

# **Strategic Habitat Conservation Workshop**



**Landscape Conservation Leadership**

Jason M. Mitchell

*January 2010*





# About TVA

- The nation's largest public power provider and is completely self-financing.
- Provides power to large industries and 157 power distributors that serve approximately 9 million consumers in seven southeastern states.
- Creates economic development opportunities and manages the Tennessee River and its tributaries to provide multiple benefits, including flood damage reduction, navigation, water quality, and recreation.

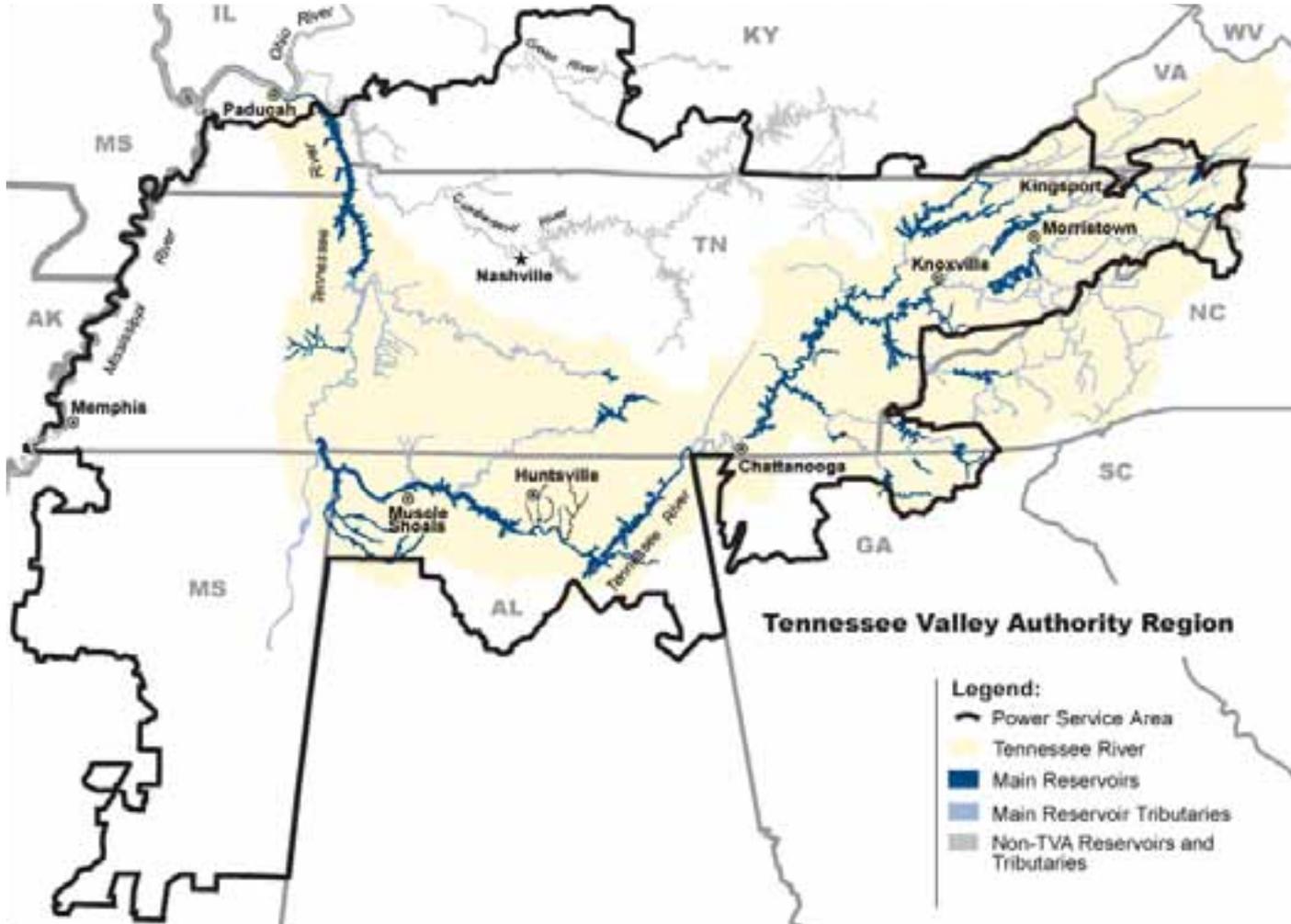




# TVA Region

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# Strategy and Environmental Policy

