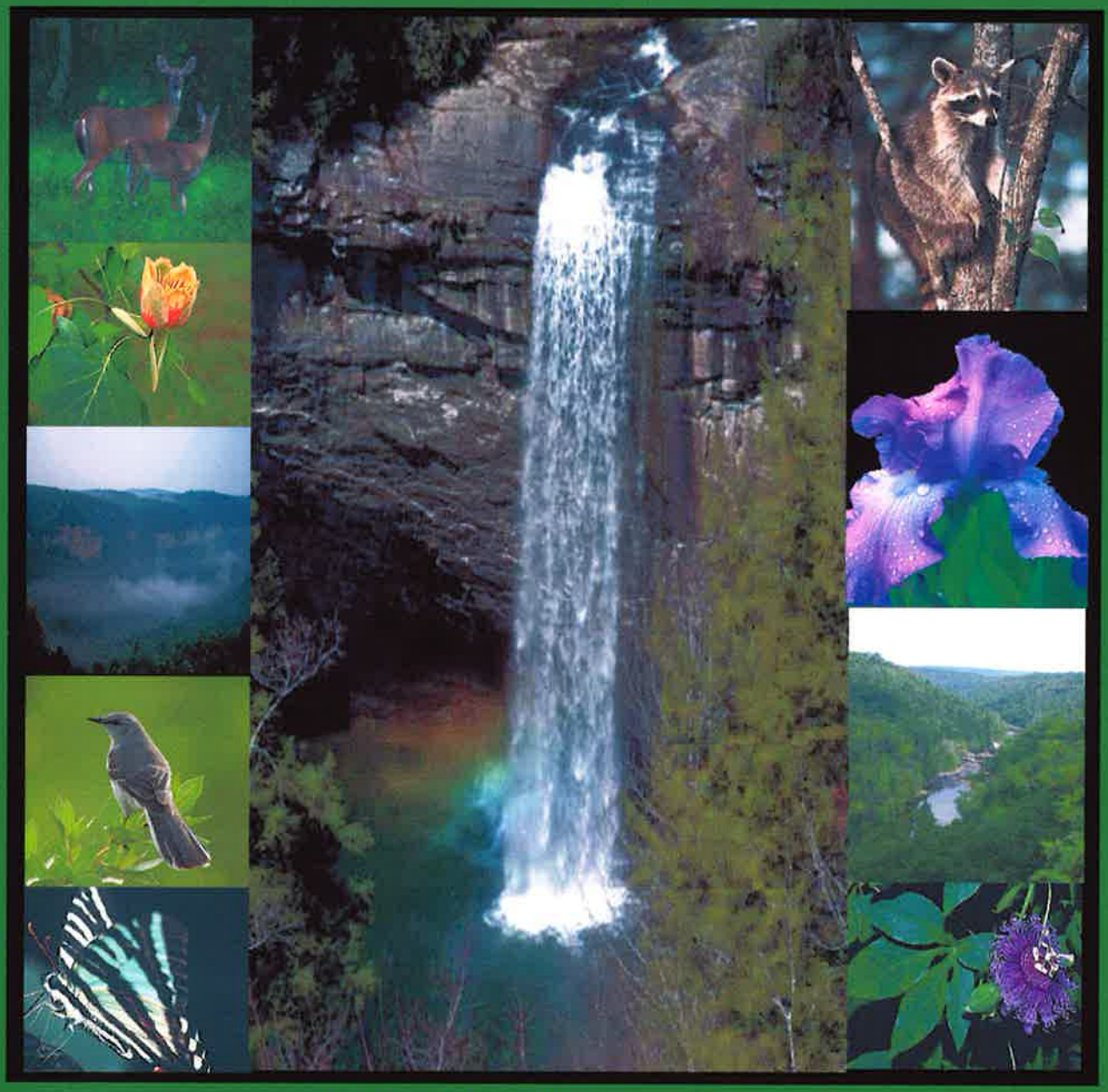
Tennessee Heritage Conservation Trust Fund Act of 2005



A Preliminary Report

December 2006

A Cooperative Project of

TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION

TENNESSEE DEPARTMENT OF AGRICULTURE FORESTRY

TENNESSEE HERITAGE CONSERVATION TRUST FUND ACT OF 2005

A PRELIMINARY ASSESSMENT OF NEEDS

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CONTENTS

EXECUTIVE SUMMARY 1

ACKNOWLEDGEMENTS OF DATA SHARING 2

INTRODUCTION 3

GLOSSARY OF ACRONYMS 5

PROCESSES AND TOOLS FOR EVALUATING NEEDS 7

POTENTIAL PARTNERS FOR FUNDING OF LAND ACQUISITION 12

GEOGRAPHICAL ORGANIZATION OF THE TENNESSEE HERITAGE CONSERVATION PLAN 16

SUMMARY OF LAND PROTECTION NEEDS 18

SECTIONS

WEST TENNESSEE PROJECTS.....West Tenn i-61

TENNESSEE RIVER POJECTS.....Tenn River i-56

MIDDLE TENNESSEE PROJECTS.....Middle Tenn i-168

CUMBERLAND PLATEAU PROJECTS.....Cumberland Plateau i-180

EAST TENNESSEE PROJECTS..... East Tenn i-106

APPENDICES

AREAS OF SPECIES RICHNESS.....APPENDIX 1

PRIORITY CONSERVATION AREAS.....APPENDIX 2

RARE PLANT LOCATIONS.....APPENDIX 3

WILDLIFE CONSERVATION AREAS (COMBINED).....APPENDIX 4

WILDLIFE CONSERVATION AREAS (AQUATIC).....APPENDIX 5

WILDLIFE CONSERVATION AREAS (KARST).....APPENDIX 6

WILDLIFE CONSERVATION AREAS TERRESTRIAL).....APPENDIX 7

FOREST LEGACY AREAS.....APPENDIX 8

THCP-AREAS OF INTEREST.....APPENDIX 9

HERITAGE CONSERVATION TRUST FUND ACT OF 2005.....APPENDIX 10

THE PUBLIC LANDS CHALLENGE.....APPENDIX 11

EXECUTIVE SUMMARY

This document was prepared as a cooperative effort by personnel from the Tennessee Department of Agriculture (TDA), Tennessee Department of Environment and Conservation (TDEC), and Tennessee Wildlife Resources Agency (TWRA). It is intended as a preliminary assessment of conservation needs for the newly created Tennessee Heritage Conservation Trust as they carry out the mandate outlined in TCA-11-7 to "assist the state in permanently conserving and preserving tracts of land within the state of Tennessee for the purposes of promoting tourism and recreation, including outdoor activities such as hunting and fishing; protecting, conserving and restoring the state's physical, cultural, archeological, historical and environmental resources; and preserving working landscapes."

The Tennessee Conservation Act of 2005 details the importance of "special places" in Tennessee and recognizes the threats being placed on these places by increasing human population and development. Without action, these areas and their rare plant and animal life, spectacular views, and historical value may be lost to future generation of Tennesseans.

This document represents the assessments made by the three state departments and agencies with primary responsibility for protecting, managing and restoring the State's extensive and diverse physical, cultural, archeological, historical and environmental resources. While extensive in scope, this document is not intended to be the "bible" for guiding the actions of the TCHTF Board. Additional input from numerous other organizations will be necessary before the Board will have a clear picture of the conservation needs in this state.

The report identifies more than 275 significant and critical projects comprising more than 700 sites in the State. Significant projects were identified in all 95 counties in the state. Within the "Areas of Interest", more than 2.6 million acres were identified. While almost 700,000 of those acres are already in some type of protected status (excluding federal lands), a minimum of 1.2 million acres were identified that still need to be protected and or made available for public access. The cost to protect these additional areas is estimated at more than $1.3 billion.

The report identifies potential sources of funding that might be used to leverage funds provided by the "Act of 2005" in subsequent years. It is estimated that the leveraging process with partners could yield $20 million annually or more to match funds appropriated by the State under this act.

ACKNOWLEDGEMENTS OF DATA SHARING

A project of this magnitude would not have been accomplished if it were not for the collaboration and partnership in data sharing. Many players have been involved in this effort. Below is a list of groups who have been instrumental in acquiring and sharing data. Thank you for your understanding, dedication, and willingness to share data and work on this private/public collaborative effort.

North Chickamauga Creek Conservancy
State of Tennessee, Department of Agriculture, Division of Forestry
State of Tennessee, Department of Environment and Conservation
State of Tennessee, Department of Finance and Administration, OIR GIS Services
State of Tennessee, Tennessee Wildlife resources Agency
Tennessee Chapter of The Nature Conservancy
Tennessee Parks and Greenways Foundation
Tennessee River Gorge Trust
University of the South
Wolf River Conservancy

INTRODUCTION

In 1903 President Theodore Roosevelt started this nation on the path toward greater awareness of our natural resources and the importance of conserving those resources. His experiences as a big game hunter, and observations of dwindling game populations in the western United States convinced him that our natural resources were not inexhaustible. During his tenure as President, Roosevelt was able to add an astounding 230 million acres to the public land base in the United States; most all of those lands in the western US.

In 1927 the Tennessee and North Carolina legislatures each voted to provide $2 million to help purchase the land for the Great Smoky Mountain National Park. Further, a partnership with the Federal government and private interests provided a broad based partnership that resulted in the purchase of more than 600,000 acres of mostly scarred and overharvested forestland that is now the most visited National Park in the country.

Today, more than one hundred years after Theodore Roosevelt's bold conservation initiatives, we still struggle to ensure that our natural resources will be adequately conserved for future generations. With urban sprawl and the accompanying loss of open lands an ever-present and growing threat, we need to redouble our efforts to make sure that we conserve lands with important and unique natural resource values. The legacy and vision of Theodore Roosevelt is as valid today as it was in the early 1900's. However, public lands represent less than 5% of all the lands in Tennessee. In all areas of the state, our natural and cultural heritage exists largely on the 95% of the lands still held in private ownership.

Large industrial and forest industry landowners are apparently in the midst of a major re-evaluation of their land holdings in Tennessee and in the Southeast. Some companies are selling all of their lands, while others are selling their lands and retaining agreements for harvesting wood products. Still others are selling lands at one location in exchange for a land purchase in another location closer to a processing facility. All told, over 1,000,000 acres of corporate timberland have sold in the past few years or is in the process of being sold here in Tennessee. The ultimate impact of these changes on Tennessee's forested landscape is difficult to predict, but it seems clear that some of our most treasured resources may be lost within a short period of time.

Other states have begun to answer the need to protect their open spaces as our nation's population continues to grow. New Jersey has embarked on an ambitious plan to conserve 1 million acres of open space. The state of Maine recently made national news when they established a conservation easement on 750,000 acres of forestland, protecting it for continued public recreational uses in perpetuity. In Tennessee, our legislature is still wrestling with how to fund state government with limited dollars, and there are many important areas that need adequate funding: better schools, health care, law enforcement and highways are just a few of the items that come to mind. But when it comes to affecting the quality of life for future generations of Tennesseans, protecting the critical habitats of wildlife in jeopardy, assuring that the abundant species remain abundant, securing enough open space to pursue outdoor recreation, and preserving the cultural sites that give us a link to our past should be a part of our long-range

vision. Budget problems in state government will come and go, but some of these lands are available right now. If we wait until later to take action, it may be too late.

Tennessee has experienced tremendous human population growth in recent years. By 2025, our state will have 17% more people than it had in 2000, but will have 1.8 million acres less open space. The Nashville Basin has been identified as the 12th most at-risk area in the nation, the highest risk area in any of the southeastern states.

In 2003 the State Recreation Plan identified several plans of action to help address the critical issues of Tennessee's recreation and conservation heritage. Among those strategies identified was a proposal to develop a comprehensive statewide plan for the acquisition of recreation lands (Proposal #7).

In 2005 Governor Bredesen proposed, and the legislature approved funding of $10,000,000, viewed as the beginning of implementation of Proposal #7. In 2006 an additional $10,000,000 was appropriated. The legislation also called for the formation of the Tennessee Heritage Conservation Trust Fund with a board of trustees to direct this acquisition program.

Objectives of the Plan

This plan attempts to identify important conservation, wildlife, and other natural and cultural heritage lands based on science and research, plus knowledge of the ever-changing issues of availability and cost. The document is designed to guide and assist the Board in assessing needs and setting acquisition priorities. It also attempts to identify potential partnerships and funding mechanisms that might serve to enhance the board's ability to leverage its financial resources.

The document was developed as a collaborative effort of the major land conservation management agencies of the State including the Department of Agriculture (Division of Forestry), Department of Environment and Conservation (Division of Natural Areas, Division of Archaeology, and Division of Parks), and the Tennessee Wildlife Resources Agency. Even though each of these agencies or departments has a unique mission, providing areas for people to enjoy outdoor recreational activities and the protecting the habitats of imperiled species and the otherwise unique and special outdoor places of Tennessee is common to all. The synergistic effect of these agencies combining their knowledge and expertise should prove useful to the Board as they work to make the best decisions and to leverage a very limited amount of financial resources.

Also included as an appendix is a six-page report developed by The Vanderbilt Center for Environmental Management Studies, entitled *The Public Lands Challenge: Protecting Tennessee's Natural Lands for Future Generations*.

Daniel Burnham once said, "Make no little plans. They have no magic to stir man's blood...Make big plans; aim high in hope and work." This document was assembled to assist in the crafting of a bold vision for an expanded public lands program.

GLOSSARY OF ACRONYMS

AMSL	above mean sea level
APSU	Austin Peay State University
AT	Appalachian Trail
ATC	Appalachian Trail Conference
BCI	Bat Conservation International
BCR	Bird Conservation Region
B-Rank	Biodiversity Rank
BMP	Best Management Practice
CBA	Chickasaw Basin Authority
CCC	Civilian Conservation Corps
CMA	Conservation Management Agreement
CTSP	Cumberland Trail State Park
CWCS	Comprehensive Wildlife Conservation Strategy
dbh	diameter at breast height
DCH	Designated Critical Habitat
DNA	Division of Natural Areas
DNH	Division of Natural Heritage
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DU	Ducks Unlimited
ESA	Endangered Species Act
ETSU	East Tennessee State University
FLC	Foothills Land Conservancy
FWS	US Fish and Wildlife Service
G-Rank	Global Rank
GAP	Gap Analysis Program
GCN	Greatest Conservation Need
GIS	Geographic Information System
GRP	Grassland Reserve Program
GSMNP	Great Smokey Mountain National Park
HCP	Habitat Conservation Plan
HFRP	Healthy Forests Reserve Program
LPRF	Local Parks and Recreation Fund
LTT	Land Trust for Tennessee
LWCF	Land and Water Conservation Fund
MTSU	Middle Tennessee State University
NAWCA	North American Wetlands Conservation Act
NCCC	North Chickamauga Creek Conservancy
NFWF	National Fish and Wildlife Foundation
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRTF	Natural Resources Trust Fund
NWCF	National Wetlands Conservation fund
NWTF	National Wild Turkey Federation

PIF	Partners in Flight
QU	Quail Unlimited
RCD	Resource Conservation District
RMEF	Rocky Mountain Elk Federation
ROW	right of way
RTP	Recreation Trails Program
SCC	Southeastern Cave Conservancy
SCRLT	South Cumberland Regional Land Trust
SCSRA	South Cumberland State Recreation Area
SHP	State Historic Park
SMZs	Stream Management Zones
SNA	State Natural Area
S-Rank	State Rank
SLAF	State Land Acquisition Fund
SWG	State Wildlife Grant
TCF	The Conservation Fund
TCS	Tennessee Cave Survey
TCWP	Tennessee Citizens for Wilderness Planning
TDA	Tennessee Department of Agriculture
TDEC	Tennessee Department of Environment and Conservation
TDF	Tennessee Division of Forestry
TDOA	Tennessee Division of Archaeology
TDOT	Tennessee Department of Transportation
THC	Tennessee Historical Commission
THCA	Tennessee Heritage Conservation Act of 2005
THCP	Tennessee Heritage Conservation Plan
THCT	Tennessee Heritage Conservation Trust
TIMO	Timber Investment Management Organization
TNC	The Nature Conservancy
TOS	Tennessee Ornithological Society
TPGF	Tennessee Parks and Greenways Foundation
TRGT	Tennessee River Gorge Trust
TSF	Tennessee State Forest
TSMP	Tennessee Stream Mitigation Program
TSP	Tennessee State Parks
TSRA	Tennessee Scenic Rivers Association
TTA	Tennessee Trails Association
TTU	Tennessee Technological University
TU	Trout Unlimited
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
TWRF	Tennessee Wildlife Resources Foundation
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Service
USFS	U.S. Forest Service

USFWS	U.S. Fish and Wildlife Service
UTK	University of Tennessee - Knoxville
WMA	Wildlife Management Area
WOA	wildlife observation area
WRC	Wolf River Conservancy
WRP	Wetlands Reserve Program
WWF	World Wildlife Fund

PROCESSES AND TOOLS FOR EVALUATING NEEDS

The planning group utilized a variety of tools and methods to help identify priority areas. Several new planning models were developed to assist in evaluating the thousands and thousands of pieces of biological data collected over the past several years. Using a powerful Geographic Information System (GIS) as a foundation, available information has been analyzed, mapped, and modeled. In many cases the use of these special models allowed the evaluation of scientific data in a fashion not previously undertaken in Tennessee. Other tools utilized to evaluate sites across the state were more traditional in their approach, but were still quite valuable. A description of the various processes and tools used in evaluating needs are presented on the following pages. Maps are also presented in the Appendices.

Areas of Species Richness - GAP Analysis Program (GAP)

The Gap Analysis Program (GAP) is a cooperative project between federal, state, regional, and private agencies and is guided by the Biological Resources Division of the U.S. Geologic Survey (USGS). The Tennessee GAP was a cooperative effort between TWRA and TTU. GAP utilizes geographic information systems to map the distribution of plant communities and terrestrial vertebrate animal species, and determine how much protection biological reserves and conservation lands provide to species rich areas. The geographic data layers required to conduct GAP include: land cover or vegetation types, predicted animal species distributions, and land ownership/land management status. The species richness map shows the number of animal species predicted to be in a location based on range data and habitat preference for all of Tennessee's native fauna (Appendix 1). Areas of species richness overlaid with locations of public managed lands can determine the protection afforded to biodiversity.

Priority Conservation Areas – The End Result

The Nature Conservancy's ecoregional planning employs rigorous scientific analysis and depends upon input from experts in academia, government agencies, and other scientists. In Tennessee, the Conservancy engaged experts from TDEC-DNA, TWRA, TVA, USFWS, USGS, USFS, and numerous academics from major universities across the state. The effort identified and evaluated target animal and plant species, natural communities, and ecological systems at a multi-state ecoregional level. This project delineated a network of priority conservation areas that should be protected to meet goals for conservation targets (Appendix 2).

TWRA collaborated with similar experts in aquatic resources to further define critical habitats. This exercise focused on habitat for fish, crayfish, mussels, and snails. The goal was to identify 1) areas that currently support rare species, 2) areas that have high diversity of aquatic species, and 3) areas where habitat could be improved to restore native species. Most of these habitats are threatened by increased water withdrawals and excessive sediment deposition. The acquisition of these river corridors would allow the state to protect sensitive habitats. Areas which are not available for purchase would be priority areas for cooperative programs to reduce negative effects of various activities in the watershed.

The above projects were combined into one map identifying priority conservation areas across the state. The result, the Conservation Priority Areas Map, shows where the State of Tennessee should focus it conservation efforts.

CWCS Models Identifying Areas of Biological Importance

The TWRA Nongame and Endangered Species Program receives federal funding through the State Wildlife Grants Program administered by the USFWS. State Wildlife Grants are annually appropriated funds. In an effort to best utilize the funds, the state has developed a Comprehensive Wildlife Conservation Strategy (CWCS). One of the elements of this CWCS is the identification of "species of greatest conservation need".

The TWRA and it planning partners developed criteria with which to evaluate the conservation need of Tennessee's native species. These criteria relied upon a species' legal status, state (TWRA) and/or federal (FWS) designation (endangered, threatened, etc.), a species' global or state rarity designation (NatureServe), an accepted national or regional management plan (e.g., US Shorebird Conservation Plan), a species geographic distribution (an endemic species to Tennessee), or other special considerations. A brief description of these criteria follows.

Legal Status - TWRA, through the authority of TCA 70-8-104 and TCA 70-8-105, lists wildlife species as deemed in need of management, threatened or endangered. Criteria for listing include: inclusion on the federal endangered/threatened list, data on population status, habitat status and trends, identified threats to their continued existence, and feasibility of the species being re-introduced.

The USFWS, through the Endangered Species Act, lists faunal and floral species as endangered or threatened. Criteria considered include species distribution, population status, threats in terms of habitat loss or modification, over utilization, disease/predation, inadequacy of existing regulations, and any other man-made factors affecting the species' continued existence.

Global or State Status - NatureServe, an international non-profit conservation organization, provides scientific information and tools to assist in the conservation of species and natural communities. Their network of Natural Heritage Programs track species status at the state and global scales. Species are assigned State and Global Ranks determined by a species population status.

Regional or National Plan - Numerous conservation plans have been developed to address the conservation of various bird species. Examples of plans include the US Shorebird Conservation Plan, the North American Colonial Waterbird Conservation Plan or the Partners in Flight Landbird Plan. These plans provide species reviews and status rankings.

Geographic Distribution and Vulnerability - Tennessee is inhabited by several species that are found nowhere else on earth. The continued existence of these species is dependent on their management in Tennessee. Because of their restricted distribution, these species may not have the resiliency to absorb or rebound from threat impacts.

Special Considerations - Some species may be selected as a species of conservation need due to commonality with other selected species of other geographic areas, globally significant aggregations of species, sharing of common ecological processes, or inhabiting a biologically diverse area.

Once "species of greatest conservation need" were identified, their habitat preferences were assigned to habitat vegetation types. For example, South Central Appalachian Cove Hardwood is preferred habitat for wood thrush, suitable for hooded warbler, and marginal for peregrine falcon. All habitat types within the state were evaluated based on the habitat needs of the species of greatest conservation need.

Finally, species occurrence data and habitat data were modeled to determine areas containing rare species concentrations, thus areas of key habitats.

Prioritization of Conservation Targets for the TDEC-Division of Natural Areas

Conservation priorities for the TDEC-DNA are based on the TNC/NatureServe standardized ranking process used systematically by all natural heritage programs throughout North, Central, and South America. The process uses specific criteria to establish state and global ranks for plant and animal species, as well as for natural communities. These state and global ranks for species and communities are then used to determine the biodiversity ranking for conservation targets, or sites, as follows.

Plants and animals, as well as plant communities, are assigned both a state rank (S-rank) and a global rank (G-rank) that indicates their degree of rarity. S-ranks are assigned by individual state natural heritage programs, in cooperation with other experts, following specific criteria and indicate the degree of rarity of a species within a given state. G-ranks are assigned by NatureServe, in cooperation with state natural heritage programs and other experts, following specific criteria and indicate the degree of rarity of a species throughout its known range world wide. Both S and G-ranks use a scale of 1 to 5, with 1 being the most rare and 5 being the most common.

Conservation targets, or sites, are assigned a biodiversity ranking (B-rank) that indicates a given site's biodiversity significance. B-ranks are assigned by individual state natural heritage programs, in cooperation with other experts, following specific standardized criteria and indicate the degree to which a given site contributes to the conservation of biological diversity. B-ranks

use a scale of 1 to 5, with 1 being the most biologically diverse and 5 being the least biologically diverse. S and G ranks for plants, animals, and communities are a key factor in determining the B-rank of a given site.

