as a  
17 result of the Proposed Action. The Proposed Action will comply with all applicable municipal,  
18 state, and Federal laws, and BMPs would be implemented as necessary to minimize impacts to  
19 the affected environment. The existing permitted stormwater outfall will be utilized and  
20 managed under the current permit. A coastal zone consistency statement, subject to review by  
21 the TGLO, will need to be approved prior to construction. The TGLO is anticipated to concur  
22 that the project will be undertaken in a manner consistent with the CMP, to the maximum extent  
23 practicable during the 30-day public review of this EA and draft FNSI. Therefore, impacts to  
24 coastal management as a result of effects to natural resources are not expected to be significant.

#### 25 **4.2.3.2 Corpus Christi Bay**

26 Impacts to Corpus Christi Bay would be considered significant if discharge flows or pollutant  
27 loads from the proposed Project Area were increased, affecting aquatic habitat or water quality in  
28 the bay. Changes to stormwater as a result of the proposed project were considered to analyze

1 discharge flows and pollutant loads. Activities associated with project demolition and  
2 construction were taken into account.

### 3 ***No Action Alternative***

4 Implementation of the No Action Alternative would not change discharge flows or pollutant  
5 loads from the proposed Project Area; therefore, no significant impact to the Corpus Christi Bay  
6 would be expected.

### 7 ***Proposed Action Alternative***

8 As further discussed in Section 4.7.1 (Stormwater) and 4.7.3 (Wastewater), changes to discharge  
9 flows and pollutant loads as a result of the Proposed Action would be minor. If carried forward,  
10 all improvements associated with the Proposed Action would be designed, reviewed, and  
11 implemented according to applicable municipal, state, and Federal codes, criteria, standards, and  
12 specifications, and BMPs from the Stormwater Report (described in Sections 4.7.1 and 4.7.3)  
13 would be incorporated as necessary to meet all applicable requirements and minimize impacts.  
14 For these reasons, no significant adverse impacts to the Corpus Christi Bay would be expected.

### 15 **4.2.3.3 Floodplain**

16 Impacts to the floodplain would be considered significant if proposed changes to elevations or  
17 topography in the Project Area altered the floodplain. Proposed modifications and  
18 improvements were assessed with current elevations and topography.

### 19 ***No Action Alternative***

20 Implementation of the No Action Alternative would not be expected to result in occupancy or  
21 modifications in the floodplain; therefore, no significant impact associated with the floodplain  
22 would be expected.

### 23 ***Proposed Action Alternative***

24 As a result of the Proposed Action, only the proposed tennis courts relocation would extend into  
25 the floodplain. The remainder of the Project Area would be located outside of the 100- and 500-  
26 year floodplains. All improvements and modifications associated with the proposed project will  
27 be designed, reviewed, and constructed according to applicable municipal, state, and Federal

1 codes, criteria, standards, and specifications, including those associated with Federal Emergency  
2 Management Agency (FEMA). Final engineering design within the floodplain will be reviewed  
3 by a State of Texas licensed architect or engineer to certify that the site plan meets all flood zone  
4 criteria. For these reasons, no significant adverse impacts to the floodplain would be expected.

#### 5 **4.2.3.4 Groundwater**

6 Impacts to groundwater would be considered significant if groundwater interaction were  
7 increased in the proposed Project Area, allowing for exposure or contamination. Groundwater is  
8 found only a few feet below ground surface. Proposed subgrade activities and changes to  
9 topography were considered to analyze groundwater interaction. Activities associated with  
10 project demolition and construction were also taken into account.

#### 11 **No Action Alternative**

12 Implementation of the No Action Alternative would not change groundwater interaction in the  
13 proposed Project Area; therefore, no significant impact to groundwater would be expected.

#### 14 **Proposed Action Alternative**

15 Changes to groundwater interaction as a result of the Proposed Action would be minor and  
16 expected with the proposed installation of stormwater features, a drainage swale, and  
17 underground utilities. If carried forward: 1) all improvements would be designed, reviewed, and  
18 constructed according to applicable municipal, state, and Federal codes, criteria, standards, and  
19 specifications; and 2) BMPs will be implemented as necessary to prevent increased interaction  
20 and farther migration of affected groundwater. In addition, personal protective equipment (PPE)  
21 would be used by construction personnel, as required by OSHA, to ensure safe working  
22 conditions. For this reason, the impact to groundwater resulting from construction and  
23 improvements associated with the Proposed Action is not considered to be significant.

### 24 **4.3 BIOLOGICAL ENVIRONMENT**

25 Significant impacts to the biological environment would be actions that resulted in a large  
26 increase or decrease in a habitat type or wildlife population. Impacts to the biological  
27 environment from the No Action and Proposed Action Alternatives could be direct or indirect.

### 1 **4.3.1 Terrestrial Habitat**

2 The majority of the terrestrial habitat of the proposed Project Area has been greatly altered  
3 through human intervention. Very few areas remain undisturbed by human activities. Under  
4 these conditions, impacts to the terrestrial habitat would be the loss of green space or maintained  
5 herbaceous areas described in Section 3.3.1.

### 6 ***No Action Alternative***

7 Under the No Action Alternative, there would be no effect to the terrestrial habitat of the  
8 proposed Project Area. There would be no change of terrestrial habitat acreage (Table 4-1), and  
9 the current vegetative species regime described in Section 3.3.1 would be anticipated to continue.

### 10 ***Proposed Action Alternative***

11 The Proposed Action Alternative would have negligible, long-term impacts to terrestrial habitat.  
12 The change in terrestrial habitat due to the Proposed Action Alternative is summarized in Table  
13 4-1. While the current amount of undeveloped habitat in the proposed Project Area would  
14 decrease from 2.5 acres to zero acres, it is anticipated that this loss would not be significant as all  
15 areas of the Project Area have historical disturbance and development, and undergo routine  
16 maintenance or mowing. The only undeveloped area within the project area is fragmented from  
17 other undeveloped areas and is surrounded by roads, buildings, and other maintained landscapes.  
18 These changes in species composition and quality are expected to be minor as there is other  
19 suitable foraging and nesting terrestrial habitat in the area. For these reasons, impacts to  
20 terrestrial habitat under the Proposed Action Alternative would not be considered significant.

21

1  
2

**Table 4-1**  
**Land Type Changes Under the Proposed Action**

Land Type	No Action Alternative		Proposed Action Alternative		% Change (+/-)
	Area (acres)	Percent of Project Area	Area (acres) <sup>1</sup>	Percent of Project Area	
Developed Urban Land	75.9	96.9	78.4	100.0	+ 2.5
Undeveloped Area	2.5	3.1	0.0	0.0	- 2.5
Total Project Area	78.4	100.0	78.4	100.0	--

### 3 **4.3.2 Aquatic Habitat**

4 Natural aquatic habitat is not present within the Project Area. Constructed features include  
5 landscaped drainage ways and a stormwater basin. An impact to the aquatic habitat within the  
6 proposed Project Area would be the addition or loss of habitat. Aquatic habitat also exists  
7 outside the proposed Project Area in Corpus Christi Bay. Though not anticipated, impacts to this  
8 surrounding habitat could include a change in habitat quality as a byproduct of activities  
9 occurring within the Project Area.

#### 10 **4.3.2.1 Wetlands**

11 A significant impact to wetlands within the proposed Project Area would be any action resulting  
12 in a major increase or decrease in wetland acreage or the quality of wetland habitat.

#### 13 **No Action Alternative**

14 Under the No Action Alternative, there would be no effect to aquatic habitat or wetlands within  
15 the proposed Project Area. The wetlands or water hazards on the golf course would be managed  
16 under current protocols, and drainage ways and pumping systems feeding the habitats would  
17 remain unaltered. For these reasons, no reasonably foreseeable changes in the wetland acreage  
18 present within the proposed Project Area would be expected.

### 1 ***Proposed Action Alternative***

2 Under the Proposed Action Alternative, there would be no impacts to wetlands within the  
3 proposed Project Area. No wetlands are located within the proposed Project Area. The 11.54  
4 acre-feet stormwater detention feature adjacent to Building 1700 would be drained and  
5 developed. However, this detention feature is a constructed, TCEQ-permitted temporary  
6 detention structure and does not constitute an actual loss of wetlands or aquatic habitat. A  
7 USACE permit would not be required for construction on the Proposed Action Alternative.

### 8 **4.3.2.2 *Seagrass Beds***

9 A significant impact to seagrass beds would be any action resulting in a major increase or  
10 decrease in seagrass beds acreage or the quality of seagrass bed habitat.

### 11 ***No Action Alternative***

12 Under the No Action Alternative, there would be no effect to seagrass beds. No seagrass beds  
13 are located within the proposed Project Area. Additionally, stormwater discharge to areas  
14 supporting seagrass beds in Corpus Christi Bay would be expected to remain unaltered, with no  
15 reasonably foreseeable changes to the volume or quality of the stormwater discharge.

### 16 ***Proposed Action Alternative***

17 No direct impacts to seagrass beds would be anticipated under the Proposed Action Alternative,  
18 as no construction activities would be conducted within suitable habitat for seagrass beds.  
19 However, indirect effects from increased stormwater discharge from the proposed Project Area  
20 could impact the seagrass. The increased flow from the outfall could impact the marsh south of  
21 the proposed Project Area where seagrass beds have been observed in the past. However,  
22 potential impacts to seagrass bed habitat are minimized by distance and location as the majority  
23 of seagrass bed habitat is located on the opposite side of the bay from the Project Area. The  
24 affected area of potential seagrass bed habitat is expected to be localized to the area immediately  
25 adjacent to the stormwater outfall and any impacts at this location are expected to be relatively  
26 minor. Existing BMPs and any new modifications or mitigation described in the Stormwater  
27 Report will be implemented to minimize any potential impacts from the increased stormwater  
28 discharge.

### 1 **4.3.2.3 Essential Fish Habitat**

2 A significant impact to essential fish habitats would be any action resulting in a major increase or  
3 decrease in essential fish habitat acreage or the quality of essential fish habitat.

#### 4 **No Action Alternative**

5 Under the No Action Alternative, no effect on EFH would be anticipated. No EFH is located  
6 within the proposed Project Area. Stormwater discharge to EFH in Corpus Christi Bay would  
7 remain unaltered with no reasonably foreseeable changes to the volume or quality of the  
8 discharge.

#### 9 **Proposed Action Alternative**

10 Impacts to EFH are not expected to be significant under the Proposed Action Alternative. No  
11 construction activities would be conducted within EFH. Additionally during construction,  
12 BMPs, including velocity dissipation and sediment and erosion control devices, will be  
13 implemented to prevent significant impacts from the increased stormwater discharge.

### 14 **4.3.2.4 NASCC Shoreline Management Program**

15 A significant impact to the NASCC Shoreline Management Program would be any action  
16 resulting in a major increase or decrease in NASCC Shoreline acreage or the quality of NASCC  
17 Shoreline Management Program habitat.

#### 18 **No Action Alternative**

19 Under the No Action Alternative, there would be no effect to the existing shoreline or Shoreline  
20 Management Plan. The shoreline around CCAD and NASCC would continue to be managed as  
21 before with no reasonably foreseeable changes.

#### 22 **Proposed Action Alternative**

23 Under the Proposed Action Alternative, there would be no effect to the Shoreline Management  
24 Plan and the shoreline around CCAD and NASCC would continue to be managed as before with  
25 no reasonably foreseeable changes. Under the Proposed Action Alternative there would be  
26 potential changes to the Shoreline Management Plan, based on the increased stormwater outfall  
27 on the southern portion of the proposed Project Area. The increased amount of stormwater

1 discharged into the marsh south of the proposed Project Area, could have a long-term, indirect  
2 impact on the shoreline between the marsh and Corpus Christi Bay. During construction, BMPs,  
3 including velocity dissipation and sediment and erosion control devices, will be implemented to  
4 minimize any potential impacts from the increased stormwater discharge. No other construction  
5 or changes to the shoreline are planned as a part of the Proposed Action Alternative.

