

TABLE OF CONTENTS

Orlando International Airport East Airfield Development Area Draft Environmental Assessment

	<u>Page</u>
1. Introduction and Proposed Action	1-1
1.1 Introduction	1-1
1.1.1 Orlando International Airport Overview	1-1
1.1.2 History of Proposed Action	1-2
1.2 Proposed Action	1-4
1.2.1 Selection of the East Airfield as a Large Contiguous Site for Aviation Development at MCO	1-5
1.2.2 Reduction of Existing Wildlife Hazard Attractants on the East Airfield	1-6
1.2.3 Secondary Fuel Storage and Distribution Facility at MCO	1-6
1.3 Aviation Forecast	1-7
1.4 Timeframe of Proposed Action	1-7
1.5 Federal Action	1-7
2. Purpose and Need	2-1
2.1 Introduction	2-1
2.2 Airport Sponsor's Long-Term Objectives	2-1
2.3 Near-Term Purpose of the Proposed Action	2-3
2.3.1 Identification of a Large Contiguous Site with Shared Infrastructure	2-3
2.3.2 Reduction of Existing Wildlife Hazard Attractants on the East Airfield	2-4
2.3.3 Secondary Fuel Supply Reliability	2-8
2.4 Near-Term Need of the Proposed Action	2-8
2.4.1 Efficient Use of Airport Property	2-8
2.4.2 Consistency with Local Land Use and Planning	2-11
2.4.3 FAA Regulations and Requirements	2-12
2.4.4 Reduce Wildlife Hazard Attractants	2-14
2.4.5 Development of a Secondary Fuel Storage and Distribution Facility at MCO	2-15
3. Alternatives	3-1
3.1 Introduction	3-1
3.2 Large Contiguous Site for Development of High and Medium Intensity Aviation and Aviation Support Facilities - Alternatives Considered	3-1
3.2.1 Off-Site Alternatives	3-2
3.2.2 On-Site Alternatives	3-3

3.3	Large Contiguous Site for Development of High and Medium Intensity Aviation and Aviation Support Facilities - Screening Analysis	3-5
3.3.1	Off-Site Alternatives	3-5
3.3.2	On-Site Alternatives	3-7
3.3.3	Summary of Alternative Screening Analysis	3-11
3.3.4	Alternatives Retained After Detailed Environmental Review	3-12
3.4	Reduction of Existing Wildlife Hazard Attractants – Alternatives Considered	3-12
3.4.1	Alternatives	3-13
3.4.2	Screening Criteria	3-14
3.5	Reduction of Existing Wildlife Hazard Attractants – Alternative Screening Analysis	3-15
3.5.1	Summary of Alternatives Screening Analysis	3-17
3.5.2	Reduction of Wildlife Hazard Attractants Alternatives Retained for Detailed Review	3-17
3.6	Development of a Secondary Fuel Storage and Distribution Facility at MCO – Alternatives Considered	3-18
3.6.1	Alternatives	3-18
3.6.2	Screening Criteria	3-20
3.7	Development of a Secondary Fuel Storage and Distribution Facility at MCO - Screening Analysis	3-20
3.7.1	Summary of Alternatives Screening Analysis	3-23
3.7.2	Fuel Storage and Distribution Facility Alternatives Retained for Detailed Review	3-24
3.8	Alternatives Retained for Evaluation	3-25
4.	Affected Environment	4-1
4.1	Introduction	4-1
4.2	Project Location & Vicinity	4-2
4.3	Existing Affected Environment by Environmental Impact Category	4-3
4.3.1	Air Quality	4-3
4.3.2	Coastal Resources	4-5
4.3.3	Compatible Land Use	4-6
4.3.4	Construction Impacts	4-10
4.3.5	Department of Transportation: Section 4(f)	4-10
4.3.6	Fish, Wildlife and Plants	4-11
4.3.7	Floodplains	4-23
4.3.8	Hazardous Materials, Pollution Prevention, and Solid Waste	4-24
4.3.9	Historic, Architectural, Archeological, and Cultural Resources	4-26
4.3.10	Light Emissions and Visual Impacts	4-27
4.3.11	Natural Resources, Energy Supply and Sustainable Design	4-27
4.3.12	Noise	4-27
4.3.13	Secondary (Induced) Impacts	4-30
4.3.14	Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	4-31
4.3.15	Water Quality	4-33
4.3.16	Wetlands	4-34
4.4	Past, Present and Reasonably Foreseeable Future Actions	4-35
4.4.1	MCO Development Actions	4-36
4.4.2	Other Development Actions in the Study Area	4-36

