

Chapters

Chapter 1.	The Purpose of, and Need for, Action	
	1.0 Introduction	1-1
	1.1 Purpose of, and Need for, the Proposed Action	1-2
	1.2 Refuge Overview.....	1-3
	1.3 The Service, Its Policies, and Legal Mandates.....	1-4
	1.4 Conservation Plans and Initiatives Guiding the Proposed Action.....	1-12
	1.5 Refuge Establishment, History, and Purpose	1-24
	1.6 Refuge Administration.....	1-25
	1.7 Refuge Operational Plans (“Step-Down” Plans)	1-25
	1.8 Refuge Vision Statement	1-26
	1.9 Refuge Goals	1-26
	1.10 The Comprehensive Conservation Planning Process	1-27
	1.11 Issues, Concerns, and Opportunities.....	1-28
	1.12 Decisions to be Made	1-30
Chapter 2.	Existing Environment	
	2.0 Introduction	2-1
	2.1 Physical Landscape Setting.....	2-1
	2.2 Regional Demographic and Socioeconomic Setting.....	2-36
	2.3 Refuge Administration.....	2-42
	2.5 Soils, Vegetation, and Habitat Types.....	2-52
	2.6 Wildlife Resources	2-69
	2.7 Refuge Visitor Services Program.....	2-88
	2.8 Cultural, Archaeological, and Historic Resources.....	2-93
Chapter 3.	Alternatives Considered, Including the Service-Preferred Alternative	
	3.0 Introduction	3-1
	3.1 Actions Considered, but not Included in Alternatives	3-3
	3.2 Actions Common to All of the Alternatives.....	3-4
	3.3 Refuge Management Alternatives: Goals, Objectives, and Strategies.....	3-24
Chapter 4.	Environmental Consequences	
	4.0 Introduction	4-1
	4.1 Impacts on Air Quality	4-10
	4.2 Impacts on Soils.....	4-18
	4.3 Impacts on Hydrology and Water Quality	4-22
	4.4 Impacts on Vegetation	4-32
	4.5 Impacts on Federally Listed and Recently Delisted Species	4-39
	4.6 Impacts on Landbirds.....	4-41
	4.7 Impacts on Open Water and Wetland Bird Species	4-48
	4.8 Impacts on Fisheries	4-53
	4.9 Impacts on Mammals.....	4-58

4.10 Impacts on Amphibians and Reptiles 4-63
4.11 Impacts on Invertebrates 4-68
4.12 Impacts on Public Use and Access 4-71
4.13 Impacts on Cultural and Historic Resources..... 4-74
4.14 Impacts on the Socioeconomic Environment..... 4-75
4.15 Cumulative Impacts 4-79

Chapter 5. Consultation and Coordination

5.0 Introduction 5-1
5.1 Planning to Protect Land and Resources 5-1
5.2 Partners Involved in Refuge Planning 5-3
5.3 Contact Information..... 5-4
5.4 Members of the Core Planning Team 5-4
5.5 Assistance from Other Service Personnel 5-5

Literature Cited

Literature Cited..... L-1

Glossary and Acronyms and Abbreviations

Glossary Glos-1
Acronyms and Abbreviations Glos-8

Appendixes

Appendix A. Suspected or Known Species on Great Swamp National Wildlife Refuge

Suspected or Known Species on Great Swamp National Wildlife RefugeA-1

Appendix B. Wilderness Review B-1

Appendix C. Findings of Appropriateness and Compatibility Determinations

CD – Wildlife Observation, Photography, Environmental Education, and Interpretation C-1
CD – White-tailed Deer Hunt C-13
CD – Spring Wild Turkey Hunt..... C-31
CD – Special Birding Events C-43
FOA – Alternate Forms of Transportation..... C-55
CD – Alternate Forms of Transportation C-57
FOA – Snowshoeing and Cross Country Skiing C-65
CD – Snowshoeing and Cross Country Skiing C-67
FOA – Dog Walking on Pleasant Plains Road and in Designated Parking Areas..... C-75
CD – Dog Walking on Pleasant Plains Road and in Designated Parking Areas C-77
FOA – Commercial Photography, Filming, or Audio Recording C-85
CD – Commercial Photography, Filming, or Audio Recording C-87
FOA – Wildlife Research..... C-97
CD – Wildlife Research C-99

