

## CONTENTS

CHAPTER 1 — PURPOSE AND NEED FOR THE PLAN.....	3
INTRODUCTION .....	3
BACKGROUND.....	3
BRIEF DESCRIPTION OF THE PARK.....	3
PURPOSE OF THE PLAN.....	4
NEED FOR THE PLAN .....	9
Purpose and Need for the Wilderness Study .....	9
McQueens Island at Lazaretto Creek .....	10
The Next Steps .....	10
IMPLEMENTATION OF THE PLAN .....	10
FOUNDATION STATEMENT .....	12
Legislative Foundation .....	12
Purpose.....	12
Significance .....	12
Special Mandates and Administrative Commitments.....	13
Fundamental Resources and Values.....	14
Other Important Resources and Values.....	16
Cultural Resources.....	16
Recreation Opportunities .....	17
Primary Interpretive Themes.....	17
SERVICEWIDE LAWS AND POLICIES.....	19
OTHER PLANNING EFFORTS RELATED TO THIS GENERAL MANAGEMENT PLAN.....	24
The Georgia Department of Transportation's U.S. Highway 80 Expansion Project.....	24
The Georgia Port Authority's Savannah Harbor Expansion Project.....	24
The National Park Service Cultural Landscape Report.....	25
The Georgia State Historic Preservation Plan 2007-2011 (Building a Preservation Ethic).....	25
The Regional Plan of Coastal Georgia 2010 .....	26
Coastal Georgia Comprehensive Economic Development Strategy 2007 .....	26
Gullah-Geechee Cultural Heritage Corridor Management Plan .....	26
PLANNING ISSUES/CONCERNS .....	27
DECISION POINTS AND CONSIDERATIONS.....	27
ISSUES.....	28
IMPACT TOPICS — RESOURCES AND VALUES AT STAKE IN THE PLANNING PROCESS.....	28
IMPACT TOPICS TO BE CONSIDERED.....	29
Cultural Resources.....	29
Natural Resources.....	31
Wilderness Resources and Values .....	31
Visitor Use and Experience .....	32
Socioeconomic Environment.....	32
Climate Change .....	32
Transportation.....	32
Park Operations.....	33
Energy Requirements, Depletable Resources, and Conservation Potential .....	33
IMPACT TOPICS CONSIDERED BUT NOT ANALYZED IN DETAIL.....	33
Air Quality .....	33
Special Status Species.....	33
Coastal Zone Management.....	33
Soundscape .....	34
Lightscape Management (Dark Night Sky Preservation) .....	34
Urban Quality and Design of the Built Environment.....	35
Socially or Economically Disadvantaged Populations .....	35

## CONTENTS

Prime and Unique Agricultural Lands.....	35
Indian Sacred Sites and Indian Trust Resources.....	35
Public Health and Safety .....	35
Conformity with Local Land Use Plans.....	35
IMPAIRMENT DETERMINATION.....	36
<b>CHAPTER 2 — ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE.....</b>	<b>39</b>
<b>MANAGEMENT ZONES AND ALTERNATIVES.....</b>	<b>39</b>
<b>FORMULATION OF THE ALTERNATIVES.....</b>	<b>40</b>
<b>IDENTIFICATION OF THE PREFERRED ALTERNATIVE.....</b>	<b>40</b>
<b>WILDERNESS STUDY .....</b>	<b>41</b>
Definition of Wilderness .....	42
Uses and Management in Wilderness .....	42
Wilderness Eligibility Assessment.....	44
Options Analyzed in the Wilderness Study .....	44
Management of Proposed Wilderness .....	45
USER (CARRYING) CAPACITY.....	48
MANAGEMENT ZONES FOR FORT PULASKI NATIONAL MONUMENT .....	51
ACTIONS COMMON TO ALL ALTERNATIVES.....	55
U.S. Highway 80 Response.....	55
Savannah Harbor Response.....	55
Visitor Center Annex.....	55
ALTERNATIVE A: THE NO-ACTION ALTERNATIVE.....	55
Concept .....	55
Wilderness.....	55
Natural Resources.....	56
Cultural Resources.....	56
Visitor Use and Experience .....	56
Access.....	57
Boundary Expansion .....	57
Interpretation.....	57
Trails .....	57
Viewshed and Vistas .....	57
ALTERNATIVE B (NPS PREFERRED ALTERNATIVE).....	60
Concept .....	60
Wilderness.....	60
Natural Resources.....	60
Cultural Resources.....	61
Visitor Use and Experience .....	61
Access.....	61
Boundary Expansion .....	61
Interpretation.....	62
Trails .....	62
Viewshed and Vistas .....	62
ALTERNATIVE C.....	64
Concept .....	64
Wilderness.....	64
Natural Resources.....	64
Cultural Resources.....	64
Visitor Use and Experience .....	64
Access.....	64
Boundary Expansion .....	64
Interpretation.....	64
Trails .....	65
Viewsheds and Vistas.....	65

