
Message from the CEO

Those of us who live in the Tennessee Valley appreciate the remarkable and picturesque natural resources of our region. Yet, how often do we consider the value they bring to our everyday existence?



Public waterways and lands, which TVA is entrusted to manage, are vital to the quality of our lives. We all know water is essential for living, but it is also critical to generating the electricity that powers our homes, businesses and industries at a low cost.

In addition to the benefit of clean water, public shoreline and reservoir, river and stream access are central to many forms of recreation we enjoy in the Tennessee Valley, from boating and paddling to hiking and fishing. These activities, in turn, draw tourists whose recreation spending fuels local economies and creates jobs in large and small communities.

Industries are also attracted to the Tennessee Valley by the low-cost electricity, available land and access to a navigable river system. Companies can find the property, power and supplies they need to manufacture items to ship across the globe. This commerce occurs here, and employs tens of thousands of people here, in part because TVA properly manages the region's natural resources and public lands.

Just as TVA mapped out its future power generation in its recent Integrated Resource Plan, our agency has now developed a 20-year plan for natural resource management and ongoing stewardship activities.

The Natural Resource Plan creates a sound framework for balancing land use, human activity and conservation in order to achieve the greatest public benefit from our natural resources. It focuses on providing recreational opportunities; prompting economic growth; protecting sensitive cultural resources, habitat and wildlife species; and promoting water quality.

Because stewardship is a shared responsibility, the plan identifies new partnership opportunities, including continuing to work with distributors of TVA-generated power. The plan also creates avenues for greater public involvement such as volunteerism, and environmental education and outreach.

Natural resource management may not be the first thing on your mind while camping along Kentucky, Wilson, Chickamauga, Melton Hill or Fontana reservoirs, or floating down the Tennessee, Clinch, Hiwassee, Ocoee, Duck or Toccoa rivers. But every day TVA is focused on protecting and enhancing these waters and surrounding public lands.

TVA presents this Natural Resource Plan because our mission focuses on responsible stewardship, alongside clean and reliable energy and sustainable economic development. We hope this document helps you understand how all these TVA initiatives tie together for the betterment and enjoyment of life in the Tennessee Valley.

A handwritten signature in black ink that reads "Tom Kilgore". The signature is written in a cursive, flowing style.

Tom Kilgore
President and CEO
Tennessee Valley Authority

Reader's Guide

The Natural Resource Plan (NRP) offers a broad range of programs to be used during the implementation of TVA's natural resources road map over the next 20 years. This reader's guide offers an overview of the NRP's structure, helping to provide clear direction to different areas of information within the document.

Executive Summary

The executive summary is an abridged version of the NRP, highlighting key goals of the plan, a history of environmental stewardship spending, an implementation outline with performance measures, and a discussion on benefits and risks.

Chapter 1 – Introduction

The introduction gives an overview of TVA's natural resources management history, objectives and programs. It also provides an overview of the NRP including its scope, how it was developed, and a discussion of natural resource management benefits.

Chapter 2 – NRP Road Map for Success

The road map for success outlines the NRP's three-phase implementation approach. It also discusses funding the plan, what success will look like, and the risks associated with not implementing the plan.

Chapters 3-8 – Resource Area Chapters

Each resource area has a dedicated chapter that presents TVA's strategy for how it will meet future stewardship responsibilities. These chapters include a brief history, a stated goal, expected outcomes and an implementation strategy for each resource area. This helps to present a high-level picture of current and future resource management efforts before getting into the details of each related program. Each resource area program included in the preferred alternative is then presented according to the following structure:¹

Program Name

Provides a brief description of the program, defining it in a broad overview rather than through specific activities. It also identifies (if applicable) how programs align across resource areas. For instance,

if a program within cultural resources management will have residual benefits or consequences for a program in another resource area (e.g., biological), this is specifically identified. The purpose is to define these alignments at the program level, as compared to the resource area level as identified in Chapter 2.

Scope: Refers to the applicable geographic area of this program. Examples include TVA reservoir lands, the Tennessee River watershed, or all TVA recreation areas.

TVA Span of Control: Refers to the degree of control TVA has over the resource(s) associated with the program. Examples include direct control (e.g., TVA forest lands), partial control (TVA has some control but often works in partnership or within a third-party agreement), and no control (e.g., enforcement of water quality standards).