### 6 **4.3.3 Wildlife**

7 The developed, urban nature of the majority of the proposed Project Area favors wildlife species  
8 that are tolerant of disturbed habitat. There is little, if any, habitat left within the proposed  
9 Project Area that is not routinely impacted by anthropogenic disturbance. Under these  
10 conditions, a significant impact to wildlife would be any change to or loss of habitat type utilized  
11 by wildlife species within the proposed Project Area.

#### 12 **4.3.3.1 Birds**

##### 13 ***No Action Alternative***

14 Under the No Action Alternative, there would be no effect on bird species utilizing the proposed  
15 Project Area for habitat. Terrestrial habitat within the proposed Project Area would continue to  
16 be mowed and maintained under current protocols. Aquatic habitat would continue to be  
17 maintained by the currently existing artificial hydrology within the proposed Project Area.  
18 Additionally, there would be no anticipated need to revise the BASH program under the No  
19 Action Alternative.

##### 20 ***Proposed Action Alternative***

21 Impacts to bird species under the Proposed Action Alternative would be expected to be short-  
22 term and minor. Impacts include the temporary displacement of bird species due to construction  
23 activities. Undeveloped habitat also exists outside the proposed Project Area that could be  
24 utilized by displaced species. Bird species that utilize aquatic habitat would be temporarily  
25 displaced by the drainage and development of the detention pond next to Building 1700. These  
26 temporary impacts on bird species associated with the Proposed Action are not anticipated to be  
27 significant.

1 Under the Proposed Action Alternative, the NASCC BASH Plan would be reviewed and updated  
2 based on the anticipated changes to habitat utilized by avian species. Appropriate habitat for bird  
3 species, including lawn areas and aquatic habitats, would be moved farther away from the  
4 NASCC airfield under the Proposed Action. Therefore, it is anticipated that the Proposed Action  
5 may result in a decrease in avian activity around the airfield. This potential decrease in avian  
6 activity would be fully evaluated during review and update of the BASH.

#### 7 **4.3.3.2 Aquatic Species (Fish and Marine Mammals)**

##### 8 **No Action Alternative**

9 Under the No Action Alternative, there would be no effect on aquatic species (fish and marine  
10 mammals). Existing stormwater discharge to fish and marine mammal habitat outside the  
11 proposed Project Area in Corpus Christi Bay would continue with no reasonably foreseeable  
12 changes to the volume or quality of the discharge anticipated.

##### 13 **Proposed Action Alternative**

14 There is currently no habitat suitable for aquatic species identified within the proposed Project  
15 Area. No significant impacts to aquatic species (fish and marine mammals) are anticipated under  
16 the Proposed Action Alternative, as no construction activities would be conducted within aquatic  
17 species habitat. However, indirect effects from increased stormwater discharge from the  
18 proposed Project Area could impact aquatic habitat. The affected area of potential habitat would  
19 be expected to be localized to the area immediately adjacent to the stormwater outfall and is not  
20 anticipated to be appreciable. During construction, BMPs, including velocity dissipation and  
21 sediment and erosion control devices, would be implemented to minimize any potential impacts  
22 from increased stormwater discharge.

#### 23 **4.3.3.3 Mammals**

##### 24 **No Action Alternative**

25 There would be no effect on mammalian species under the No Action Alternative. Habitat  
26 within the proposed Project Area would continue to be maintained under existing protocols, with  
27 no reasonably foreseeable changes anticipated.

### 1 ***Proposed Action Alternative***

2 Temporary, short-term impacts to mammalian species would be anticipated under the Proposed  
3 Action Alternative. Disturbance from construction activities would likely temporarily displace  
4 species from habitat areas. Undeveloped habitat exists outside of the proposed Project Area and  
5 would be available for utilization by displaced species. For these reasons, no significant impacts  
6 to mammalian species would be anticipated under the Proposed Action Alternative.

### 7 **4.3.3.4 *Reptiles and Amphibians***

#### 8 ***No Action Alternative***

9 There would be no effect on reptile and amphibian species under the No Action Alternative.  
10 Habitat within the proposed Project Area would continue to be maintained under existing  
11 protocols with no reasonably foreseeable changes. Existing stormwater discharges into Corpus  
12 Christi Bay would continue with no reasonably foreseeable changes.

### 13 ***Proposed Action Alternative***

14 Temporary, short-term impacts to reptile and amphibian species would be anticipated under the  
15 Proposed Action Alternative. Disturbance from construction activities would likely temporarily  
16 displace species from habitat areas. Undeveloped habitat exists outside the proposed Project  
17 Area and would be available for utilization by displaced species. Stormwater discharge into  
18 Corpus Christi Bay from the proposed Project Area may have indirect impacts on aquatic  
19 reptilian species such as sea turtles, but these impacts are not anticipated to be significant and are  
20 expected to be similar to the impacts for aquatic species described above. As a result, no  
21 significant impacts to reptile and amphibian species would be anticipated under the Proposed  
22 Action Alternative.

### 23 **4.3.4 *Protected Species***

24 A significant impact to protected species would be any action resulting in a major increase or  
25 decrease in protected species or change in the acreage or the quality of protected species habitat.

#### 1 **4.3.4.1 Threatened and Endangered Species**

##### 2 **No Action Alternative**

3 No effects on listed threatened or endangered species would be anticipated under the No Action  
4 Alternative. Habitat within the proposed Project Area would continue to be maintained under  
5 existing protocols, with no reasonably foreseeable disturbance. Stormwater would continue to be  
6 discharged into Corpus Christi Bay from the proposed Project Area, with no reasonably  
7 foreseeable changes to volume or quality.

##### 8 **Proposed Action Alternative**

9 Under the Proposed Action Alternative, there would be no effect, and therefore, no significant  
10 impacts to Federal- or state-listed species. No Federal- or state-listed species were observed  
11 within the proposed Project Area during the July 2012 biological survey. As described in  
12 Section 3.3.4, potential suitable habitat for some of the protected species is located within or  
13 immediately adjacent to the proposed Project Area. It is anticipated that potential impacts to  
14 Federal- or state-listed avian, fish, mammal, and reptilian species would be similar to other  
15 unprotected wildlife, described above, and would not be significant. As suitable habitat is not  
16 present, the Proposed Action would have no appreciable effect on Federal- or state-listed plants.

17 Potential suitable habitat was identified within the proposed Project Area during the July 2012  
18 biological survey for the following state-listed species: black-spotted newt and sheep frog.  
19 Though no individuals of these species were observed during the survey, there is the possibility  
20 that these species reside within the freshwater habitat within the proposed Project Area.  
21 Potential habitat for these species in the proposed Project Area includes low quality areas such as  
22 roadside ditches and the permitted temporary stormwater detention feature. Features are  
23 constructed and typically undergo routine maintenance activities, such as mowing. The  
24 temporary stormwater detention feature would be removed. While these species could be  
25 temporarily disturbed and displaced during construction, it is anticipated that the Proposed  
26 Action Alternative would not have a significant impact on the black-spotted newt and the sheep  
27 frog because the available habitat is minimal and low quality. Additionally, TPWD consultation  
28 received 2 February 2015 stated that the Wildlife Habitat Assessment Program does not  
29 anticipate significant adverse impacts to rare, threatened or endangered species or other fish and

1 wildlife resources. Further information regarding listed threatened and endangered species is  
2 available in the Threatened and Endangered Species Report provided as Appendix E.

### 3 **4.3.4.2 State of Texas Species of Concern**

#### 4 **No Action Alternative**

5 One State of Texas SOC, the maritime pocket gopher, has the potential to occur within the  
6 proposed Project Area. There would be no significant impacts to the maritime pocket gopher  
7 anticipated under the No Action Alternative. Suitable habitat within the proposed Project Area  
8 would continue to be managed under currently existing protocols with no further reasonably  
9 foreseeable disturbances.

#### 10 **Proposed Action Alternative**

11 There would be no anticipated significant impacts to the maritime pocket gopher under the  
12 Proposed Action Alternative. During the July 2012 survey, several burrows within the general  
13 survey area were observed, but those burrows appeared to be utilized by spotted ground squirrels  
14 (*Spermophilus spilosoma*). Disturbance to suitable habitat during construction may temporarily  
15 displace any maritime pocket gophers within the proposed Project Area and destroy any burrows  
16 currently in the areas developed under the Proposed Action Alternative. However, there is  
17 suitable habitat in lawn areas outside the proposed Project Area that would not be directly  
18 disturbed by the Proposed Action. Displaced gophers would likely utilize these habitat areas  
19 while construction is ongoing. It is possible that the Proposed Action Alternative could result in  
20 maritime pocket gopher mortality during construction activities when burrows are destroyed.  
21 This could result in a decline of any existing maritime pocket gopher populations within the  
22 proposed Project Area. The population decline would likely be short-term, as gophers would be  
23 anticipated to move back into the affected areas after construction and begin to repopulate lawn  
24 and mowed, maintained areas. Current monitoring of the maritime pocket gopher population  
25 would continue under the Proposed Action Alternative. More information regarding the  
26 maritime pocket gopher is available in the Threatened and Endangered Species Report in  
27 Appendix E.

28 During the July 2012 survey, NASCC personnel indicated that maritime pocket gophers were  
29 present on the CCAD installation and that consultation with wildlife agencies should be

1 conducted before any construction could take place in areas with suspected gopher activity  
2 (NASCC, 2013). Both USFWS and TPWD comments were solicited during the public scoping  
3 period of this EA. TPWD correspondence received 2 February 2015 stated that that the Wildlife  
4 Habitat Assessment Program does not anticipate significant adverse impacts to rare, threatened  
5 or endangered species or other fish and wildlife resources.

#### 6 **4.3.5 Migratory Birds**

##### 7 ***No Action Alternative***

8 There would be no anticipated significant impacts to migratory birds under the No Action  
9 Alternative. Suitable habitat within the proposed Project Area would continue to be maintained  
10 under existing protocols with no reasonably foreseeable disturbances.

##### 11 ***Proposed Action Alternative***

12 There would be no anticipated significant impacts to migratory birds under the Proposed Action  
13 Alternatives. Temporary disturbance from displacement due to construction activities related to  
14 the Proposed Action would be minor as there is suitable habitat outside the proposed Project  
15 Area. During the July 2012 biological survey, no migratory bird nests were observed within the  
16 proposed Project Area. However, nesting sites for some species of migratory birds can change  
17 from year to year. Nests for migratory birds could be constructed within the Project Area during  
18 future breeding seasons. Therefore, if construction activities may take place during breeding  
19 season, pre-construction surveys for breeding nests would be conducted by a trained biologist  
20 prior to any clearing activities. Further information regarding migratory birds can be found in  
21 the Threatened and Endangered Species Report in Appendix E.

#### 22 **4.4 CULTURAL RESOURCES**

23 Impacts to cultural resources would be considered significant if they result in adverse impacts to  
24 historical structures or archeological resources eligible for the National Register of Historic  
25 Places (NRHP).

1 **No Action Alternative**

2 No significant adverse impacts to cultural resources would be expected as a result of the No  
3 Action Alternative. However, if construction or demolition activities reveal evidence of  
4 archeological resources, additional Section 106 consultation would be initiated.