Conservation priorities for the TDEC-DNA are determined largely, but not exclusively, by the B-ranks of individual sites. The DNA places a high priority on the conservation of sites with a B-rank of 1 or 2, gives careful consideration to sites with a B-rank of 3, and considers sites with a B-rank of 4 or 5 only when there are other significant mitigating circumstances. The underlying science used to derive these ranks is provided by the DNA-Natural Heritage Inventory Program, as well as the Rare Species Protection Program. This selection, acquisition, and management of sites are provided by the DNA-State Natural Areas Program. This process ensures that the DNA's limited financial and personnel resources are expended on those sites that offer the greatest contribution to the conservation of Tennessee's biological diversity (Appendix 1).

Property Integrity and Manageability of State Lands

Zone integrity is the effect adjacent lands or in-holding has on the management of state property. In-holdings or near in-holdings affect the landscape if the land use changes, or if the accessibility to state land or to control access to state land is affected. Example: An in-holding if sold for development generally would have a negative impact on the surrounding state land conservation value. Additionally, this in-holding would need access, as required by law, which would further impact the state property and conservation value. Therefore, the degree to which the subject property affects the integrity of the state property function, operability and achievement of the agency's mission is estimated by zone integrity. To rank the magnitude of affect of adjacent lands on manageability and integrity, certain conditions are considered including:

no effect now or in the foreseeable future
adjacent land borders state on two sides, no access issue
adjacent land borders state on two sides, access issue
adjacent land borders state on more than two sides, no access issue
adjacent land borders state on more than two sides, with access issue
complete in holding

Project manageability refers to the ability to manage the property or project area to meet the mission of an agency(s) or to improve the management to meet the mission of an agency(s). This includes the connections to other public lands. These connections provide corridors for access improvement and protection from adjacent land use changes. The ecological, geological and cultural impacts should be considered in the "conservation value" section. The degree to which the manageability of a project is either impacted or enhanced should be considered. The more the subject parcels positively affects the existing property's manageability would result in a higher score and would include:

No effect on the management of the project
Some effect on the management
Some effect on manageability and makes connection to other public property
Moderate effect on manageability

Moderate to considerable effect with connection to other public property
High level of effect and/or connects to a large extent to other public property or to multiple public properties.

Cultural Sites Ranking Process (War Sites)

Cultural and historical sites related to War and Military activities are rated on a nine point criteria established by the Tennessee Wars/Historical Commission to reflect general and specific goals and objectives for historic preservation in the state (see Tennessee Wars Commission Duties and Objectives). Each topic is to be given a rating from one (1) to ten (10) with a total of ninety (90) points being possible. They are as follows:

1. Projects that develop preservation, management and/or interpretation plans for Tennessee Wars related sites using a community consensus for building approach and funding to support administrative staff to implement such plans.

2. Survey projects that identify Tennessee Wars Commission related sites and/or result in National Register nominations.

3. Archaeological projects that are designed to investigate Tennessee Wars sites, especially fortifications, encampment, and battlefield sites.

4. Projects emphasizing interpretation or heritage tourism.

5. Projects that further the documentation and evaluation of historic Tennessee African American resources during the Tennessee Wars.

6. Projects that provide assistance for the purchase of easements or other property interests for protection of Tennessee War sites, taking into consideration the threat to the site and its level of significance.

7. Applicants should show evidence of a degree of public interest, participation and support, i.e., endorsements, newspaper clippings, etc.

8. Applications should demonstrate the ability to satisfactorily administer and carryout a project of the type proposed and can reliably be expected to meet all legal, contractual, and financial obligations.

9. Applicants should be completely filled out, fully legible, contain all requested information and very clearly explain the purpose and methodology of the project.

Land Conservation Priority Matrix

Based on the processes outlined above, as well as other criteria such as relative land costs, unique features, etc., initial efforts were made to develop a conservation priority matrix by which each parcel of land could be ranked. Presently, this matrix is still in the developmental stage.

POTENTIAL PARTNERS FOR FUNDING OF LAND ACQUISITION

Tennessee has been very fortunate to have developed a variety of successful partnerships which have allowed for the leveraging of limited acquisition and protection dollars in past years. This new initiative should continue to rely on partnerships and grants to "stretch" limited funding and reduce the cost of acquisitions. Following is a partial list of past and potential future funding partners.

1. Federal

   a. **North American Wetlands Conservation Act (NAWCA)** (http://www.fws.gov/birdhabitat/nawca/grants.htm) - The North American Wetlands Conservation Act (Act) of 1989 provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico. The Act was passed, in part, to support activities under the North American Waterfowl Management Plan, an international agreement that provides a strategy for the long-term protection of wetlands and associated uplands habitats needed by waterfowl and other migratory birds in North America. In December 2002, Congress reauthorized appropriations for the Act through Fiscal Year (FY) 2007, reflecting its and the public's support of the Act's goals. Congress increased the appropriation authorization to $55 million in 2003, with $5 million increases to occur annually until FY 2007, when the appropriation cap will be $75 million.

      A North American Wetlands Conservation Act standard grant proposal is a 4-year plan of action supported by a NAWCA grant and partner funds to conserve wetlands and wetlands-dependent fish and wildlife through acquisition (including easements and land title donations), restoration and/or enhancement, with a grant request between $50,001 and $1,000,000. Small grants (up to $50,000) are administered separately. Match must be non-Federal and at least equal the grant request (referred to as a 1:1 match). Match is eligible up to 2 years prior to the year the proposal is submitted and grant and match funds are eligible after the proposal is submitted and through the project period.

   b. **Forest Legacy** (http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml) - The Forest Legacy Program protects private lands from being converted to non-forest uses through the purchase of conservation easements or fee simple titles from willing private landowners. The program is voluntary on two levels; states decide whether or not to join and private forest landowners voluntarily agree to place conservation easements on their properties. The purpose of the Forest Legacy Program is to keep forestland available for traditional uses.

Tennessee completed its Assessment of Need in 1999, which identified at least 14 Forest Legacy zones of interest. These areas have been updated and expanded since 1999, with the current zone of interest coverage depicted in Appendix 8.

Forest Legacy projects require a 25% non-federal match.

c. **State Wildlife Grants** (http://www.teaming.com/state_wildlife_grants.htm) - The State Wildlife Grants Program provides funding to every state and territory to support cost effective conservation aimed at keeping wildlife from becoming endangered. This program continues the long history of cooperation between the federal government and the states for managing and conserving wildlife species, going back to landmark laws like the 1937 Pittman-Robertson Wildlife Restoration Act and the 1950 Dingell-Johnson Sport Fish Restoration Act. For more information on this program, visit the Teaming With Wildlife web site.

   In order to receive federal funds through the State Wildlife Grants program, Congress charged each state and territory with developing a state Comprehensive Wildlife Conservation Strategy (CWCS). These strategies will outline species and habitat priorities and the actions that need to be taken to conserve them.

   Tennessee recently completed its Comprehensive Wildlife Conservation Strategy, which identified species of greatest conservation need in the state, and develop strategies for their conservation. Priority habitats for conserving aquatic, terrestrial and karst (cave) species are being identified as a part of the CWCS planning project. More information can be found at http://www.state.tn.us/twra/wildlife/cwcs/cwcsindex.html

d. **Recreation Trails Program (RTP)** – Through the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act for the 21st Century, approximately $1.2 million is available statewide for recreation trail projects every other year. Eligible applicants include state, federal, and local government agencies and private organizations. Public/private partnerships are also encouraged. Projects are funded at 80% with a 20% match requirement (qualifying in-kind matches are allowed). The intent of this program is to fund backcountry trail projects.

e. **Land and Water Conservation Fund (LWCF)** – Approximately $3 million is available annually through the LWCF Act of 1965 to be distributed every other year for outdoor recreation projects. Only state and local government agencies are eligible to apply for these federal funds. A 50% match is required, but in-kind matches are allowed within certain guidelines. Eligible trail related activities are the same as the LPRF uses mentioned above.

f. **Endangered Species (Section 6) Grants** (http://endangered.fws.gov/grants/) – two grant programs under the auspices of the Endangered Species act provide potential for land acquisition: 1) Habitat Conservation Plan Land Acquisition Grants, and; 2) Recovery Land Acquisition Grants.

i. Habitat Conservation Plan Land Acquisition Grants – require that a Habitat Conservation Plan (HCP) be developed and approved for the area of interest. HCP includes an incidental take permit that is issued by the USFWS to a permittee, which allow activities that result in the incidental take of federally listed species. Land acquisition grants can be used to acquire lands associated with approved HCP's. Match requirements are 25% non-federal (10% non-federal when two or more states implement a joint project). Tennessee is currently working with the state of Kentucky to develop an HCP for the Northern Cumberlands of Tennessee and Kentucky.

ii. Recovery Land Acquisition Grants – these grants can be used to acquire lands in support of approved recovery goals and objectives for federally listed species. Match requirements are 25% non-federal (10% non-federal when two or more states implement a joint project).

2. **National Fish and Wildlife Foundation (NFWF)**

   a. Acres for America Program (http://www.nfwf.org/grant_apply.cfm) - this is a new land acquisition program that NFWF is implementing in partnership with Wal-Mart Corporation. Total grant funds in the amount of approximately $3.1 million per year are available on a competitive basis. Match requirement is 1:1, but higher match ratios will probably be necessary to be competitive. Federal funds can be used as match.

3. **Conservation Easements**

   a. Forest Legacy program – see description above

   b. The following programs administered by USDA offer potential for conservation easements. Depending on the program, easements of 30 years, or permanent easements are possible. The Healthy Forests Reserve program has options for 30-year or 99-year easements.
      i. Wetlands Reserve Program (http://www.nrcs.usda.gov/programs/wrp/)
      ii. Grassland Reserve Program (http://www.nrcs.usda.gov/programs/GRP/)
      iii. Healthy Forests Reserve Program (http://www.nrcs.usda.gov/programs/HFRP/ProgInfo/HFRPProgramInfo.html)
      iv. Farm and Ranchland Protection Program (http://www.nrcs.usda.gov/programs/frpp/)

4. **Local Park and Recreation Fund (LPRF)** – Approximately $7 million is available every other year from the State of Tennessee for the acquisition, development and rehabilitation of park and recreation land and facilities, including recreation trails. Only cities and counties are eligible to apply. A 50% match is required, but in-kind matches are allowed within certain guidelines.

5. **Natural Resources Trust Fund (NRTF)** – A small fund authorized by TCA 11-14-304. Grants from the NRTF may be awarded to all eligible local governmental entities and state areas for outdoor recreation, historical or archaeological sites, the acquisition of lands, waters, or interests in land and waters.

RTP, LPRF and LWCF Applications:

The application deadline for the next formal grant cycle has not yet been established, but will be in Spring 2006. For an application contact: Tennessee Department of Environment and Conservation, Recreation Educational Services Division, 10th Floor L&C Tower, 401 Church St., Nashville, TN 37243-0439; phone 615.532.0748, e-mail: Alice.Burke@state.tn.us, or visit the website at: www.state.tn.us/environment/recreation

6. **Private Foundations**

a. National Wild Turkey Federation – The NWTF, through its superfund program, has partnered on several acquisition and development projects that enhance or protect wild turkey habitat as well as habitat for other species or that provide access for hunting recreation.

b. Rocky Mountain Elk Foundation – With the re-introduction of elk into the upper Cumberland Mountains, RMEF has partnered to help acquire the Sundquist WMA. Recently they have established the Appalachian Initiative with the objective of acquiring and otherwise protecting and managing elk habitats in the southern Appalachian Mountains of Tennessee and Kentucky.

c. Ducks Unlimited – DU has been very active in wetland conservation in the US and Canada. Potential exists to partner with this organization for most wetlands acquisitions. DU also provides significant funding for enhancement and management of wetlands.

d. The Nature Conservancy – TNC's mission is to preserve the plants, animals and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive. TNC is a global, member based organization with a very strong presence in Tennessee. They have a history of providing significant support, both funding and science, for important projects in Tennessee.

e. The Conservation Fund – This national organization helps local, state and federal agencies, and nonprofit organizations acquire property from willing sellers to protect open space, wildlife habitat, public recreation areas, river corridors and historic places. TCF has partnered with other groups in Tennessee over the past several years on several significant projects including the acquisition of 74,000 acres on the Cumberland Plateau.

f. State and Local Foundations – There are numerous state and local foundations that have been extremely successful in raising funds or otherwise facilitating protection of special lands in Tennessee. Although this is not a complete listing, some of the more prominent groups include the Tennessee Parks and Greenways Foundation, the Wolf River Conservancy, the North Chickamauga Creek Conservancy, Foothills Land Conservancy, Tennessee River Gorge Trust, Friends of Cordell Hull, South Cumberland Regional Land Trust, Friends of South Cumberland State Recreation Area, Historic Rugby Inc., Friends of Fall Creek Falls, and Bridgestone/Firestone Trust.

GEOGRAPHICAL ORGANIZATION OF THE TENNESSEE HERITAGE CONSERVATION PLAN

With its east/west orientation, Tennessee transcends a variety of geologic, topographic, and edaphic (soil) conditions or *physiographic provinces*. Such provinces often have distinct plant communities and wildlife habitats from one another. Unlike political boundaries such as counties, the natural communities of physiographic provinces often occur on a continuum, with one gradually being replaced by another. However, one need not be a trained geologist or field biologist to discern between such varied habitats as the cypress-tupelo swamps of West Tennessee, the high-gradient streams of the Blue Ridge Mountains, the gently rolling hills of the Highland Rim, or the hemlock forests of the steep, rugged, dissected gorges of the Cumberland Plateau.

The Tennessee Heritage Conservation Plan has been organized into five regions: West Tennessee, Tennessee River Region, Middle Tennessee, Cumberland Plateau, and East Tennessee. These loosely follow the physiographic provinces of Tennessee, but for planning purposes no one county is divided into multiple regions, and some of the regions contain multiple physiographic provinces. Therefore, some of the conservation targets described herein may differ markedly from other targets in the same region. Likewise, sites in two different regions may have great similarities for they are actually within the same physiographic province. For example, the counties on the western edge of the Cumberland Plateau region have portions which physiographically have an affinity to sites within the Middle Tennessee Region. The map on the following page shows the "Planning Regions" used in this document. They are similar, although not identical to the planning regions used in the 2003 State Recreation Plan.

Tennessee Heritage Conservation Plan
Regional Project Areas

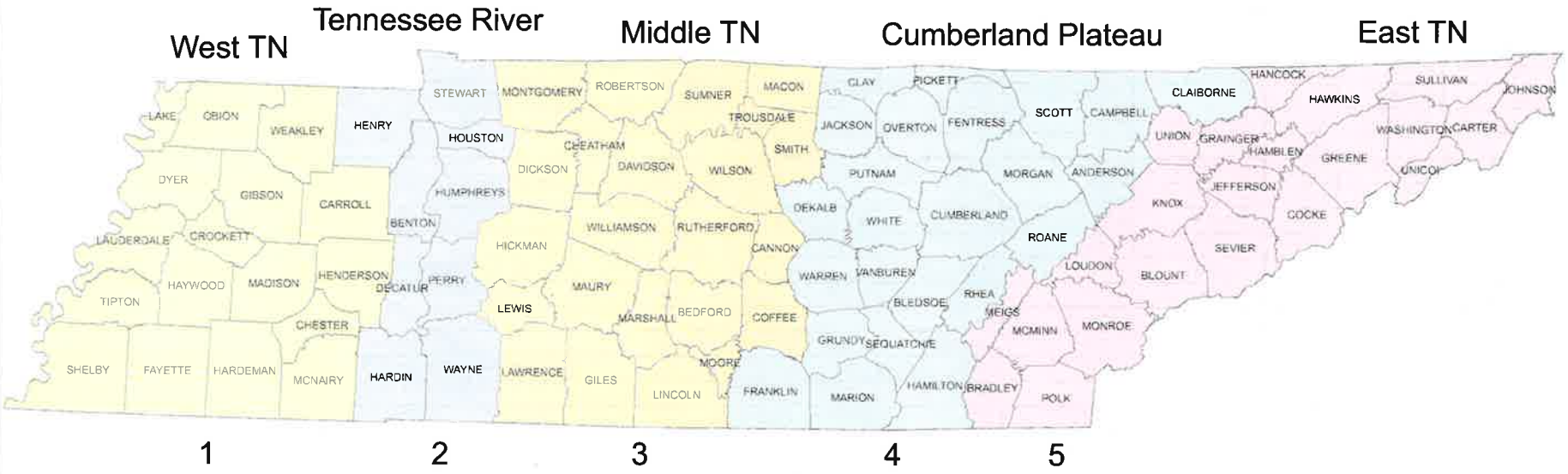


TABLE 2
SUMMARY OF LAND PROTECTION NEEDS
(BY PLANNING REGION)

PLANNING REGION	PLANNING REGION #	PROJECT	ACRES IN PROJECT AREA	ACRES PROTECTED	ACRES REMAINING TO PROTECT	ACQUISITION ACRES	LAND COSTS	COST/ ACRE	OTHER COSTS	TOTAL COST
West Tenn	1	Archaeological Sites - W. TN	1,822	-	1,822	1,822	7,288,000	4,000	700,000	7,988,000
West Tenn	1	Big Hill Pond SP & Davis Bridge	12,662	4,342	8,320	3,159	9,000,000	2,849	1,000,000	10,000,000
West Tenn	1	Chickasaw State Forest & State Park	14,452	14,227	225	317	281,100	887	69,000	350,100
West Tenn	1	Hatchie Scenic River & Habitat Corridor	94,572	10,285	84,287	84,287	98,500,000	1,169	8,000,000	106,500,000
West Tenn	1	Island 35 and Densford Bar	8,506	-	8,506	8,506	11,057,800	1,300	500,000	11,557,800
West Tenn	1	Loosahatchie Bar & Armstrong Bar	4,813	-	4,813	2,813	5,906,700	2,100	230,000	6,136,700
West Tenn	1	Lower Obion River	30,155	19,052	11,103	11,349	23,204,450	2,045	2,163,166	25,367,616
West Tenn	1	Meeman-Shelby Forest/Eagle Lake	28,311	14,907	13,404	4,665	15,286,150	3,277	1,528,615	16,814,765
West Tenn	1	Middle Fork of Forked Deer Habitat Corridor	43,415	10,432	32,983	22,983	41,369,400	1,800	4,000,000	45,369,400
West Tenn	1	Mid-Miss. Alluvial Valley	120,000	62,064	57,936	40,857	98,645,557	2,414	3,562,244	102,207,801
West Tenn	1	Miss.Valley Lake Fishing Access	3,992	-	3,992	3,992	12,333,892	3,090	1,000,000	13,333,892
West Tenn	1	Natchez Trace Forest, Park & WMA	47,527	45,930	1,597	2,240	633,300	283	162,000	795,300
West Tenn	1	Reelfoot (Philippy Pits/Ibis Hole)	998	-	998	1,248	1,702,340	1,364	160,234	1,862,574
West Tenn	1	Reelfoot (West Bank)	8,068	4,129	3,939	3,059	5,770,125	1,886	577,013	6,347,138
West Tenn	1	Reelfoot Lake-East	18,345	200	18,145	9,993	15,769,035	1,578	1,437,843	17,206,878
West Tenn	1	Reelfoot Lake-South/Lake Isom	14,904	1,850	13,054	9,067	16,514,934	1,821	1,592,361	18,107,295
West Tenn	1	South Fork of Forked Deer	25,685	1,450	24,235	16,279	20,708,000	1,272	2,060,000	22,768,000
West Tenn	1	Stream Fishing Access-W. TN	43	-	43	43	86,000	2,000	8,600	94,600
West Tenn	1	T.O. Fuller State Park	1,265	897	368	369	5,000,000	13,550	400,000	5,400,000
West Tenn	1	Upper Obion River Habitat Corridor	66,295	25,846	40,449	19,101	20,350,000	1,065	1,530,000	21,880,000
West Tenn	1	Wolf River	58,766	17,000	41,766	21,198	24,853,850	1,172	2,281,000	27,134,850
West Tenn		**Subtotal**	**604,596**	**232,611**	**371,985**	**267,347**	**434,260,633**	**1,624**	**32,962,075**	**467,222,708**
Tenn River West	2	Archaeological Sites - TN River Basin D319West	1,388	-	1,388	1,388	5,552,000	4,000	500,000	6,052,000
Tenn River West	2	Baugus Cave	222	-	222	222	222,000	1,000	25,000	247,000
Tenn River West	2	Beason Creek Habitat Corridor	2,950	450	2,500	2,500	3,000,000	1,200	300,000	3,300,000
Tenn River West	2	Beech Creek Bluff Conservation Area	274	-	274	111	111,000	1,000	12,000	123,000
Tenn River West	2	Buffalo River Habitat Corridor	59,349	-	59,349	32,000	45,000,000	1,406	2,000,000	47,000,000
Tenn River West	2	Duck/Buffalo River Confluence	7,500	-	7,500	7,500	12,000,000	1,600	1,100,000	13,100,000
Tenn River West	2	Eagle Creek	61,948	-	61,948	61,948	43,500,000	702	3,000,000	46,500,000
Tenn River West	2	Johnsonville State Historic Area	2,684	498	2,186	1,750	3,700,000	2,114	350,000	4,050,000
Tenn River West	2	Little Beech Creek	32,355	-	32,355	32,355	18,025,000	557	1,805,000	19,830,000
Tenn River West	2	Middle Cypress Creek	1,077	-	1,077	1,077	1,615,500	1,500	150,000	1,765,500
Tenn River West	2	Mousetail Landing SP	2,543	1,235	1,308	654	1,200,000	1,835	120,000	1,320,000
Tenn River West	2	Nathan Bedford Forrest State Park	5,394	2,632	2,762	1,657	3,000,000	1,811	200,000	3,200,000
Tenn River West	2	Paris Landing State Park	773	469	304	153	500,000	3,268	50,000	550,000
Tenn River West	2	Pickwick Landing SP & Dry Creek	16,538	1,592	14,946	13,453	18,000,000	1,338	1,300,000	19,300,000

TABLE 2
SUMMARY OF LAND PROTECTION NEEDS
(BY PLANNING REGION)