Current Activities: Outlines current activities associated with the program. This level of effort matches Alternative A of the EIS.

NRP Activities: Provides a list of activities that TVA will implement over the 20-year NRP span. Collectively, all of the NRP activities presented in this document represent the preferred alternative (Alternative D) in the environmental impact statement.

Expected Benefits: Outlines unique, program-specific benefits of implementing the above NRP activities. These supplement the overall natural resources management benefits discussed in Chapter 1 and offer a brief discussion of why TVA is implementing each program.

¹ Chapter 7 – Reservoir Lands Planning follows a different structure, given that the resource area is not programmatic in nature.

Table of Contents

Executive Summary

The Natural Resource Plan	3
History of Environmental Stewardship Spending	4
Road Map for Success	5
Measures of Success	7
Benefits	7
Risks	8
Funding	8
Resource Area Summaries	9

Chapter 1 – Introduction

1.1 Tennessee Valley Authority History	25
1.2 Overview of TVA’s Vision and Environmental Policy	26
1.3 Overview of the Natural Resource Plan	28
1.3.1 Resource Areas	29
1.3.2 Geographic Scope	30
1.3.3 Out of Scope	31
1.3.4 Stakeholders	31
1.4 Development Process	35
1.4.1 Determine the Scope of the NRP	35
1.4.2 Develop, Analyze, and Evaluate NRP Programs	36
1.4.3 Release the Draft NRP and EIS for Public Comment	37
1.4.4 Finalize and Issue the NRP	37
1.5 Past TVA Environmental Stewardship Spending	37
1.6 Benefits	38
1.6.1 Public and Economic Benefits	39
1.6.2 Ratepayer Benefits	39

Chapter 2 – NRP Road Map for Success

2.1 Implementation Strategy	43
2.1.1 Phase I: Years 1 to 3	43
2.1.2 Phase II: Years 4 to 5	46
2.1.3 Phase III: Years 6 to 20	48
2.2 Funding	48
2.3 Measures of Success	49
2.4 Risks	52

Chapter 3 – Biological Resources

3.1 Goal	58
3.2 Benefits	58
3.3 Implementation Strategy	58
Land Stewardship	59
Habitat and Species Management	60
Dispersed Recreation	61
Public Outreach and Awareness	62
3.4 Measures of Success	62
3.5 Resource Area Programs	63
3.5.1 Threatened and Endangered Species Program	64
3.5.2 Wetlands Management	66
3.5.3 TVA Sensitive Resources Data Management	68
3.5.4 Natural Areas Management	70
3.5.5 Migratory Birds Management	71
3.5.6 Grasslands and Agricultural Lands Management	72
3.5.7 Dewatering Projects Management	74
3.5.8 Forest Resource Management	76
3.5.9 Nonnative Invasive Plant Management	78
3.5.10 Nuisance Animal Control	79
3.5.11 Terrestrial Greenhouse Gas Sequestration Management	80
3.5.12 Wildlife Habitat Council – Third-Party Certifications	81
3.5.13 Wildlife Habitat Enhancement Partnerships	82
3.5.14 Boundary Maintenance	83
3.5.15 Land Conditions Assessment and Land Stewardship Maintenance	84
3.5.16 Conservation Planning	86
3.5.17 Dispersed Recreation Management	87
3.5.18 Leave No Trace	88
3.5.19 Trails Management	89

Chapter 4 – Cultural Resources

4.1 Goal	93
4.2 Benefits	93
4.3 Implementation Strategy	93
Enforcement	94
Protection	95
Data Management	96
Public Outreach and Awareness	97
4.4 Measures of Success	97
4.5 Resource Area Programs	98
4.5.1 Archaeological Monitoring and Protection	99
4.5.2 Archaeological Resources Protection Act	101
4.5.3 Native American Consultation	102
4.5.4 Native American Graves Protection and Repatriation Act	103
4.5.5 National Historic Preservation Act Section 106	104
4.5.6 Preservation Program	105
4.5.7 Preserve America	106
4.5.8 Archaeological Outreach (Thousand Eyes)	108
4.5.9 Corporate History Program	109

