

Natural Resource Management

Proposed Implementation Activities

Hill Henry

March 4, 2010



Objectives

Define resource management activities

Develop a range of options for management activities



Resource Management Activities

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- Access Controls and Lands Protection
- Access Roads and Parking Areas
- Agricultural and Open Lands Management
- Aquatic Ecology Management
- Boundary Maintenance
- Conservation Planning
- Dewatering Areas Management
- Dispersed Recreation
- Endangered Species Act Consultation
- Endangered Species Management
- Endangered Species Monitoring
- Environmental Education Program
- Forest Management
- Greenhouse Gas Management
- Habitat Enhancement Partnerships
- Land Conditions Assessment
- Land Stewardship Maintenance Checklist
- Mineral Rights Policy
- Non-native Invasive Plant Management
- Natural Areas Management
- Nuisance Animal Control
- Public Education and Communication
- Resource Management - Unit Plan
- Resource Stewardship Campaign
- Trails
- TVA Natural Heritage Database
- Wetland Resource Protection and Management
- Wildlife Habitat Council Certification
- Wildlife Habitat Management

- **Regulatory Compliance**
- **Resource Management**
- **Planning**
- **Communication and Partnerships**



Regulatory Compliance



Resource Management Activities

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TVA Endangered Species Consultation

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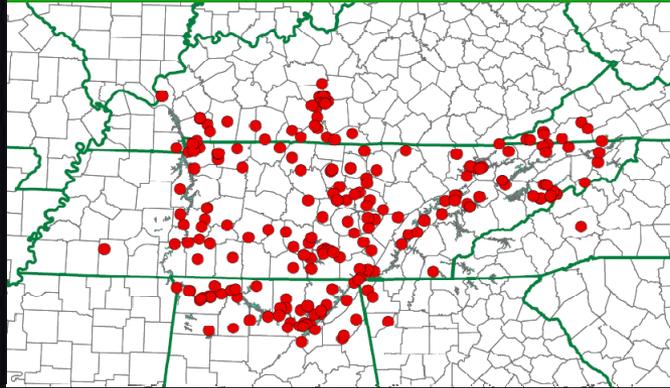


Pyne's Ground Plum



TVA Endangered Species Management

Section 7a2



TVA Endangered Species Monitoring

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Ruth's Golden Aster



Boulder Darter

Bluemask Darter



Green Pitcher Plant

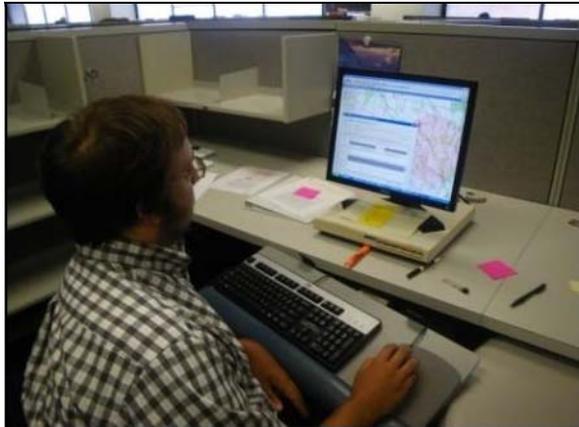


TVA Natural Heritage Database

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- **Developed in 1976 – Snail Darter Issue.**
- **Contains over 31,000 plant and animal records throughout the 7-State PSA, ranked 5th of 68 US and Canadian Programs**
- **Maintained by professional Botanists, Zoologists, Aquatic Biologists, and Wetland Biologists.**
- **Tracks 3,083 plant and animal species, varies annually.**
- **180 Federal Species (Endangered, Threatened, Candidate)**





Wetland Protection and Monitoring

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Section 404, Clean Water Act



IVA Non-Native Invasive Plant Management

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Executive Order 13112

Kudzu

Napalese browntop



Management of Resources

Resource Management Activities

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IWA Agricultural and Open Lands