5 **Proposed Action Alternative**

6 Consultation with the Texas Historical Commission (THC), initiated as part of the 2009 EA,  
7 resulted in a determination that activities included in the 2009 NEPA analysis would not impact  
8 cultural resources. As discussed in Section 2.1, the Proposed Action includes construction and  
9 demolition activities previously assessed in the 2009 EA. Therefore, the SHPO consultation  
10 concurred that the construction of Powertrain PN64026 facilities and the demolition of NASCC  
11 facilities would have no significant adverse impacts to cultural resources.

12 Section 106 Consultation is currently ongoing with the Texas SHPO for the portion of the  
13 Proposed Action not previously reviewed as part of the 2009 EA, as indicated in Appendix F. If  
14 construction or demolition activities reveal evidence of archeological resources, additional  
15 Section 106 consultation would be initiated pursuant to 36 CFR 800.13 and all work would cease  
16 until coordination with SHPO is complete.

17 As described in Appendix F, the Criteria of Adverse Effects was applied to this Proposed Action  
18 and it was determined that the Proposed Action would not bring about impacts that would cause  
19 degradation and/or loss of the characteristics that make the historic properties eligible for listing  
20 in the NRHP, including the introduction of physical, visual, audible, or atmospheric elements  
21 that are out of character with the historic properties and their setting. Consequently, the  
22 Proposed Action is anticipated to have no significant effect on historic properties at NASCC.  
23 Consultation with the Texas SHPO is currently ongoing between NAVFAC SE, for concurrence  
24 that the Proposed Action would have no effect on cultural resources. No construction activities  
25 would occur until consultation with the Texas SHPO is complete and the FNSI for this EA has  
26 been signed.

## 1 **4.5 SOCIOECONOMICS**

### 2 **4.5.1 Demographics**

3 Impacts to the demographics of the proposed Project Area would be considered significant if an  
4 action resulted in a long-term change to the population or the demographic composition of the  
5 City population.

#### 6 ***No Action Alternative***

7 Under the No Action Alternative, there would be no change to baseline conditions described in  
8 Section 3.5 and no impacts to the demographic composition of the region.

#### 9 ***Proposed Action Alternative***

10 Since there is no increase or decrease in population as a result of the Proposed Action, there  
11 would be no impact to the amount of housing available, or change in the amount of schools or  
12 the quality of the schools in the local community. Since the Proposed Action would not affect  
13 local populations, housing, or education, there would be no impact to the demographic  
14 composition of the proposed Project Area or surrounding community.

### 15 **4.5.2 Local Economy**

16 Socioeconomic impacts on the local economy would be considered significant if long-term  
17 employment rates changed or if the amount of local businesses decreased.

#### 18 ***No Action Alternative***

19 Under the No Action Alternative, CCAD would still be operating with outdated, deteriorating,  
20 and aging facilities that can no longer meet demands. Without the required tooling, equipment,  
21 material handling, parts storage, and floor space, CCAD would eventually reach the point where  
22 they were unable to maintain the workload capacity. CCAD would be unable to develop the  
23 necessary skill sets for new technologies to meet client needs, which would result in potential  
24 revenue loss. Additionally, there would be no reduction in energy costs associated with updated  
25 state-of-the art and energy-efficient facilities, and there would be potential costs associated with  
26 continued flash corrosion.

1 Furthermore, under the No Action Alternative, the surrounding community would not benefit  
2 from expenditures incurred from the construction, demolition, and relocating of facilities.

### 3 ***Proposed Action Alternative***

4 Under the Proposed Action, the local economy would experience short-term economic benefits  
5 from expenditures incurred from the construction, demolition, and relocation of existing  
6 facilities. Commodities (e.g., gasoline for equipment and trucks) would be expected to be  
7 purchased from the local area. However, employment in the area would not increase since it is  
8 expected that the construction companies would utilize their current employees.

9 The Proposed Action will meet the stringent requirements of USACE and NAVFAC SE Interim  
10 Design Guidance and will be constructed to meet LEED silver standards. The updated and  
11 energy efficient facilities will have a long-term beneficial impact to CCAD by reducing energy  
12 costs and eliminating flash corrosion.

13 While CCAD is best known for helicopter repair, 70 percent of the total revenue comes from  
14 component restoration, which includes planning, coordinating and executing restoration of  
15 hydraulic, mechanical, electrical, avionics, instruments, bearings, aircraft rotor systems, rotary  
16 wing, rotor heads, rotor controls, and related aircraft components (CCAD, 2013). Improved  
17 production facilities would result in increased efficiency, which would help maintain the  
18 capacity and overall capability of the entire facility. Although projections state that workload is  
19 anticipated to decrease, the increased operational efficiency associated with the new facilities  
20 would help increase component productivity and throughput.

21 Construction and relocation activities associated with the Proposed Action would be  
22 implemented to support the projected workload, to include helicopter repair and component  
23 restoration. However, the existing revenue breakdown would be maintained, with 70 percent of  
24 the total revenue coming from component restoration.

### 25 **4.5.3 Environmental Justice**

26 Impacts would be considered significant if the human health or environmental impacts resulting  
27 from the alternatives were to disproportionately adversely impact children or minority or low-  
28 income populations. To comply with EO 12898, ethnicity and poverty status in the study area

1 have been analyzed. The ROI for each resource area has been evaluated within the COC to  
2 identify the presence or absence of environmental justice populations. Additionally, to comply  
3 with EO 13045, environmental health and safety risks have been identified to determine if  
4 children could be disproportionately affected by the alternatives.

5 The ROIs for the alternatives are the two census tracts potentially affected by the Proposed  
6 Action. Given the demographic composition of the ROIs, there are two environmental justice  
7 communities present. Since it is unknown which residents within Census Tracts 29 and 30 are  
8 minorities and which residents within Census Tract 30 are considered low income, for purposes  
9 of this analysis, it was assumed that all residents of Census Tracts 29 and 30 were minorities and  
10 all residents within Census Tract 30 were low income. Census Tracts 29 and 30 are hereinafter  
11 referred to as an environmental justice population.

#### 12 ***No Action Alternative***

13 Under the No Action Alternative, there would be no change to baseline conditions described in  
14 Section 3.5 and no impacts to environmental justice communities or children.

#### 15 ***Proposed Action Alternative***

16 Most impacts from the Proposed Action would be localized to the project site and would not  
17 impact surrounding communities. Site preparation and construction activities associated with the  
18 Proposed Action would cause short-term increases in noise levels and air emissions for the  
19 duration of the construction activities. However, noise levels and emissions would attenuate  
20 rapidly with distance from the site and would be evenly distributed throughout the project area,  
21 thereby not disproportionately affecting a single population. Therefore, there would be no  
22 disproportionate and adverse impacts to environmental justice communities or children as a  
23 result of the Proposed Action.

#### 24 **4.6 LAND USE**

25 Impacts to land use would be considered significant if an action results in the long term change  
26 to land-use restrictions, potential conflicting uses of property, or loss of land utilized by the  
27 public.

1 **No Action Alternative**

2 No significant impacts to land use are expected under the No Action Alternative. Land use  
3 within the proposed Project Area would remain similar to the baseline conditions described in  
4 Section 3.6 for the reasonably foreseeable future.

5 **Proposed Action Alternative**

6 No significant impacts to land use are expected under the Proposed Action Alternative.  
7 The proposed underground electrical line will remain within the current land use designations  
8 extending through depot maintenance, recreation, open space, administration, and training lands.  
9 The proposed and existing stormwater conveyance features will remain within the current land  
10 use designations, including depot maintenance, recreation, open space, and airfield lands.  
11 Changes to land use for the buildings proposed for relocation under the Proposed Action are  
12 presented in Table 4-2.

13 **Table 4-2**  
14 **Proposed Building Demolition and Relocation Land Use Designations**

Building Number	Building Name	Building User	Current Land Use Designation for Existing Building	Approximate Size (ft <sup>2</sup> )	Current Land Use Designation for Relocation
8	Building 8 – (portion south of Hangar Line)	CCAD	Depot Maintenance	865,000	Depot Maintenance
358	Hazardous Waste Storage Area	CCAD	Depot Maintenance	1,200	N/A. Relocation of building has not been established. Areas will be identified once Powertrain Facility is complete.
362	Hazardous Waste/Material Temporary Storage	NASCC	Depot Maintenance	440	N/A. Facility planned for NASCC closure.
1152 1209 1219	General Administration and Engineering Shops	CCAD	Depot Maintenance	7,364 7,516 3,648	N/A. Relocation of buildings have not been established. Areas will be identified once Powertrain Facility is complete.
1277	NEX Tire and Lube	NASCC	Depot	2,856	Open Space

Building Number	Building Name	Building User	Current Land Use Designation for Existing Building	Approximate Size (ft <sup>2</sup> )	Current Land Use Designation for Relocation
1713	Auto Maintenance Hobby Shop	NASCC	Maintenance	4,221	
1737	Auto Maintenance Hobby Shop	NASCC		2,693	
1738	Navy/Marine Corps Relief Thrift Shop	NASCC	Administration	7,650	
	Arts & Crafts Shop				
1743	Golf Course Storage	NASCC	Administration	4,000	Industrial
1746	Bachelor Enlisted Quarters (used as engineering and administrative offices)	CCAD	Depot Maintenance	87,870	Depot Maintenance
124	Tennis Courts	NASCC	Recreation	18,750	Recreation

1 As shown in Table 4-2, the majority of the buildings proposed for relocation will be relocated to  
2 an area with the same land use designation. Approximately 40,170 ft<sup>2</sup> of the 1,013,208-ft<sup>2</sup>  
3 (approximately 4%) building demolition and relocation will result in a change to land use  
4 designation. Although relocation areas have not been identified for Buildings 358, 1152, 1209,  
5 and 1219, areas selected for building relocation in the future are expected to be in areas with land  
6 use designations appropriate for the intended use of the property. Therefore, the proposed  
7 changes to land use designations are not considered significant.

#### 8 **4.6.1 Restricted Land Uses**

9 As stated above in Section 4.6, impacts to land use would be considered significant if an action  
10 results in the long term change to land-use restrictions.

#### 11 **No Action Alternative**

12 No change to land use restrictions outlined in Section 3.6 would be expected as a result of the No  
13 Action Alternative. The existing AICUZs, ESQDs, and IRP sites would remain in the current  
14 locations, and land use designations located within these restriction areas would not change.

## 1 **Proposed Action Alternative**

2 Land use restrictions associated with AICUZs and the location of APZs would not change as a  
3 result of the Proposed Action. No construction, demolition, or relocation of structures would  
4 occur within AICUZs; however, portions of the proposed electrical transmission line and the  
5 existing stormwater conveyance feature are located within APZ I and a Clear Zone.  
6 Construction within the APZ I and Clear Zone associated with the proposed electrical  
7 transmission line will be conducted in accordance with applicable regulations and requirements  
8 documented in 32 CFR Part 256, *Air Installations Compatible Use Zones*.

9 As discussed in Section 3.6, no ESQD arcs are located within the proposed Project Area. As a  
10 result of the Proposed Action, no change to the location of ESQD arc areas are expected, and no  
11 demolition or construction activities will occur within ESQD arc areas. Therefore, no impacts to  
12 ESQD arcs as a result of the Proposed Action are expected.

13 Locations of IRP sites will not change as a result of the Proposed Action. IRP sites are discussed  
14 in further detail in Section 4.8.

## 15 **4.7 UTILITIES AND INFRASTRUCTURE**

16 Impacts to utilities and infrastructure as a result of the Proposed Action include consideration of  
17 changes to facilities, operations, and population in the proposed Project Area. Impacts to utilities  
18 and infrastructure would be considered significant if an action results in a demand that exceeds  
19 the current capacity of the resource.