PLANNING REGION	PLANNING REGION #	PROJECT	ACRES IN PROJECT AREA	ACRES PROTECTED	ACRES REMAINING TO PROTECT	ACQUISITION ACRES	LAND COSTS	COST/ ACRE	OTHER COSTS	TOTAL COST
Tenn River West	2	Rushing Creek Habitat Area	1,950	750	1,200	1,200	3,000,000	2,500	300,000	3,300,000
Tenn River West	2	Stewart State Forest	5,393	4,319	1,074	1,496	875,500	585	106,000	981,500
Tenn River West	2	Stream Fishing Access-TN River Basin West	810	-	810	810	3,652,000	4,509	365,200	4,017,200
Tenn River West	2	The Coalings	10,000	200	9,800	11,220	13,220,000	1,178	1,095,000	14,315,000
Tenn River West	2	Tobaccoport Cave	204	-	204	204	204,000	1,000	18,000	222,000
Tenn River West	2	Walker Branch Consservation Area	1,336	280	1,056	1,111	1,666,500	1,500	130,000	1,796,500
Tenn River West	2	White Oak Creek	19,000	7,000	12,000	12,000	17,000,000	1,417	1,700,000	18,700,000
Tenn River West	2	Wildcat Hollow & Lacefield Falls SNA	323	-	323	100	110,000	1,100	10,000	120,000
Tenn River West		**Subtotal**	**234,011**	**19,425**	**214,586**	**184,909**	**195,153,500**	**1,055**	**14,636,200**	**209,789,700**
Middle Tenn	3	Archaeological Sites - Middle TN	3,656	-	3,656	3,656	14,620,000	3,999	1,000,000	15,620,000
Middle Tenn	3	Auntney Hollow SNA	1,105	27	1,078	1,078	1,617,000	1,500	140,000	1,757,000
Middle Tenn	3	Barnett's Woods SNA	257	40	217	217	325,000	1,498	25,000	350,000
Middle Tenn	3	Basin Spring SNA	218	-	218	218	327,000	1,500	25,000	352,000
Middle Tenn	3	Billy Swamp	88	-	88	88	150,000	1,698	15,000	165,000
Middle Tenn	3	Bledsoe Creek State Park	925	162	763	381	1,250,000	3,281	125,000	1,375,000
Middle Tenn	3	Blowhole Cave	410	-	410	410	615,000	1,500	50,000	665,000
Middle Tenn	3	Bon Aqua Forest	38	-	38	38	200,000	5,263	20,000	220,000
Middle Tenn	3	Brawleys Fork	934	-	934	934	1,200,000	1,285	130,000	1,330,000
Middle Tenn	3	Bridgewater Cave	130	-	130	130	130,000	1,000	12,000	142,000
Cumb Plateau	3	Briggs Chapel Hollow	10	-	10	10	10,000	1,000	4,000	14,000
Middle Tenn	3	Buffalo State Scenic River	1,917	-	1,917	500	500,000	1,000	45,000	545,000
Middle Tenn	3	Burnt Hill Road Glade	200	-	200	200	300,000	1,500	25,000	325,000
Middle Tenn	3	Caney Fork River Bluffs	50	-	50	50	90,000	1,800	10,000	100,000
Middle Tenn	3	Cedar Grove Glade	109	-	109	100	150,000	1,500	15,000	165,000
Middle Tenn	3	Cedar Hill Swamp	385	153	232	220	330,000	1,500	30,000	360,000
Middle Tenn	3	Cedars of Lebanon State Forest and Park	12,800	9,189	12,800	3,405	6,167,000	1,811	643,000	6,810,000
Middle Tenn	3	Cheatham WMA & Harpeth River State Park	25,000	20,551	4,307	3,447	4,748,000	1,377	430,000	5,178,000
Middle Tenn	3	Collins Trifolium/Rocky Hill Glades	104	-	104	105	157,500	1,500	15,000	172,500
Middle Tenn	3	Cumberland River (Haynes Bottoms/Shelton Ferry)	3,500	971	2,529	1,750	3,502,360	2,001	293,000	3,795,360
Middle Tenn	3	Cumberland River Bluffs	55	-	55	56	99,750	1,781	13,000	112,750
Middle Tenn	3	David Crockett State Park	2,357	1,016	1,341	603	1,250,000	2,073	120,000	1,370,000
Middle Tenn	3	Devil's Backbone SNA	11,242	950	10,292	10,292	15,438,000	1,500	1,000,000	16,438,000
Middle Tenn	3	Dripping Rock Bluff SNA	67	-	67	67	100,200	1,496	10,000	110,200
Middle Tenn	3	Dry Branch	1,171	-	1,171	1,117	1,000,000	895	100,000	1,100,000
Middle Tenn	3	Duck River Habitat Corridor & Scenic River	55,450	17,037	38,413	15,526	20,628,600	1,329	1,648,000	22,276,600
Middle Tenn	3	Duke and Witty Creeks & McMahan Creek	2,024	-	2,024	2,024	2,900,000	1,433	199,000	3,099,000

TABLE 2
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(BY PLANNING REGION)

PLANNING REGION	PLANNING REGION #	PROJECT	ACRES IN PROJECT AREA	ACRES PROTECTED	ACRES REMAINING TO PROTECT	ACQUISITION ACRES	LAND COSTS	COST/ ACRE	OTHER COSTS	TOTAL COST
Middle Tenn	3	Dunbar Cave SNA	578	109	469	117	250,000	2,137	25,000	275,000
Middle Tenn	3	Flat Rock SNA	2,472	846	1,626	1,626	3,252,000	2,000	250,000	3,502,000
Middle Tenn	3	Flint River Bottom SNA	180	-	180	180	179,000	994	15,000	194,000
Middle Tenn	3	Forest Mill Pond SNA	57	-	57	57	112,000	1,956	13,000	125,000
Middle Tenn	3	Gattinger's Glade & Barrens SNA	382	57	325	325	650,000	2,000	50,000	700,000
Middle Tenn	3	Gladeview Barrens SNA & Gladeview Glade	34	-	34	34	50,000	1,471	9,500	59,500
Middle Tenn	3	Grassy Pond	25	-	25	25	30,000	1,197	5,000	35,000
Middle Tenn	3	Harpeth State Scenic River	1,662	-	1,662	500	750,000	1,500	60,000	810,000
Middle Tenn	3	Haskins Chapel Rd/Rattlesnake Lodge Cedar Glades	483	-	483	483	750,000	1,553	60,000	810,000
Middle Tenn	3	Haws Spring Fork	152	-	152	152	152,000	1,000	14,000	166,000
Middle Tenn	3	Hay Hollow	3	-	3	3	5,000	1,667	4,000	9,000
Middle Tenn	3	Henry Horton State Park	3,973	1,177	2,796	1,677	4,000,000	2,385	400,000	4,400,000
Middle Tenn	3	Herron (Herring) Cave	300	-	300	300	450,000	1,500	40,000	490,000
Middle Tenn	3	Hickman County Bat Cave	918	-	918	918	918,000	1,000	80,000	998,000
Middle Tenn	3	Hill Creek & Cave	21	-	21	21	21,000	1,000	4,000	25,000
Middle Tenn	3	Lane Farm	715	-	715	715	1,720,500	2,406	170,000	1,890,500
Middle Tenn	3	Langford Branch SNA	951	23	928	928	928,000	1,000	75,000	1,003,000
Middle Tenn	3	Lewis State Forest	4,637	1,300	3,337	3,233	1,543,200	477	302,000	1,845,200
Middle Tenn	3	Lincoln County Bat Cave	221	-	221	221	221,000	1,000	18,000	239,000
Middle Tenn	3	Little Grinders Creek/Hick Hill WMA	2,451	-	2,451	2,451	2,451,000	1,000	200,000	2,651,000
Middle Tenn	3	Long Hunter State Park	12,921	2,486	10,435	4,725	13,123,000	2,777	1,313,000	14,436,000
Middle Tenn	3	Long Pond Slough	1,000	80	920	920	1,700,000	1,848	170,000	1,870,000
Middle Tenn	3	Manus Road Cedar Glade SNA	1,294	15	1,279	1,279	1,918,500	1,500	140,000	2,058,500
Middle Tenn	3	May Prairie SNA/Hickory Flats WMA	2,005	961	1,044	1,048	1,600,000	1,527	100,000	1,700,000
Middle Tenn	3	McMinn's &Rising Sun Bluffs	150	-	150	150	225,000	1,500	20,000	245,000
Middle Tenn	3	Mill Creek	1,521	-	1,521	1,520	3,040,000	2,000	250,000	3,290,000
Middle Tenn	3	Montgomery Bell State Park	9,160	3,850	5,310	2,295	7,000,000	3,050	700,000	7,700,000
Middle Tenn	3	Mount View SNA	29	-	29	29	29,000	1,000	5,000	34,000
Middle Tenn	3	Mullberry Bridge Bluff	59	-	59	25	25,000	1,000	4,000	29,000
Middle Tenn	3	Old Stone Fort State Archaeological Park	1,051	736	315	158	300,000	1,899	30,000	330,000
Middle Tenn	3	Overbridge SNA	220	70	150	150	225,000	1,500	18,000	243,000
Middle Tenn	3	Parks Creek Swamp & Hwy 53 Barrens	150	-	150	150	150,000	1,000	12,000	162,000
Middle Tenn	3	Philadelphia & Textbook Glades	92	-	92	92	92,000	1,000	18,000	110,000
Middle Tenn	3	Pickadilly Prairie	16	-	16	16	20,000	1,250	5,500	25,500
Middle Tenn	3	Piper Caves	115	-	115	115	115,000	1,000	10,000	125,000
Middle Tenn	3	Porters Bluff	67	-	67	67	100,500	1,500	10,000	110,500
Middle Tenn	3	Radnor Lake SNA	1,676	1,140	536	107	2,345,500	21,921	245,000	2,590,500

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(BY PLANNING REGION)

PLANNING REGION	PLANNING REGION #	PROJECT	ACRES IN PROJECT AREA	ACRES PROTECTED	ACRES REMAINING TO PROTECT	ACQUISITION ACRES	LAND COSTS	COST/ ACRE	OTHER COSTS	TOTAL COST
Middle Tenn	3	Ridgetop Barrens	10	-	10	10	15,000	1,500	4,000	19,000
Middle Tenn	3	Rutledge Falls	17	-	17	17	35,000	2,059	3,000	38,000
Middle Tenn	3	Salt Lick Creek Forest	172	-	172	172	172,000	1,000	15,000	187,000
Middle Tenn	3	Sandy Mitchell Hollow	50	-	50	50	50,000	1,000	5,000	55,000
Middle Tenn	3	Scales Mountain Knobs SNA	88	-	88	88	132,000	1,500	10,000	142,000
Middle Tenn	3	Short Mountain SNA & Sanctuary	1,643	-	1,643	1,643	1,643,000	1,000	125,000	1,768,000
Middle Tenn	3	Short Springs SNA	1,115	401	714	695	750,000	1,079	75,000	825,000
Middle Tenn	3	South Berlin Glade	46	-	46	46	46,000	1,000	6,000	52,000
Middle Tenn	3	Southwestern Highland Rim Habitat Project	250,000	17,556	232,444	86,375	57,597,400	667	1,200,000	58,797,400
Middle Tenn	3	Spring Creek Bottoms & Glades	1,354	-	1,354	1,500	1,500,000	1,000	125,000	1,625,000
Middle Tenn	3	Stillhouse Hollow Falls & Rattlesnake Falls	1,136	90	1,046	1,045	1,570,500	1,503	155,000	1,725,500
Middle Tenn	3	Stream Fishing Access-Mid TN	1,417	-	1,417	1,417	12,372,000	8,731	1,237,200	13,609,200
Middle Tenn	3	Sullenger Bend SNA	3	-	3	3	15,000	5,000	5,000	20,000
Middle Tenn	3	Summitville Mountain Spring	291	-	291	291	291,000	1,000	24,000	315,000
Middle Tenn	3	Sunnybell Glade SNA	741	36	705	705	1,057,000	1,499	80,000	1,137,000
Middle Tenn	3	Taylor Hollow SNA	670	173	497	497	745,000	1,499	65,000	810,000
Middle Tenn	3	The Swamps	433	-	433	433	650,000	1,501	45,000	695,000
Middle Tenn	3	Turnbull Creek	400	-	400	400	592,500	1,481	55,000	647,500
Middle Tenn	3	Twin Falls Hollow	24	-	24	24	25,000	1,042	8,000	33,000
Middle Tenn	3	Tynes Glade	10	-	10	10	25,000	2,500	5,000	30,000
Middle Tenn	3	Tyree Springs	35	-	35	35	52,500	1,500	5,000	57,500
Middle Tenn	3	Wayside Swamp	47	-	47	47	59,000	1,261	6,000	65,000
Middle Tenn	3	Willoughby Tract	1,009	-	1,009	1,009	1,500,000	1,487	150,000	1,650,000
Middle Tenn		**Subtotal**	**436,654**	**81,202**	**364,499**	**169,947**	**209,141,510**	**1,231**	**14,395,200**	**223,536,710**
Cumb Plateau	4	Alpine Mountain	145,870	-	145,870	10,000	5,500,000	550	500,000	6,000,000
Cumb Plateau	4	Ament Cave	3	-	3	91	500,000	5,495	50,000	550,000
Cumb Plateau	4	Antioch Bridge	336	-	336	336	750,000	2,233	60,000	810,000
Cumb Plateau	4	Archaeological Sites - Cumb. Plateau	1,075	-	1,075	1,075	3,750,000	3,488	350,000	4,100,000
Cumb Plateau	4	Berry Cave	877	-	877	897	1,110,000	1,237	110,000	1,220,000
Cumb Plateau	4	Big Mouth Cave	524	-	524	524	300,000	572	33,000	333,000
Cumb Plateau	4	Big Woods	945	-	945	945	1,300,000	1,375	100,000	1,400,000
Cumb Plateau	4	Blooin Hollow	538	-	538	538	900,000	1,672	75,000	975,000
Cumb Plateau	4	Booker T Washington State Park	657	432	225	112	500,000	4,464	50,000	550,000
Cumb Plateau	4	Boyd Barrens	19	-	19	19	40,000	2,115	8,000	48,000
Cumb Plateau	4	Brady Mountain	6,454	-	6,454	6,454	6,454,400	1,000	250,000	6,704,400
Cumb Plateau	4	Buck Creek Cove	600	-	600	600	600,000	1,000	60,000	660,000

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(BY PLANNING REGION)

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Cumb Plateau	4	Caney Hollow Cave	7	-	7	7	12,000	1,815	3,000	15,000
Cumb Plateau	4	Carter Cave SNA	8,056	373	7,683	1,056	820,000	776	80,000	900,000
Cumb Plateau	4	Carter Mountain	161,550	21,499	140,051	38,460	38,000,000	988	1,800,000	39,800,000
Cumb Plateau	4	Catoosa	110,000	79,700	30,300	10,600	15,100,100	1,425	1,500,000	16,600,100
Cumb Plateau	4	Cedar Creek Sullivantia	82	-	82	82	253,000	3,073	30,000	283,000
Cumb Plateau	4	Chimney Rock	1,290	-	1,290	1,183	1,100,000	930	83,000	1,183,000
Cumb Plateau	4	Chimneys SNA	5,390	33	5,357	5,360	4,000,000	746	300,000	4,300,000
Cumb Plateau	4	Clifty Creek Gorge	210	-	210	210	150,000	714	16,000	166,000
Cumb Plateau	4	Colditz Cove SNA	503	0	503	503	325,000	646	25,000	350,000
Cumb Plateau	4	Cordell Hull State Historic Park	206	45	161	42	136,200	3,258	21,000	157,200
Cumb Plateau	4	Cove Lake State Park	840	581	259	51	150,000	2,941	20,000	170,000
Cumb Plateau	4	Cowan Tunnel	127	-	127	127	100,000	789	15,000	115,000
Cumb Plateau	4	Cumberland Mountain State Park	1,685	1,543	142	142	135,000	951	15,000	150,000
Cumb Plateau	4	Cumberland Trail	158,379	7,938	150,441	158,379	95,000,000	600	2,500,000	97,500,000
Cumb Plateau	4	Cummings Cove	19,390	4,391	14,999	1,500	1,200,000	800	100,000	1,300,000
Cumb Plateau	4	Cummings Lake	134	-	134	134	100,000	745	15,000	115,000
Cumb Plateau	4	Dry Creek Ravine	978	560	418	418	400,000	956	50,000	450,000
Cumb Plateau	4	Edwards Point Sandstone Outcrops	52	21	31	31	60,000	1,958	8,000	68,000
Cumb Plateau	4	English Cave	176	-	176	176	245,000	1,394	20,000	265,000
Cumb Plateau	4	Goose Pond	35	-	35	35	65,000	1,880	7,000	72,000
Cumb Plateau	4	Grassy Creek Cave	6	-	6	6	15,000	2,660	5,000	20,000
Cumb Plateau	4	Grindstone Mountain & Geologic Feature	813	-	813	813	1,400,000	1,722	100,000	1,500,000
Cumb Plateau	4	Grundy Forest SNA/Fiery Gizzard	16,317	807	15,510	5,631	2,468,700	438	197,000	2,665,700
Cumb Plateau	4	Grundy Lakes	928	176	752	451	450,000	998	50,000	500,000
Cumb Plateau	4	Harper Road - Sycamore Branch	3	-	3	3	10,000	3,534	4,000	14,000
Cumb Plateau	4	Harrison Bay State Park	2,348	1,660	688	344	1,100,000	3,198	100,000	1,200,000
Cumb Plateau	4	Hawkins Cove East	75	-	75	75	65,000	864	8,000	73,000
Cumb Plateau	4	Hicks Gap SNA	1,580	343	1,237	1,237	1,050,000	849	80,000	1,130,000
Cumb Plateau	4	Hubbards Cave SNA	1,252	51	1,201	1,202	700,000	582	50,000	750,000
Cumb Plateau	4	Indian Mountain State Park	913	254	659	264	500,000	1,894	30,000	530,000
Cumb Plateau	4	Issac Spring Pond	20	-	20	20	15,000	756	4,000	19,000
Cumb Plateau	4	Laurel Snow SNA	4,100	698	3,402	710	600,000	845	45,000	645,000
Cumb Plateau	4	Lee Farm	56	-	56	56	40,000	715	7,000	47,000
Cumb Plateau	4	Lees Station Road Barrens	3	-	3	3	5,000	1,453	3,000	8,000
Cumb Plateau	4	Lone Montain State Forest	3,979	3,623	356	402	498,400	1,240	68,000	566,400
Cumb Plateau	4	Lost Creek Cave-White County	3	-	3	3	6,000	1,948	3,000	9,000
Cumb Plateau	4	Magendanz Falls SNA	16	-	16	16	35,000	2,124	6,000	41,000

TABLE 2
SUMMARY OF LAND PROTECTION NEEDS
(BY PLANNING REGION)

PLANNING REGION	PLANNING REGION #	PROJECT	ACRES IN PROJECT AREA	ACRES PROTECTED	ACRES REMAINING TO PROTECT	ACQUISITION ACRES	LAND COSTS	COST/ ACRE	OTHER COSTS	TOTAL COST
Cumb Plateau	4	Marion County Sinkhole Site	8	-	8	8	10,000	1,253	3,000	13,000
Cumb Plateau	4	Meadow Creek Seep	8	3	5	8	10,000	1,250	3,000	13,000
Cumb Plateau	4	Measles Gulf and Cave	4	-	4	4	5,000	1,232	3,000	8,000
Cumb Plateau	4	Meredith Cave	7	-	7	7	20,750	3,012	4,000	24,750
Cumb Plateau	4	Mill Cave	5	-	5	5	10,000	2,174	3,000	13,000
Cumb Plateau	4	Mill Creek Hemlocks Site	83	-	83	83	200,000	2,421	25,000	225,000
Cumb Plateau	4	Mingo Swamp	5,909	371	5,538	5,033	4,532,500	901	312,000	4,844,500
Cumb Plateau	4	Mud Creek Swamp	137	-	137	137	100,000	732	15,000	115,000
Cumb Plateau	4	Norris Dam State Park	3,976	2,799	1,177	705	2,100,000	2,979	250,000	2,350,000
Cumb Plateau	4	North Chickamauga Creek	44,152	5,626	38,526	22,661	24,463,440	1,080	1,223,000	25,686,440
Cumb Plateau	4	Old CCC Road Barking Treefrog Pond	72	-	72	69	120,000	1,739	8,200	128,200
Cumb Plateau	4	Old Hog Lot Orchid Site	3	-	3	3	10,000	2,941	3,000	13,000
Cumb Plateau	4	Old Turnpike Road	949	234	715	716	600,000	838	40,000	640,000
Cumb Plateau	4	Ozone Falls	204	26	178	190	182,000	958	18,000	200,000
Cumb Plateau	4	Peters Bridge Sandstone Rockhouses	108	-	108	108	125,000	1,155	15,000	140,000
Cumb Plateau	4	Pickett State Forest/WMA	27,986	20,519	7,467	7,039	5,446,100	774	525,000	5,971,100
Cumb Plateau	4	Piney River Stinging Fork & Piney Falls SNA	65,956	1,014	64,942	8,042	5,600,000	696	400,000	6,000,000
Cumb Plateau	4	Plantation Pond	18	-	18	20	15,000	750	5,000	20,000
Cumb Plateau	4	Powell River Preserve	274	30	244	244	250,000	1,027	25,000	275,000
Cumb Plateau	4	Prentice Cooper State Forest	28,545	27,083	1,462	1,017	1,290,900	1,269	140,000	1,430,900
Cumb Plateau	4	Roaring Creek Gorge	1,535	-	1,535	1,535	1,600,000	1,042	100,000	1,700,000
Cumb Plateau	4	Roaring River/Roaring Fork/Spring Creek SNA	4,440	118	4,322	1,000	1,500,000	1,500	130,000	1,630,000
Cumb Plateau	4	Rock Island State Park	2,000	1,208	792	792	4,000,000	5,051	200,000	4,200,000
Cumb Plateau	4	Rugby SNA	961	323	638	638	650,000	1,019	65,000	715,000
Cumb Plateau	4	Rumbling Falls Cave System	10,135	1,288	8,847	8,847	6,000,000	678	300,000	6,300,000
Cumb Plateau	4	Savage Gulf	35,138	14,361	20,777	21,277	14,372,000	675	628,000	15,000,000
Cumb Plateau	4	Scott's Gulf	122,213	40,266	81,947	29,641	20,856,700	704	1,382,000	22,238,700
Cumb Plateau	4	Sequatchie Cave	346	8	338	338	250,000	740	25,000	275,000
Cumb Plateau	4	Sgt Alvin C. York State Historic Park	623	400	223	145	226,900	1,565	25,000	251,900
Cumb Plateau	4	Sherwood Escarpment	1,261	-	1,261	1,261	1,200,000	952	100,000	1,300,000
Cumb Plateau	4	Slickrock Branch/Paint Rock Creek	17	-	17	17	17,000	1,008	3,000	20,000
Cumb Plateau	4	Spencer Powerline Seeps	78	-	78	78	60,000	771	8,000	68,000
Cumb Plateau	4	Standing Stone State Forest and State Park	9,858	9,436	422	695	569,590	820	77,000	646,590
Cumb Plateau	4	Stream Fishing Access-Cumb Plateau	1,724	-	1,724	1,724	15,870,000	9,205	1,587,000	17,457,000
Cumb Plateau	4	Tanager Hill SNA	85	-	85	10	10,000	1,000	3,000	13,000
Cumb Plateau	4	Tennessee River Gorge	27,000	16,344	10,656	5,000	5,500,000	1,100	300,000	5,800,000
Cumb Plateau	4	Tims Ford State Park	3,566	592	2,974	50	722,000	14,360	78,000	800,000

TABLE 2
SUMMARY OF LAND PROTECTION NEEDS
(BY PLANNING REGION)