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Fisheries Improvements

Shallow Water Structure



Fish Nurseries



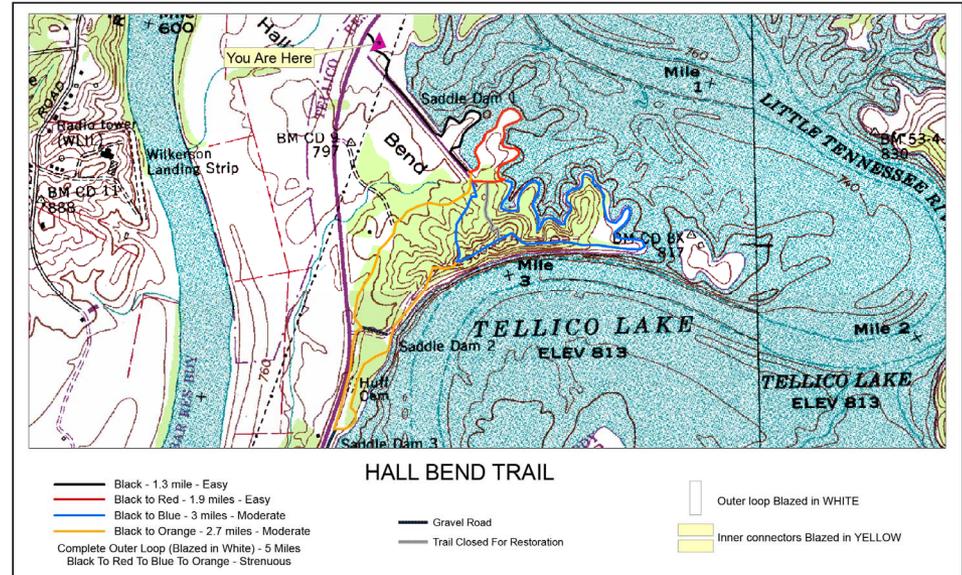
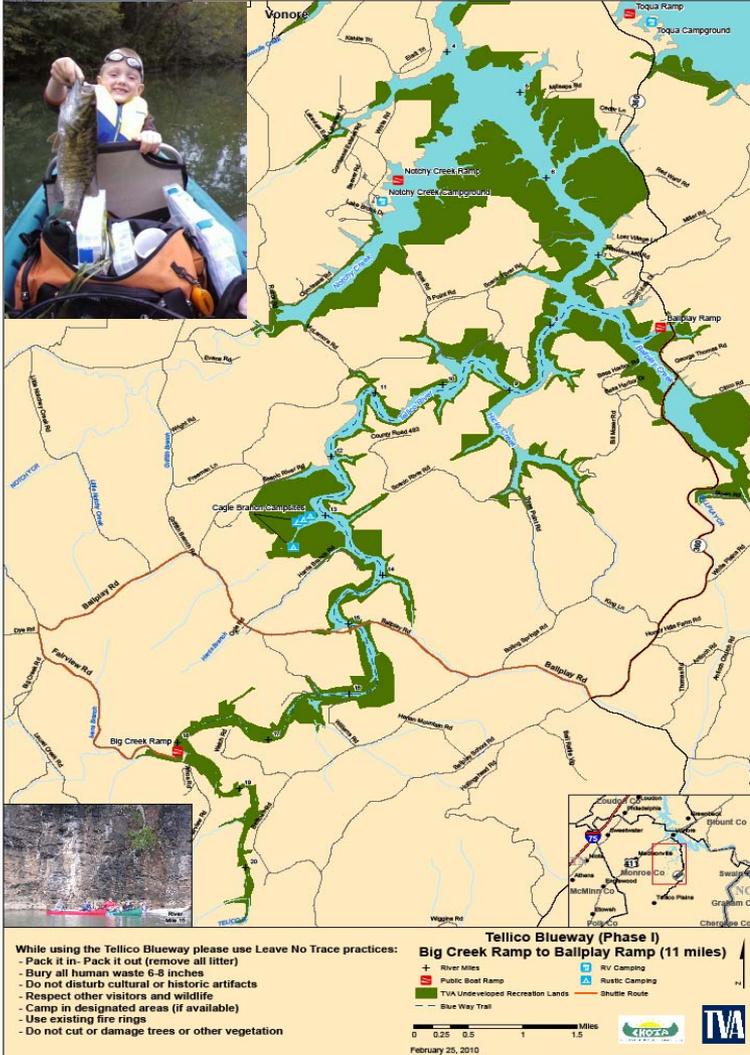
TVA Dewatering Areas