20 One objective of the Powertrain PN64026 Project is to meet requirements to become LEED  
21 Silver certified. Therefore, LEED requirements will be considered during the final design and  
22 construction of the Proposed Action. In addition, EO 13514: Federal Leadership in  
23 Environmental, Energy, and Economic Performance, signed 5 October 2009, includes several  
24 requirements that apply to utilities and infrastructure. These requirements are also considered  
25 where applicable within this section.

### 26 **4.7.1 Stormwater**

27 Impacts to stormwater would be considered significant if proposed project modifications or  
28 improvements caused an increase in stormwater flows or pollutant loads that exceed limits

1 established within municipal, state, or Federal codes, regulations, or permits. Changes to  
2 facilities as a result of the Proposed Action have been considered to analyze stormwater flows  
3 and pollutant loads in depth as presented in the Stormwater Evaluation Report, attached as  
4 Appendix C. Activities associated with project demolition and construction have also been taken  
5 into account.

6 To comply with the TPDES program, TCEQ issued NASCC authorization to manage and  
7 discharge stormwater under two general permits: the Small MS4 General Permit (TXR040000)  
8 and the MSGP (TXR050000). In addition, it is anticipated that demolition and construction  
9 activities that take place at NASCC would require TCEQ authorization to manage and discharge  
10 stormwater under TPDES Construction General Permit TXR150000. Any impacts to stormwater  
11 resulting from the Proposed Action that initiate violation of these permits would be considered  
12 significant.

### 13 ***No Action Alternative***

14 Implementation of the No Action Alternative would not change the baseline conditions of the  
15 proposed Project Area described in Section 3.7.1; therefore, the No Action Alternative would  
16 have no expected effect to stormwater within the Project Area.

### 17 ***Proposed Action Alternative***

18 As discussed in detail in Appendix C, stormwater flow conveyance will be modified as part of  
19 the Proposed Action. An additional 3.6-acre stormwater infiltration basin will be constructed,  
20 within the footprint of Building 1746, which will accept stormwater from new construction  
21 included in Powertrain PN64026 Project. The existing infiltration pond will be reduced from  
22 11.54 acre-ft to 1.1 acre-ft and used as a retention pond. The 1.1-acre-ft retention pond will be  
23 connected to the existing stormwater conveyance by an approximately 900-foot proposed swale  
24 system located parallel to First Street. The Proposed Action will also redirect stormwater in the  
25 Powertrain PN64026 Project construction area to Laguna Madre, away from Corpus Christi Bay,  
26 resulting in increased water flows through conveyances leading to Laguna Madre. Based on a  
27 preliminary plan provided by CCAD, it is anticipated, that the increased flow will be managed  
28 by stormwater improvements which include: 1) a 3.6-acre infiltration basin to manage  
29 stormwater associated with the new construction of the Powertrain PN64026 Project; and 2)

1 approximately 1.1 acres of LID stormwater features and a 9,200-linear-foot swale system to  
2 convey stormwater from the project area south of D Street to an existing outfall on the southeast  
3 side of NASCC into Laguna Madre. The Stormwater Evaluation Report, attached as Appendix  
4 C, provides an analysis of the preliminary stormwater improvements planned with the Proposed  
5 Action and recommended BMPs. The demolition of Building 8 should not change the  
6 stormwater flow in that area as there will be no changes to impervious cover.

7 Overall stormwater quality is not expected to change as part of the Proposed Action. However, the  
8 Proposed Action is expected to increase volume of stormwater to Laguna Madre through existing  
9 conveyance. These effects will be mitigated through the design of a swale system for water  
10 quality controls. Additional water quality controls, such as meandering the proposed swale  
11 along First Street and incorporating elevation changes for increased residence time and nutrient  
12 uptake or aeration and/or elevation controls, should be considered as part of the final design to  
13 further reduce loading at Laguna Madre outfall.

14 If carried forward, all improvements associated with the Proposed Action would be designed,  
15 reviewed, and installed according to applicable municipal, state, and Federal codes, criteria,  
16 standards, and specifications. Upon further design of stormwater improvements, structural  
17 BMPs (such as LID stormwater features, energy dissipaters, etc.) would be incorporated as  
18 necessary to meet all applicable requirements and to minimize impacts. Once implemented,  
19 stormwater plans required by permit, such as the SWMP and SWPPP, would be updated  
20 accordingly and put into practice. For these reasons, no significant adverse impacts to  
21 stormwater would be expected.

22 Demolition and construction associated with the Proposed Action would be required to comply  
23 with TPDES Construction General Permit TXR150000, which includes the integration of a  
24 SWPPP. The SWPPP would include temporary stormwater, erosion, and sedimentation controls  
25 amongst other BMPs for the duration of demolition or construction in order to minimize  
26 increases in stormwater flows and pollutant loads and comply with TPDES. For these reasons,  
27 the impact to stormwater resulting from demolition and construction associated with the  
28 Proposed Action is not considered to be significant.

1 LEED prerequisites and credits that require specific stormwater management and controls and  
2 how they apply to the Proposed Action are included in the Stormwater Evaluation Report,  
3 attached as Appendix C.

#### 4 **4.7.2 Water**

5 Impacts to water supply and infrastructure would be considered significant if the water demand  
6 in the proposed Project Area were increased and approaching the capacity of infrastructure or the  
7 City of Corpus Christi supply. Changes to population and operations as a result of the proposed  
8 project have been considered to analyze water demand. Activities and personnel associated with  
9 project demolition and construction have also been taken into account.

10 To comply with EO 13514: Federal Leadership in Environmental, Energy, and Economic  
11 Performance, the head of each Federal agency will improve water use by doing the following:

- 12     ▪ Reducing potable water consumption intensity by 2 percent annually through FY  
13     2020 or 26 percent by the end of FY 2020, relative to a baseline of the agency's  
14     water consumption in FY 2007, by implementing water management strategies  
15     including water-efficient and low-flow fixtures and efficient cooling towers.
- 16     ▪ Reducing agency industrial, landscaping, and agricultural water consumption by 2  
17     percent annually or 20 percent by the end of FY 2020 relative to a baseline of the  
18     agency's industrial, landscaping, and agricultural water consumption in FY 2010.

19 As a result of this EO, there is potential for reduced water demand at CCAD and NASCC  
20 through the year 2020, regardless of which action is carried forward (Office of the Press  
21 Secretary, 2009).

#### 22 **No Action Alternative**

23 Implementation of the No Action Alternative would not change the water demand or  
24 infrastructure in the proposed Project Area; therefore, no significant impact to water  
25 infrastructure or the City of Corpus Christi water supply would be expected. However, CCAD  
26 and NASCC may still require a reduction in water consumption to comply with EO13514.

### 1 **Proposed Action Alternative**

2 Under the Proposed Action there would be no permanent change to the population, and existing  
3 operations would only be relocated. Therefore, no significant impact to water infrastructure or  
4 the City of Corpus Christi water supply would be expected.

5 The Proposed Action would be expected to result in changes to water infrastructure at NASCC to  
6 provide water service to the proposed facilities. It is anticipated that water would be supplied by  
7 expanding existing infrastructure in the Project Area. A domestic water line will extend from an  
8 existing valve at the DCRF to the proposed CEP building. Domestic water from the CEP will be  
9 transported to the proposed Powertrain Process Shops via an underground utility (Merrick &  
10 Company, 2014). If carried forward, all improvements would be designed, reviewed, and  
11 installed according to applicable municipal, state, and Federal codes, criteria, standards, and  
12 specifications. Considering the age and condition of the water infrastructure, resulting impacts  
13 of improvements associated with the Proposed Action would not be considered adverse, and  
14 could be beneficial. Although adequate flow and pressure available from the existing Installation  
15 system are not currently adequate for the entire Powertrain Project, water consumption needs  
16 will be identified and reported to DPW to accommodate demands as needed (Merrick &  
17 Company, 2014).

18 During demolition and construction associated with the Proposed Action, an increase in  
19 construction workforce and activities (e.g., dust suppression activities) could result in a  
20 temporary minor increase in water demand. Water used for dust control could be delivered to  
21 construction sites by truck, and personnel could use portable restroom facilities, minimizing the  
22 increase in water demand. For these reasons, the impact to water supply and infrastructure  
23 resulting from demolition and construction associated with the Proposed Action would not be  
24 considered significant. Although no change in demand is expected as a result of the Proposed  
25 Action, installation of new infrastructure and fixtures may contribute to achieving compliance  
26 with EO 13514.

### 27 **4.7.3 Wastewater**

28 Impacts to domestic or industrial wastewater would be considered significant if wastewater loads  
29 from the proposed Project Area were increased or compositions altered such that the

1 infrastructure could no longer provide sufficient capacity or treatment. Domestic and industrial  
2 wastewater loads, composition, and infrastructure have been analyzed separately due to  
3 differences in impact sources.

4 In compliance with the TPDES program and Chapter 26 of the TWC, TCEQ issued NASCC a  
5 permit (USEPA ID No. TX0007889; State Permit No. WQ0002317000) authorizing treatment  
6 and discharge of wastes directly to the Corpus Christi Bay. Any impacts to wastewater resulting  
7 from the Proposed Action that initiate violation of this permit would be considered significant.

### 8 ***Domestic Wastewater***

9 Significant impacts to domestic wastewater in the proposed Project Area would include an  
10 increased load approaching infrastructure capacity. Changes to population as a result of the  
11 Proposed Action were considered to analyze domestic wastewater loads. Personnel associated  
12 with project demolition and construction were also taken into account.

### 13 **No Action Alternative**

14 Implementation of the No Action Alternative would not impact the domestic wastewater load or  
15 infrastructure in the proposed Project Area; therefore, no significant impact to domestic  
16 wastewater is expected.

### 17 **Proposed Action Alternative**

18 Changes to domestic wastewater as a result of the Proposed Action are expected to be minor.  
19 Within the proposed Project Area, there would be no expected permanent change to the  
20 population; therefore, the domestic wastewater load would remain the same. The Proposed  
21 Action would be expected to result in changes to domestic wastewater infrastructure to provide  
22 service to the proposed facilities. If carried forward, all improvements will be designed,  
23 reviewed, and constructed according to applicable municipal, state, and Federal codes, criteria,  
24 standards, and specifications. Considering the age and condition of the wastewater  
25 infrastructure, resulting impacts of improvements associated with the Proposed Action could be  
26 beneficial.

27 During demolition and construction associated with the Proposed Action, an increase in  
28 construction workforce could result in a temporary minor increase in domestic wastewater load.

1 Demolition and construction personnel could use portable restroom facilities managed by a  
2 qualified contractor, which would include off-site disposal of wastewater and thereby minimize  
3 any potential increases in domestic wastewater load. In addition, the domestic wastewater  
4 treatment plant currently has capacity for increased wastewater loads associated with the  
5 Proposed Action. For this reason, the impact to domestic wastewater resulting from demolition  
6 and construction associated with the Proposed Action would not be considered significant.

### 7 ***Industrial Wastewater***

8 Significant impacts to industrial wastewater in the proposed Project Area would include an  
9 increased load or altered composition approaching infrastructure capacity or treatment  
10 capabilities. Changes to operations as a result of the Proposed Action were considered to  
11 analyze the industrial wastewater loads. Activities associated with project demolition and  
12 construction were also taken into account.

### 13 **No Action Alternative**

14 Implementation of the No Action Alternative would not change the industrial wastewater load,  
15 composition, or infrastructure in the proposed Project Area; therefore, no significant impact to  
16 industrial wastewater would be expected.