PLANNING REGION	PLANNING REGION #	PROJECT	ACRES IN PROJECT AREA	ACRES PROTECTED	ACRES REMAINING TO PROTECT	ACQUISITION ACRES	LAND COSTS	COST/ ACRE	OTHER COSTS	TOTAL COST
Cumb Plateau	4	Turkey Creek	311	-	311	311	275,000	884	25,000	300,000
Cumb Plateau	4	Upper Caney Fork	1,393	-	1,393	1,393	800,000	574	75,000	875,000
Cumb Plateau	4	Upper Cumberland Mountains	400,000	143,116	256,884	100,000	48,000,000	480	3,000,000	51,000,000
Cumb Plateau	4	Virgin Falls Pocket Wilderness SNA	3,005	1,378	1,627	1,627	1,200,000	738	100,000	1,300,000
Cumb Plateau	4	Washmorgan Hollow SNA	229	73	156	156	225,000	1,442	25,000	250,000
Cumb Plateau	4	West Morrison Pond & Lowlands Site	43	-	43	43	50,000	1,166	7,000	57,000
Cumb Plateau	4	White Buis Cave & Coonsies Creek Cave	7	-	7	7	20,000	2,849	4,000	24,000
Cumb Plateau	4	White County Wetlands Complex	1,424	74	1,350	1,350	800,000	593	35,000	835,000
Cumb Plateau	4	Whites Creek	7,059	-	7,059	7,000	9,000,000	1,286	50,000	9,050,000
Cumb Plateau	4	Williams Tract	609	-	609	609	470,000	772	30,000	500,000
Cumb Plateau	4	Window Cliffs Protection Planning Site	147	-	147	147	147,000	1,000	13,000	160,000
Cumb Plateau	4	Wolf River White Cedar Site	46	-	46	46	50,000	1,087	8,000	58,000
Cumb Plateau	4	Wolf, Farmer & Cave Coves	1,530	-	1,530	1,530	900,000	588	50,000	950,000
Cumb Plateau		**Subtotal**	**1,474,587**	**411,418**	**1,063,169**	**484,687**	**368,445,680**	**760**	**20,467,200**	**388,912,880**
East Tenn	5	Alcoa Marsh SNA	90	-	90	91	500,000	5,495	50,000	550,000
East Tenn	5	Amber Darter Designated Critical Habitat	369	-	369	150	900,000	6,000	100,000	1,000,000
East Tenn	5	Archaeological Sites - E. TN	1,267	-	1,267	1,267	5,100,000	4,025	500,000	5,600,000
East Tenn	5	Austin Springs	187	-	187	190	550,000	2,895	50,000	600,000
East Tenn	5	Big Ridge State Park	6,400	3,853	2,547	891	2,000,000	2,245	200,000	2,200,000
East Tenn	5	Brooks Island	241	-	241	241	450,000	1,867	50,000	500,000
East Tenn	5	Bull Run Knobs	191	-	191	190	550,000	2,895	50,000	600,000
East Tenn	5	Chandler Cove Falls	8	-	8	8	75,000	9,375	10,000	85,000
East Tenn	5	Clinch State Scenic River	6,951	-	6,951	500	1,850,000	3,700	150,000	2,000,000
East Tenn	5	Conasauga State Scenic River	6,313	0	6,313	500	500,000	1,000	50,000	550,000
East Tenn	5	Davy Crockett Birthplace State Park	631	106	525	210	750,000	3,571	75,000	825,000
East Tenn	5	Doe Mountain	14,846	-	14,846	8,300	8,300,000	1,000	245,000	8,545,000
East Tenn	5	Doe River Gorge	244	-	244	244	300,000	1,230	35,000	335,000
East Tenn	5	Fort Loudoun State Historic Park	1,027	900	127	63	640,000	10,159	64,000	704,000
East Tenn	5	French Broad State Scenic River	1,200	-	1,200	500	500,000	1,000	50,000	550,000
East Tenn	5	Gilliland Glade and Oak forest	9	-	9	10	45,000	4,500	5,000	50,000
East Tenn	5	Hampton Creek Cove SNA	2,262	681	1,581	1,581	3,800,000	2,404	300,000	4,100,000
East Tenn	5	Hiwassee & Ocoee Rivers Rec Area	226	224	2	2	40,000	20,000	10,000	50,000
East Tenn	5	Hiwassee State Scenic River	3,768	-	3,768	500	500,000	1,000	50,000	550,000
East Tenn	5	Horner Cave	535	-	535	530	550,000	1,038	50,000	600,000
East Tenn	5	House Mountain	2,079	850	1,229	1,288	3,400,000	2,640	300,000	3,700,000
East Tenn	5	Hunter Bog SNA and Hunter Marsh	28	-	28	33	110,000	3,333	10,000	120,000

TABLE 2

SUMMARY OF LAND PROTECTION NEEDS
(BY PLANNING REGION)

PLANNING REGION	PLANNING REGION #	PROJECT	ACRES IN PROJECT AREA	ACRES PROTECTED	ACRES REMAINING TO PROTECT	ACQUISITION ACRES	LAND COSTS	COST/ ACRE	OTHER COSTS	TOTAL COST
East Tenn	5	Indian Cave	14	-	14	14	17,000	1,214	3,000	20,000
East Tenn	5	Kelly Ridge Cave	80	-	80	80	320,000	4,000	30,000	350,000
East Tenn	5	Kyles Ford	2,500	875	1,625	1,550	2,575,500	1,662	200,000	2,775,500
East Tenn	5	Laurel Creek Bog	12	-	12	20	110,000	5,500	15,000	125,000
East Tenn	5	Lick Creek	3,672	1,205	2,467	1,700	4,387,750	2,581	147,000	4,534,750
East Tenn	5	Martha Sundquist Forest	2,217	2,001	216	215	269,800	1,255	28,000	297,800
East Tenn	5	Mascot Cedar Glade	45	-	45	45	200,000	4,444	20,000	220,000
East Tenn	5	Meades Quarry Cave	207	-	207	207	600,000	2,899	50,000	650,000
East Tenn	5	Morril's Cave SNA	61	-	61	61	205,000	3,361	20,000	225,000
East Tenn	5	Mud Flats Cave	217	-	217	216	675,000	3,125	50,000	725,000
East Tenn	5	Panther Creek State Park	2,417	1,304	1,113	390	1,300,000	3,333	130,000	1,430,000
East Tenn	5	Pearson's Cave	452	-	452	450	930,000	2,067	70,000	1,000,000
East Tenn	5	Red Clay State Historic Park	388	71	317	190	400,000	2,105	40,000	440,000
East Tenn	5	Reedy Creek Cove	22	-	22	23	60,000	2,609	10,000	70,000
East Tenn	5	Ripshin Bog	156	-	156	156	450,000	2,885	45,000	495,000
East Tenn	5	Roane Mountain State Park	3,036	2,100	936	468	1,100,000	2,350	120,000	1,220,000
East Tenn	5	Rocky Fork	11,453	-	11,453	9,925	29,000,000	2,922	1,000,000	30,000,000
East Tenn	5	Sensabaugh Cave	66	-	66	65	90,000	1,385	10,000	100,000
East Tenn	5	Smith Bend/Hiwassee Refuge	7,848	3,383	4,465	1,000	3,250,000	3,250	280,000	3,530,000
East Tenn	5	Snake Mountain	720	-	720	360	680,000	1,889	50,000	730,000
East Tenn	5	Stream Fishing Access-E. TN			1,365	1,365	28,166,000	20,634	2,816,000	30,982,000
East Tenn	5	Sycamore Shoals State Park	466	63	403	201	600,000	2,985	60,000	660,000
East Tenn	5	Tuckahoe Creek State Scenic River	1,489	-	1,489	100	280,000	2,800	20,000	300,000
East Tenn	5	Walkertown Branch Bog	46	-	46	46	72,000	1,565	8,000	80,000
East Tenn	5	Watauga Fish Hatchery Site	25	-	25	25	193,000	7,751	19,300	212,300
East Tenn	5	Watauga River Bluffs SNA	394	50	344	343	880,000	2,566	70,000	950,000
East Tenn	5	Wright White Pine Stand SNA	38	-	38	39	115,000	2,949	10,000	125,000
East Tenn		**Subtotal**	**86,913**	**17,666**	**70,612**	**36,543**	**108,336,050**	**2,965**	**7,725,300**	**116,061,350**
		Total	**2,836,761**	**762,322**	**2,084,851**	**1,143,432**	**1,315,337,373**	**1,150**	**90,185,975**	**1,405,523,348**

WEST TENNESSEE

TABLE OF CONTENTS ..... PAGE

WEST TENNESSEE COUNTY AND PROJECT MAP 1

IMPORTANT AQUATIC HABITAT AREAS OF WEST TENNESSEE 2

ARCHAELOGICAL SITES IN WEST TENNESSEE 4

WEST TENNESSEE STREAM FISHING ACCESS 10

MISSISSIPPI VALLEY LAKE FISHING ACCESS 12

ARMSTRONG BAR (See Loosahatchie Bar/Robinson Crusoe Island & Armstrong Bar)

BEAN SWITCH REFUGE (See Upper Obion River)

BIG CYPRESS TREE STATE PARK (See Upper Obion River)

BIG HILL POND STATE PARK AND DAVIS BRIDGE 16

BOGOTA WMA (See Lower Obion River)

CHICKASAW NWR (See Mid-Mississippi Alluvial Valley)

CHICKASAW STATE FOREST & STATE PARK 18

COLD CREEK REFUGE (See Mid-Mississippi Alluvial Valley)

DAVIS BRIDGE (See Big Hill Pond State Park)

DENSFORD BAR (See Island 35 and Densford Bar)

EAGLE LAKE REFUGE (See Meeman Shelby Forest State Park and SNA and Eagle Lake)

EATON BOTTOMS (See Middle Fork of Forked Deer Habitat Corridor)

ERNEST RICE (See Lower Obion River)

FORT PILLOW (See Mid-Mississippi Alluvial Valley)

FORT WRIGHT (See Mid-Mississippi Alluvial Valley)

GHOST RIVER (See Wolf River Corridor)

GOOCH WMA (See Upper Obion River)

HATCHIE STATE SCENIC RIVER AND HABITAT CORRIDOR 20

HOP-IN REFUGE (See Upper Obion River)

HORNS BLUFF (See Middle Fork of Forked Deer Habitat Corridor)

ISLAND 35 AND DENSFORD BAR 25

JOHN TULLY WMA (See Mid-Mississippi Alluvial Valley)

LAKE ISOM NWR (See Reelfoot Lake Complex)

LOOSAHATCHIE BAR/ROBINSON CRUSOE ISLAND & ARMSTRONG BAR 27

LOWER HATCHIE NWR (See Mid-Mississippi Alluvial Valley)

LOWER OBION RIVER 29

LUCIUS BIRCH SNA (See Wolf River Corridor)

MANESS SWAMP REFUGE (See Upper Obion River)

MEEMAN SHELBY FOREST STATE PARK AND SNA AND EAGLE LAKE REFUGE 32

MID-MISSISSIPPI ALLUVIAL VALLEY 35

MIDDLE FORK OF FORKED DEER HABITAT CORRIDOR 41

MILLSTONE MOUNTAIN (See Mid-Mississippi Alluvial Valley)

MOSS ISLAND WMA(See Lower Obion River)

NATCHEZ TRACE STATE FOREST & STATE PARK 43

OBION RIVER WMA (See Upper Obion River)

PHILLIPY PITTS (See Reelfoot Lake Complex)

REELFOOT LAKE COMPLEX 45

RIVERWOODS SNA (See Wolf River Corridor)

ROBINSON CRUSOE ISLAND (See Loosahatchie Bar/Robinson Crusoe Island & Armstrong Bar)

SHAWS CREEK (See Wolf River Corridor)

SOUTH FORK OF THE FORKED DEER RIVER SYSTEM 49

SUNK LAKE (See Mid-Mississippi Alluvial Valley)

THORNY CYPRESS (See Lower Obion River)

TIGRETT WMA (See Middle Fork of Forked Deer Habitat Corridor)

T.O. FULLER STATE PARK 52

TUMBLEWEED WMA (See Lower Obion River)

TURK CREEK (See South Fork of the Forked Deer River System)

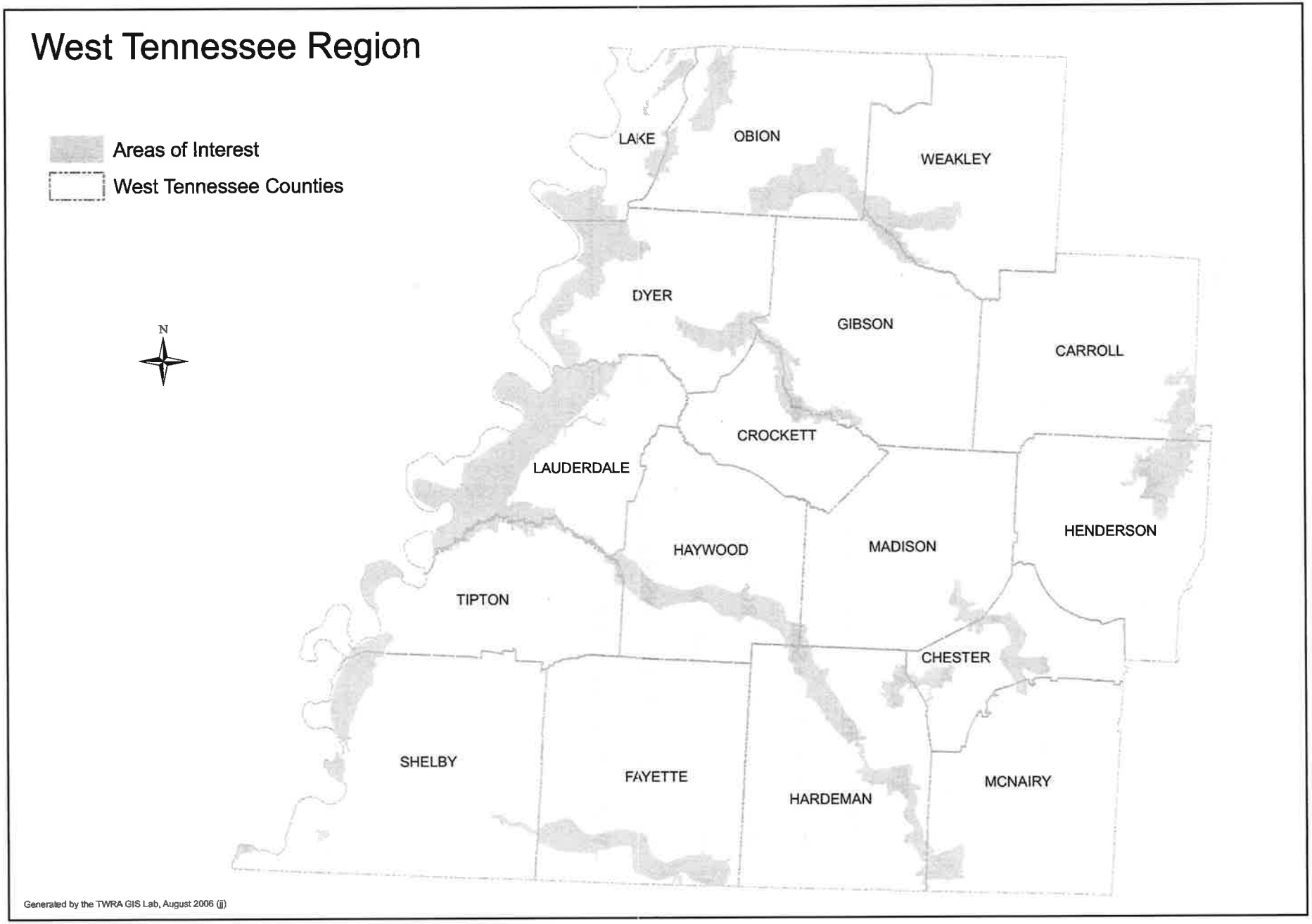
UPPER OBION RIVER PROJECT 54

WHITE LAKE REFUGE (See Lower Obion River)

WILLIAM B. CLARK CONSERVATION AREA (See Wolf River Corridor)

WOLF RIVER CORRIDOR 58

West Tennessee Region



IMPORTANT AQUATIC HABITAT AREAS OF WEST TENNESSEE

Location - Two tributaries of the Mississippi River have been selected as important habitat areas. The Hatchie River flows through McNairy, Hardeman, Haywood, Tipton, and Lauderdale counties. The Wolf River flows through Fayette and Shelby counties. Important lands include both river channel and adjacent floodplain.

Description - These rivers are large tributaries to the Mississippi River. Compared to other rivers in the region they are in decent condition, as they still have some unaltered sections of channel. However both rivers suffer from channelization and are threatened by erosion in the watershed.

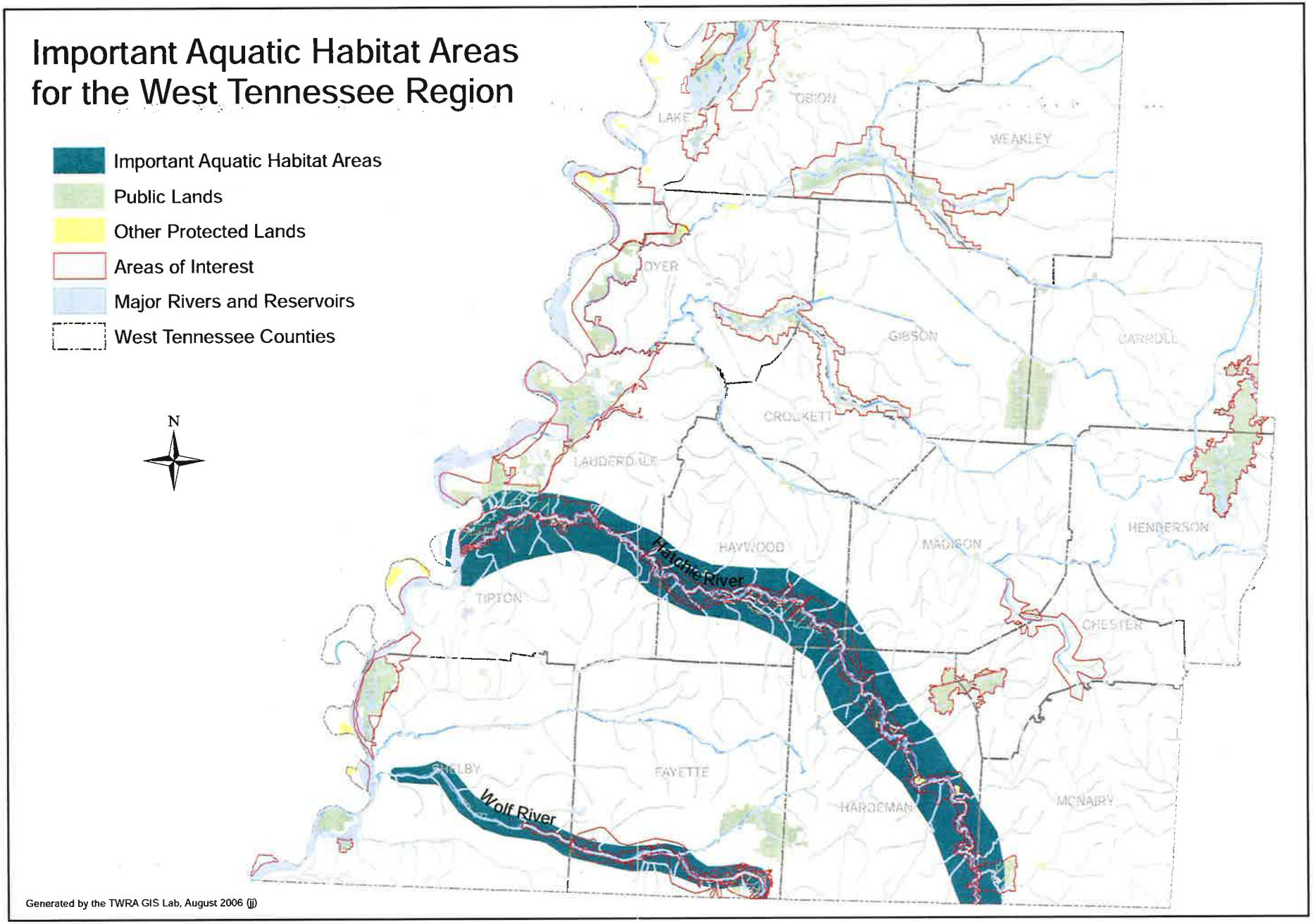
Significance - Rivers and floodplain forests that function naturally, such as the Hatchie and Wolf river systems, are imperiled ecosystems in the lower Mississippi valley. In fact, the naturally meandering stretches of the Hatchie River make it the longest free-flowing tributary of the lower Mississippi River. The Hatchie and Wolf rivers interconnect bottomland hardwood forests, canebrakes, swamps, sloughs, and oxbow lakes. The natural flood processes that drive these ecosystems are intact, sustaining these rivers and their wetland habitats that support rich aquatic diversity. Unaltered tributaries of the Mississippi River provide important spawning habitat and high-flow refuge areas for large river fishes. Additionally, natural flows are crucial to the transport (from spawning areas to the river) of juvenile fishes after hatching and routine floods allow these same fish access to the rich backwater lakes that are important to their first year growth and survival. Aquatic habitats in the Hatchie and Wolf river ecosystems are home to more than 135 species of fish and mussels and the Hatchie River probably contains more species of catfishes (11) than any other river in North America. In addition to the complex aquatic ecosystems, these rivers systems have the most extensive floodplain forests in Tennessee that are frequented by over 250 bird species.

Excessive sedimentation, contaminants, altered flow patterns as well as habitat fragmentation are all threatening the viability of Tennessee's Mississippi River tributaries. Several groups have recognized the uniqueness of these systems and are diligently working to restore and protect these streams. TNC has named the Hatchie River as one of 75, "Last Great Places" worldwide most deserving of protection during the next decade and the Wolf River Conservancy was formed with the mission "to conserve and enhance the Wolf as a natural resource for public education and low impact recreation."

Land Management Strategies - Protection of streams and riparian zones can be achieved by direct acquisition and working with landowners to implement conservation programs designed to reduce erosion of soils.

Partners - TNC, TPG, USFWS, NRCS, TDA, Tennessee Landowner Incentive Program, Tennessee Stream Mitigation Program, Wolf River Conservancy.

Important Aquatic Habitat Areas for the West Tennessee Region



ARCHAELOGICAL SITES IN WEST TENNESSEE

Location - Carroll, Chester, Crockett, Dyer, Fayette, Gibson, Hardeman, Haywood, Henderson, Lake, Lauderdale, Madison, McNairy, Obion, Shelby, Tipton, and Weakley Counties.

Description - These counties occupy the Coastal Plain and Mississippi River Valley physiographic regions. The Coastal Plain is generally defined as an area of relatively low elevation and relief. The eastern portion of the Coastal Plain (West Tennessee Uplands) has upland elevations of about 500 feet AMSL, whereas the western portion (West Tennessee Plain) is less hilly with terrain that gently slopes toward the Mississippi River. Low bluffs adjacent to the Mississippi River floodplain (elevation around 100 feet AMSL) mark the western margin of the Coastal Plain. The Mississippi River Valley comprises the Mississippi River floodplain. This physiographic region can measure up to 14 miles wide, and includes Reelfoot Lake along with a variety of oxbow lakes, meander scars, back swamps, and natural levees.

Prehistoric Sites - Prehistoric archaeological sites recorded within these two physiographic regions are classified into four major time periods: (1) Paleo-Indian, 10,000 B.C. to 8000 B.C.; (2) Archaic, 8000 B.C. to 1500 B.C.; (3) Woodland 1500 B.C. to A.D. 800; and (4) Mississippian, A.D. 900 to A.D. 1500. The Tennessee Division of Archaeology's statewide site file lists 1,661 occurrences of prehistoric sites in the THCP region. These range in size and complexity from relatively small Paleo-Indian and Archaic camps to substantial Mississippian mound centers.

Many of the prehistoric sites included in the following table represent significant cultural resources that are in danger of destruction due to a variety of man-made (agriculture, construction) and natural (erosion) forces. The THCP will provide an important means to acquire some of these non-renewable resources before they are lost forever. An excellent example is the Denmark Mounds site (40MD85) in Madison County. Currently in private ownership, this Mississippian period site consists of three prehistoric mounds and associated habitation areas on a bluff overlooking Big Black Creek. Much of the site remains intact, although some vandalism of the mounds has occurred over the past decade. Denmark Mounds represents just one of two Mississippian mound centers documented within the Coastal Plain physiographic region. This site is critical to understanding the social and political dynamics of Mississippian populations in west Tennessee.