DEVELOPMENT OF COST ESTIMATES .....	72
Range of Annual Costs.....	72
Implementation .....	73
MITIGATIVE MEASURES COMMON TO ALL ACTION ALTERNATIVES.....	81
Cultural Resources.....	81
Natural Resources.....	82
Visitor Safety and Experience.....	84
Noise Abatement.....	84
Scenic Resources.....	84
FUTURE STUDIES AND IMPLEMENTATION PLANS NEEDED .....	85
ENVIRONMENTALLY PREFERABLE ALTERNATIVE.....	85
ALTERNATIVES AND ACTIONS CONSIDERED BUT DISMISSED FROM DETAILED EVALUATION .....	87
Combination of Two Alternatives .....	87
Remove Fort Pulaski and Surrounding Structures from Floodplains.....	87
Construct an Observation Tower on Tybee Island .....	88
Permit After-Hours Vehicular Access to the Park.....	88
<b>CHAPTER 3 — AFFECTED ENVIRONMENT .....</b>	<b>92</b>
INTRODUCTION .....	92
EARLY HISTORY .....	92
19TH CENTURY HISTORY .....	92
POST CIVIL WAR HISTORY .....	93
THE NATIONAL MONUMENT AND ITS REGIONAL CONTEXT .....	96
LAND ACQUISITION .....	97
CULTURAL RESOURCES.....	98
Background.....	98
Colonial Sites .....	98
Archeological Resources.....	98
Museum Collections.....	100
Historic Structures.....	101
Ethnographic Resources .....	105
Cultural Landscapes .....	105
NATIONAL PARK SERVICE MANAGEMENT OF FORT PULASKI NATIONAL MONUMENT 106	
OTHER INFLUENCES ON COCKSPUR ISLAND .....	107
NATURAL RESOURCES.....	108
Climate.....	108
Soils and Geologic Resources.....	108
Plant Communities and Vegetation .....	109
Lowland Temperate Seasonal Evergreen Forest .....	109
Planted/Cultivated Temperate or Subpolar Needle-Leaved Evergreen Forest .....	110
Temperate Broad-Leaved Evergreen Woodland.....	110
Saturated Temperate Broad-Leaved Evergreen Shrubland .....	111
Tidal Cold-Deciduous Shrublands .....	111
Tidal Needle Leaved or Microphyllous Evergreen Dwarf Shrubland.....	111
Tidal Temperate or Subpolar Grassland.....	111
Anthropogenic Habitats .....	112
Wildlife .....	112
Aquatic Vegetation.....	112
Finfish Species .....	112
Shellfish .....	113
Reptiles and Amphibians.....	113
Benthic Invertebrates.....	113
Marine Mammals .....	114
Special Status Species.....	114

## CONTENTS

Species Listed by the State of Georgia.....	116
Water Quality.....	118
Floodplains.....	119
Shoreline Erosion.....	120
Wetlands.....	120
Tidal Influences.....	121
Wilderness Resources and Values .....	121
VISITOR USE AND EXPERIENCE.....	123
SOCIOECONOMIC ENVIRONMENT.....	123
TRANSPORTATION .....	126
Port of Savannah.....	127
MONUMENT OPERATIONS AND MANAGEMENT.....	127
LAND USE .....	127
<b>CHAPTER 4 — ENVIRONMENTAL CONSEQUENCES.....</b>	<b>132</b>
INTRODUCTION .....	132
METHODS AND ASSUMPTIONS FOR ANALYZING IMPACTS.....	132
Identification of Impacts.....	132
IMPACT TOPICS.....	133
Cultural Resources.....	133
Natural Resources.....	134
Wilderness Resources and Values .....	135
Visitor Use and Experience .....	135
Socioeconomic Environment.....	135
Transportation.....	135
CUMULATIVE IMPACT ANALYSIS .....	143
Past Actions That Could Contribute to Cumulative Effects.....	143
Current and Future Actions That Could Contribute to Cumulative Effects .....	144
DECISION MAKING TO AVOID IMPAIRMENT OR UNACCEPTABLE IMPACTS ON RESOURCES OF FORT PULASKI NATIONAL MONUMENT.....	145
Impairment.....	145
Unacceptable Impacts .....	145
Comparison of Alternatives .....	146
IMPACTS COMMON TO ALL ALTERNATIVES.....	146
Transportation.....	146
CLIMATE CHANGE.....	147
IMPACTS OF IMPLEMENTING ALTERNATIVE A (CONTINUE CURRENT MANAGEMENT) .....	148
Cultural Resources.....	148
Natural Resources.....	151
Wilderness Resources and Values .....	154
Visitor Use and Experience .....	155
Socioeconomic Environment.....	156
Park Operations.....	156
Energy Requirements and Conservation Potential .....	157
Unavoidable Adverse Impacts.....	157
Irrecoverable or Irreversible Commitments of Resources.....	157
Relationship between Local Short-Term Uses of the Environment and Maintenance or Enhancement of Long-Term Productivity .....	157
IMPACTS OF IMPLEMENTING ALTERNATIVE B (NPS PREFERRED ALTERNATIVE).....	157
Cultural Resources.....	157
Natural Resources.....	161
Wilderness Resources and Values .....	165
Visitor Use and Experience .....	166
Socioeconomic Environment.....	167