### 17 **Proposed Action Alternative**

18 The Proposed Action would not affect CCAD operations that currently generate industrial  
19 wastewater; therefore, the industrial wastewater load and composition from existing operations  
20 would not be expected to change. However, the Proposed Action would result in additional  
21 industrial wastewater infrastructure to provide service to the newly constructed buildings that  
22 would be connected to the existing industrial wastewater system. If carried forward, all  
23 improvements associated with the proposed project will be designed and installed according to  
24 applicable municipal, state, and Federal codes, criteria, standards, and specifications. For these  
25 reasons, the impact to industrial wastewater resulting from infrastructure improvements would  
26 not be considered significant.

1 Demolition and construction planned with the Proposed Action would not be expected to  
2 produce wastewater to be discharged into the industrial wastewater system; therefore, no impact  
3 to industrial wastewater would be expected from associated activities.

#### 4 **4.7.4 Electricity**

5 Impacts to electricity would be considered significant if the demand in the proposed Project Area  
6 was increased and approaching the capacity of Nueces Electric infrastructure or service  
7 capability. Changes to population and operations as a result of the Proposed Action have been  
8 considered to analyze electricity demand. Activities and personnel associated with project  
9 demolition and construction have also been taken into account.

#### 10 ***No Action Alternative***

11 Implementation of the No Action Alternative would not change the electricity demand or  
12 infrastructure in the proposed Project Area; therefore, no significant impact to Nueces Electric  
13 infrastructure or service capability would be expected.

#### 14 ***Proposed Action Alternative***

15 Changes to electricity demand as a result of the Proposed Action would be expected to be long-  
16 term and minor. Within the proposed Project Area there would be no permanent change to the  
17 population, and existing operations would only be relocated.

18 The Proposed Action would be expected to result in changes to electricity infrastructure to  
19 provide service to the proposed facilities. Specifically, two new underground electrical feeders  
20 will be constructed from an existing substation located off NASCC property and extend to the  
21 DCRF (Building 1700). The proposed route is depicted in Figure 1-1. In addition, six electrical  
22 feeders located within two existing conduits will be relocated. If carried forward, all  
23 improvements will be designed, reviewed, and installed according to applicable municipal, state,  
24 and Federal codes, criteria, standards, and specifications. Resulting impacts of electricity  
25 infrastructure improvements associated with the Proposed Action are not considered to be  
26 significant.

27 During demolition and construction associated with the Proposed Action, associated activities  
28 could result in a temporary minor increase in electricity demand. Electricity used for demolition

1 and construction activities could be supplied by portable generators, minimizing the increase in  
2 electricity supplied by Nueces Electric. For these reasons, the impact to electricity resulting  
3 from demolition and construction associated with the Proposed Action would not be considered  
4 significant.

#### 5 **4.7.5 Natural Gas**

6 Impacts to natural gas would be considered significant if the demand in the proposed Project  
7 Area were increased and approaching the capacity of City of Corpus Christi infrastructure or  
8 service. Changes to population and operations as a result of the Proposed Action were  
9 considered to analyze natural gas demand. Activities and personnel associated with project  
10 demolition and construction were also taken into account.

#### 11 ***No Action Alternative***

12 Implementation of the No Action Alternative would not change natural gas demand or  
13 infrastructure in the proposed Project Area; therefore, no significant impact to City of Corpus  
14 Christi infrastructure or service would be expected.

#### 15 ***Proposed Action Alternative***

16 Changes to natural gas demand as a result of the Proposed Action are expected to be long-term  
17 and minor. Within the proposed Project Area, there would be no permanent change to the  
18 population, and existing operations would only be relocated.

19 The Proposed Action would be expected to result in changes to natural gas infrastructure to  
20 provide service to the proposed facilities. Natural gas infrastructure would connect to an existing  
21 8-inch high pressure line located south of the Project Area. The existing line reportedly has  
22 capacity to support the Proposed Action as well as future projects (Merrick & Company, 2014).  
23 If carried forward, all improvements will be designed, reviewed, and installed according to  
24 applicable municipal, state, and Federal codes, criteria, standards, and specifications. Resulting  
25 impacts of natural gas infrastructure improvements associated with the Proposed Action are not  
26 considered to be significant.

#### 1 **4.7.6 Telecommunications**

2 Impacts to telecommunications would be considered significant if the load in the proposed  
3 Project Area were increased and approaching the capacity of infrastructure or service. Changes  
4 to population as a result of the Proposed Action were considered to analyze the  
5 telecommunications load. Personnel associated with project demolition and construction were  
6 also taken into account.

#### 7 ***No Action Alternative***

8 Implementation of the No Action Alternative would not change the telecommunications load or  
9 infrastructure in the proposed Project Area; therefore, no significant impact to  
10 telecommunications would be expected.

#### 11 ***Proposed Action Alternative***

12 Changes to telecommunications as a result of the Proposed Action would be expected to be long-  
13 term and minor. Within the proposed Project Area, no permanent change to the population  
14 would be expected; therefore, the telecommunications load would remain the same. The  
15 Proposed Action would be expected to result in changes to telecommunications infrastructure to  
16 provide service to the proposed facilities. Specifically, four fiber-optic conduits are proposed  
17 from existing lines located within the DCRF Main Telecommunication Equipment Room to the  
18 proposed PPS and CEP buildings. Additionally, the cellular antenna located in Building 8 is  
19 anticipated to be relocated prior to demolition. If carried forward, all improvements will be  
20 designed, reviewed, and installed according to applicable municipal, state, and Federal codes,  
21 criteria, standards, and specifications. Resulting impacts of telecommunications infrastructure  
22 improvements associated with the Proposed Action could be beneficial.

23 During demolition and construction associated with the Proposed Action, an increase in  
24 population accounting for personnel would be expected; however, this would not be expected to  
25 result in an increase in telecommunications load because demolition and construction personnel  
26 typically use mobile communications devices. Therefore, no impacts to telecommunications  
27 from the demolition and construction associated with the Proposed Action are expected.

#### 1 **4.7.7 Transportation**

2 Impacts to transportation would be considered significant if traffic in the proposed Project Area  
3 were increased and approaching the capacity of infrastructure. Changes to facilities, operations,  
4 and population as a result of the proposed project were considered to analyze traffic. Activities  
5 and personnel associated with project demolition and construction were also taken into account.

#### 6 ***No Action Alternative***

7 Implementation of the No Action Alternative would not change traffic or transportation  
8 infrastructure in the proposed Project Area; therefore, no significant impact to transportation is  
9 expected.

#### 10 ***Proposed Action Alternative***

11 Changes to traffic as a result of the Proposed Action are expected to be temporary and minor.  
12 Within the proposed Project Area, no permanent change to the population is expected.  
13 Therefore, traffic levels are anticipated to remain consistent with existing conditions, and  
14 existing operations would only be relocated. The relocation of facilities and operations would  
15 redirect some traffic; however, relocation of operations currently housed in Building 8 (the  
16 largest facility being partially relocated) would dictate the majority of redirected traffic, and  
17 operations would be relocated fewer than 1,000 ft from the existing building. Therefore, impacts  
18 to transportation as a result of changes to traffic are not considered to be significant.

19 During demolition and construction associated with the Proposed Action, an increase in  
20 construction workforce and activities could result in a temporary increase in traffic. To  
21 minimize increased traffic, a Traffic Control Plan would be prepared prior to commencing  
22 demolition and construction activities. Therefore, the impact to transportation resulting from  
23 demolition and construction associated with the Proposed Action would not be considered  
24 significant.

#### 25 **4.7.8 Solid Waste**

26 Impacts to solid waste would be considered significant if solid waste generation in the proposed  
27 Project Area were increased and approaching the capacity of the City of Corpus Christi Cefe  
28 Valenzuela Landfill. Changes to population and operations as a result of the Proposed Action

1 were considered to analyze solid waste generation. Activities and personnel associated with  
2 project demolition and construction were also taken into account.

3 To comply with EO 13514: Federal Leadership in Environmental, Energy, and Economic  
4 Performance, the head of each Federal agency will eliminate waste by means of the following:

- 5       ▪ “Diverting at least 50 percent of nonhazardous solid waste, excluding construction and  
6       demolition debris, by the end of FY 2015.”
- 7       ▪ “Diverting at least 50 percent of construction and demolition materials and debris by the  
8       end of FY 2015” (Office of the Press Secretary, 2009).

9 As a result, reduced solid waste generation and disposal and increased recycling at CCAD and  
10 NASCC are expected through the year 2015, regardless which action is carried forward.

### 11 **No Action Alternative**

12 Implementation of the No Action Alternative would not change solid waste generation in the  
13 proposed Project Area; therefore, no significant impact to the City of Corpus Christi Cefe  
14 Valenzuela Landfill is expected.

### 15 **Proposed Action Alternative**

16 Changes to solid waste as a result of the Proposed Action would be expected to be minor.  
17 Within the proposed Project Area, there would be no permanent change to the population, and  
18 existing operations would only be relocated; therefore, no permanent increases in solid waste  
19 generation would be expected.

20 Demolition and construction associated with the Proposed Action would result in a temporary  
21 increase in solid waste generation. All additional waste produced during these activities would  
22 be disposed of in compliance with applicable municipal, state, and Federal codes and regulations.  
23 Using average waste generation rates provided in the 2003 USEPA report, *Estimating Building-  
24 Related Construction and Demolition Materials Amounts*, amounts of waste that would be  
25 generated during demolition and construction/renovation were estimated and are presented in  
26 Tables 4-3 and 4-4.

1  
2

**Table 4-3  
Demolition Solid Waste Generation Estimates**

<b>Building</b>	<b>Size (ft<sup>2</sup>)</b>	<b>Demolition Waste (pounds)</b>	<b>Demolition Waste (tons)</b>
8	865,000	136,670,000	68,335
124	18,750	2,962,500	1,481
358	1,200	189,600	95
362	440	69,520	35
1152	7,364	1,163,512	582
1209	7,516	1,187,528	594
1219	3,648	576,384	288
1277	2,856	451,248	226
1713	4,221	666,918	333
1737	2,693	425,494	213
1738	7,650	1,208,700	604
1743	4,000	632,000	316
1746	87,870	13,883,460	6,942
<b>Total</b>	<b>1,013,208</b>	<b>160,086,864</b>	<b>80,043</b>

## Notes:

1. Average nonresidential demolition waste generation rate of 158 lb/ft<sup>2</sup> from USEPA, 2003 used to estimate demolition waste.
2. Demolition waste calculated for tennis courts (Building 124) is based on nonresidential structures (i.e., office building) and may result in an overestimation of waste actually generated.

3  
4

1 **Table 4-4**  
2 **Construction and Renovation Solid Waste Generation Estimates**

Building to be Constructed or Relocated	Size (ft <sup>2</sup> )	Construction/Renovation Waste (pounds)	Construction/Renovation Waste (tons)
CEP	11,800	51,212	26
PPS	150,990	655,297	328
124	18,750	81,375	41
358	1,200	5,208	3
362	N/A	0	0
1152	7,364	31,960	16
1209	7,516	32,619	16
1219	3,648	15,832	8
1746 (to be relocated to B250)	15,750	185,457	93
<b>Total</b>	<b>289,138</b>	<b>1,058,960</b>	<b>529</b>

## Notes:

1. Average nonresidential construction waste generation rate of 4.34 lb/ft<sup>2</sup> from USEPA, 2003 used to estimate construction waste.
2. Average nonresidential office renovation waste generation rate of 11.79 lb/ft<sup>2</sup> from USEPA, 2003 used to estimate renovation waste.
3. Building 362 will be demolished, but not replaced as part of the Proposed Action.
4. Building relocations that have not yet been determined are assumed to be replaced with construction of like size.
5. Renovation waste for Building 1746 calculated based on size of Building 250 (15,730 ft<sup>2</sup>).
6. Waste calculated for tennis courts (Building 124) is based on nonresidential structures (i.e., office building) and may result in an overestimation of waste actually generated.