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Controlled Water Releases





Creating Opportunities for Recreation





Animal Control

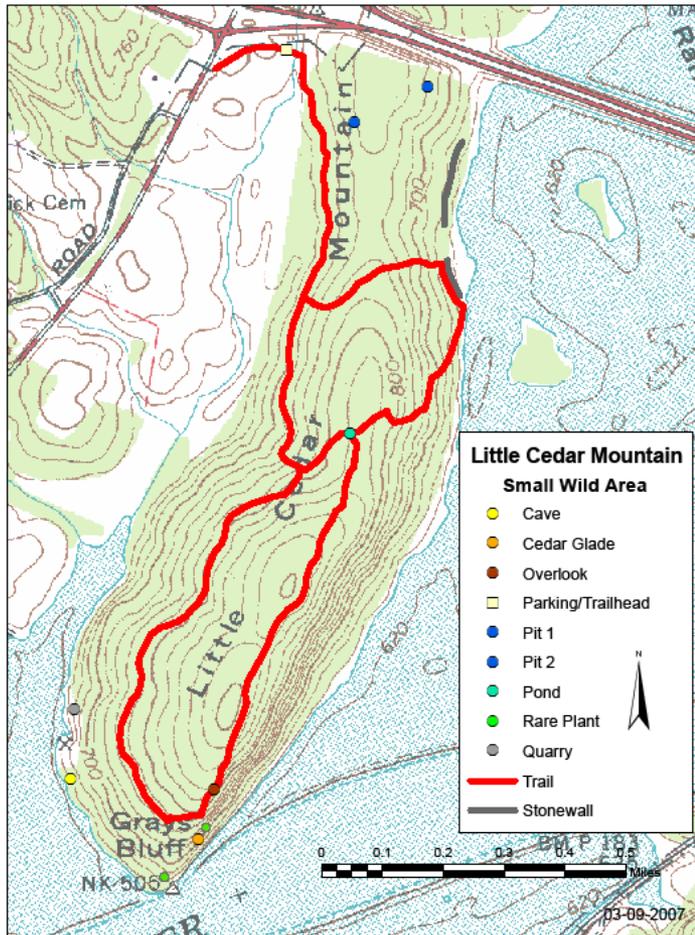
Avian Issues



Flooding



Interpretative Trails



Planning



TVA Wildlife Habitat Management

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Selective Plantings



Agricultural Buffers



Habitat Manipulation



Planning



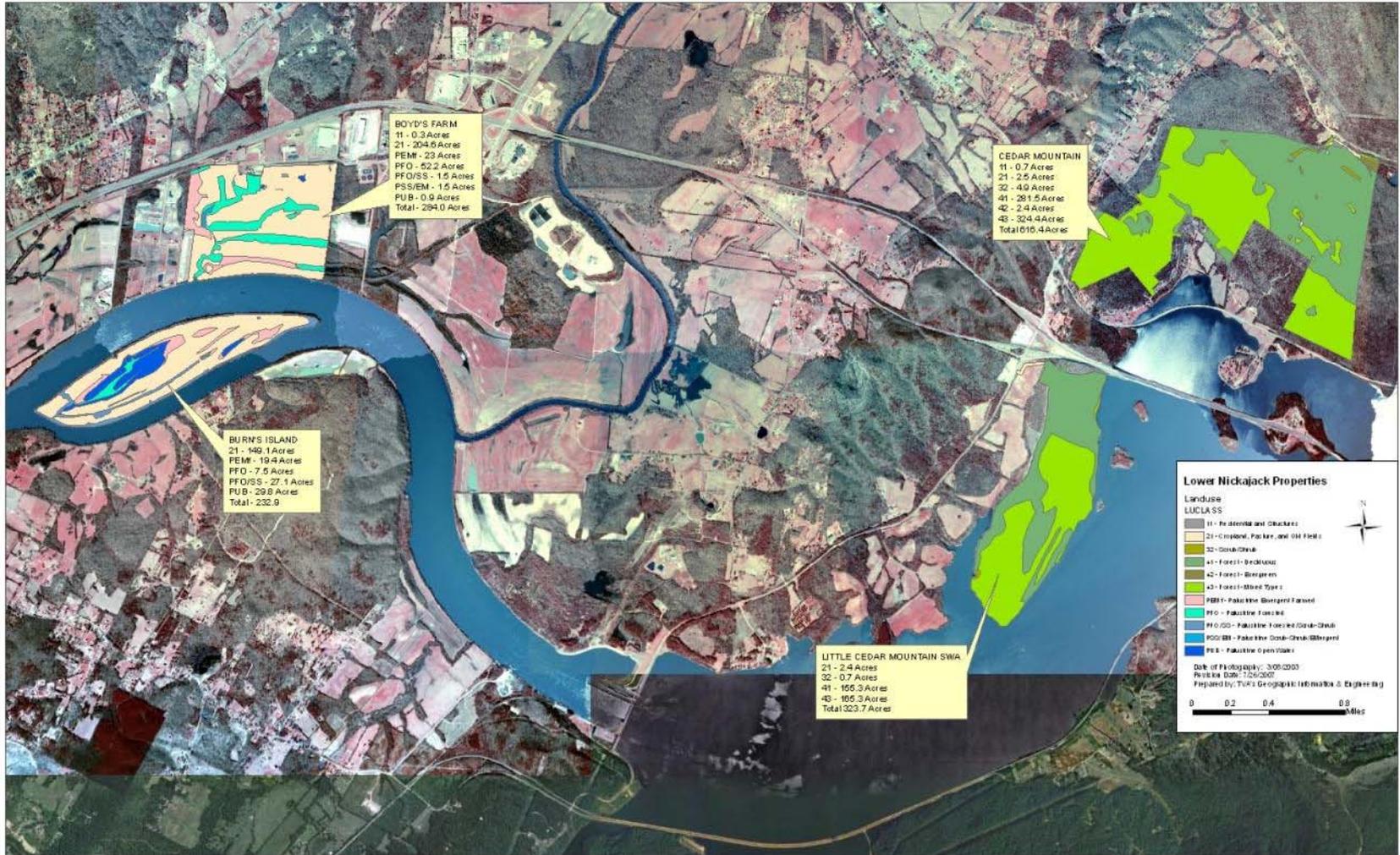
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TVA Land Conditions Assessment

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TVA Land Stewardship Maintenance Checklist