Historic-Period Sites - With few exceptions, historic-period archaeological sites in this part of Tennessee date from after the Chickasaw land cessions of 1818. The statewide site file maintained by the Tennessee Division of Archaeology identifies 1,004 historic-period sites in west Tennessee. These sites are varied as to the kinds of past activity that occurred at each location, and some have more than one "component," meaning there are two or more kinds of historic-period activity represented within the boundaries established for that site. Some sites have standing historic-period buildings, but the existence of a building is incidental to the area being defined as an archaeological site. The largest number of recorded historic-period sites in the region fall under the general

category "domestic sites," a group made up of locations where nineteenth or early-twentieth-century homes, farmsteads, and plantations once existed. Other broad categories include large and small-scale industrial sites, military sites, and special site categories that occur mostly in urban areas. A study of Civil War military sites in West Tennessee recorded 81 examples in the West Tennessee Region. This is a site category that is considered especially endangered and in need of preservation efforts. The historic-period sties listed on the following table include a number of these Civil War military sites, as well as sites from other categories. The non-military sites were chosen based on a variety of preservation considerations. In general they are sites that represent some past activity that is of special interest, but where there are few if any examples that can be considered protected.

Land Protection Needs – 1,822 acres at an estimated cost of $7,988,000.

Potential Partners – The Archaeological Conservancy, Tennessee Council for Professional Archaeology, Tennessee Wars Commission

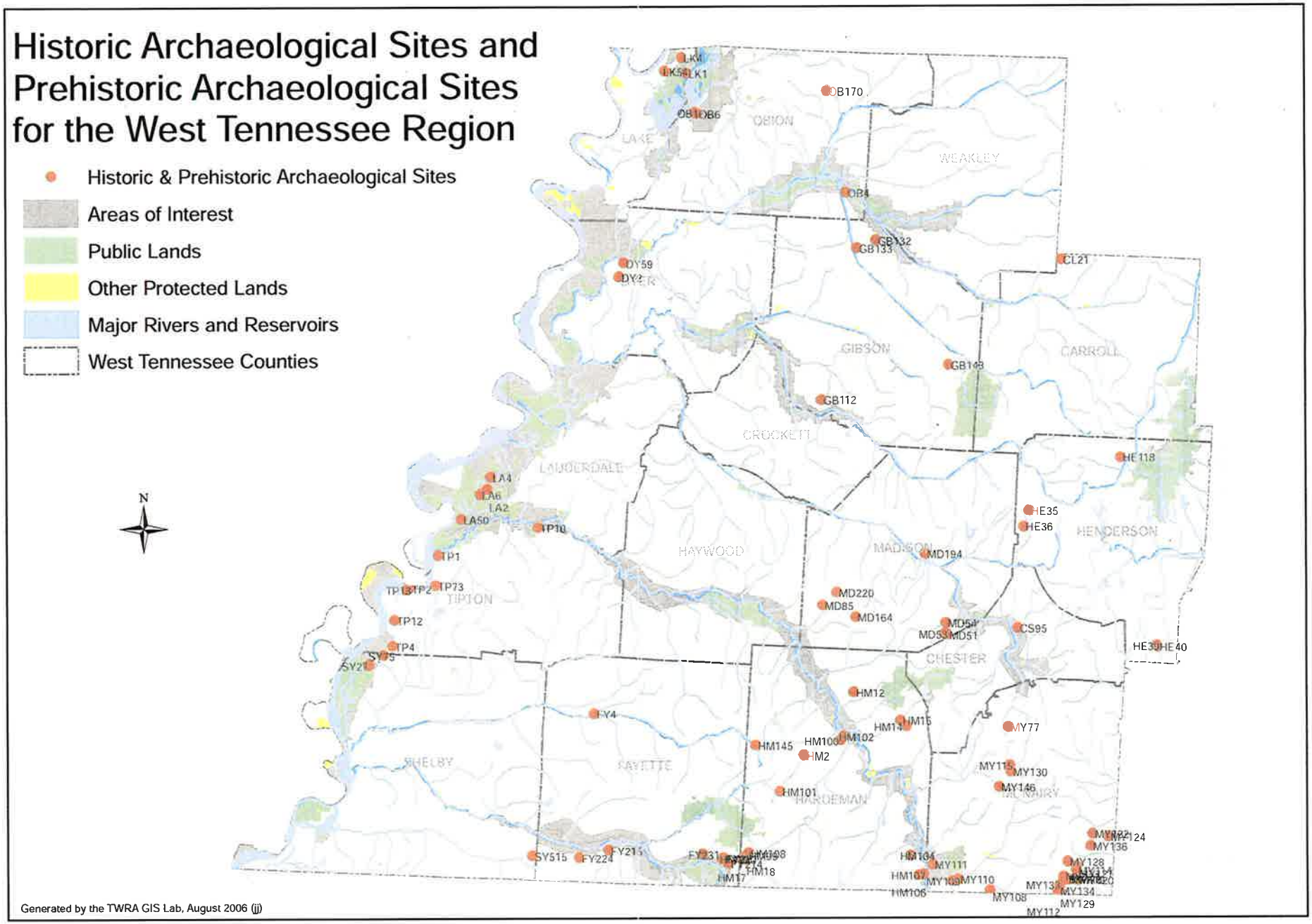
West Tennessee – Archaeological Sites

County	Site Number	Estimated Acreage	Name
Carroll	40CL21	5	McKenzie Pottery
Chester	40CS95	20	Bray Mounds (Prehistoric)
Crockett	- none -		
Dyer	DY2	10	Lenox Gin (Prehistoric)
Dyer	DY59	5	(Unnamed Prehistoric)
Fayette	40FY4	10	(Unnamed Prehistoric)
Fayette	40FY214	10	LaGrange Defenses (CW)
Fayette	40FY215	10	Grissum Creek Defenses (CW)
Fayette	40FY221	15	LaGrange Fort (CW)
Fayette	40FY224	15	Lafayette Defenses (CW)
Fayette	40FY230	5	Hancock Hall (CW)
Fayette	40FY231	15	Pinecrest Earthwork (CW)
Gibson	40GB112	25	Gibson Wells Hotel Resort
Gibson	40GB132	20	Davy Crockett Homestead (1st)
Gibson	40GB133	15	Davy Crockett Homestead (2nd)
Gibson	40GB143	5	Flippin Creek (Prehistoric)
Hardeman	40HM2	20	(Unnamed Prehistoric)
Hardeman	40HM12	7	Keller Pottery
Hardeman	40HM14	10	E. Price Pottery No. 1
Hardeman	40HM15	10	E. Price Pottery No. 2
Hardeman	40HM17	5	B. Ussery Pottery
Hardeman	40HM18	5	S. Smyth Pottery
Hardeman	40HM19	5	W. T. Follis Pottery
Hardeman	40HM99	10	Fort McDowell (CW)
Hardeman	40HM100	5	Bolivar Defenses (CW)
Hardeman	40HM101	5	Middleburg Blockhouse (CW)
Hardeman	40HM102	5	Bolivar Defenses (CW)
Hardeman	40HM104	10	Fort Flad (CW)
Hardeman	40HM106	300	Davis Bridge (CW)
Hardeman	40HM107	40	Confederate Camp (CW)
Hardeman	40HM108	10	Grand Junction Defenses (CW)
Hardeman	40HM145	5	Trail of Tears Segment
Henderson	40HE35	7	Craven-Fesmire Pottery
Henderson	40HE36	10	M. Craven Pottery

County	Site Number	Estimated Acreage	Name
Henderson	40HE39	10	M. Mooney Pottery No. 1
Henderson	40HE40	10	M. Mooney Pottery No. 2
Henderson	40HE118	60	Parker's Crossroads (CW)
Lake	40LK1	15	Haynes (Prehistoric)
Lake	40LK4	20	Otto Sharpe (Prehistoric)
Lake	40LK54	30	Island No. 10 Defenses (CW)
Lauderdale	40LA2	10	Porter (Prehistoric)
Lauderdale	40LA4	20	Jones Bayou (Prehistoric)
Lauderdale	40LA6	10	(Unnamed Prehistoric)
Lauderdale	40LA50	100	Fort Pillow (CW)
McNairy	40MY77	10	N. J. Culberson Pottery
McNairy	40MY108	25	Post Chewalla (CW)
McNairy	40MY109	8	Youngs Bridge (CW)
McNairy	40MY110	10	Butler's Chapel (CW)
McNairy	40MY111	10	Wray's Bluff (CW)
McNairy	40MY112	10	Advance on Corinth (CW)
McNairy	40MY114	8	Advance on Corinth (CW)
McNairy	40MY115	5	Bethel Defenses (CW)
McNairy	40MY118	10	Advance on Corinth (CW)
McNairy	40MY119	10	Advance on Corinth (CW)
McNairy	40MY120	8	Advance on Corinth (CW)
McNairy	40MY121	10	Advance on Corinth (CW)
McNairy	40MY122	10	Advance on Corinth (CW)
McNairy	40MY124	140	Fallen Timbers (CW)
McNairy	40MY127	70	Advance on Corinth (CW)
McNairy	40MY128	90	Advance on Corinth (CW)
McNairy	40MY129	8	Advance on Corinth (CW)
McNairy	40MY130	8	Bethel Defenses (CW)
McNairy	40MY133	10	Bethel Defenses (CW)
McNairy	40MY134	5	Advance on Corinth (CW)
McNairy	40MY136	10	Advance on Corinth (CW)
McNairy	40MY146	20	Unnamed Earthwork (CW)
Madison	40MD51	10	Davis Pottery
Madison	40MD53	10	C. Monroe Pottery
Madison	40MD54	5	H. Reevely Pottery
Madison	40MD85	20	Denmark Mounds (Prehistoric
Madison	40MD164	15	Britton Land (CW)
Madison	40MD194	5	Jackson Pottery
Madison	40MD220	5	Denmark Church (CW)

County	Site Number	Estimated Acreage	Name
Obion	400B1	15	Grassy Island Mounds (Prehistoric)
Obion	400B4	5	(Unnamed Prehistoric)
Obion	400B6	10	(Unnamed Prehistoric)
Obion	400B170	10	Camp Brown (CW)
Shelby	40SY27	5	(Unnamed Prehistoric)
Shelby	40SY75	10	Rast (Prehistoric)
Shelby	40SY515	8	Collierville Defenses (CW)
Tipton	40TP1	10	Hatchie (Prehistoric)
Tipton	40TP2	10	Richardson Landing (Prehistoric)
Tipton	40TP4	10	(Unnamed Prehistoric)
Tipton	40TP10	10	Bishop (Prehistoric)
Tipton	40TP12	10	Wilder (Prehistoric)
Tipton	40TP13	10	(Unnamed Prehistoric)
Tipton	40TP73	200	Fort Wright (CW)
Weakley	- none -		

Historic Archaeological Sites and Prehistoric Archaeological Sites for the West Tennessee Region



STREAM FISHSING ACCESS - WEST TENNESSEE

Locations - Fourteen access points are shown on the following map. These areas were chosen to complement existing access areas and improve the value of recreational fisheries. All areas are located adjacent to the named river. The exact location is not critical; it is possible that another parcel located within one mile could be substituted for the indicated location.

Description - Access points would be relatively small parcels (3-10 acres) located in the floodplain, preferably near existing roads. Areas adjacent to existing roads and bridge right-of-ways are typically covered with early-succession vegetation. Some locations may be in agricultural use.

Recreational Significance - Access is currently limiting the recreational value of these rivers. Fishing is a popular sport for Tennesseans and tourists. Opening additional access areas would allow anglers to fish for a variety of fish including bass, catfish, crappie, and bream. Some areas would be suitable for duck hunting. All areas could also be used for wildlife viewing.

Canoeist and kayakers would use these areas. Many of the requested access areas are positioned such that one could safely travel from one point to the next within a day. A well-developed series of access points along these rivers would attract more visitors to the area. Ultimately, attracting private canoe shuttle services would further improve the recreational value of the river. For example, there are already some shuttle services on the Wolf River.

Strategy - TWRA would establish a small gravel parking area, and provide a narrow gravel or concrete ramp to the river for boats. TWRA would develop access areas in a manner that would minimize the footprint on the land and maximize the amount of riparian vegetation.

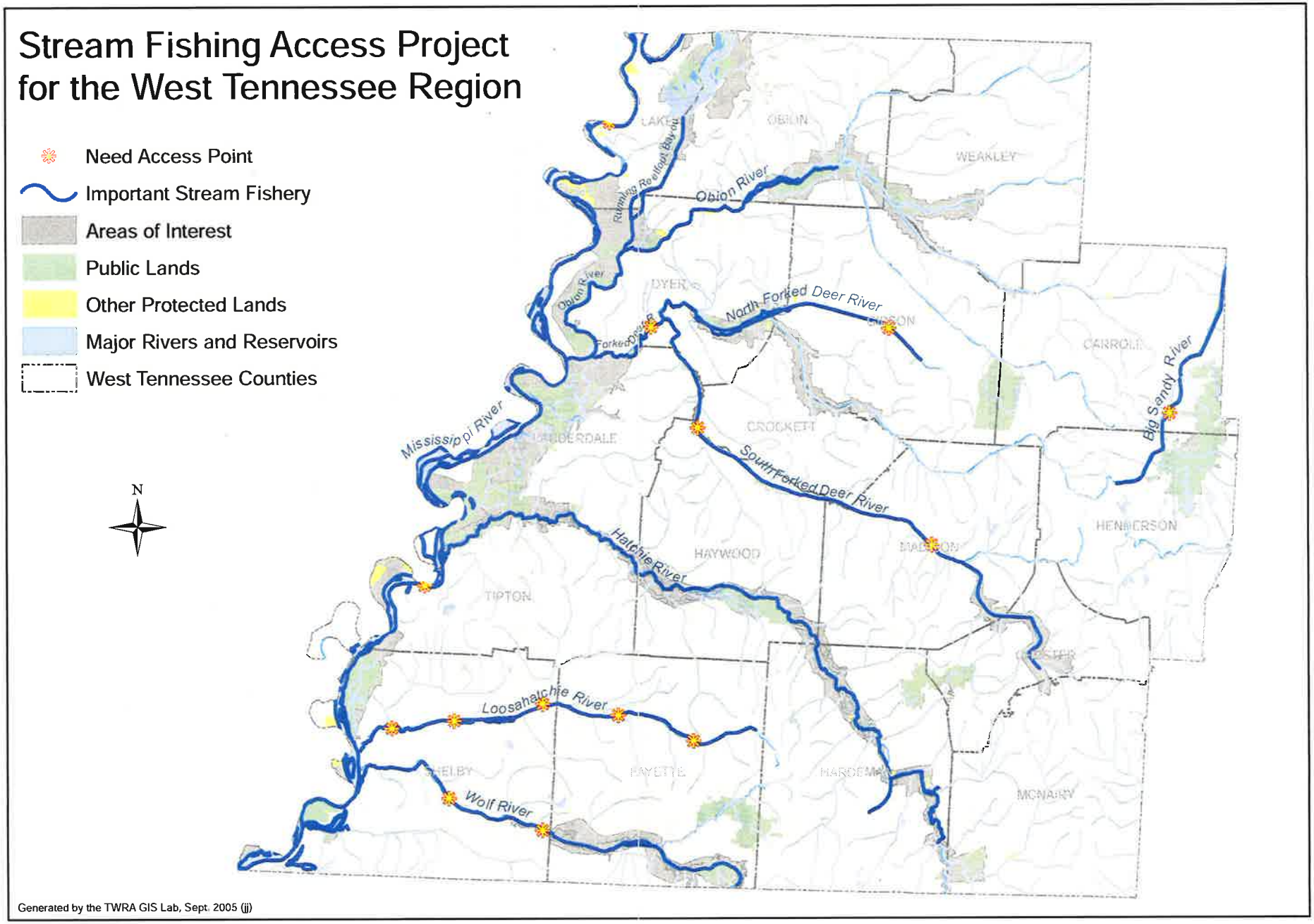
Land Protection Needs – 43 acres at an estimated cost of $94,600.

Potential Partners - TPGF, TWRF, local tourism boards, DU, and local watershed organizations.

Fishing Access Needed in West Tennessee Region.

River	County of needed access	Number of boat access needed	Total Acres	Cost/ Acre	Land Cost	10% Survey & Closing Fees	Total Cost
Mississippi River	Tipton/Lake	2	10	2,000	20,000	2,000	22,000
Forked Deer River	Dyer	1	3	2,000	6,000	600	6,600
North Fork Forked Deer River	Gibson	1	3	2,000	6,000	600	6,600
South Fork Forked Deer River	Haywood/Crockett/Madison	2	6	2,000	12,000	1,200	13,200
Loosahatchie River	Shelby/Fayette	5	15	2,000	30,000	3,000	33,000
Wolf River	Shelby	2	6	2,000	12,000	1,200	13,200
TOTAL		**13**	**43**		**$86,000**	**$8,600**	**$94,600**

Stream Fishing Access Project for the West Tennessee Region



MISSISSIPPI VALLEY LAKE FISHING ACCESS

Location - The 23 lakes are located along the Mississippi River Corridor. See following table and maps for locations.

Description - These lakes vary in size from 3 to 1,084 acres in area. Some were originally formed by oxbows, and others have dams that maintain the pool. The property to be purchased would ideally include at least a 200-foot buffer around each lake.

Significance - These lakes provide habitat for a variety of resident aquatic and terrestrial wildlife. Many would support migrating waterfowl.

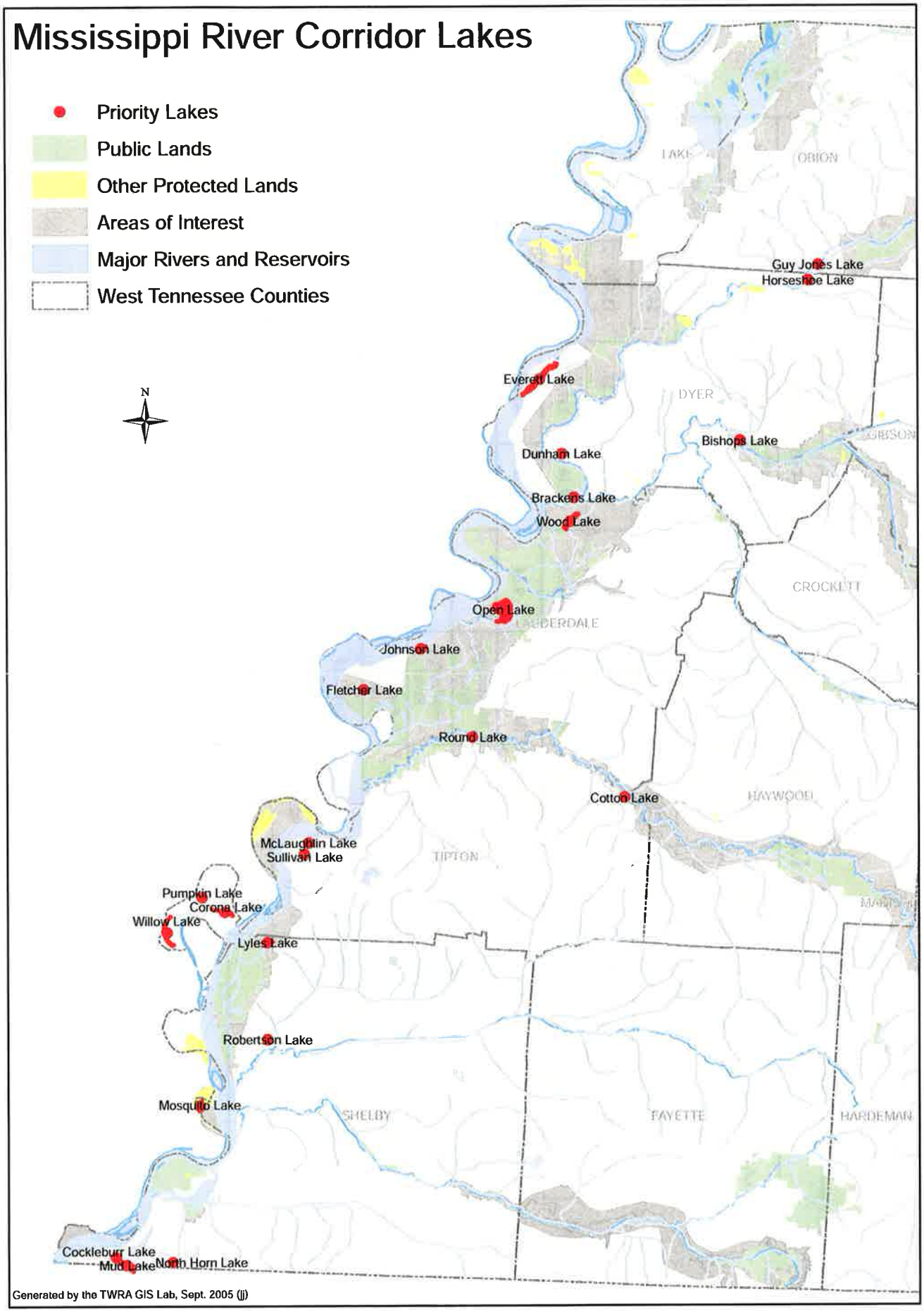
Public access to multiple lakes along the Mississippi Corridor would provide multiple-use opportunities to Tennesseans and tourist visiting the area. Depending on the size of the lake, recreational opportunities could include fishing, hunting, wildlife viewing, and paddling. These lakes would make great side trips off of the Great River Birding Trail. Travelers on the Mississippi Bike trail could use some of these as destinations or rest areas along their route.

Land Protection Needs – 3,992 acres at an estimated cost of $13,333,892

Potential Partners - DU, local tourism boards, Tennessee Ornithological Society, TPGF.