3 The schedule for Proposed Action demolition and construction is currently unknown. However,  
4 even if these activities were completed within 1 year, the total waste generated, approximately  
5 80,500 tons, would be approximately 16% of the 500,000 tons of waste accepted annually by the  
6 Cefe Valenzuela Landfill, and even more so in relation to the maximum acceptance rate of  
7 1,000,000 tpy. Additionally, to comply with the EO 13514, a portion of construction and  
8 demolition waste will be recycled. Therefore, impacts to solid waste resulting from demolition  
9 and construction activities associated with the Proposed Action would not be considered  
10 significant.

#### 11 **4.8 HAZARDOUS MATERIALS AND WASTE**

12 The following subsections include a description of the potential impacts to hazardous materials  
13 and waste.

#### 1 **4.8.1 Petroleum Product Storage and Hazardous Material Storage**

2 Impacts to hazardous materials would be considered significant if an action resulted in the use or  
3 storage of hazardous material that did not comply with current regulatory requirements.

#### 4 ***No Action Alternative***

5 Under the No Action Alternative, no change in the current conditions described in Section 3.8.1  
6 would be expected; therefore, no significant impacts would be expected for petroleum product  
7 and hazardous material storage.

#### 8 ***Proposed Action Alternative***

9 The use of hazardous materials during the implementation of the Proposed Action is expected to  
10 be limited to construction activities (paints, solvents) and vehicle maintenance (fuels, oils,  
11 lubricants). Requirements for the use, handling, storage, and transport of hazardous materials at  
12 NASCC are outlined in the NASCC Hazardous Material Management Plan. Five HDSCs are  
13 located in Building 8 and may require relocation prior to demolition under the Proposed Action.

14 The CCAD Fuel Farm, AST-1737-1 and five drum storage areas are located within buildings  
15 proposed for demolition. The ASTs and drum storage areas would be relocated or removed prior  
16 to demolition. The ASTs and drum storage areas identified for relocation will be relocated to  
17 location within the completed Building 1700. The selection of new locations would be evaluated  
18 and managed in accordance with applicable federal, state, and NASCC requirements. Although  
19 Tank 1804-1 is located within the Proposed Project Area, Building 1804 would not be  
20 demolished under the Proposed Action and would not be impacted by the Proposed Action.

21 Although storage locations will require relocation under the Proposed Action, use, handling,  
22 storage, and transport of hazardous materials will be managed in accordance with the NASCC  
23 Hazardous Material Management Plan; therefore, impacts to petroleum product storage and  
24 hazardous material storage would not be considered significant.

#### 25 **4.8.2 Hazardous Waste**

26 Impacts to hazardous waste would be considered significant if an action resulted in the disposal  
27 of hazardous material and/or waste that did not comply with current regulatory requirements.

**1    No Action Alternative**

2    Under the No Action Alternative, there would be no change in current conditions or in CCAD  
3    and NASCC procedures for managing and disposal of hazardous wastes. Activities would  
4    continue in the current facilities; therefore, no significant impacts would be expected.

**5    Proposed Action Alternative**

6    The storage and disposal of hazardous waste are regulated by ongoing programs and policies at  
7    NASCC and CCAD. Any generation of hazardous waste under the Proposed Action would be  
8    managed according to those procedures. Building 362 (Hazardous Waste/Material Temporary  
9    Storage) is an inactive facility that is scheduled for demolition. NASCC will develop and  
10   implement a closure plan prior to the demolition of the building.

**11   4.8.3 Solid Waste Management Units/Installation Restoration Program Sites**

12   Impacts to SWMUs or IRP sites would be considered significant if an action resulted in non-  
13   compliance with applicable regulations.

**14   No Action Alternative**

15   Under the No Action Alternative, there would be no change in current conditions. Current use of  
16   the existing institutional controls and physical controls would continue. Application of  
17   monitored natural attenuation and annual groundwater sampling would continue for the IRP  
18   sites. The land use designation would continue, as industrial and groundwater use would  
19   continue to be prohibited; therefore, no significant impacts would be expected.

**20   Proposed Action Alternative**

21   The soil beneath the floor of Building 8 has been declared a PCL exceedance zone for all  
22   affected property COCs, without further investigation. The existing concrete floor serves as a  
23   cap to prevent unacceptable human exposures. With the implementation of the Proposed Action,  
24   only a portion of Building 8 would be demolished, the remainder of Building 8 would continue  
25   to be used for industrial purposes, and groundwater use would continue to be prohibited. While  
26   approximately 865,000 ft<sup>2</sup> of Building 8 would be demolished, the foundation of Building 8  
27   would remain in place and continue to act as a cap for the contamination beneath the building.

1 Monitored natural attenuation and annual groundwater sampling would continue. No significant  
2 impacts would be expected.

3 Contamination from IRP Sites 1, 3, and 4 extends to areas underlying the existing stormwater  
4 conveyance and the proposed electrical transmission line. As discussed in Section 3.8.3,  
5 contamination includes VOCs, PCBs, and inorganics, and monitored natural attenuation is  
6 currently being implemented for IRP Sites 1 and 3. During construction of the electrical  
7 transmission line, the areas impacted by IRP Sites 1, 3, and 4 may be disturbed. Although no  
8 further action requirements have been met for IRP Site 4, appropriate construction requirements  
9 will be developed and implemented by CCAD, NASCC, and the selected contractor to minimize  
10 disturbance to areas associated with IRP Sites 1, 3, and 4 and to ensure compliance with  
11 remediation requirements. Coordination with IRP site managers will take place, and BMPs  
12 would be implemented to minimize public health and environmental hazards associated with the  
13 sites. In addition, evaluation and use of appropriate PPE would be conducted by construction  
14 personnel, as required by OSHA, to ensure safe working conditions. Review and oversight of  
15 the IRP sites by USEPA and TCEQ would continue, and the annual groundwater monitoring  
16 would continue. Any proposed subgrade activities or changes to topography would be reviewed  
17 to ensure continued compliance with remediation requirements for the IRP sites. Although the  
18 Proposed Action may result in disturbance of IRP sites, appropriate measures will be taken to  
19 minimize disturbance and complete construction activities in accordance with applicable Federal,  
20 state, and local laws and regulations. Therefore, impacts to SWMUs and IRPs are not considered  
21 significant.

#### 22 **4.8.4 Asbestos-Containing Materials**

23 Buildings constructed prior to approximately 1978 may contain ACM. As discussed in Section  
24 4.8, ACM has been identified in some of the CCAD buildings located within the proposed  
25 Project Area, including B250 and B1746 (Cape, 2006). No information was available on the  
26 potential presence of ACM in the NASCC buildings. Impacts regarding ACM would be  
27 considered significant if an action resulted in non-compliance with applicable regulations.

## 1 **No Action Alternative**

2 Under the No Action Alternative, there would be no change in current conditions or operations.  
3 Any existing ACM located in buildings within the proposed Project Area would be managed  
4 according to existing installation management plans and procedures.

## 5 **Proposed Action Alternative**

6 The OSHA regulation 29 CFR 1910, for general industry, and 29 CFR 1926, for construction,  
7 requires owners to know the condition of asbestos in their buildings and whether tenants and/or  
8 employees are being exposed. Prior to renovation and/or deconstruction activities, USEPA  
9 regulations under NESHAP, 40 CFR 61, Part M require an owner to know the extent of ACM in  
10 a building prior to the start of work.

11 As summarized above in this Section and detailed within Section 3.8.4, ACM or suspected ACM  
12 have been identified in Building 250 and Building 1746. Prior to demolition and/or renovation  
13 activities associated with the Proposed Action, the potential presence of ACM would need to be  
14 evaluated for those buildings within the proposed Project Area that have not already been  
15 surveyed for ACM. Although most friable asbestos will be found in buildings constructed prior  
16 to 1978, nonfriable asbestos may also be found in some newer buildings. During deconstruction  
17 activities associated with the Proposed Action, any ACM removed or generated would be  
18 managed according to facility management plans and state and Federal regulations. The negative  
19 impacts from this alternative would be short-term and minimized when administered in  
20 accordance with the installation management plans during deconstruction activities.

## 21 **4.8.5 Lead-Containing Paint**

22 Buildings constructed prior to approximately 1978 may contain LCP or lead based paint (LBP).  
23 With the exception of Building 1746 and the Building 8 Old Engine Shop, surveys for LCP have  
24 not been conducted (Cape, 2006). Based on the age of the buildings within the Project Area,  
25 LCP would be expected. LBP was identified in the white paint on the Hot Line Vat in the  
26 Building 8 Old Engine Cleaning Shop (Weston, 2008b). LBP and LCP have continued to be  
27 used after 1978 in industrial settings such CCAD due to the beneficial uses of LBP and LCP to  
28 prohibit rust. Impacts regarding LCP would be considered significant if an action resulted in  
29 non-compliance with applicable regulations.

1 **No Action Alternative**

2 Under the No Action Alternative, there would be no change in current conditions or operations.  
3 Any existing LCP located in buildings within the Project Area would be managed according to  
4 existing installation management plans and procedures.

5 **Proposed Action Alternative**

6 All work would be conducted in accordance with 29 CFR 1910 and 29 CFR 1926. Prior to  
7 demolition and/or renovation activities associated with the Proposed Action, the potential  
8 presence of LBP would need to be evaluated. In addition to the building materials, the LBP  
9 evaluation should include piping, equipment, and painted metal structures. According to the  
10 2006 Cape report, the TCLP analytical results for Building 1746 suggest that the deconstruction  
11 waste stream is likely to be characterized as a nonhazardous waste. During deconstruction  
12 activities associated with the Proposed Action, any LBP removed or generated would be  
13 managed according to facility guideline and procedures and state and Federal regulations.

14 **4.8.6 Occupational Health and Safety**

15 Impacts to occupational health and safety would be considered significant if an action resulted in  
16 non-compliance with OSHA regulations.

17 **No Action Alternative**

18 Under the No Action Alternative, there would be no change in current conditions or operations.  
19 CCAD would continue to operate in an outdated, deteriorating and aging facility that cannot  
20 meet the current and future operational demands.

21 **Proposed Action Alternative**

22 Construction and demolition activities associated with the Proposed Action will be conducted in  
23 accordance with applicable OSHA regulations 29 CFR 1910 and 29 CFR 1926. Contamination  
24 associated with IRP Sites 1, 3, and 4 is present adjacent to portions of the existing stormwater  
25 conveyance feature and proposed underground electrical line that would be constructed under the  
26 Proposed Action. Institutional controls and physical controls have been implemented to prevent  
27 exposure to COCs in groundwater and soil. Contractors responsible for construction and  
28 demolition/deconstruction activities will be responsible for compliance with the applicable

1 OSHA regulations and identifying appropriate protective measure for employees (US Navy,  
2 2009). Therefore, no significant adverse impacts to occupational health and safety would result  
3 from the Proposed Action.

#### 4 **4.9 NOISE**

5 A significant noise impact would occur if a temporary or periodic increase in ambient noise  
6 levels in the project vicinity were increased above levels existing without the project (i.e., above  
7 75 dB at the nearest sensitive receptor) and/or a substantial permanent increase in ambient levels  
8 in the project vicinity above levels existing without the project.

#### 9 ***No Action Alternative***

10 Implementation of the No Action Alternative would not change the baseline conditions of the  
11 proposed Project Area described in Section 3.9.1; therefore, the No Action Alternative would  
12 have no expected effect on noise within the Project Area.