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- **Strategic Plan** - manage land and water resources to provide multiple benefits to the Valley and serve as a responsible steward of the Tennessee River System.
  - **Environmental Policy** - continue to manage public land to meet the desired conditions for their defined purpose.
  - **Land Policy** - continue to develop reservoir land management plans with substantial public input and with approval of the TVA Board.
  - **Natural Resource Management Strategy** - be a leader (among other public and/or investor-owned utilities) in natural resource management through the implementation of sustainable practices to balance protection of cultural, heritage, and ecological resources while providing dispersed recreation opportunities.
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# Resource Stewardship

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- 293,000 acres of public land
- 652-mile long Tennessee River and its tributaries – the nation's fifth largest river system
- 11,000 miles of shoreline
- 15,900 miles (260,000 acres) of transmission line rights-of-way.





# **CONSERVATION LEADERSHIP STRATEGIES**



# Tennessee River

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- The connection – watersheds link our initiatives.
- An integrated approach – one system that meets many needs.
- Every day, TVA balances competing – and sometimes conflicting – needs for water in order to deliver the greatest value for the people of the Tennessee Valley.



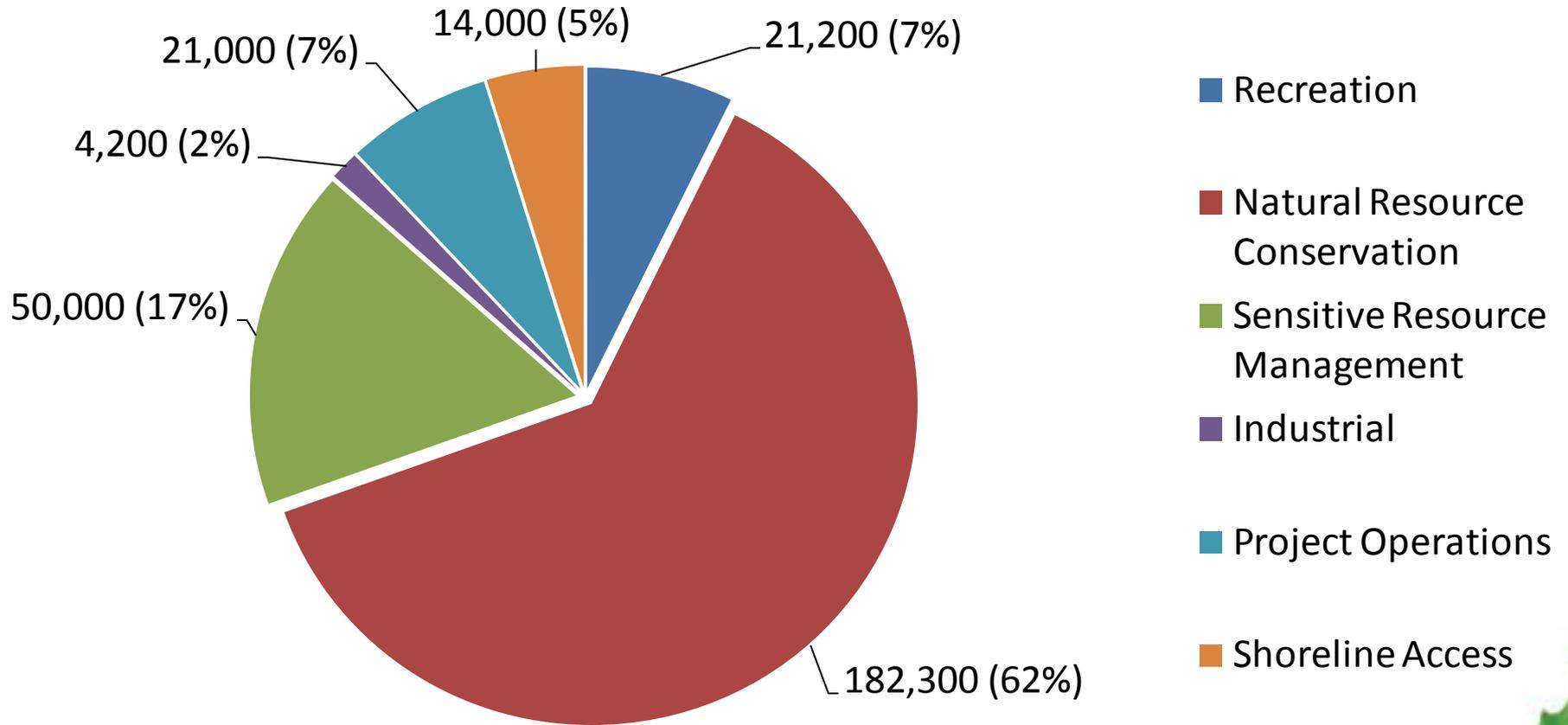
# Land Planning

- TVA develops land plans to facilitate management of public land around its reservoirs.
- The reservoir land planning process is a systematic method of identifying and evaluating the most suitable use of public lands under TVA stewardship.
- Plans are developed with participation by public agencies and officials, private organizations, and individuals.





# TVA Land Uses

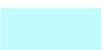


# TVA Typical TVA Land Ownership

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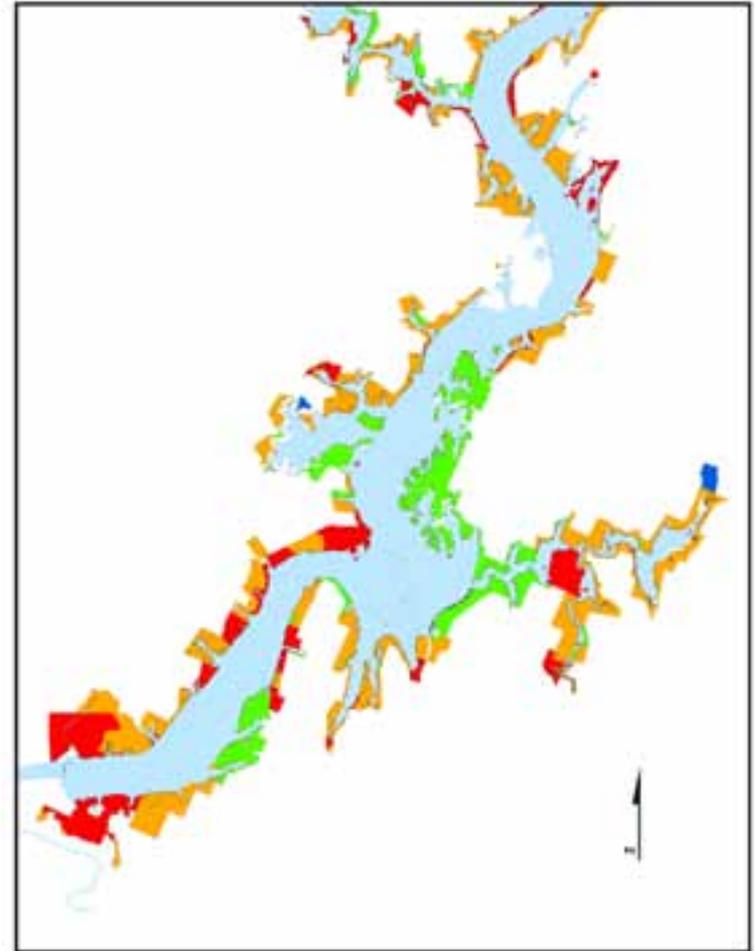
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## Chickamauga

-  TVA Land
-  Sold Land
-  Transferred Land
-  Flowage Easement
-  Chickamauga Reservoir

## Acreage

-  16,336
-  14,023
-  3,619
-  1,328



# Natural Resource Plan

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- TVA is preparing an EIS to conduct a comprehensive study of its future environmental stewardship needs.
- We are improving our processes for identifying and prioritizing needs.
- Draft plan is schedule for release this spring.