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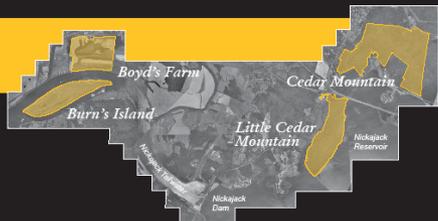
Unit Plans

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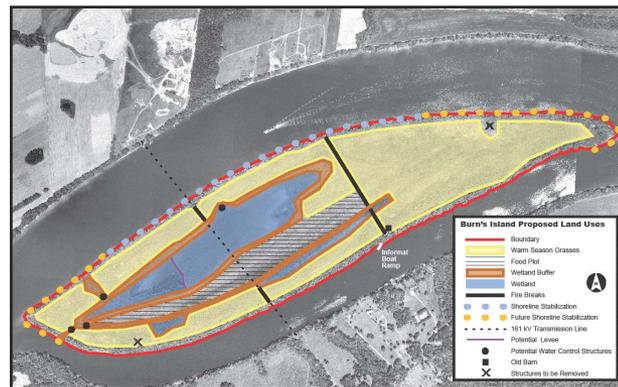
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Lower Nickajack Properties

Draft Comprehensive Management Plan



September 2007



Partnerships and Communication

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- **Environmental Education Program**
- **Habitat Enhancement Partnerships**
- **Public Education and Communication**
- **Resource Stewardship Campaign**