Private Lakes Recommended for Purchase									
LAKE NAME	**COUNTY**	**Latitude**	**Longitude**	**LOCALE**	**Estimated Lake Acreage**	**200 Foot Lake Buffer**	**Estimated Total Acreage**	**Estimated Cost/Acre**	**Estimated Total Cost**
Bishops Lake	Dyer	36.00555	-89.35583	Dyersburg	7.42	20.52	27.94	4,000	$111,768
Brackens Lake	Dyer	35.9311	-89.59694	Moss Island	9.43	19.09	28.51	$2,500	$71,287
Dunham Lake	Dyer	35.9825	-89.61666	N. of Moss Island	8.52	19.04	27.56	$2,500	$68,910
Everett Lake	Dyer	36.07083	-89.65472	S. of I-155	532.18	208.34	740.52	$2,500	$1,851,308
Horseshoe Lake	Dyer	36.19916	-89.26277	N. of Newbern	3.01	10.54	13.56	$2,500	$33,890
Fletcher Lake	Lauderdale	35.69277	-89.89444	Golddust	23.40	30.75	54.15	$2,500	$135,363
Johnson Lake	Lauderdale	35.7436	-89.8125	Ashport	44.82	47.48	92.30	$2,500	$230,757
Open Lake	Lauderdale	35.79499	-89.69555	Chickasaw National Wildlife Refuge	1084.29	166.45	1250.74	$3,000	$3,752,218
Wood Lake	Lauderdale	35.90222	-89.6025	Hales Point	122.88	136.79	259.66	$3,000	$778,990
Guy Jones Lake	Obion	36.21777	-89.24916	Gooch WMA	4.84	24.85	29.70	$2,500	$74,246
Cockleburr Lake	Shelby	35.00416	-90.22277	Memphis	24.69	24.55	49.24	$3,000	$147,708
Lyles Lake	Shelby	35.33861	-90.02333	Meeman Shelby SF	57.11	51.59	108.70	$3,000	$326,112
Mosquito Lake	Shelby	35.1886	-90.11055	Loosahatchie Bar	28.07	50.29	78.36	$3,500	$274,243

Private Lakes Recommended for Purchase (continued)									
LAKE NAME	**COUNTY**	**Latitude**	**Longitude**	**LOCALE**	**Estimated Lake Acreage**	**200 Foot Lake Buffer**	**Estimated Total Acreage**	**Estimated Cost/Acre**	**Estimated Total Cost**
Mud Lake	Shelby	34.99583	-90.20722	Memphis	359.68	100.04	459.72	$4,000	$1,838,864
North Horn Lake	Shelby	35.00305	-90.1425	Memphis	31.91	26.95	58.86	$4,000	$235,428
Robertson Lake	Shelby	35.27138	-90.01527	Loosahatchie R.	9.82	20.71	30.53	$3,500	$106,872
Corona Lake	Tipton	35.42138	-90.08444	Mississippi R.	140.47	99.16	239.63	$3,500	$838,700
Cotton Lake	Tipton	35.57527	-89.51083	Hatchie River	9.38	33.22	42.60	$2,000	$85,198
McLaughlin Lake	Tipton	35.50777	-89.96694	Mississippi River	5.71	16.41	22.12	$3,500	$77,409
Pumpkin Lake	Tipton	35.4375	-90.11888	Mississippi River	14.00	19.55	33.55	$3,500	$117,408
Round Lake	Tipton	35.64	-89.73305	S. Fort Pillow Prison	6.32	20.46	26.77	$2,500	$66,930
Sullivan Lake	Tipton	35.4936	-89.97222	Island 35	3.05	12.17	15.22	$3,500	$53,273
Willow Lake	Tipton	35.39361	-90.17166	Brandywine Chute	155.59	146.41	302.00	$3,500	$1,057,008
Totals					**2686.58**	**1305.36**	**3991.94**		**$12,333,892**


Mississippi River Corridor Lakes
Priority Lakes
Public Lands
Other Protected Lands
Areas of Interest
Major Rivers and Reservoirs
West Tennessee Counties
N
Guy Jones Lake
Horseshoe Lake
Everett Lake
Dunham Lake
Bishops Lake
Brackens Lake
Wood Lake
Open Lake
Johnson Lake
Fletcher Lake
Round Lake
Cotton Lake
McLaughlin Lake
Sullivan Lake
Pumpkin Lake
Corona Lake
Willow Lake
Lyles Lake
Robertson Lake
Mosquito Lake
Cockleburr Lake
Mud Lake
North Horn Lake
LAKE
OBION
DYER
CROCKETT
LAUDERDALE
TIPTON
HAYWOOD
SHELBY
FAYETTE
HARDEMAN
Generated by the TWRA GIS Lab, Sept. 2005 (jj)

BIG HILL POND STATE PARK AND DAVIS BRIDGE

Location – (N35.0425,W88.7478) Big Hill Pond State Park is located in McNairy County about 18 miles south of Selmer on Hwy 57 about 10 miles from the intersection of Hwy 45. The Davis Bridge civil war battle site is located just west of the state park.

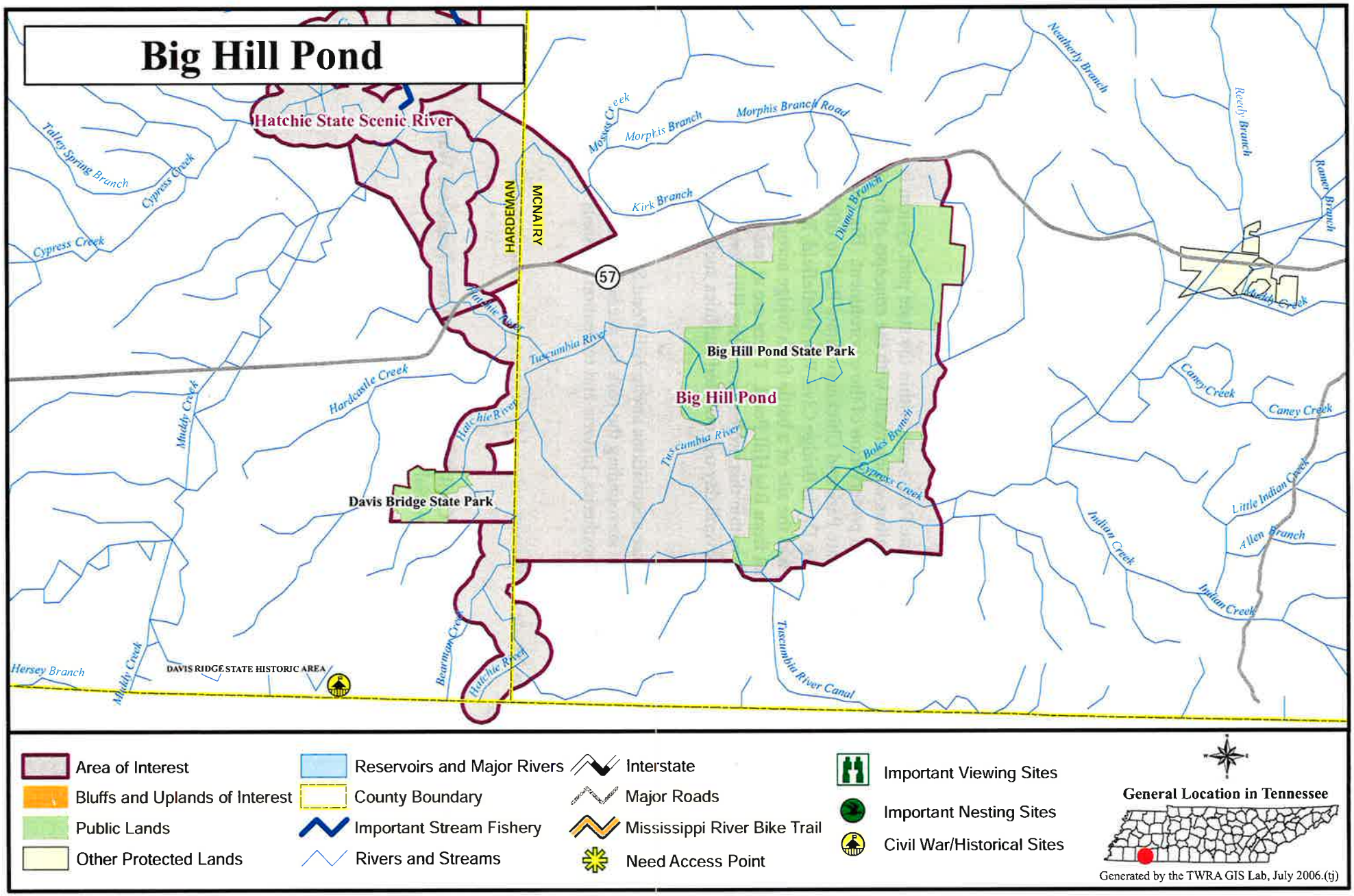
Description - Big Hill Pond State Park lies in the southwestern part of McNairy County and encompasses approximately 5,000 acres of magnificent timberland and hardwood bottom land. Cypress Creek and Tuscumbia River border the property. Several oxbow lakes and sloughs add to the waterway. The floodplain adjacent to both the Tuscumbia River and Cypress Creek contains small oxbow lakes and swamp areas which are desirable habitat for waterfowl, wildlife and fishing.

Significance - Big Hill Pond State Park's role within the state park system is to provide low impact recreational opportunities which mesh with the concepts of historic, cultural and environmental education and preservation of the environment. Big Hill Pond works well with Pickwick Landing State Park and Chickasaw State Park to offer a full spectrum of recreational experiences. The Davis Bridge Civil War Battlefield, located just two miles to the west of the park, was the site of a battle for a bridge across the Hatchie River and is maintained by personnel from Big Hill Pond. There are at least three other significant archaeological sites within this project area. Big Hill Pond State Park provides the community with several day use oriented facilities such as hiking, fishing and picnicking.

Strategy - The strategy for future acquisitions at Big Hill Pond State Park and Davis Bridge are to acquire properties surrounding the park for access or access control and those that further the wildlife, aesthetics, historic and recreation missions of the State Park System.

Land Protection Needs - Approximately 3,159 acres at an estimated cost of $10,000,000.

Potential Partners - TCF, LWCF, Civil War Preservation Trust, Tennessee Wars Commission and Davis Bridge Memorial Foundation.


Big Hill Pond
Hatchie State Scenic River
HARDEMAN
MCNAIRY
57
Big Hill Pond State Park
Big Hill Pond
Davis Bridge State Park
DAVIS RIDGE STATE HISTORIC AREA
Tuscumbia River Canal
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CHICKASAW STATE FOREST & STATE PARK

Location – (N35.3728, W88.8210) Chickasaw State Forest is located in Chester and Hardeman Counties on the Coastal Plain in West Tennessee near Henderson.

Description - Chickasaw State Forest - (13,104 acres)

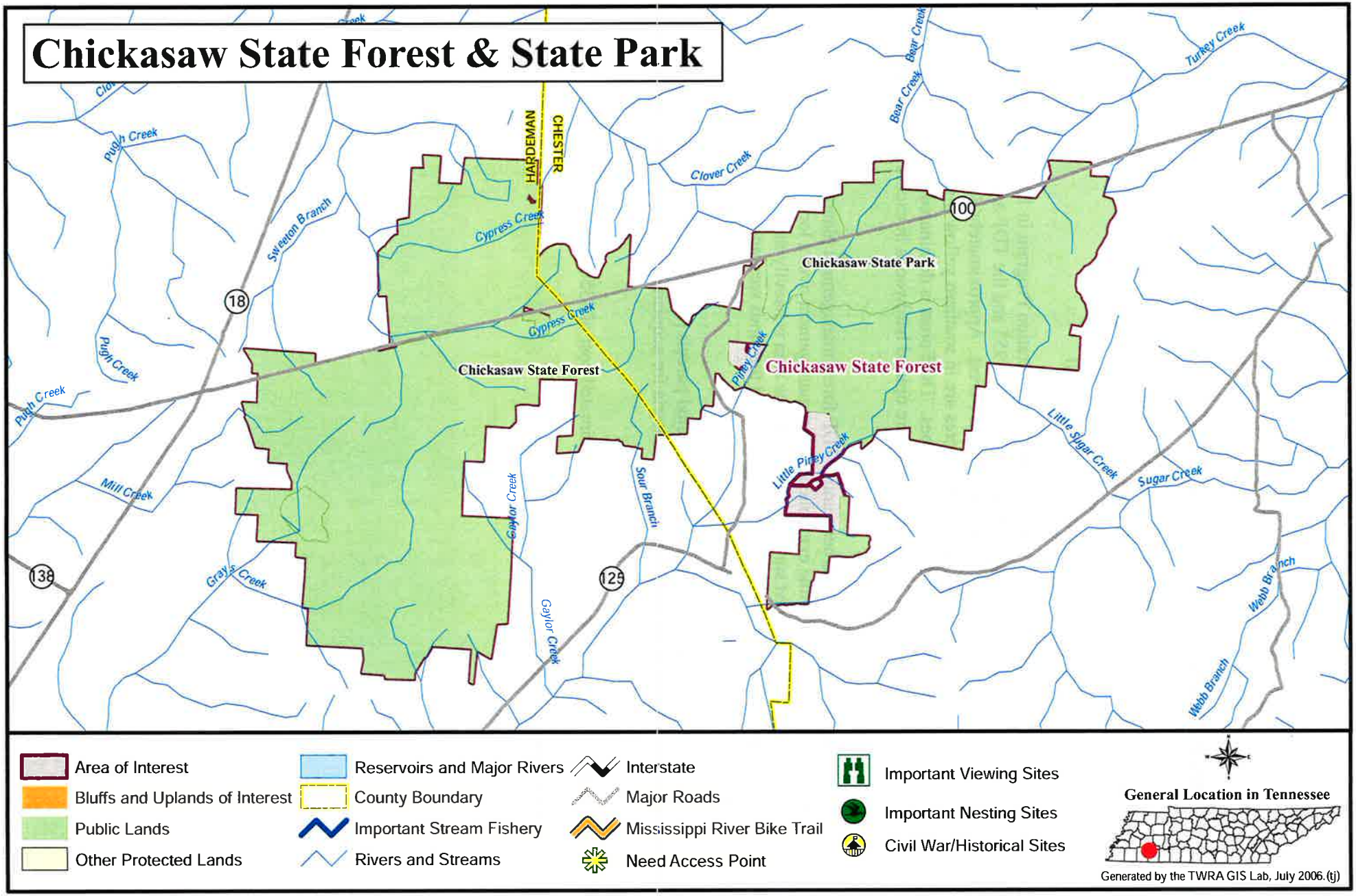
The Forest originated with the Resettlement Administration Program in 1935. The entire project area was deeded to the State of Tennessee in 1955 and the TDF assumed responsibility for the portion that is now a State Forest. Approximately 8,190 acres of the Forest are in hardwood types, about 3,826 acres are in southern yellow pines, and the remainder is in mixed pine and hardwood types. The Forest is dominated by stands of mature sawtimber. About 35% of the stands are upland hardwoods in excess of 80 years old.

Significance – Chickasaw has been under TDF forest management planning process since 1980 and offers a prime example of forest management over a long period of time. Since the Chickasaw Forest surrounds the Park, the area is heavily utilized for recreation and hunting. TWRA has identified Chickasaw and the lands west and north of the forest as important areas for bird conservation.

Strategy - Inholdings and connections to isolated parcels (Big Rock) disconnected from the main body of the forest are the primary criteria for acquisitions, with forest access and access control also being very important.

Land Protection Needs – 317 acres at an estimated cost of $350,100

Potential Partners - Unknown


Chickasaw State Forest & State Park
HARDEMAN
CHESTER
Bear Creek
Turkey Creek
Pugh Creek
Clover Creek
Sweeton Branch
Cypress Creek
100
Chickasaw State Park
18
Chickasaw State Forest
Piney Creek
Chickasaw State Forest
Little Sugar Creek
Sugar Creek
Little Piney Creek
Mill Creek
Gaylor Creek
Sour Branch
138
Grays Creek
129
Webb Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HATCHIE STATE SCENIC RIVER AND HABITAT CORRIDOR

Location – (N35.5042, W89.1513) The Hatchie River enters southwest Tennessee from Alcorn County, Mississippi about 34 miles south-southeast of Bolivar, TN in Hardeman County . The river flows north then west as it passes through McNairy, Hardeman, Madison, Haywood, Tipton, and Lauderdale Counties along its 183 mile journey before it empties into the Mississippi River at the Lauderdale-Tipton County line. Along its journey it passes through the Hatchie National Wildlife Refuge (Brownsville) and Lower Hatchie National Wildlife Refuge (part of the Mid-Mississippi Alluvial Valley Project). The Hatchie River was designated as a State Scenic River in 1970.

Description - The Hatchie River twists and turns for 183 miles through western Tennessee. The watershed is 2,568 square miles, including the portion of the Hatchie River in northern Mississippi. In general, the river is characterized by a wide forested floodplain containing wetlands, oxbow lakes, bottomland hardwood forests, and rich agricultural fields. The Hatchie River is a significant component of the 24 million-acre Mississippi River Alluvial Plain Ecoregion, which covers seven states in the lower Mississippi River Valley stretching from southern Illinois to the Gulf of Mexico.

For thousands of years native people were modifying the landscape; first competing with large predators for game, then as agriculture became more prevalent, clearing and burning forests to plant sunflowers and pigweed, beans, squash and corn. The most recent Native Americans to claim this territory were the Chickasaws. The Chickasaws mainly used West Tennessee as a hunting ground. The Hatchie was an important transport route for Native American, allowing them to float buffalo, deer and elk meat downstream in cypress dugouts to the Mississippi River to be shipped to other established settlements.

Toward the end of the 19th century many fauna were lost in West Tennessee. Elk were extirpated from the state in the 1860's. One of the last swallow-tailed kites in Tennessee was sighted near Brownsville in 1880. The last Carolina parakeet recorded in Tennessee was killed in Haywood County in 1876. Three years later, the last big flights of passenger pigeons in Tennessee were recorded near Brownsville.

Presently, hundreds of thousands of people live in the Hatchie River watershed. The upland forests have been cleared for cotton and other agriculture. However, the floodplain remains mostly in bottomland hardwood forests. This watershed is one of the most productive agricultural areas in the state.

Significance - The Hatchie River is remarkable as the longest free-flowing tributary of the lower Mississippi River. It is the largest forested floodplain remaining in Tennessee. Because it has remained unimpounded and unchannelized, the natural flood processes that drive the ecosystem are intact, sustaining the river and wetland habitats that support a rich ecological diversity. The Hatchie River ecosystem is a complex interconnected ecological system encompassing bottomland hardwood forests, canebrakes, swamps, and sloughs, rivers and lakes. These habitats support one of the most biodiverse systems in Tennessee with more than 100 species of fish and 35 species of mussels. With 11 species

of catfish, the Hatchie probably contains more species of catfish than any other river in North America. About 250 species of birds use the Hatchie's forests at some point during the year . Swainson's and cerulean warblers are some of the rarer birds found in its forests. There are at least 18 Tennessee rare species found in the Hatchie River, three of which are possible candidates for federal protection.

A partial listing of species of significance in the Hatchie includes game species such as white-tailed deer, eastern wild turkey, spotted/largemouth bass and crappie. This area also supports populations of non-game such as the federally endangered Hatchie burrowing crayfish, white wartyback, pink mucket, orange-foot pimpleback and ring pink mussels, several in-need-of-management species including the naked sand darter, scaly sand darter, northern madtom, alligator gar, eastern slender glass lizard, alligator snapping turtle, Swainson's warbler, cerulean warbler, Mississippi kite, barking treefrog, meadow jumping mouse, southern bog lemming, eastern big-eared bat, eastern woodrat, and southeastern shrew, two state threatened species including the western pigmy rattlesnake and the lark sparrow, and one sate endangered species (Bachman's sparrow). Also, the Hatchie River is the site of three ongoing species restoration projects (alligator gar, alligator snapping turtle, Mississippi kite).

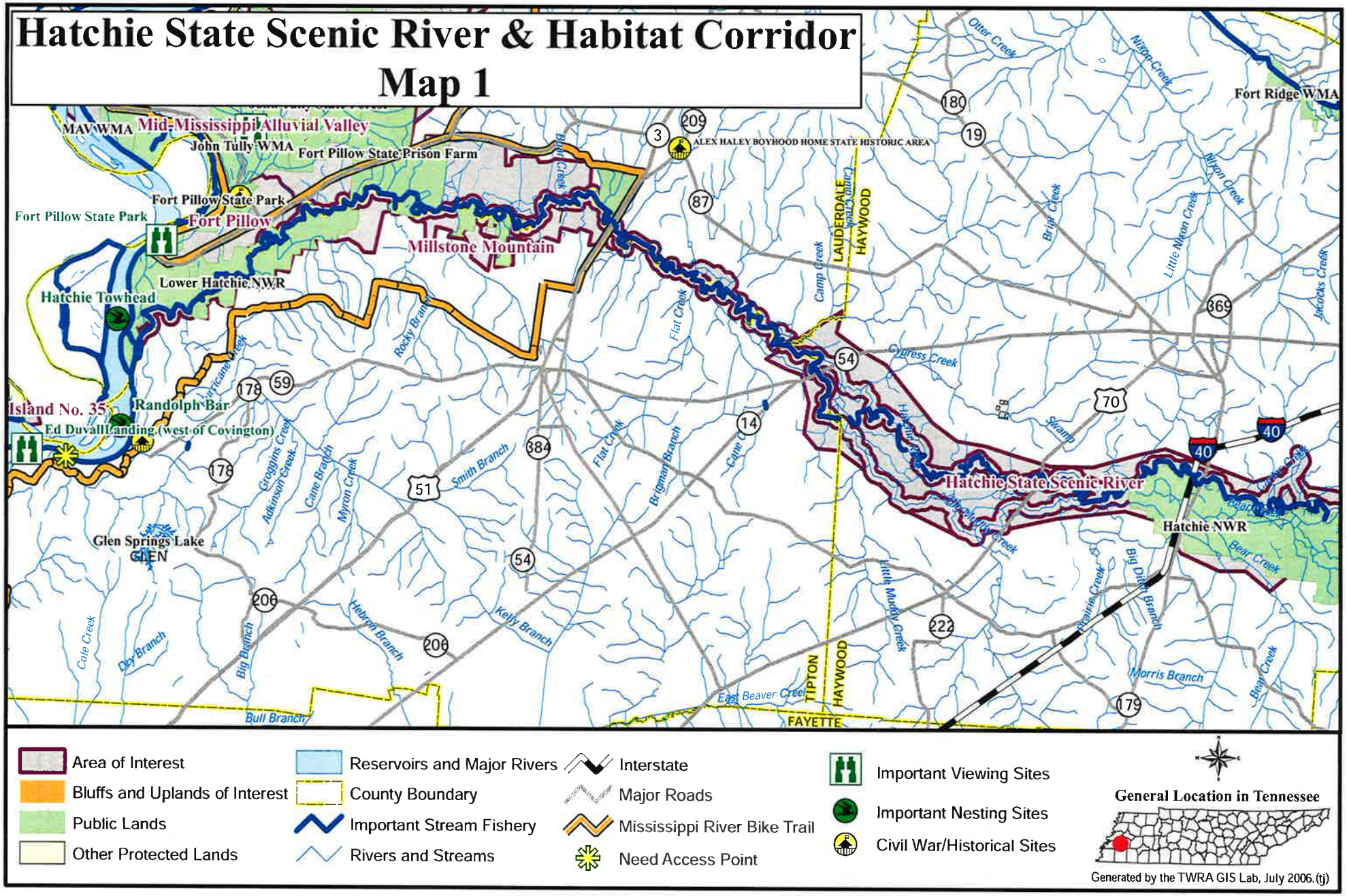
This area has been indicated as an area of "biological significance" in many plans including the "West Tennessee Conservation Plan" and "Tennessee's Comprehensive Wildlife Conservation Strategy". Additionally, there are at least four significant archaeological sites identified in this project area

Strategy – The floodplain of the Hatchie River is extensive, covering almost 95,000 acres. The site conservation plan for the Hatchie State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 1,000 feet from the center of the river. Additionally, located along the Hatchie State Scenic River are other conservation lands, public and private, that include an area greater than that included within the Scenic River Boundary. These areas will be in addition to the conservation needs for the Scenic River. It may not be practical for the state or federal government to own and manage all of the lands within the scenic river and habitat corridor, however, through a public and private partnership involving innovative conservation approaches and private landowner incentives, it is hoped that the vast floodplain of the Hatchie River can be conserved. The needs presented here are viewed as long term goals possibly encompassing a time frame of 50-100 years.

Land Protection Needs - 84,287 acres at an estimated cost of $106,500,000.

Potential Partners – TNC, QU, NWTF, TDEC, TWRA, USFWS, WRC, Shelby County Government, Fayette County Government, and Chickasaw Basin Authority.