## Goals

- Provide management options for recreation, natural resource management, reservoir lands planning, and water resources.
  - Integrate stewardship objectives for maximum benefits and efficiencies.
  - Provide optimum public benefits.
  - Balance competing and sometimes conflicting resource uses.
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# **CONSERVATION LEADERSHIP INITIATIVES**



# **TVA** Shorebird Working Group

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TVA established a five-year working group comprised of federal and state agencies, non-governmental organizations, and volunteers to learn more about shorebird resources in the Valley.



**Greater and Lesser Yellowlegs**



**Sanderling**



# Shorebird Working Group

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- Project accomplishments include over 2000 hours of shorebird monitoring (3800 surveys at 160 sites), resulting in the largest shorebird monitoring effort ever completed in the Valley.
  - The group leveraged \$154,000 in cost sharing projects and \$47,000 was contributed from in-kind and volunteer support.
  - Several associated research projects focused on mudflat vegetation growth, modeling shorebird habitat, and shorebird and food resource response to reservoir drawdown.
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# Shorebird Working Group

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- Mudflats and other habitats exposed by seasonal drawdowns of TVA reservoirs provide diverse and important habitats for thousands of migratory shorebirds.
  - Approximately 28 regularly occurring shorebird species travel through the Valley.
  - The biggest challenge is to optimize water levels during times of shorebird use.
  - Successful collaboration – answered ecological questions to support policy decisions.
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# **TVA** Natural Areas

TVA's network of 154 Natural Areas is nationally recognized because most of the Natural Areas protect populations of federal- and/or state-listed plants or animals.



Large-flowered Skullcap

# **TVA** Natural Areas

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One program goal is to Identify and Protect:

- Rare or endemic species habitat (non-listed species)
- Unique or exemplary geological features or biological communities
- Significant scenic areas
- Representative community types



Lady's Bluff Small Wild Area  
Kentucky Reservoir

# Natural Areas

- **Small Wild Areas** (31) are sites with exceptional natural, scenic, or aesthetic qualities which are suitable for low-impact public use, such as hiking trails and overlooks.
  - **Habitat Protection Areas** (112) are established to protect rare plants, animals or exemplary biological communities or unique geological features.
  - **Ecological Study Areas** (5) consist of sites suitable for ecological research or environmental education.
  - **Wildlife Observation Areas** (6) are sites that have concentrations of viewable wildlife such as shorebirds, songbirds, and waterfowl.
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# **TVA** Land Management Partnerships

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To improve wildlife and waterfowl populations, TVA has provided more than 200,000 acres of land and water to federal and state agencies for waterfowl and upland wildlife management areas and refuges.



**Northern Bobwhite**  
Courtesy USFWS



# Dewatering Areas

- Dewatering areas on Kentucky and Wheeler Reservoirs provide premier overwintering waterfowl and migratory bird habitat. TVA has enjoyed a long-term partnership in the management of over 20,000 acres of these bottomland habitats.
- Partners
  - Wheeler National Wildlife Refuge
  - Tennessee National Wildlife Refuge
  - Tennessee Wildlife Resources Agency
  - Alabama Department of Conservation and Natural Resources