4.4.3	Transportation Improvements in the Study Area	4-36
5.	Environmental Consequences and Mitigation	5-1
5.1	Introduction	5-1
5.2	Air Quality	5-3
5.2.1	Near-Term Impact Analysis	5-3
5.2.2	Comparison to Significant Impact Thresholds	5-6
5.2.3	Mitigation	5-7
5.3	Coastal Resources	5-7
5.3.1	Near-Term Impact Analysis	5-8
5.3.2	Comparison to Significant Impact Thresholds	5-9
5.3.3	Mitigation	5-10
5.4	Compatible Land Use	5-10
5.4.1	Near-Term Impact Analysis	5-10
5.4.2	Comparison to Significant Impact Thresholds	5-11
5.4.3	Mitigation	5-11
5.5	Construction	5-11
5.5.1	Near-Term Impact Analysis	5-11
5.5.2	Comparison to Significant Impact Thresholds	5-14
5.5.3	Mitigation	5-14
5.6	Department of Transportation Act: Section 4(f)	5-14
5.6.1	Near-Term Impact Analysis	5-14
5.6.2	Comparison to Significant Impact Thresholds	5-15
5.6.3	Mitigation	5-16
5.7	Fish, Wildlife, and Plants	5-16
5.7.1	Near-Term Impact Analysis	5-16
5.7.2	Comparison to Significant Impact Thresholds	5-19
5.7.3	Mitigation	5-20
5.8	Floodplains	5-20
5.8.1	Near-Term Impact Analysis	5-21
5.8.2	Comparison to Significant Impact Thresholds	5-22
5.8.3	Mitigation	5-23
5.9	Hazardous Materials, Pollution Prevention, and Solid Waste	5-23
5.9.1	Near-Term Impact Analysis	5-23
5.9.2	Comparison to Significant Impact Thresholds	5-26
5.9.3	Mitigation	5-27
5.10	Historical, Architectural, Archeological, and Cultural Resources	5-27
5.10.1	Near-Term Impact Analysis	5-27
5.10.2	Comparison to Significant Impact Thresholds	5-28
5.10.3	Mitigation	5-28
5.11	Light Emissions and Visual Effects	5-28
5.11.1	Near-Term Impact Analysis	5-29
5.11.2	Comparison to Significant Impact Thresholds	5-31
5.11.3	Mitigation	5-31
5.12	Natural Resources, Energy Supply, and Sustainable Design	5-32
5.12.1	Near-Term Impact Analysis	5-33
5.12.2	Comparison to Significant Impact Thresholds	5-34
5.12.	Mitigation	5-34
5.13	Noise	5-35
5.13.1	Near-Term Impact Analysis	5-35
5.13.2	Comparison to Significant Impact Thresholds	5-36
5.13.3	Mitigation	5-36

5.14	Secondary (Induced) Impacts	5-36
5.14.1	Near-Term Impact Analysis	5-36
5.14.2	Comparison to Significant Impact Thresholds	5-38
5.14.3	Mitigation	5-38
5.15	Socioeconomic Impacts, Environmental Justice, and Children's Health and Safety Risks	5-39
5.15.1	Near-Term Impact Analysis	5-40
5.15.2	Comparison to Significant Impact Thresholds	5-42
5.15.3	Mitigation	5-42
5.16	Water Quality	5-43
5.16.1	Near-Term Impact Analysis	5-43
5.16.2	Comparison to Significant Impact Thresholds	5-46
5.16.3	Mitigation	5-47
5.17	Wetlands	5-47
5.17.1	Near-Term Impact Analysis	5-47
5.17.2	Comparison to Significant Impact Thresholds	5-49
5.17.3	Mitigation	5-50
5.18	Cumulative Impacts	5-55
5.18.1	Impact Analysis Approach	5-55
5.18.2	Summary of Cumulative Impacts	5-76
6.	Public Coordination	6-1
6.1	Overview	6-1
6.1.1	History of the Proposed Action Property	6-1
6.1.2	History of the Environmental Permitting Actions and Previous NEPA Process for the Proposed Action Site	6-2
6.2	Agency, Tribal, and Local Governmental Coordination	6-5
6.3	Public Coordination	6-6
6.3.1	Notice of Availability	6-6
6.3.2	Public Meeting	6-7
7.	List of Preparers	
7.1	List of Preparers	7-1
8.	Acronyms	
8.1	Acronyms	8-1