Hatchie State Scenic River & Habitat Corridor
Map 1



Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands

Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams

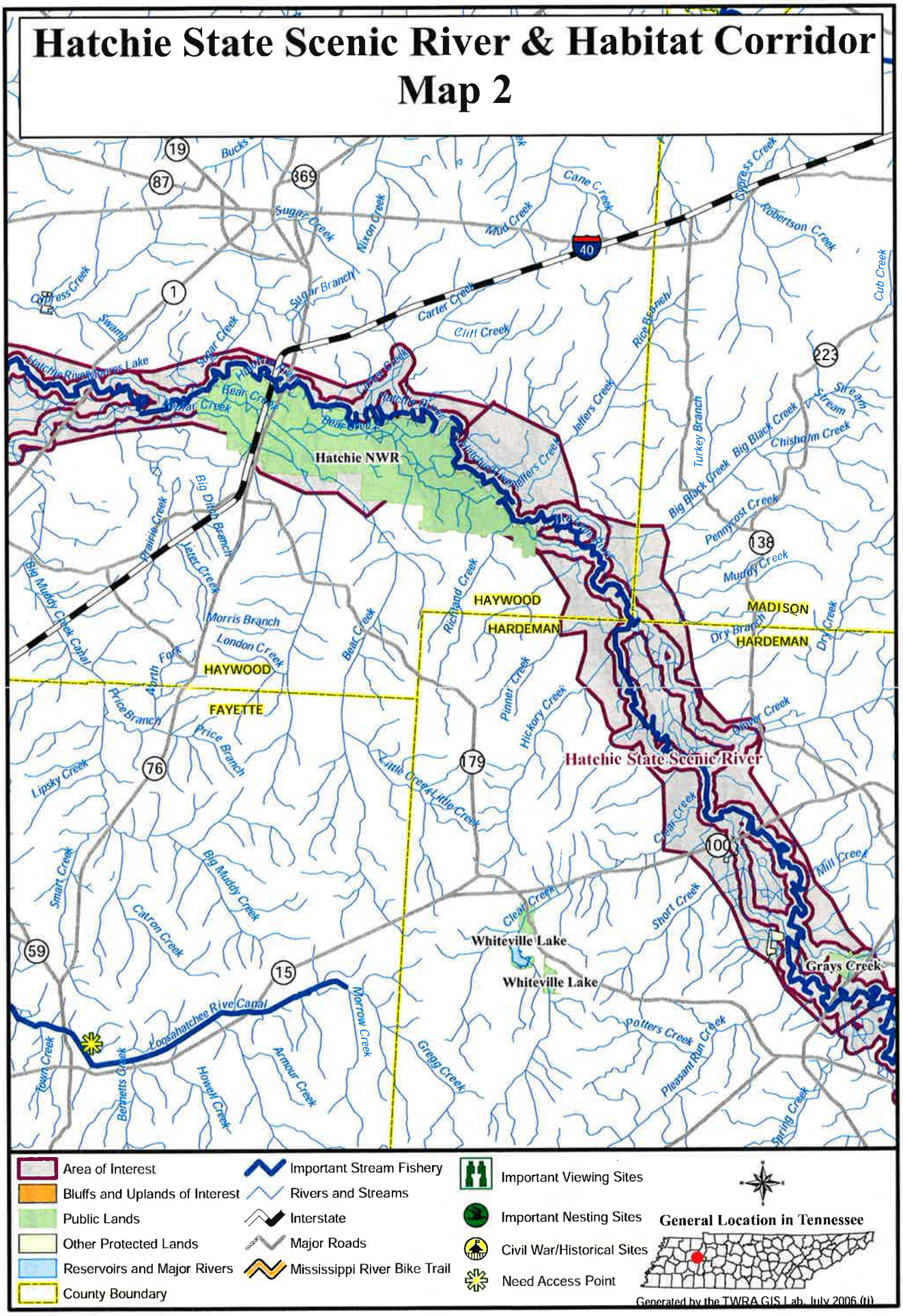
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point

Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites

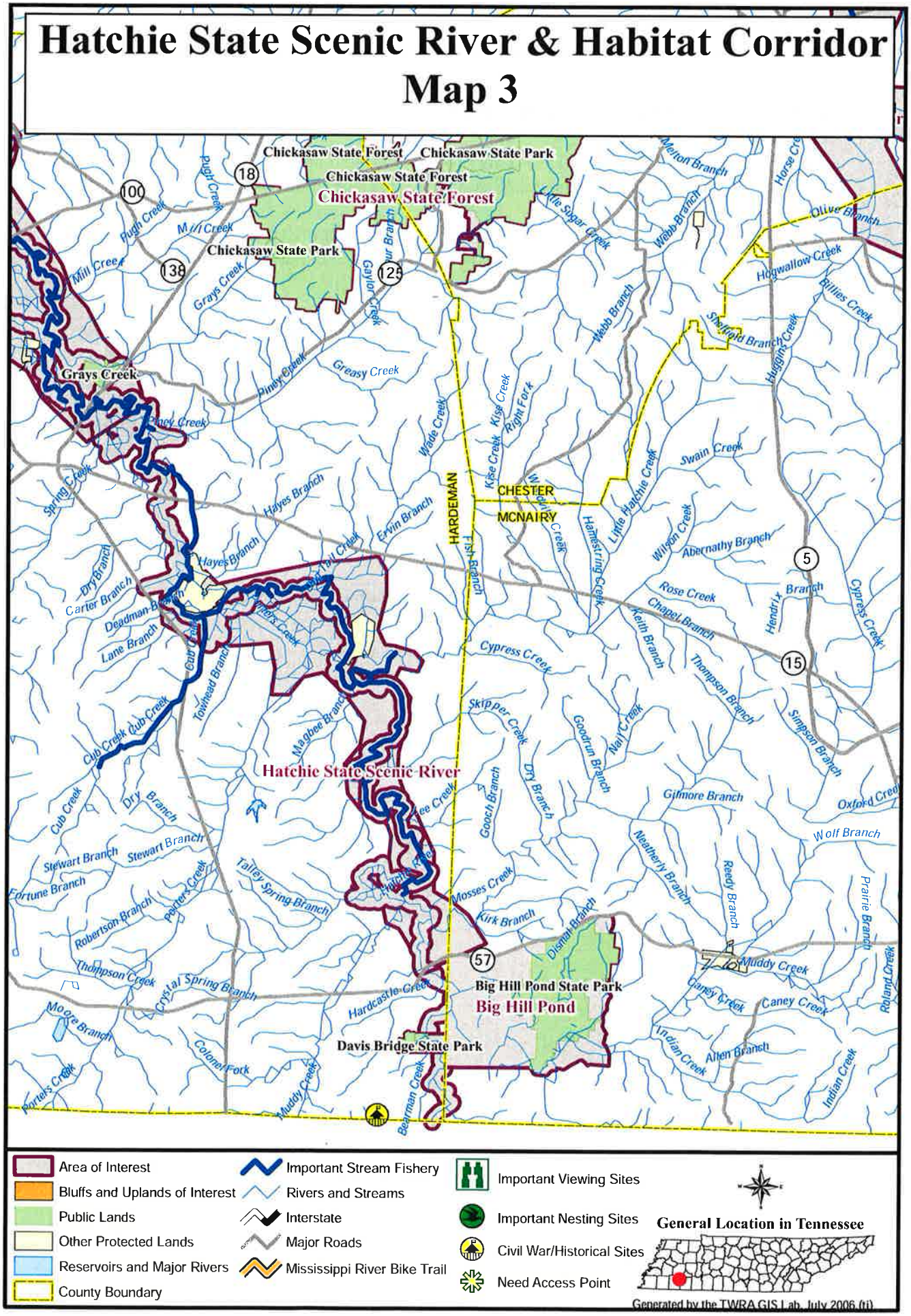
General Location in Tennessee

Generated by the TWRA GIS Lab, July 2006.(tj)

Hatchie State Scenic River & Habitat Corridor
Map 2



Hatchie State Scenic River & Habitat Corridor
Map 3



ISLAND 35 AND DENSFORD BAR

Location – (N35.5257, W90.0153) This project is located in the Mississippi River floodplain in Tipton County. Island 35 is on the west side of the river.

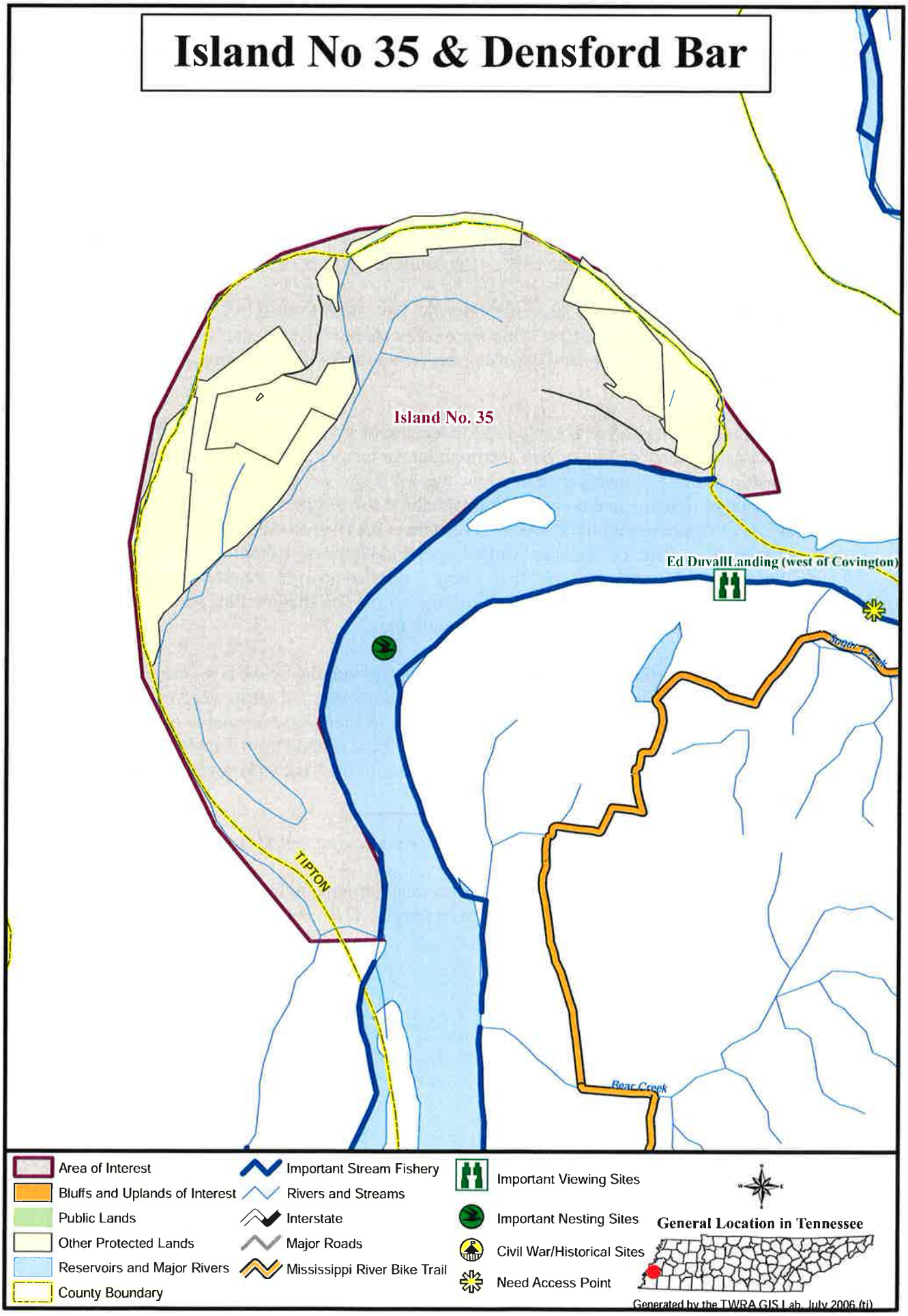
Description – The property was once part of the Mississippi River and an inactive chute separates the island from Arkansas. The island consists of exposed sand with vegetation on the higher ground.

Significance – The island is one link in a chain of several properties along the Mississippi floodplain that have been identified as important areas for restoration and conservation. Ownership of this property would allow the TWRA to work with partners to restore the floodplain function of this property. Specifically TWRA would like to reconnect the chute with the river so this channel can flood seasonally. The reestablished waterway would improve habitat for sport fish, paddlefish, catfish, and the endangered pallid sturgeon. The island is also important habitat for shorebirds including the endangered interior least tern.

Lands Protection Needs – 8,506 acres at an approximate cost of $11,557,800.

Potential Partners – Southeast Aquatic Resource Partnership, Lower Mississippi River Conservation Committee, USACE, TNC, and NRCS.

Island No 35 & Densford Bar



LOOSAHATCHIE BAR/ROBINSON CRUSOE ISLAND & ARMSTRONG BAR

Location – (N35.1841, W90.0940 and N35.0339, W90.2861) These properties are located in the Mississippi River floodplain in Shelby County. Loosahatchie Bar/Robinson Crusoe Island is directly west of Mud Island in Memphis. Armstrong Bar is located on the west side of the river in the southwest corner of Shelby County.

Description – Both areas are large sandbars that have been formed by deposited sand from the river. At one time these areas were connected to the river, but at present only inactive chutes remain. The land consists of exposed sand with vegetation on the higher ground.

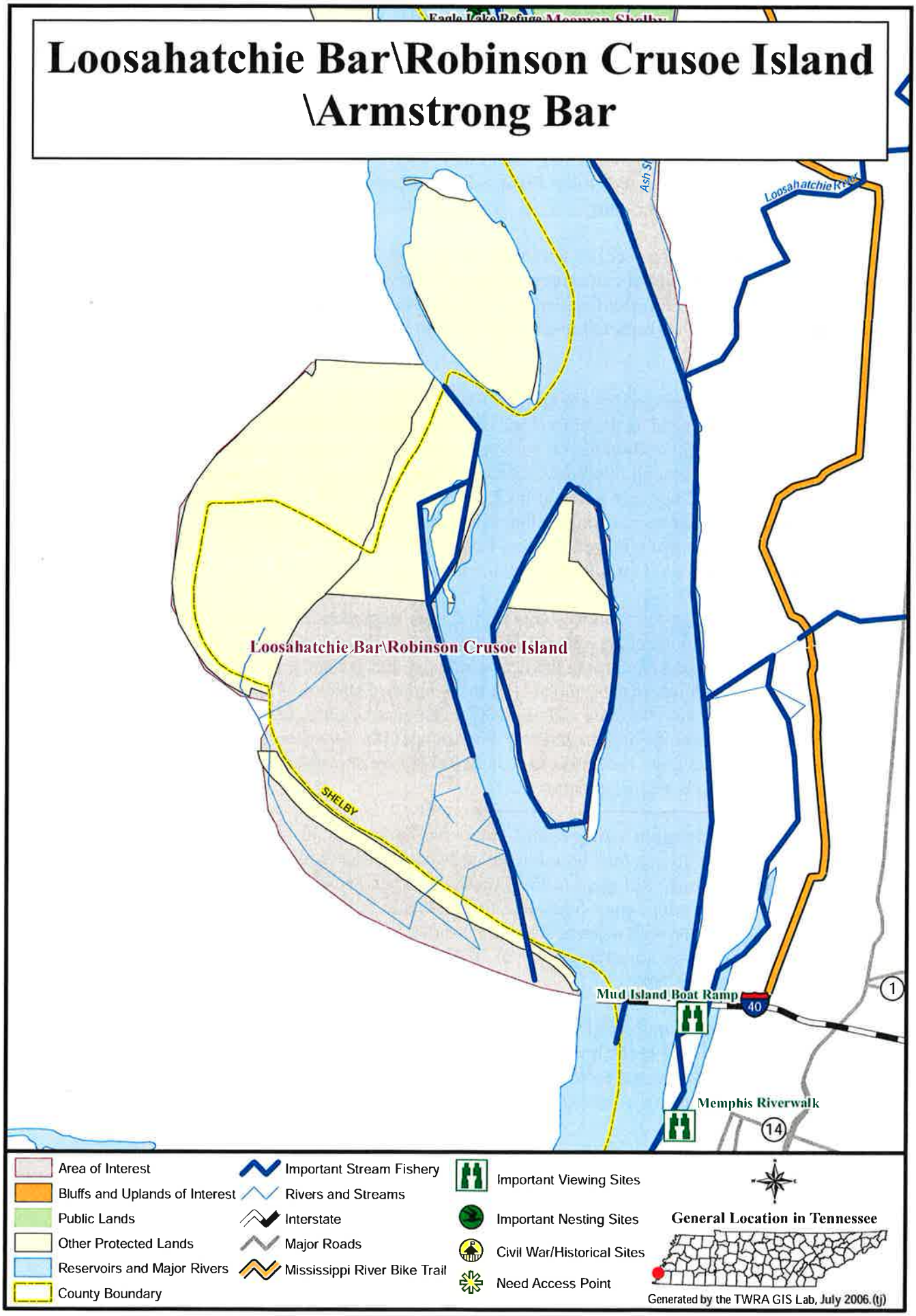
Significance – These areas are two links in a chain of several areas along the Mississippi floodplain that have been identified as important for restoration and conservation. Ownership of these properties would allow the TWRA to work with partners to restore the floodplain function and create additional habitat for wildlife. Specifically TWRA would like to partner with the USACE to reconnect the river to the back channels on these properties. The reestablished waterways would improve habitat for sturgeon, paddlefish, catfish, and many sportfish. These areas also provide important habitat for shorebirds including the endangered interior least tern. The shallow flats surrounding these areas currently provide habitat for juvenile fishes.

In the Loosahatchie Bar area TWRA wants to partner with the USACE to create habitat. Chevrons would be installed to create islands for shorebirds and create deep holes for fish. The opportunity to create islands within sight of Memphis is a unique opportunity. When complete, people could observe wildlife on these islands from the Memphis greenway along Mud Island. By adding more water to the backwater areas recreational fishing could be greatly improved.

Land Protection Needs – 2,813 acres at an approximate cost of $6,136,700.

Potential Partners – Southeast Aquatic Resource Partnership, Lower Mississippi River Conservation Committee, USACE, City of Memphis, TNC, and NRCS.

Loosahatchie Bar\Robinson Crusoe Island \Armstrong Bar



LOWER OBION RIVER

Location – (N36.0488, W89.6131) The Lower Obion River project area is located in the downstream section of the Obion River in Dyer county approximately five miles west/northwest of Dyersburg.

Description – The project lies within the Mississippi Alluvial Valley. The Obion River is free-flowing although extensive sections of the river have been channelized. The area is wetlands, prior converted wetlands and associated uplands. Much of the bottomland hardwood forest has been removed in the process of converting a majority of this land to agricultural uses.

Significance – The corridor along the Mississippi river and its immediate tributaries has long been recognized as the most significant migratory bird corridor in the world. Annually, up to 50 million ducks, geese, shorebirds, wading birds, neotropical birds and raptors migrate through this general region of North America. Over the past hundred years, this region has seen some of the most dramatic habitat changes of any ecosystem in the country. It has been estimated that as much as 80% of the bottomland hardwood forest that dominated this area has now been removed. The remaining forest areas have been further degraded through fragmentation.

This project will protect this key area from further degradation plus allow for enhanced management activities that will increase the area's ability to provide habitat for at least 23 species of shorebirds including the least sandpiper and greater yellowlegs, 17 waterfowl species, 11 landbird species, and at least one waterbird species of concern in the Mississippi Flyway, the state and federally endangered interior least tern. Other rare birds that frequent the area include the Mississippi kite, Swainson's warbler, little blue heron and great egret. Activities to provide habitat for shorebirds during critical migratory periods will be undertaken.

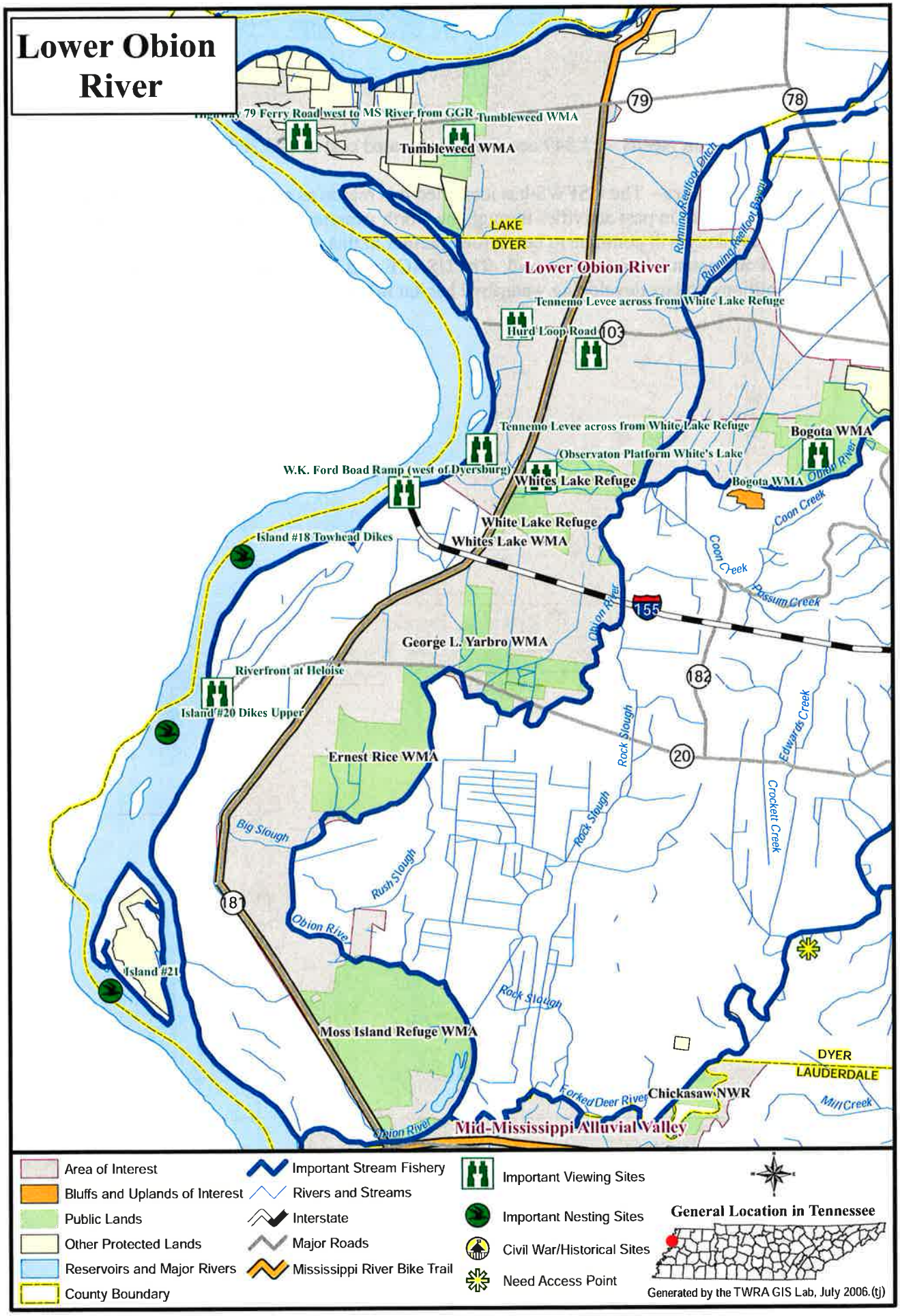
The Lower Mississippi Valley Joint Venture has delineated this general area as having potential to link fragmented bottomland hardwood forests (including already protected lands at White Lake Refuge, Thorny Cypress, E. Rice, Moss Island, Tumbleweed, and Bogota) thus creating larger functional forest patches for species that require large to very large blocks of forest in order to maintain "source" breeding populations. This area could provide a functional forestland patch of 20,000 acres and critical habitat for Swainson's and cerulean warblers.

This area contains nine of the birding sites listed in the "Great River Birding Trail Plan". However, only four of the birding sites are now protected. An observation tower has already been constructed at White Lake Refuge. Three fishing access sites are located within this project area and one proposed fishing access site is proposed just east of the project area.

The area near Lenox is the site of at least two significant prehistoric Indian sites that are in need of protection. Additionally the viewscape from the bluffs at Lenox and north along the Obion River give visitors an exceptional view both to the west and north.

Land Protection Needs – 11,349 acres at an estimated cost of $25,367,616

Potential Partners – The USFWS has identified this region as an important wetland area and has partnered in past activities through the North American Wetlands Conservation Act. They likely will continue to be a strong partner in this project. DU, NWTF, TPGF, and TCF are potential partners as well. The USACE will be spending approximately three millions dollars developing waterfowl habitat in the area.