#### 13 ***Proposed Action Alternative***

14 Implementation of the Proposed Action Alternative would create both temporary and permanent  
15 new sources of noise. Temporary noise sources would include the operation of construction and  
16 demolition equipment associated with the construction of the relocated buildings, demolition of  
17 the identified existing structures, and excavation and grading activities. For evaluating potential  
18 noise impacts, it is assumed that construction and demolition activities are distributed throughout  
19 the year and would occur during a regular 8-hour day, 5 days per week. The effects of temporary  
20 noise from the operation of construction and demolition equipment would be expected to be  
21 minor and much less than the existing surrounding sources of noise, which include noise from  
22 aircraft on the airfield located to the west of the proposed Project Area.

23 Per USEPA, noise levels that are at or above 55 dB for outdoor areas or 45 dB for indoor areas  
24 are expected to interfere with activities and cause annoyance (USEPA, 2011a). The SPLs  
25 produced by typical demolition or construction equipment at each of the locations would be  
26 expected to be similar to those in Table 3-1, which range from 80 to 85 dBA at a distance of 50 ft  
27 from the source. Measured noise levels from construction equipment are 75 to 84 dBA. For  
28 each multiple of 50 ft, the SPL decreases by six. The particular demolition and construction

1 activities that would be associated with the Powertrain Project and potential sensitive receptors  
2 are discussed below.

3 Any existing operations within Building 8 would move to the new Powertrain Building. There  
4 would be no change in the activities conducted within the new building. Any noise produced by  
5 these operations is anticipated to be the same as or less than existing levels. It is possible that the  
6 levels of noise would be reduced from current levels because the new building would be  
7 constructed to current building standards, which incorporate improved noise reduction measures  
8 to further mitigate the potential for noise exposure to surrounding sensitive receptors. As noted  
9 in the 2009 EA (USACE, 2009), the noise level reduction properties of the building's  
10 construction materials would reduce noise levels by 18 to 27 dBA. Other noise impacts  
11 associated with the PN64026 Powertrain project were previously assessed in the 2009 EA and  
12 found to be not significant.

13 Several buildings would be relocated with the proposed Project Area to replace buildings that  
14 would be demolished as part of the expansion of the Powertrain building. The noise level would  
15 not be expected to significantly impact sensitive receptors, as the activities within each of the  
16 new buildings already occur at their current locations, and these activities are not expected to  
17 change.

18 The noise impacts at each of the locations where the new facilities would be constructed would  
19 typically be temporary, short-term, intermittent, localized, and occur during daylight hours.  
20 Therefore, there would be no expected long-term effects or change in the type of activities or  
21 facility operations, and these temporary increases in construction noise are not considered to be  
22 significant.

#### 23 **4.10 AIR QUALITY**

24 The following factors were considered in evaluating air quality: (1) the short- and long-term air  
25 emissions generated from construction and demolition activities; (2) the type of emissions  
26 generated; and (3) the potential for emissions to result in ambient air concentrations that exceed  
27 one of the NAAQS or SIP requirements. The entire Corpus Christi MSA is in attainment for all  
28 pollutants. Therefore, a general conformity determination is not required. The detailed air

1 emission calculations for the Alternative Actions included in the sections below are detailed in  
2 Appendix H.

### 3 **No Action Alternative**

4 There would be no short-term or long-term changes in emissions from the No Action  
5 Alternative.

### 6 **Proposed Action Alternative**

7 The Proposed Action would result in short-term emissions and fugitive dust during construction,  
8 demolition, paving and infrastructure activities. However, the effects from these activities would  
9 last only as long as the duration of the activity, fall off rapidly with distance from the activity  
10 site, and would not result in long-term impacts. For total pollutant emission purposes, it has  
11 been assumed that all building construction/demolition and infrastructure activities would be  
12 completed in one year. Long-term emissions may decrease due to the replacement of older in-  
13 efficient emission sources with newer energy saving equipment and buildings. The combustion  
14 of fuel by the construction equipment involved in the Proposed Action would result in emissions  
15 of CO, VOC, NO<sub>x</sub>, SO<sub>2</sub>, and PM<sub>10</sub>, and PM<sub>2.5</sub>. It has been assumed that major existing  
16 infrastructure would be utilized. It has also been assumed that the same future activities would  
17 still be conducted at CCAD regardless of the proposed changes in this EA. The short-term  
18 increase in CO, VOC, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions are minimal and would be expected  
19 to have minimal impact on the air quality in Nueces County. Annual short-term emissions for  
20 the Proposed Action are summarized in Table 4-5.

21 **Table 4-5**  
22 **Expected Short-term Annual Emissions from Alternative Actions**

Action	VOC	CO	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>
Proposed Action (tpy)	5.8	43.9	86.6	36.2	10.3	0.64
No-Action Alternative (tpy)	0.0	0.0	0.0	0.0	0.0	0.0

CO = carbon monoxide

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter equal or fewer than 2.5 micrometers in diameter

PM<sub>10</sub> = particulate matter equal or fewer than 10 micrometers in diameter

SO<sub>x</sub> = sulfur oxides

tpy = tons per year

VOC = volatile organic compound

1 Little short-term impact to local air quality would be expected from the Alternative Actions.  
2 Therefore, no mitigative actions would be required. BMPs could include watering to reduce  
3 fugitive dust, erosion control measures, reduced equipment idling, and the use of low sulfur and  
4 bio-diesel fuel in construction/transport vehicles.

#### 5 **Greenhouse Gases**

6 The Proposed Action would result in approximately 16,771 metric tpy of CO<sub>2</sub> emissions. The  
7 amount of CO<sub>2</sub> released under the Proposed Action represents less than 0.0002 percent of the  
8 2012 US anthropogenic emissions of CO<sub>2eq</sub>. This amount of short-term emissions would not  
9 contribute significantly to climate change, but any emission of GHGs represents an incremental  
10 increase in global GHG concentrations. The CEQ has issued draft guidance (CEQ, 2010) that  
11 the direct emissions of 25,000 metric tons of CO<sub>2eq</sub> or more should be considered a useful  
12 indicator that the GHG emissions from the action may warrant further analysis.

13 The short-term construction activities under Proposed Action are not subject to the requirements  
14 of 40 CFR Part 98 - Mandatory Greenhouse Gas Reporting.

#### 15 **4.11 VISUAL AND SCENIC**

16 Impacts to visual and scenic resources would be considered significant if the integrity of the  
17 existing resources were changed so that the visual characteristics were no longer in place.

#### 18 ***No Action Alternative***

19 Under the No Action Alternative, there would be no changes to the baseline visual and scenic  
20 aspects of the Project Area as described in Section 3.10. Buildings, development, and  
21 maintained and unmaintained lands would remain in their current conditions and locations, and  
22 views and scenic attributes would continue unchanged.

#### 23 ***Proposed Action Alternative***

24 Impacts to visual and scenic resources as a result of the Proposed Action would be negligible.  
25 Views of the Project Area from within NASCC property would be expected to change under the  
26 Proposed Action. Although the views would change, the overall scenic quality of the proposed  
27 Project Area would remain the same. The proposed Project Area would continue to include

1 views of buildings with approximately the same horizontal and vertical footprint of existing  
2 facilities, although the locations of the buildings would change. With the exception of the single  
3 relocation of the MWR/NEX Joint Car Care Facility and tennis courts, all other areas are  
4 currently developed with buildings. There would be a change in the view at the location of the  
5 relocated facility, but because it is within the boundaries of the developed CCAD facility and  
6 includes the construction of buildings near other areas of existing buildings, there would be no  
7 impacts to the scenic quality.

8 Views of the Project Area from the Corpus Christi Bay, and from the JFK Memorial Causeway  
9 of State Highway 358, would remain unchanged under the Proposed Action. The proposed  
10 Project Area is obscured from view of the Bay and the Causeway by dense and tall vegetation  
11 (approximately 30 ft in height) outside the perimeter of a 10-ft chain-link security fence. This  
12 vegetation and fencing would remain unchanged for security purposes to prevent viewing the  
13 facility from the adjacent water. Therefore, the scenic and visual qualities of the proposed  
14 Project Area, as viewed from outside the NASCC boundaries, would remain unchanged under  
15 the Proposed Action. Therefore, visual resources would not be expected to be significantly  
16 impacted by the Proposed Action.

#### 17 **4.12 CUMULATIVE IMPACTS**

18 Cumulative impacts include not only those direct and indirect impacts of the alternatives  
19 discussed previously in Section 4.0, but also those impacts associated with past, present, and  
20 reasonably foreseeable future actions that are considered along with each alternative. These  
21 effects can be generated from single or multiple events and may be additive or interactive.  
22 Principles of cumulative effects analysis, as described in the CEQ guide *Considering Cumulative*  
23 *Effects under the National Environmental Policy Act* (CEQ, 1997), are described as follows:

- 24     ▪ Caused by the aggregate of past, present, and reasonably foreseeable future actions.
- 25     ▪ Include the total effect, both direct and indirect, on a given resource, ecosystem, and  
26     human community of all actions taken, no matter who (Federal, non-Federal, or private)  
27     has taken the actions.
- 28     ▪ Need to be analyzed in terms of the specific resource, ecosystem, and human community  
29     being affected.

- 1       ▪ May result from the accumulation of similar effects or the synergistic interaction of  
2       different effects.

3 Cumulative effects were assessed for each resource using reasonable assumptions of changes,  
4 growth, and development in and around CCAD and NASCC based on previous installation  
5 history (past), current conditions (present), and reasonably anticipated (foreseeable) future  
6 activities of CCAD, NASCC, and NASCC tenants. As described in Section 1, this Proposed  
7 Action is a continuation of a larger nine-phase project analyzed in the 2009 Building  
8 Replacement Facility EA. The project, previously planned for completion in nine phases, is now  
9 planned for completion in seven phases. The 2009 EA included cumulative impacts analysis for  
10 all phases of the Powertrain Project, including the phases that are part of this Proposed Action.  
11 Due to the additional activities included in this Proposed Action (relocation of the NASCC  
12 facilities), this EA includes an updated review of the cumulative impacts in the 2009 Building  
13 Replacement Facility EA in conjunction with updated reasonably foreseeable actions. It should  
14 also be noted that CCAD is currently developing a programmatic environmental approach in an  
15 effort to streamline future review and provide consistent assessment of environmental impacts,  
16 including cumulative impacts, related to subsequent phases of the Powertrain Project.

17 Past actions include the recent construction of Phase 0 of the Powertrain Project (e.g., the DCRF  
18 building), the Rotor Blade Processing Facility, and the Aircraft Corrosion Control Facility on  
19 CCAD. In addition to the past and current actions, additional construction and demolition  
20 activities on the CCAD property are planned through FY 2019 and beyond. Such actions are  
21 described in the 2012 CCAD ADP. As part of the cumulative analysis of this Proposed Action,  
22 the actions described in the 2012 ADP (USACE, 2012) are also summarized below in Tables 4-6  
23 and 4-7.

24 Future projects for NASCC and NASCC tenants are outlined in the 2011 NASCC Master Plan  
25 (NAVFAC SE, 2011). Planned projects at NASCC are designated as either near-term or long-  
26 term projects and would occur through a phased approach. Several projects included in the  
27 NASCC Master Plan are not assessed in detail as a part of cumulative impacts within this EA  
28 due to the nature of the projects (e.g., renovation projects) or the proximity to the Powertrain  
29 PN64026 Project Area. Those NASCC and NASCC tenant planned projects within the vicinity

1 of the Powertrain PN64026 Project and included in the cumulative impacts analysis are  
 2 presented in Tables 4-6 and 4-7.