FOA – Police and Fire Training..... C-107
 CD – Police and Fire Training..... C-109
 FOA – National Weather Service Sensor C-115
 CD – Operation and Maintenance of National Weather Service Automated Precipitation
 Sensor..... C-117

Appendix D. Staffing Charts

Staffing Charts D-1

Figures, Tables, and Maps

List of Figures

Figure 1-1 The Comprehensive Conservation Planning Process and its Relationship to
 the NEPA 1-29

List of Tables

Table 2-1 Surficial Geology of Great Swamp NWR.....2-6
 Table 2-2 Subwatersheds of the Great Swamp Watershed2-11
 Table 2-3 Impoundments at Great Swamp NWR2-13
 Table 2-4 NJDEP AMNET Biological Condition of Streams Influencing Great Swamp
 NWR.....2-17
 Table 2-5 2010 303(d) List (Sublist 5) Impaired Waters Within and Adjacent to Great
 Swamp NWR.....2-18
 Table 2-6 Monthly Averages for Temperature and Precipitation at Boonton Weather
 Station (1971-2000)2-28
 Table 2-7 Criteria Pollutants Monitored Within the Suburban Reporting Region (including
 Great Swamp NWR)2-34
 Table 2-8 Air Toxicants Exceeding Long-Term Health Benchmarks Chester Laboratory
 Monitoring Stations (2007).....2-35
 Table 2-9 National, Regional, and Local Community for Areas Near Great
 Swamp NWR.....2-37
 Table 2-10 Annual Averages of Unemployment Rates for the United States, New Jersey,
 Morris County and Somerset County between 2000 and 2010.....2-39
 Table 2-11 Calculated Annual Median Family Income and Per Capita Income for the
 United States, New Jersey, Morris County and Somerset County2-40
 Table 2-12 Recent Great Swamp NWR Revenue Sharing Payments (1986 through
 2009)2-41
 Table 2-13 Great Swamp NWR Staffing, Budget, Volunteer Hours, and Visitation
 Data.....2-43
 Table 2-14 Volunteer Hours by Friends of Great Swamp NWR2-49
 Table 2-15 Soil Types of Great Swamp NWR2-52
 Table 2-16 CCP Habitat Types and NVCS Vegetation Communities2-61
 Table 2-17 Common Invasive Plant Species at Great Swamp NWR and Past Control
 Efforts.....2-65

Table 2-18: Number of Each Bat Species Captured at Great Swamp NWR
(2006-2010 and 2012) 2-75

Table 2-19 Average Annual Waterfowl Counts 1993-2006 2-79

Table 2-20 Comparison of Peenting Woodcock Surveys Conducted at Great Swamp
NWR by USFWS And NJDEP Division Of Fish And Wildlife 2-83

Table 2-21 Comparison of Hunt Statistics from 1974-2010..... 2-90

Table 3-1 Relative Trends in Deer Numbers Based on Spotlight and Harvest Data for
Great Swamp NWR..... 3-42

List of Maps

Map 2-1 Refuge Location..... 2-3

Map 2-2 Refuge Acquisition Boundary 2-4

Map 2-3 Regional Conservation Lands 2-5

Map 2-4 Soils 2-9

Map 2-5 Hydrologic Units..... 2-10

Map 3-1 Existing Habitat Management..... 3-28

Map 3-2 Existing Public Use Opportunities 3-29

Map 3-3 Anticipated Habitat Types under Alternative B 3-62

Map 3-4 Proposed Public Use Facilities under Alternative B 3-63

Map 3-5 Anticipated Habitat Types under Alternative C..... 3-101

Map 3-6 Proposed Public Use Facilities under Alternative D 3-126

Table 4-1 Regional Context for Impacts Analyses at
Great Swamp National Wildlife Refuge..... 4-1

Table 4-2 Impact Significance Criteria Threshold Definitions..... 4-3