Environmental Education

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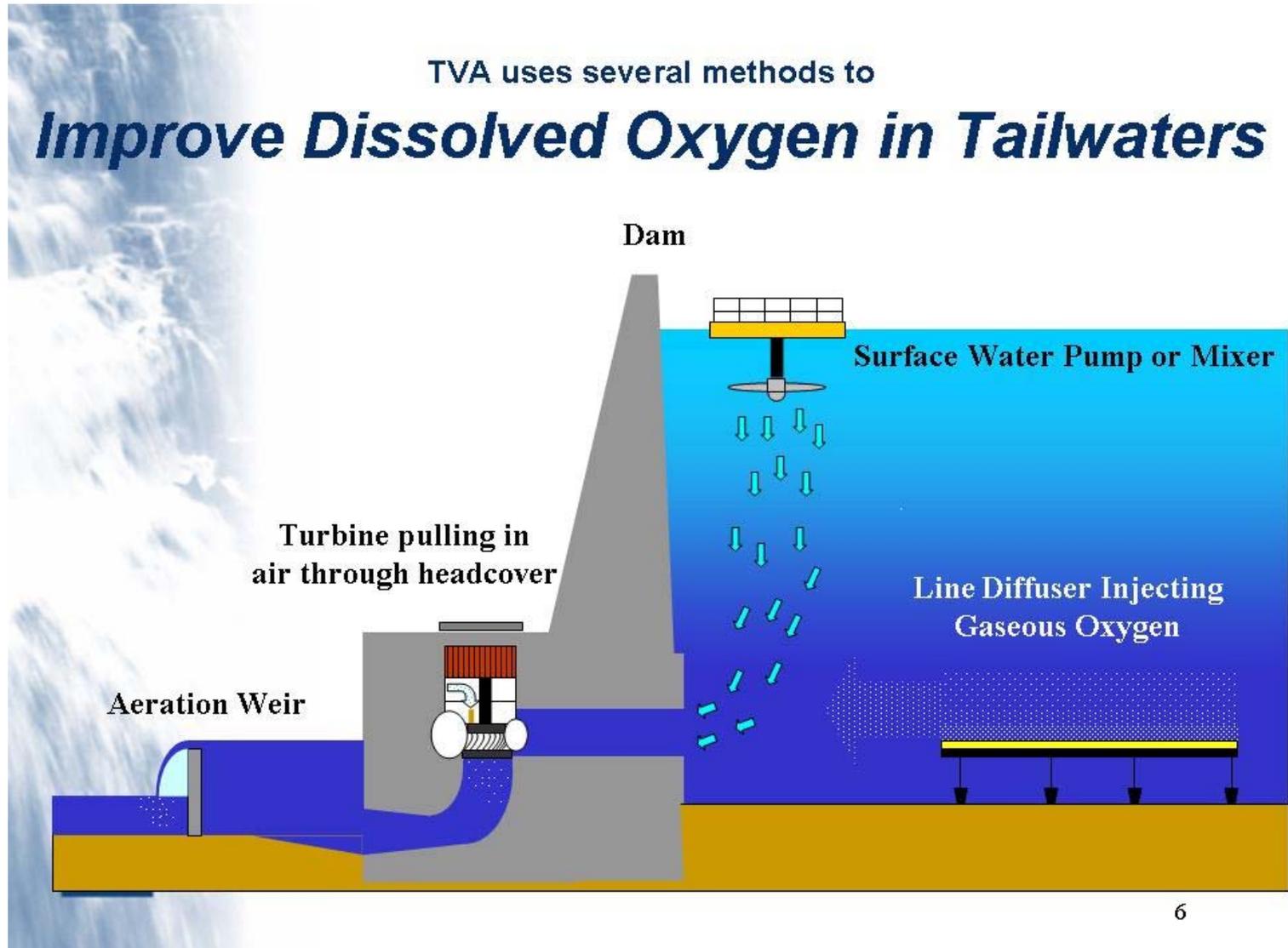


IVA Habitat Enhancement Partnership

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Resource Stewardship Campaign

Reservoir Release Improvement – Minimum Flow

- 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.
- 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.



Chatuge Infuser Weir

TVA Partnering with Regulators

Work with other agencies to collectively address endangered species issues.



Gray bats emerging from Nickajack Cave.

Staff from Biological Resources, Permitting and Compliance, Watershed Teams, and Stewardship Programs and Processes work together to monitor populations of endangered species on TVA lands.