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**Table 4-6**  
**Proposed Future Development Projects on NASCC**

Project Title	Scope	Entity
<i>Near-Term Development</i>		
Aircraft Final Assembly	Not Provided	CCAD
Aircraft Processing Facility	Not Provided	CCAD
Airframe Support	Not Provided	CCAD
AMRDEC MED/SAFR Engineering Analysis Building	10,100 ft <sup>2</sup>	NASCC
Conference Center	8,460 ft <sup>2</sup>	NASCC
Barracks	Not Provided	CCAD
Consolidated Club	13,858 ft <sup>2</sup>	NASCC
Consolidated Equipment Maintenance Facility	Not Provided	CCAD
Golf Course Maintenance Shop	Not Provided	NASCC
Hangar Support Shop	Not Provided	CCAD
Hazardous Materials Induction/Distribution	Not Provided	CCAD
Marina Expansion	67 Boat Slips	NASCC
Process Equipment Induction	Not Provided	CCAD
<i>Long-Term Development</i>		
Advanced Composite Airframes	Not Provided	CCAD
Advanced Composite Facility	Not Provided	CCAD
Airframe/Comp. Induct/Dist	Not Provided	CCAD
Athletic & Fitness Center	54,366 ft <sup>2</sup>	NASCC
CDC/Youth Center Facility	TBD	NASCC
Depot Maintenance Hangar	Not Provided	CCAD
DLA Open Storage Lot	43,347 SY	NASCC
DLA Warehouse Replacement	TBD	NASCC
Fire Station 2 Replacement	TBD	NASCC
Motor Pool & Stands Maintenance Facility	Not Provided	CCAD
Naval Health Clinic	127,571 ft <sup>2</sup>	NASCC
NEX Warehouse	Not Provided	NASCC
Realign Dimmit Drive	850 LF	NASCC
RDECOM SAFR Engineering Analysis	Not Provided	CCAD
Single Sailor Center	TBD	NASCC

Source: NAVFAC SE, 2011; USACE, 2012.

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**Table 4-7  
Proposed Future Demolition Activities on NASCC**

<b>Building Number</b>	<b>Project Title</b>	<b>Scope (ft<sup>2</sup>)</b>	<b>Entity</b>
<i>Near-Term Demolition</i>			
39	MWR/NCIS Office	17,057	NASCC
129	Legal/Contracting	13,456	CCAD
245	Training/Tail Rotor	6,000	CCAD
249	MWR Storage	4,050	NASCC
250	Training	15,730	CCAD
318	Training Building	2,448	NASCC
1727	Environmental/Safety	42,048	CCAD
1728	Mechanical	1,290	CCAD
1756	Youth Center	4,968	NASCC
1782	Child Care Facility	9,441	NASCC
F, G, H, I, J	Senior Officer Housing, King Drive	18,680	NASCC
H-A, H-B, H-C, H-D, and H-E	Senior Officer Housing, Ninth Street	13,906	NASCC
<i>Long-Term Demolition</i>			
2	NASCC Headquarters	20,576	NASCC
5	Library	10,522	NASCC
55	Hangar	59,911	NASCC
56	Hangar	65,388	NASCC
89	Instrument Training	20,910	NASCC
90	All Hands Club	24,880	NASCC
92	Locker Room	2,986	NASCC
93	Pump Room	1,344	NASCC
94	Open Pool	2,968	NASCC
102	Fitness Center	20,539	NASCC
103	Fitness Center	16,620	NASCC
113	Vehicle Maintenance/Motor Pool	452	CCAD
127	AC Paint Shop	Not Provided	CCAD
129	General Administration	13,456	CCAD
188	Vehicle Maintenance/Motor Pool	Not Provided	CCAD
206	Engineering/Housing Shop	5,750	CCAD
245	Aircraft Maintenance	Not Provided	CCAD

Building Number	Project Title	Scope (ft <sup>2</sup> )	Entity
257	Hazardous Materials Storage	3,000	CCAD
259	General Administration	3,116	CCAD
339	Vehicle Maintenance/Motor Pool	14,604	CCAD
355-357, 359	Storage	Not Provided	CCAD
372	Engineering/Housing Shop	1,096	CCAD
1246	Condemned Aircraft Parts Storage	2,400	CCAD
1260	CCAD Learning Center	30,946	CCAD
1753	Barbeque Shelter	400	NASCC
1787	Bachelor Enlisted Quarters/Admin	32,295	CCAD
1808	Aircraft Paint Shop	57,280	CCAD
1825	Condemned Aircraft Parts Storage	5,740	CCAD
1828	Bearing Shop	17,511	CCAD

Source: NAVFAC SE, 2011; USACE, 2012.

#### 1 **4.12.1 Physical Environment**

2 The soils in the Project Area and the surrounding area of NASCC have been heavily disturbed  
3 over the course of CCAD and NASCC operations. There are no prime or unique farmlands in  
4 these areas. Although erosion may occur during demolition and/or construction, BMPs will be  
5 used; therefore, no adverse impacts would be expected.

#### 6 **4.12.2 Water Resources**

7 To analyze cumulative impacts to water resources resulting from all proposed future actions,  
8 changes to facilities, operations, and population in the vicinity of the proposed Project Area were  
9 considered and activities associated with project demolition and construction were also taken  
10 into account. No significant cumulative impacts to water resources are expected as a result of  
11 the Proposed Action and other reasonably foreseeable future actions.

#### 12 **4.12.3 Biological Environment**

13 Cumulative impacts to the biological environment within the proposed Project Area are not  
14 expected to be significant. The disturbed nature of the existing environment has no habitat of  
15 high value for wildlife, including threatened and endangered species, SOC, or migratory birds.

1 The area outside of the proposed Project Area contains habitat that species affected by the  
2 Proposed Action can utilize.

#### 3 **4.12.4 Cultural Resources**

4 In order to analyze cumulative impacts to cultural resources (including historic districts)  
5 resulting from all proposed future actions, changes to facilities or operations in the vicinity of the  
6 proposed Project Area were considered and activities associated with project demolition and  
7 construction were also taken into account. It is not anticipated that the potential future actions  
8 would bring about impacts that would cause degradation and/or loss of the characteristics that  
9 make the historic properties eligible for listing in the NRHP, including the introduction of  
10 physical, visual, audible, or atmospheric elements that are out of character with the historic  
11 properties and their setting. As required under Section 106, CCAD, NASCC, and NAVFAC SE  
12 will continue consultation with the Texas SHPO for potential future actions to review for  
13 potential impacts to cultural resources. No construction activities would occur until consultation  
14 and concurrence from the Texas SHPO is complete. Therefore, no significant cumulative  
15 impacts to cultural resources are expected as a result of the Proposed Action and other  
16 reasonably foreseeable future actions.

#### 17 **4.12.5 Socioeconomics**

18 Short-term economic expenditures from construction, demolition, and relocation of facilities  
19 associated with the Proposed Action and other cumulative projects described in Section 4.11  
20 would cumulatively have beneficial socioeconomic effects in and around the area of CCAD.  
21 Additionally, construction of updated, energy efficient facilities will have the long-term  
22 beneficial impact of reducing energy costs at CCAD.

#### 23 **4.12.6 Land Use**

24 Future NASCC land use designations are presented in the NASCC Master Plan (NASCC, 2011).  
25 Although minimal changes to land use designation will result from the Proposed Action, the  
26 designation changes will allow for appropriate use of the property and enable CCAD to continue  
27 its mission. Therefore, changes to land use designations are considered beneficial. In addition to  
28 the cumulative changes in land use designations, the Proposed Action is not expected to  
29 contribute to cumulative impacts to land use restrictions.

#### 1 **4.12.7 Utilities and Infrastructure**

2 The minor impacts associated with the Proposed Action are expected to beneficially contribute to  
3 cumulative impacts to NASCC utilities and infrastructure. Construction of the proposed  
4 underground electrical line would contribute to the support of future Powertrain Project  
5 construction. However, additional infrastructure would be constructed as needed for future  
6 projects. The long term impacts to utilities and infrastructure associated with the Proposed  
7 Action are not expected to impact demand on the existing utilities and infrastructure and would  
8 not contribute to cumulative impacts to utility demand.

#### 9 **4.12.8 Hazardous Materials and Waste**

10 Waste storage areas are located throughout NASCC, including CCAD. Conforming storage  
11 areas are permitted by the TCEQ for storage of specified hazardous wastes for a period of one  
12 year. NASCC has one conforming storage area located in Building 257, which is not included in  
13 the proposed Project Area. Waste containers include primarily 55-gallon drums on pallets or  
14 500-gallon tote tanks. No significant change to the hazardous materials and waste is expected as  
15 a result of the Proposed Action or other reasonable foreseeable future actions. Any hazardous  
16 materials and wastes associated with the construction and demolition would be intermittent and  
17 temporary. No changes to overall operations are planned. Any activities that use hazardous  
18 materials and generate hazardous waste would be expected to be the same or similar to current  
19 activities. No significant adverse impacts would be expected from the Proposed Action.

#### 20 **4.12.9 Noise**

21 No significant change to the noise levels in the surrounding area is expected as a result of the  
22 Proposed Action or other reasonable foreseeable future actions. Noise from construction and  
23 demolition would be highly localized, intermittent, and temporary. The proposed future  
24 development projects and demolition activities on NASCC would occur over a period of many  
25 years and be physically distributed across NASCC. Therefore, there would not be any  
26 significant adverse impacts from the Proposed Action and reasonably foreseeable future actions.

#### 1 **4.12.10 Air Quality**

2 The Proposed Action would result in short-term emissions during construction, demolition,  
3 paving and infrastructure activities. The emissions would be temporary, localized, and would be  
4 eliminated after the activity is completed. The short-term increase in emissions would be  
5 minimal when compared to the total regional annual emissions. Long term emissions may  
6 decrease due to the replacement of older inefficient emission sources with newer, energy-saving  
7 equipment and buildings.

8 The short-term emissions from the Proposed Action would be from mobile sources (equipment  
9 and vehicles) and fugitive dust. These emissions quickly dissipate within the vicinity of the  
10 activity source, thereby minimizing contribution to cumulative impacts from past, present, and  
11 reasonably foreseeable future projects that may be conducted in the area or at CCAD.

12 The minimal cumulative impacts from the Proposed Action and other proposed projects would  
13 not be expected to have significant impacts on the local air quality. The limited amount of GHG  
14 emissions from the Proposed Action would not contribute significantly to climate change.

#### 15 **4.12.11 Visual and Scenic**

16 While the Proposed Action would alter the visual qualities of the Project Area, impacts would  
17 not be expected to be significant. Additionally, it is anticipated that the Proposed Action and  
18 planned actions would not have a significant cumulative impact on visual resources, as actions  
19 would be similar and resemble existing facilities and views.

## 5. LIST OF PREPARERS

This EA has been prepared under the direction of Mr. Rick Smith of the USACE, Tulsa District, and Ms. Polly Gustafson of CCAD Environmental Division. Additional individuals, from both associated Federal agencies and from WESTON, who contributed to the preparation of this document, are listed below in Tables 5-1 and 5-2, respectively.

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**Agency Participation in NEPA Preparation**

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**Table 5-2**  
**WESTON Participation in NEPA Preparation**

<b>Name</b>	<b>Role/Specialty</b>	<b>Years of Experience</b>
Mary Strickert	NEPA Program Manager	23
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Ashley Stuart	Resource Specialist; Socioeconomics and Environmental Justice	4
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Barry Peterson	Resource Specialist; Air and Noise	15
Rusty Jones, P.G.	Resource Specialist; Geology and Geophysics	8
David Bennett, P.E.	Resource Specialist; Stormwater	8
Kathleen Mittmann	Senior NEPA Review; and Visual Resources	15
Mark Herrin	GIS	8

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