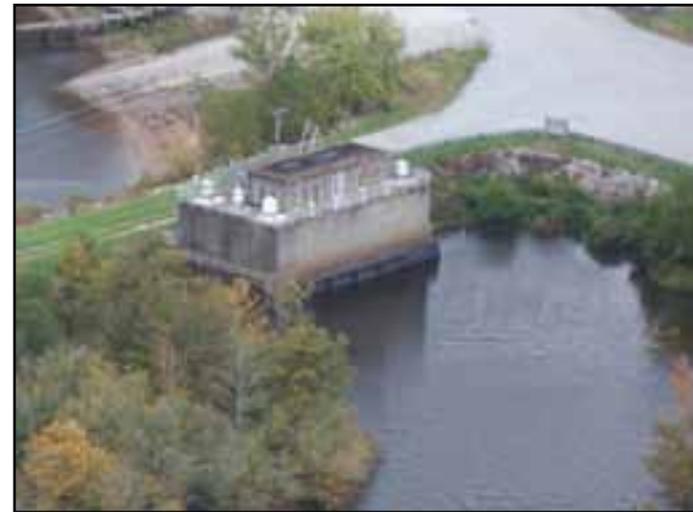




# Dewatering Areas



Camden Levee  
Kentucky Reservoir



West Sandy Pumpouse  
Kentucky Reservoir



# **TVA** Dewatering Areas

Waterfowl habitat provided in the dewatering projects is critical for meeting the state- and federal-established goals and objectives for the Lower Mississippi Flyway as defined North American Waterfowl Management Plan.



**Mallard**  
Courtesy USFWS



# **IVA** Targeted Watershed Initiatives

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- Partner with local citizens, organizations, and agencies
- Identify and quantify water quality issues
- Develop improvement plans
- Leverage resources
- Implement improvement projects