Chapter 5 – Recreation Management

5.1 Goal	114
5.2 Benefits	115
5.3 Implementation Strategy	115
Innovation	116
Enhancement/Expansion	117
Data Management	118
Public Outreach and Awareness	119
5.4 Measures of Success	119
5.5 Resource Area Programs	120
5.5.1 Management of Campgrounds on Dam or Power Plant Reservations	121
5.5.2 Management of Campgrounds off Dam or Power Plant Reservations	122
5.5.3 Day-Use Areas on Dam Reservations	123
5.5.4 Day-Use Areas off Dam Reservations	124
5.5.5 Stream Access Sites	125
5.5.6 Annual Tours	126
5.5.7 Recreation Information Management	127
5.5.8 Boating Density Assessments	128
5.5.9 Reservoir Lands Recreation Inventory Management	129
5.5.10 Recreation Design Principles	130
5.5.11 Recreation Planning, Assistance and Technical Support	131
5.5.12 Tennessee Valley Camp-Right Campground Program	132
5.5.13 Dispersed Recreation Management	133
5.5.14 Trails Management	133
5.5.15 Leave No Trace	133
5.5.16 Tennessee Valley Clean Marina Program	133

Chapter 6 – Water Resources

6.1 Goal	138
6.2 Benefits	138
6.3 Implementation Strategy	139
Water Quality Management	140
Data Management	142
Strategic Partnerships	143
Public Outreach and Awareness	144
6.4 Measures of Success	144
6.5 Resource Area Programs	145
6.5.1 Aquatic Ecology Management	146
6.5.2 Stream and Tailwater Monitoring Program	147
6.5.3 Climate Change Sentinel Monitoring	148
6.5.4 Strategic Partnership Planning	149
6.5.5 Tennessee Valley Clean Marina Program	150
6.5.6 Water Resource Outreach Campaign	151
6.5.7 Reservoir Shoreline Stabilization/ Riparian Management Program	152
6.5.8 Nutrient Source – Watershed Identification and Improvement Program	154
6.5.9 Northern Gulf of Mexico/Mississippi River Basin Nutrient Load Reductions Program	156

Chapter 7 – Reservoir Lands Planning

7.1 History of Reservoir Lands Planning	161
7.2 Goal	164
7.3 Comprehensive Valleywide Land Plan	165
Overview	165
Planning Process	168
Benefits	169
7.4 Implementation Strategy	170
7.5 Measures of Success	170
7.6 Zone Definitions	171
7.7 Current Land Zone Allocations By Reservoir	175

Chapter 8 – Public Engagement

8.1 Goal	179
8.2 Benefits	179
8.3 Implementation Strategy	180
Education and Communication	181
Involvement	182
Partnerships	183
8.4 Measures of Success	183
8.5 Resource Area Programs	184
8.5.1 Environmental Education	185
8.5.2 Volunteer Program	186
8.5.3 Foundation and Trust Fund	187

In Closing	189
-------------------	------------

Glossary and Acronyms	190
------------------------------	------------

List of Figures

Executive Summary

Figure 0.1	Historical TVA essential stewardship activities spending	4
Figure 0.2	Overview of the NRP implementation strategy	5

Chapter 1 – Introduction

Figure 1.1	Environmental Policy alignment with TVA's mission	26
Figure 1.2	IRP-NRP project deliverables framework	28
Figure 1.3	NRP resource areas and supporting objectives	29
Figure 1.4	NRP geographic scope	30
Figure 1.5	Natural resource planning process	35
Figure 1.6	Key inputs to the NRP decision-making process	36
Figure 1.7	Benefits of natural resources management	38

Chapter 2 – NRP Road Map for Success

Figure 2.1	Overview of the NRP implementation strategy	42
Figure 2.2	NRP measures of success	50
Figure 2.3	Potential risks associated with not implementing resource management activities	53

Chapter 5 – Recreation Management

Figure 5.1	Land conveyed by TVA for recreation management	113
-------------------	--	-----

Chapter 7 – Reservoir Lands Planning

Figure 7.1	History of lands under TVA management	161
Figure 7.2	Summary of reservoir land management plans by planning methodology	163
Figure 7.3	Current zone allocations and Comprehensive Valleywide Land Plan ranges	166

Chapter 8 – Public Engagement

Figure 8.1	Resource area-specific public outreach programs	178
-------------------	---	-----