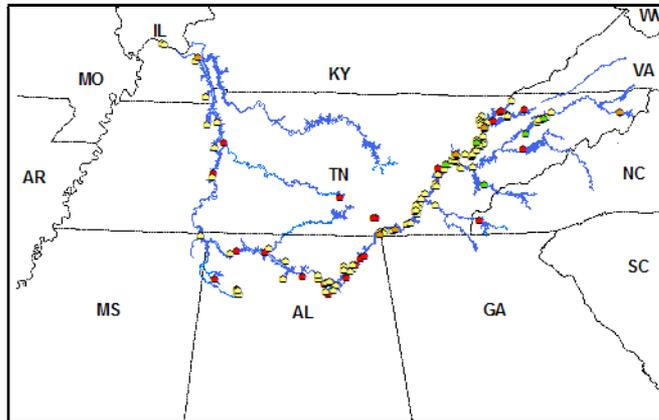
TVA Natural Areas



Lady's Bluff
TVA Small Wild Area



NATURAL AREA





Consider Timber Objectives



Snag Retention

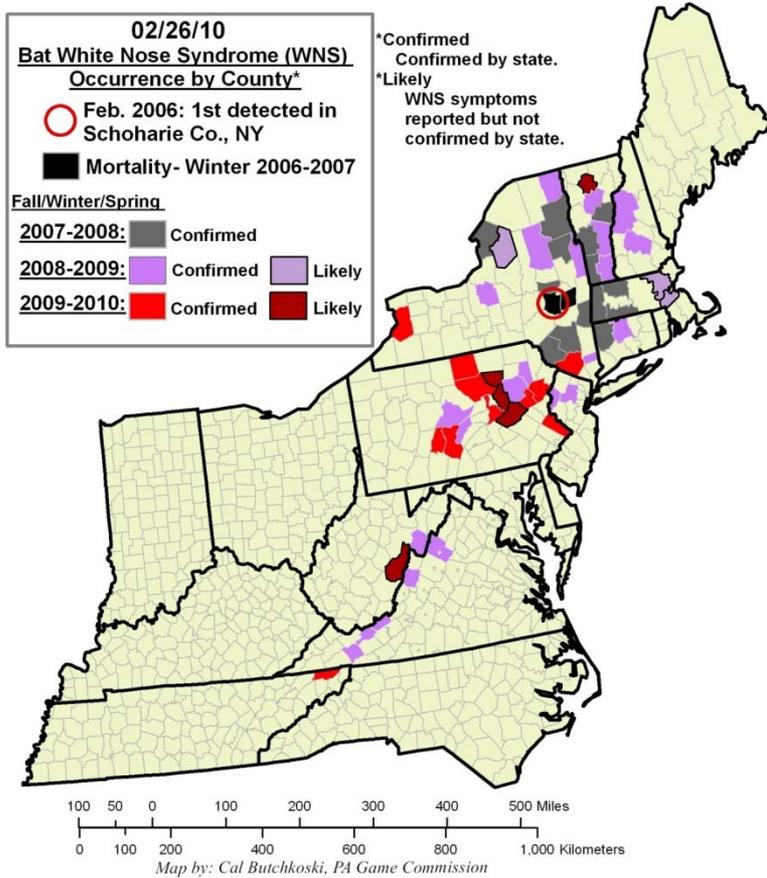
Forest Health

TVA Greenhouse Gas Management

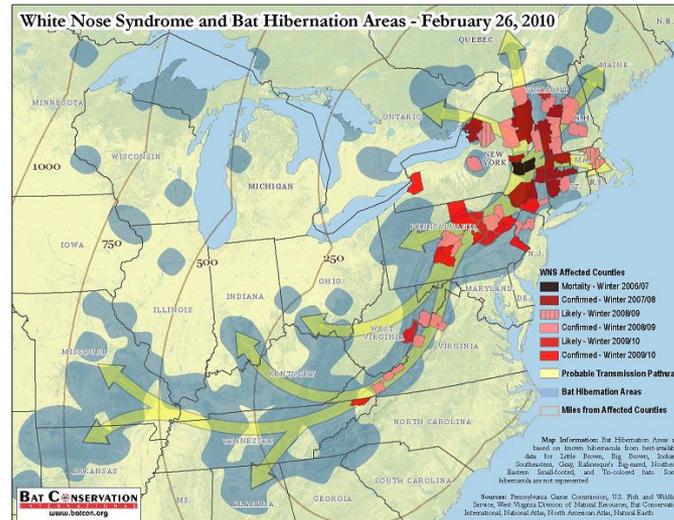
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Emerging issues or regulatory changes could impact proposed activities.



White Nose Syndrome could result in future operational constraints.