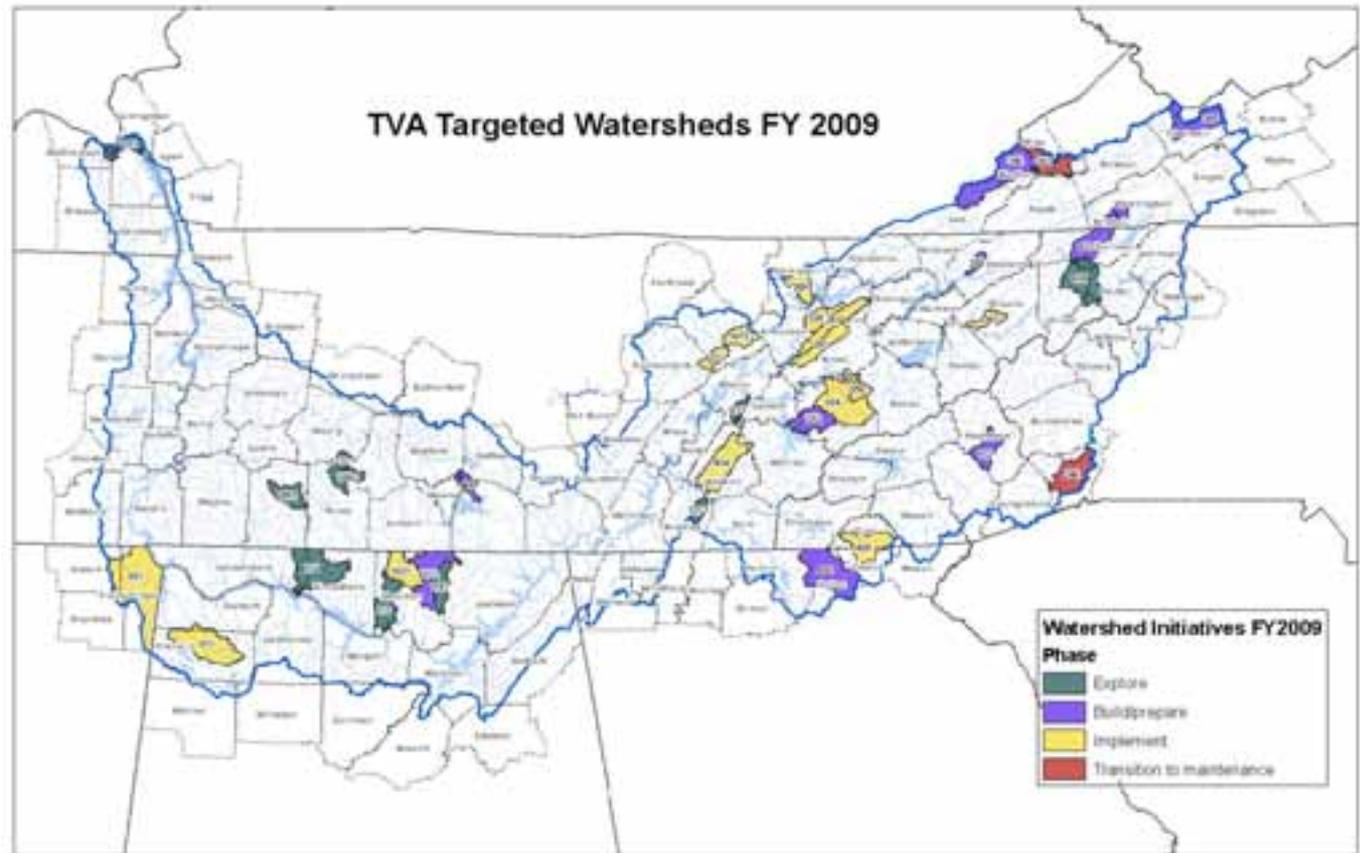


# TVA Targeted Watershed Initiatives

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- Targeted Watersheds
- Structured Approach
- Measurable Results



# **Watershed Technical Support**

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- Urban and agricultural BMPs
- Monitoring plan development and implementation
- Watershed assessment
- Watershed action plan development
- Grant development
- Stakeholder coalition development



# **TVA** Reservoir Releases Improvements

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- TVA has installed equipment and established minimum flows at many of its dams to add oxygen to the tailwater and to maintain a more constant wetted habitat.
- Since the early 1990s, TVA has spent about \$60 million on these improvements.



Chatuge Infuser Weir



# Reservoir Releases Improvements

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- Dissolved-oxygen concentrations have increased dramatically in more than 300 miles of river downstream from TVA dams, and wetted habitat is maintained in 180 miles of river previously impacted by intermittent drying.
- Studies show an increase in the number and diversity of fish and insects in these areas, as well as a significant growth in tailwater fishing.



# **TVA** Native Grassland Management

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Work with partners to establish and maintain native warm season grasses on TVA lands.

## **Objectives**

- eradication of non-native invasive species
- enhancement of grassland wildlife habitat and,
- development of forage crop demonstrations

Noeton Management Unit,  
Cherokee Reservoir





# **CONSERVATION LEADERSHIP OPPORTUNITIES**



# **IWA** Leadership Opportunities

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- Shorebird Working Group - all working group members indicated that they were satisfied with the results of the initiative and all felt that the group should continue beyond its original five-year mission.
  - Shorebird Working Group - need for dedicated stopover habitat for migratory shorebirds – Wheeler partnership?
  - Natural Areas - an established process and network for conservation initiatives.
  - Natural Areas - transform regional collections of natural areas into a network that has the resiliency to meet challenges.
  - Dewatering Areas - opportunities to meet multiple objectives and capitalize on new partnerships.
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# Leadership Opportunities

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- Targeted Watershed Initiatives - an established process for working with stakeholders and a network for addressing priority conservation initiatives.
  - Reservoir Releases Improvements - provides an example of how integrating system operations on a landscape scale can improve ecosystem health.
  - Native Grassland Management - opportunities exist due to the availability of TVA open lands and their unique geography.
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# **TVA** Other Initiatives

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- Land Conditions Assessment
- Carbon Abatement
- Non-native invasive plant management
- Integrated management (maintenance) of transmission line rights-of-way.



# Summary

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- A broad regional mission and the capacity to integrate regional objectives.
  - Steward of the Tennessee River – the watershed connects our stewardship partners.
  - Manage public land to provide multiple benefits, including conservation, recreation, and economic development.
  - The majority of TVA lands (79%) are allocated for Sensitive Resource Management and Natural Resource Conservation.
  - Preparing an EIS to conduct a comprehensive study of future environmental stewardship needs.
  - Seeking partnerships in land management.
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# TVA and Landscape Conservation

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Where do you think TVA fits in the and the Appalachian Landscape Conservation Geography?



The End