List of Tables

Table 1.4-1	Proposed Action Implementation Schedule	1-7
Table 2.2-1	2014 Conceptual Development Plan – Use Category Summary	2-2
Table 2.3-1	Wildlife Strike Summary Information for MCO 2009-2013	2-5
Table 2.3-2	Damaging Bird Strikes 2013 at MCO	2-6
Table 3.3-1	Summary of Alternatives Screening Analysis	3-12
Table 3.5-1	Summary of Alternatives Screening Analysis	3-18
Table 3.7-1	Summary of Alternatives Screening Analysis	3-24
Table 4.3-1	National Ambient Air Quality Standards	4-4
Table 4.3-2(a)	Land Use Types for East Airfield – USACE Wetland Delineations	4-12
Table 4.3-2(b)	Land Use Types for East Airfield – SFWMD Wetland Delineations	4-13
Table 4.3-3	Listed Plant Species that Could Occur within the East Airfield Site	4-17
Table 4.3-4	East Airfield Site Wildlife Observations	4-18

List of Tables (continued)

Table 4.3-5	Listed Wildlife Species that Occur in Orange County – Likelihood to Occur on East Airfield Site	4-19
Table 4.3-6	Existing Aircraft Operations	4-28
Table 4.3-7	Existing 2008 Runway Use	4-29
Table 4.3-8	Direct Employment at MCO (2014)	4-31
Table 4.3-9	Race and Poverty Characteristics (Percent of Overall Population)	4-33
Table 4.4-1	Past, Present and Reasonably Foreseeable Projects in the Vicinity of the East Airfield Site	4-38
Table 5.2-1	Proposed Project Related Construction Emissions	5-5
Table 5.3-1	FCMP State Statute Consistency	5-9
Table 5.6-1	Summary of Section 4(f) Impacts – Significance Thresholds	5-15
Table 5.7-1	On-Site Habitat and Regional Habitat Coverage Comparison	5-17
Table 5.7-2	Summary of Biotic Resources Impacts – Significance Thresholds	5-20
Table 5.8-1	Summary of Floodplain Impacts – Significance Thresholds	5-23
Table 5.9-1	Summary of Hazardous Materials Impacts – Significance Thresholds	5-27
Table 5.10-1	Summary of Historic and Archaeological Impacts – Significance Thresholds	5-28
Table 5.12-1	Summary of Energy Supply, Natural Resources, and Sustainable Design – Significance Thresholds	5-34
Table 5.13-1	Summary of Noise Impacts – Significance Thresholds	5-36
Table 5.15-1	Summary of Socioeconomic Impacts – Significance Thresholds	5-43
Table 5.16-1	Summary of Water Quality Impacts – Significance Thresholds	5-47
Table 5.17-1	Summary of Wetland Impacts – Significance Thresholds	5-50
Table 5.18-1	Potential for Environmental Impacts of Cumulative Projects	5-57
Table 6.2-1	Agency, Tribal, and Local Government Distribution List	6-5
Table 7.1-1	List of Preparers	7-1

List of Figures

Figure 1.1-1	Vicinity Map	Follows Page 1-1
Figure 1.2-1	Project Location Map	Page 1-4
Figure 1.2-2	2014 East Airfield Conceptual Plan	Figure 1.2-1
Figure 1.2-3	Proposed Action	Page 1-5
Figure 1.2-4	Fuel Farm	Page 1-6
Figure 1.5-1	Draft 2014 ALP Sheet 3	Page 1-8
Figure 1.5-2	Draft 2014 ALP Sheet 17	Figure 1.5-1
Figure 2.3-1	MCO Wildlife Strike Reports by Runway (2009-2013)	On Page 2-5
Figure 2.4-1	Figure LU 2A Southeast Orlando Sector Plan (November 2010)	Page 2-11
Figure 3.2-1	Lake Nona Alternative	Page 3-2
Figure 3.2-2	Orlando Executive Airport Alternative	Page 3-3
Figure 3.2-3	On-Site Alternatives	Figure 3.2-2
Figure 3.2-4	East Airfield Alternative	Page 3-4
Figure 3.2-5	Tradeport Alternative	Figure 3.2-4
Figure 3.2-6	Heintzelman Boulevard Alternative	Figure 3.2-5
Figure 3.2-7	Mud Lake Alternative	Figure 3.2-6
Figure 3.3-1	Conservation Easements	Page 3-11
Figure 3.4-1	Wildlife Hazard Attractant Reduction – Alternative 1	Page 3-13
Figure 3.4-2	Wildlife Hazard Attractant Reduction – Alternative 2	Page 3-14
Figure 3.4-3	Wildlife Hazard Attractant Reduction – Alternative 3	Figure 3.4-2
Figure 3.6-1	Fuel Storage and Distribution Facility – Alternative 1	Page 3-19