Park Operations.....	168
Energy Requirements and Conservation Potential .....	168
Unavoidable Adverse Impacts.....	168
Irretrievable or Irreversible Commitments of Resources.....	168
Relationship between Local Short-Term Uses of the Environment and Maintenance or Enhancement of Long-Term Productivity .....	168
<b>IMPACTS OF IMPLEMENTING ALTERNATIVE C.....</b>	<b>169</b>
Cultural Resources.....	169
Natural Resources.....	171
Wilderness Resources and Values .....	174
Visitor Use and Experience .....	174
Socioeconomic Environment.....	174
Park Operations.....	175
Energy Requirements and Conservation Potential .....	175
Unavoidable Adverse Impacts.....	175
Irretrievable or Irreversible Commitments of Resources.....	176
Relationship between Local Short-Term Uses of the Environment and Maintenance or Enhancement of Long-Term Productivity .....	176
<b>CHAPTER 5 — CONSULTATION AND COORDINATION.....</b>	<b>180</b>
BRIEF HISTORY OF PUBLIC INVOLVEMENT .....	180
CONSULTATIONS WITH OTHER AGENCIES AND ORGANIZATIONS.....	181
U.S. Fish and Wildlife Service, Section 7 Consultation.....	181
Historic Preservation Division of the Georgia Department of Natural Resources, Section 106 Consultation.....	181
List of Reviewing Agencies and Recipients .....	182
<b>REFERENCES.....</b>	<b>186</b>
<b>APPENDIX A: LIST OF RELEVANT LEGISLATION .....</b>	<b>190</b>
<b>APPENDIX B: WILDERNESS ELIGIBILITY ASSESSMENT .....</b>	<b>194</b>
<b>APPENDIX C: THREATENED AND ENDANGERED SPECIES .....</b>	<b>196</b>
<b>APPENDIX D: FLOODPLAIN STATEMENT OF FINDINGS.....</b>	<b>198</b>
<b>APPENDIX E: IMPAIRMENT DETERMINATION.....</b>	<b>210</b>
<b>PREPARERS AND CONSULTANTS .....</b>	<b>213</b>
<b>INDEX .....</b>	<b>214</b>

## CONTENTS

### MAPS

Fort Pulaski National Monument Area Map .....	6
Fort Pulaski National Monument Vicinity Map.....	7
Fort Pulaski National Monument Site Map .....	8

### FIGURES

Figure 1. Draft Wilderness Eligibility Determination .....	47
Figure 2. Monument Boundaries.....	59
Figure 3. Alternative B Management Zones.....	63
Figure 4. Alternative C Management Zones.....	66
Figure 5. Earnings by Industry in the Savannah, Georgia Metropolitan Statistical Area 2007.....	125
Figure 6. Savannah, Georgia Metropolitan Statistical Area Employment by Industry in 2007.....	126

### TABLES

Table 1. Servicewide Mandates and Policies Pertaining to Fort Pulaski National Monument .....	20
Table 2. Special Status Species — Chatham, Effingham, and Jasper Counties.....	33
Table 3. Indicators and Standards .....	49
Table 4. Management Zone Descriptions for Fort Pulaski National Monument.....	52
Table 5. Comparison of Alternatives.....	67
Table 6. Costs of Alternatives.....	73
Table 7. Summary of Impacts .....	74
Table 8. Environmentally Preferable Alternative Analysis.....	87
Table 9. List of Classified Structures.....	102
Table 10. Special Status Species Listed by Federal and State Agencies .....	118
Table 11. Visitation at Fort Pulaski National Monument since 1995 .....	123
Table 12. Comparative Socioeconomic Statistics for Chatham County, Georgia.....	125
Table 13. Impact Threshold Definitions.....	137