List of Figures (continued)

Figure 3.6-2	Fuel Storage and Distribution Facility – Alternative 2	Figure 3.6-1
Figure 3.6-3	Fuel Storage and Distribution Facility – Alternative 3	Figure 3.6-2
Figure 3.6-4	Fuel Storage and Distribution Facility – Alternative 4	Figure 3.6-3
Figure 3.8-1	Proposed Action	Page 3-25
Figure 4.1-1	Farmland Designations for the Proposed Action Site	Page 4-2
Figure 4.2-1	Vicinity Map	Figure 4.1-1
Figure 4.2-2	Project Location Map	Figure 4.2-1
Figure 4.2-3	Detailed Study Area	Page 4-3
Figure 4.3-1	Noise Overlay Zones	Page 4-6
Figure 4.3-2	City of Orlando FLUM – Effective Date: May 24, 2012	Page 4-7
Figure 4.3-3	City of Orlando Zoning – Amended February 27, 2012	Page 4-8
Figure 4.3-4	Innovation Way Corridor Study	Page 4-9
Figure 4.3-5	Surrounding Area Development	Page 4-10
Figure 4.3-6	Potential Section 4(f) Properties in the Vicinity of MCO	Page 4-11
Figure 4.3-7a	East Airfield Vegetative Cover and Land Use	Page 4-12
Figure 4.3-7b	East Airfield Vegetative Cover and Land Use	Figure 4.3-7a
Figure 4.3-8	Woodstork Colony Locations	Page 4-21
Figure 4.3-9	Eagle Nest Location	Page 4-23
Figure 4.3-10	FEMA Firm Map	Page 4-24
Figure 4.3-11	Alamo Rent-A-Car Location (8200 McCoy Road)	Page 4-25
Figure 4.3-12	Runway Usage – Calendar Year 2014	Page 4-29
Figure 4.3-13	2008 DNL Noise Contours	Figure 4.3-12
Figure 4.3-14	Environmental Justice	Page 4-32
Figure 4.3-15	Water Quality Monitoring Sites	Page 4-34
Figure 4.3-16	Federal Wetland Overview Map	Page 4-35
Figure 4.3-17a	Federal Wetland Map	Figure 4.3-16
Figure 4.3-17b	Federal Wetland Map	Figure 4.3-17a
Figure 4.3-18	State Wetland Overview Map	Figure 4.3-17b
Figure 4.3-19a	State Wetland Map	Figure 4.3-18
Figure 4.3-19b	State Wetland Map	Figure 4.3-19a
Figure 5.1-1	2014 East Airfield Conceptual Plan	Page 5-2
Figure 5.17-1	Federal Wetland Impact Map	Page 5-48
Figure 5.17-2	State Wetland Impact Map	Figure 5.17-1
Figure 5.17-3	Location of Mitigation Area/Disney Wilderness Preserve	Page 5-54
Figure 5.18-1	Boggy Creek Drainage Basin (cumulative impacts)	Page 5-74
Figure 6.1-1	Proposed Action	Page 6-4
Figure 6.1-2	2014 East Airfield Conceptual Plan	Page 6-7

Appendix

- A. Land Acquisition Timeline
- B. Florida State's Energy Emergency Response to the 2004 Hurricanes
- C. Large Scale Aviation Examples
- D. Tradeport DRI
- E. GOAA Air Operations Area Wildlife Ecological Study and Annual Report 2013
- F. USDA Wildlife Hazard Assessment for the East Airfield
- G. MCO East Airfield – Wildlife Data Review (January 9, 2015)
- H. Wildlife Hazard Site Visit Report
- I. Alternative 6 – Height Restriction Graphic

Appendix (continued)

- J. South Terminal Complex EA – Development Areas Figure
- K. Major Development Areas
- L. NOAA Letter Correspondence
- M. Solid Waste Landfill Capacity
- N. Agency Coordination Correspondence
- O. FAA Approval of Noise Contours
- P. MCO Capital Improvement Program
- Q. 2040 Long Range Transportation Plan
- R. GOAA Land Use Certification Letter
- S. City of Orlando Noise Ordinance
- T. USFWS Wood Stork Biological Assessment (May 2009)
- U. Buffer Yard Agreement (March 2000)
- V. East Airfield EA Transportation Analysis Support
- W. Wetland Avoidance and Minimization – Configuration 1
- X. Mitigation Letter
- Y. ACOE Mitigation Ledger
- Z. Timeline – East Airfield Site