Lower Obion River
Highway 79 Ferry Road west to MS River from GGR
Tumbleweed WMA
Tumbleweed WMA
LAKE
DYER
Lower Obion River
Running Realtoot Ditch
Running Realtoot Bayou
Tennemo Levee across from White Lake Refuge
Hurd Loop Road
Tennemo Levee across from White Lake Refuge
Bogota WMA
Observaton Platform White's Lake
W.K. Ford Boad Ramp (west of Dyersburg)
Whites Lake Refuge
Bogota WMA
Obion River
White Lake Refuge
Whites Lake WMA
Island #18 Towhead Dikes
Coon Creek
Coon Creek
Possum Creek
Obion River
George L. Yarbro WMA
Riverfront at Heloise
Island #20 Dikes Upper
Rock Slough
Edwards Creek
Ernest Rice WMA
Rock Slough
Crockett Creek
Big Slough
Rush Slough
Obion River
Island #21
Rock Slough
Moss Island Refuge WMA
DYER
LAUDERDALE
Forked Deer River
Chickasaw NWR
Mill Creek
Obion River
Mid-Mississippi Alluvial Valley
79
78
103
155
182
20
18
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MEEMAN SHELBY FOREST STATE PARK AND SNA AND EAGLE LAKE REFUGE

Location – (N35.3301,W90.0700) Meeman Shelby is located approximately 15 miles north of Memphis near Millington along the Mississippi River in Shelby County

Description: Meeman Shelby Forest State Park was established in 1938 by the National Park Service, but was later transferred to the State of Tennessee. The area has been managed as both a state park and a WMA since 1950. Eagle Lake Refuge (3,200 acres) was acquired in 1992 by TWRA. Approximately 11,000 acres of the park are designated as a SNA.

Bordering on the mighty Mississippi River, two-thirds of this 17,700-acre state park/SNA/ WMA are bottomland hardwood forests of large oak, cypress and tupelo. The area also contains two lakes and many miles of hiking trails. The Meeman Museum and Nature Center is named for Edward J. Meeman, courageous conservation editor of Scripps-Howard newspapers who helped establish this park and the Great Smoky Mountains National Park. Adjoining the area to the south is Eagle Lake Refuge which comprises 3,200 acres of prior converted wetlands. Deer, turkey, beaver and some 200 species of birds, including waterfowl and shorebirds are abundant. A public boat ramp provides fishing access to the Mississippi River.

Significance – (Site significance – B3) The area is significant for its protection of the now diminishing southern bottomland hardwood forest. This type of ecosystem is comprised of perennial wetlands, sloughs, and low gradient streams. The abundance of food, water, and cover allow a variety of wildlife to exist. It is particularly significant because so much of west Tennessee's rivers and streams have been seriously altered, resulting in a loss of vast bottomland hardwood forests that were once prevalent. This large natural area provides refugia for many populations of rare species including creeping spot-flower (*Acmella oppositifolia*), copper iris (*Iris fulva*), and cedar elm (*Ulmus crassifolia*). The interior least tern and bald eagle are two federally listed bird species that have been recorded in the bottomlands here. The area is also home to 11 state champion trees. Cypress sloughs are dominated by bald cypress and southern hackberry with an understory of black willow, green ash, and water elm. Bottomland hardwoods are dominated by cottonwoods, sycamore, and southern hackberry. The Chickasaw Bluffs also support unique plant communities. The bluff vegetation is variable according to slope aspect but is characterized by sweet gum, tulip poplar, white and red oaks, and beech with a distinctive understory of red buckeye.

This is one of the most biologically diverse areas in west Tennessee. Over 200 avian species are known to occur on the Shelby/Eagle Lake complex. Cerulean, prothonotary, northern parula, Swainson's, and worm-eating warblers all breed within the boundaries of Meeman Shelby. Each of those species is very high on the Partners in Flight (PIF) priority list. In May 2004 more than 50 Mississippi kites, another PIF high priority species, were observed foraging above the WMA at one time.

With the Memphis skyline visible to the south, these areas are a recreational hub for the largest metropolitan area on the Mississippi River between St. Louis and New Orleans. An estimated 1,030,000 visitor days are spent by outdoor enthusiasts enjoying the birdwatching, hunting, fishing, hiking, etc. that these areas have to offer. The area has a wildlife viewing platform and is a significant site on the Great River Birding Trail. This area also provides lake fishing and boat access to the Mississippi River for fishing.

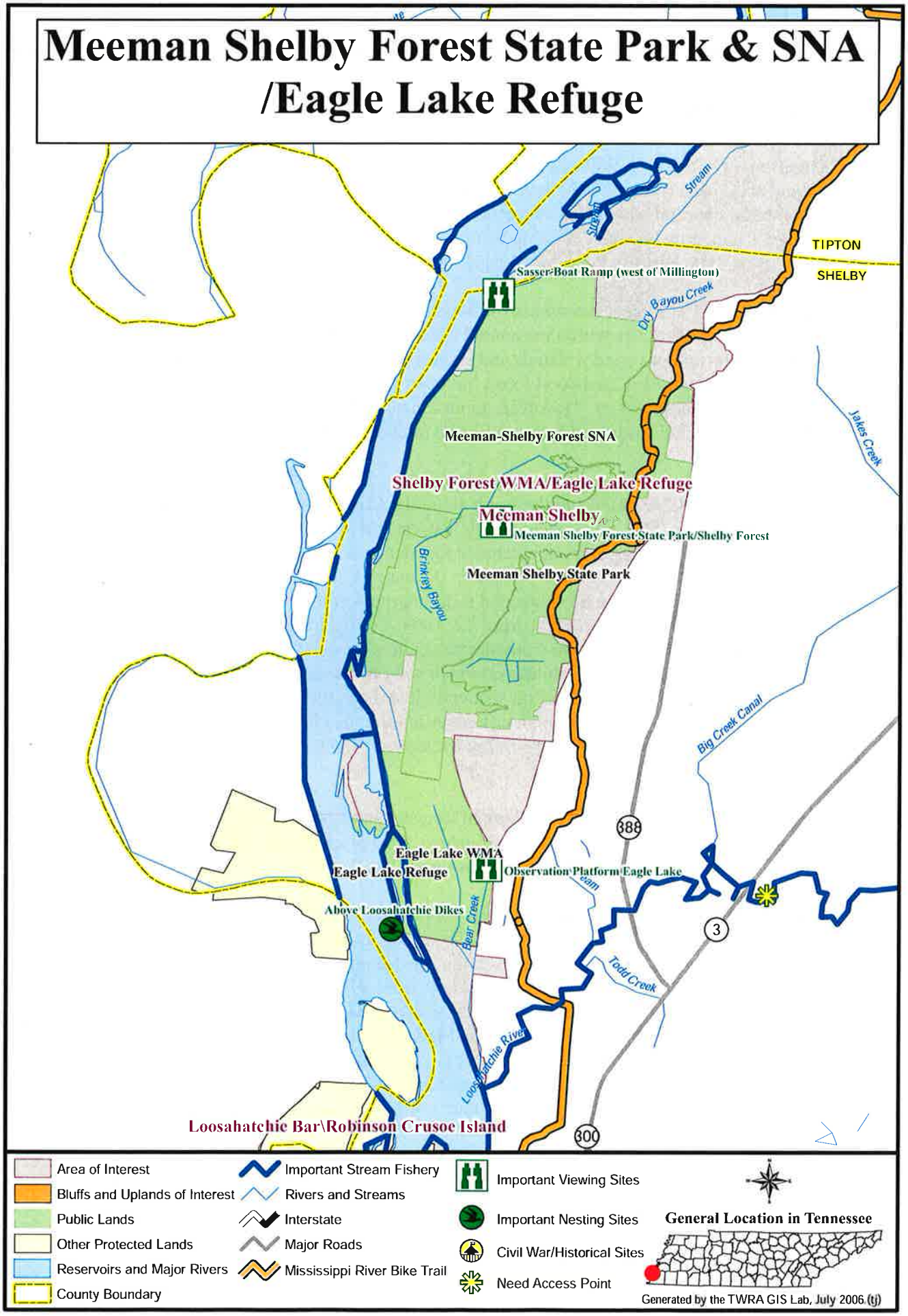
The potential for development of inholdings threaten the diversity of this area. Continued development of the boundary areas could diminish the project's effectiveness to provide adequate habitats for species listed above.

The area is below the 20,000 acre minimum forest patch size required for viable populations of certain migratory songbirds as identified by PIF. Only one such area now exists in Tennessee, but expansion and reforestation could help enable this project area to qualify as one or the four areas needed in the Mississippi Alluvial Valley.

Land Protection Needs – State Parks - 600 acres at an estimated cost of $5,000,000; SNA – 1,121 acres at an estimated cost of $5,044,500; WMA – 3,228 acres at an estimated cost of $6,500,000.

Potential Partners – TDEC and TWRA. TWRA has already partnered with DU and the USFWS in the acquisition of more than 3,200 acres at Eagle Lake Refuge in the past 10 years. Currently, we are partnering with TPGF on the acquisition of several hundred additional acres. Tennessee Ornithological Society has provided technical support for this project.

Meeman Shelby Forest State Park & SNA /Eagle Lake Refuge



MID-MISSISSIPPI ALLUVIAL VALLEY

Location – (N35.7595, W89.7100) The Mid-Mississippi Alluvial Valley is an extensive project area located along the Mississippi River 30-60 miles north of Memphis. It encompasses several existing sub-projects including Lower Hatchie National Wildlife Refuge, Chickasaw National Wildlife Refuge, Sunk Lake SNA, John Tully WMA, and Fort Pillow State Historic Park Fort Wright, and Millstone Mountain.

Description – The project lies within the Mississippi Alluvial Valley. A significant portion of the project lies within the annual floodplain of the Mississippi River. The area is wetlands, prior converted wetlands and some associated uplands. In certain areas, much of the bottomland hardwood forest has been removed in the process of converting the land to agricultural uses. However, approximately 30% of the project area still remains bottomland hardwood forest in blocks ranging in size from a few acres to several thousand acres.

Fort Pillow (1,642 acres) lies to the south along the Chickasaw Bluffs overlooking the Mississippi River. This area is rich in both historic and archaeological significance. In 1861, the Confederate Army built extensive fortifications here and named the site for General Gideon J. Pillow of Maury County. Because of its strategic location, the fort was taken by the Union Army who controlled it during most of the war. Remains of the earthworks are well-preserved. On April 12, 1864, Confederate General Nathan Bedford Forrest and approximately 1,500 Confederate soldiers attacked Fort Pillow. The Union garrison had 550 soldiers; almost half of which were black troops. Major William F. Bradford refused to surrender and subsequently lost the battle after the fort was stormed by Forrest's troops. Because of high casualties among the black Union troops, the Confederates were accused of perpetrating a massacre. Controversy surrounding the battle still exists today.

Another 200 acres is proposed for National Register status known as Fort Wright including fortification and arms storage remains. The brick powder magazine is the only known surviving Confederate powder magazine in the South.

Sunk Lake SNA is an 1,870 acre B3 SNA cooperatively managed by the USFWS as part of the Lower Hatchie National Wildlife Refuge. The forests at Sunk Lake surround a series of six shallow depressional lakes within the floodplain of the Mississippi River. The Five Hundred Pound Lake derives its name from a local fisherman's account of having caught 500 pounds of buffalo fish there in one day. The lakes within the preserve were created by the same series of the New Madrid earthquake that created Reelfoot Lake. The floodwaters from the Mississippi River recharge the lakes approximately every five years. Recent additions to the natural area include farmland that is being planted with cherry oak, Nuttall oak, willow oak and other bottomland species to restore the bottomland hardwood forest.

It supports excellent examples of bald cypress swamp, bottomland hardwood forest, and open marshy aquatic habitat. The diversity of wetland and upland communities offer a wide range of habitat for waterfowl and other birds, fish, reptiles, amphibians, and both

native terrestrial and aquatic vegetation. Rare plant species at Sunk Lake include creeping spot-flower (*Acmella oppositifolia*), featherfoil (*Hottonia inflata*), lake cress (*Neobeckia aquatica*), ovate-leaved arrowhead (*Sagittaria platyphylla*) and cedar elm (*Ulmus crassifolia*).

Millstone Mountain is a prominent upland knob in the Coastal Plain physiographic province. The area contains boulder-sized rocks and differs from much of the deep, sandy-soiled land of West Tennessee. The upland forest consists of dry-mesic species, but also includes more xeric tree species such as southern red oak, blackjack oak, and post oak. This area contrasts with the lowlands of the Hatchie River just to the north. In the early 1990s, the Tennessee Division of Natural Areas was involved with botanical inventories of the site. In 2001, TNC purchased 182 acres along the Hatchie River, and approximately 42 acres of the TNC property includes uplands within the Millstone Mountain site design. In 2002, the USFWS purchased 161 acres and expects to purchase more of the site in the future.

Site Importance High (B3) - At least seven state-listed plant species occur on the upland portion of Millstone Mountain. Five of the species earleaved false foxglove (*Agalinis auriculata*), red starvine (*Schisandra glabra*), small-laved panicgrass (*Panicum ensifolium*), creeping spotflower (*Acmella oppositifolia*), and nodding rattlesnake root (*Prenanthes crepidinea*) are considered very rare and imperiled (S2) in Tennessee. It is unclear the full extent of these plant occurrences and how much of each occurrence grows on TNC or USFWS lands.

The protection of the entire Millstone Mountain would aid in protection of these rare species. Currently red starvine is only known from three counties in Tennessee. Outside of Millstone Mountain, the only public land where earleaved false foxglove is known to occur is the Fort Campbell Military Reservation and the proposed Crowder Cemetery Barrens Designated SNA. The only other public land for small-leaved panic grass is the Arnold Engineering and Development Center.

Significance – This project is the most extensive wetland project in Tennessee and seeks to restore and link up to 100,000 acres of fragmented bottomland forest. The area was identified by the Lower Mississippi Valley Joint Venture as the most feasible project for providing suitable habitat for the swallow-tailed kite, a species that generally requires a minimum of 100,000-acre blocks of bottomland forest.

The corridor along the Mississippi River and its immediate tributaries has long been recognized as the most significant migratory bird corridor in the world. Annually, up to 50 million ducks, geese, shorebirds, wading birds, neotropical birds and raptors migrate through this general region of North America. Over the past hundred years, this region has seen some of the most dramatic habitat changes of any ecosystem in the country. It has been estimated that as much as 80% of the bottomland hardwood forest that dominated this area has now been removed. The forest areas that remain are fragmented thereby degrading them even further.

This project will protect this key area from further degradation plus allow for enhanced management activities that will increase the area's ability to provide habitat for at least 23 species of shorebirds including the least sandpiper and greater yellowlegs, 17 waterfowl species, 11 landbird species, and at least one waterbird species of concern in the Mississippi Flyway, the state and federally endangered interior least tern. Other rare birds that frequent the area include the Mississippi kite, Swainson's warbler, little blue heron and great egret.

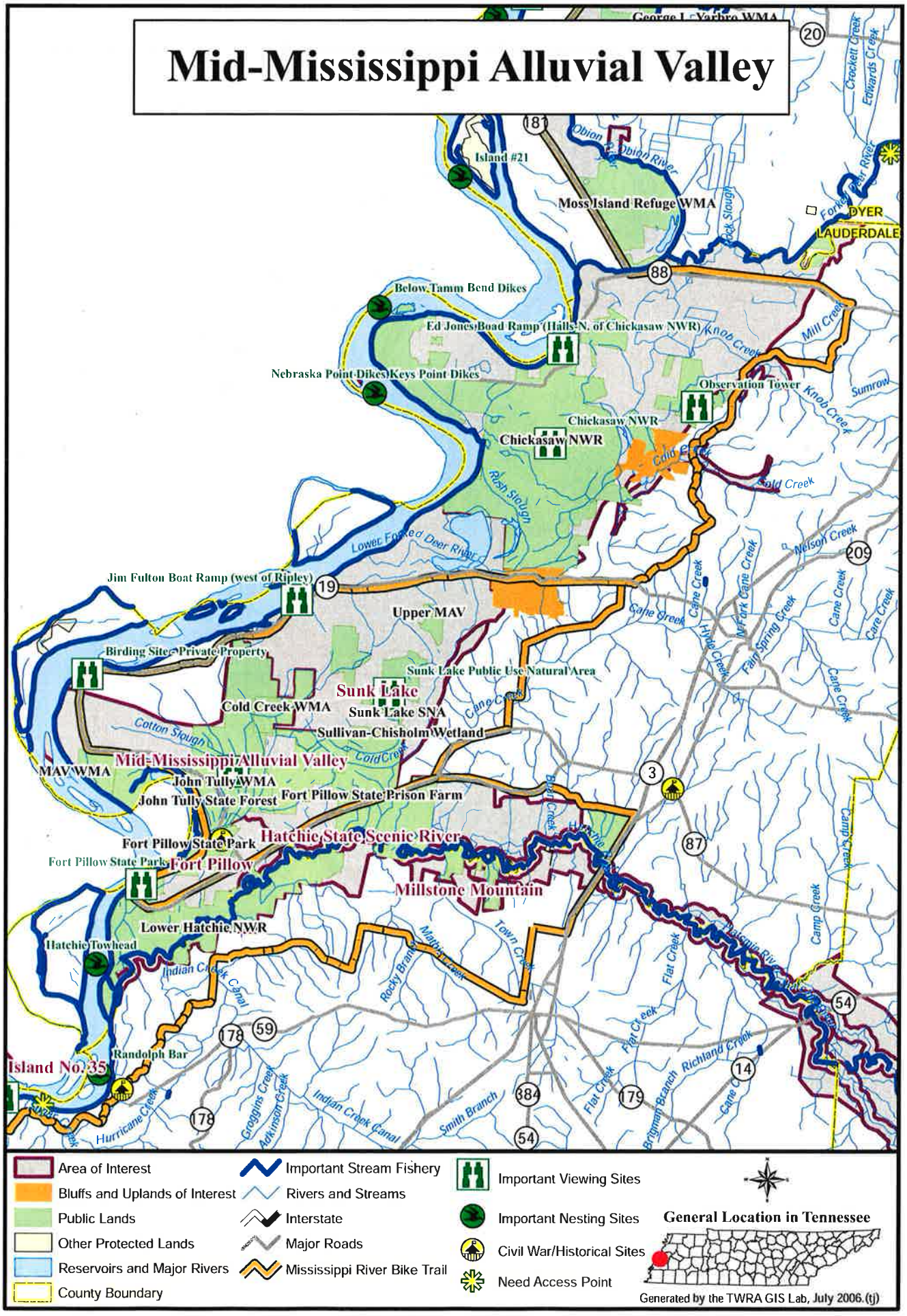
Due to its size, this project has potential to provide a significant amount of wildlife recreation. Its diverse habitats, species richness, proximity to Memphis, and location along the Great River Road leading to Reelfoot make it a very attractive destination for hunters, anglers, and especially wildlife watchers. The project area includes six of the birding sites included in the Great River Birding Trail that are already protected. Three public fishing access fishing sites exist in the project area and there is potential for others to be developed.

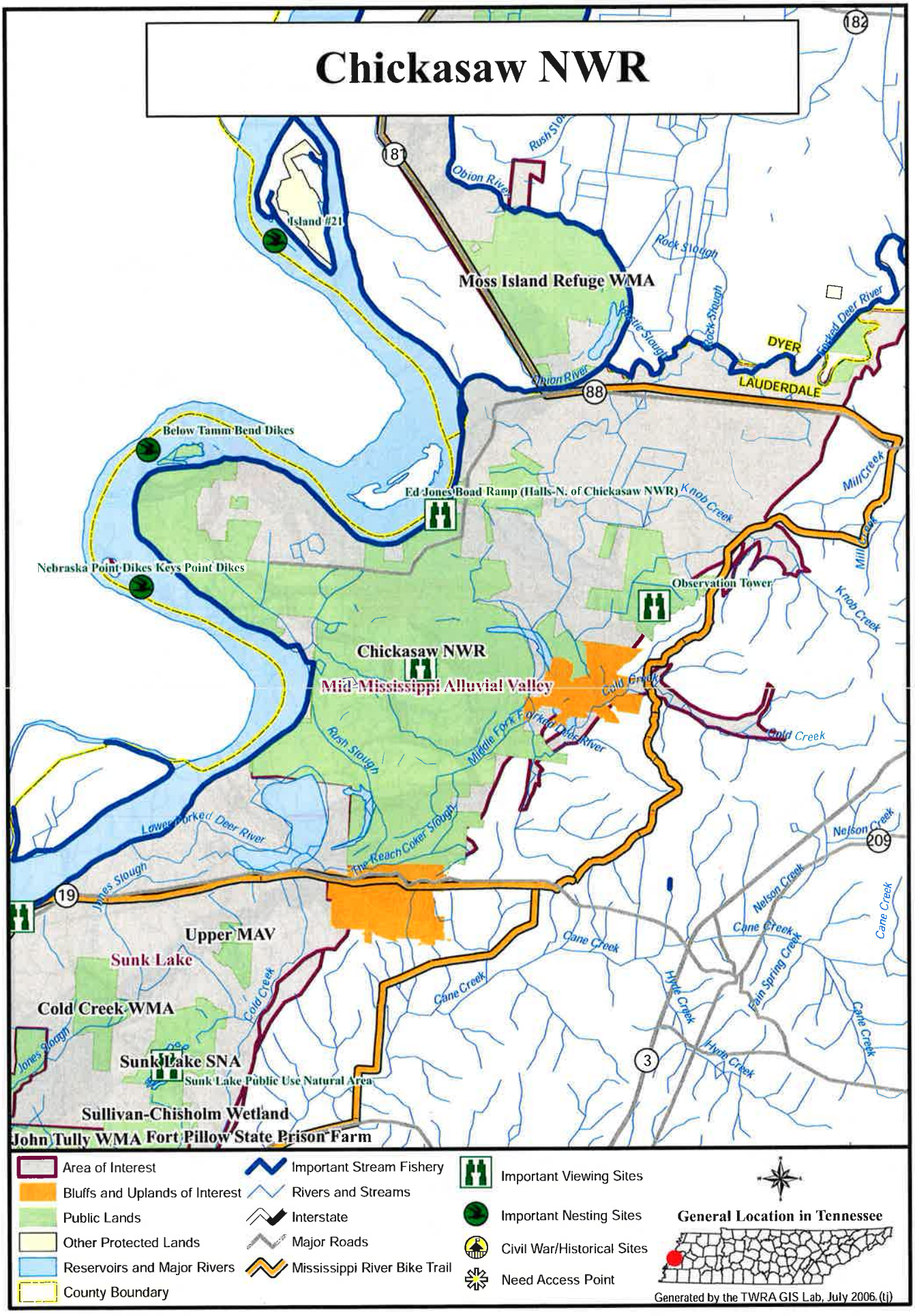
The lower portion of this project area also contains Chickasaw Bluff # 1 (near Ft Pillow) and Chickasaw Bluff # 2 (between Randolph and Richardson). In terms of viewscapes, these may be the most crucial areas along the entire length of the project as they provide spectacular views of the River and allow visitors to see the tremendous power and grandeur of this huge waterway. Much of Bluff # 1 is already protected by USFWS, TWRA, TDEC and Tennessee Department of Corrections. However, the entire area north of Hwy 59 between Randolph and Richardson (including Ft. Wright mentioned above) needs to be protected. Other significant viewscapes can be found at Hales Point which is one of the highest points in the corridor and at Arp where the bluff along Hwy. 19 is nearly 300 feet above the valley floor.

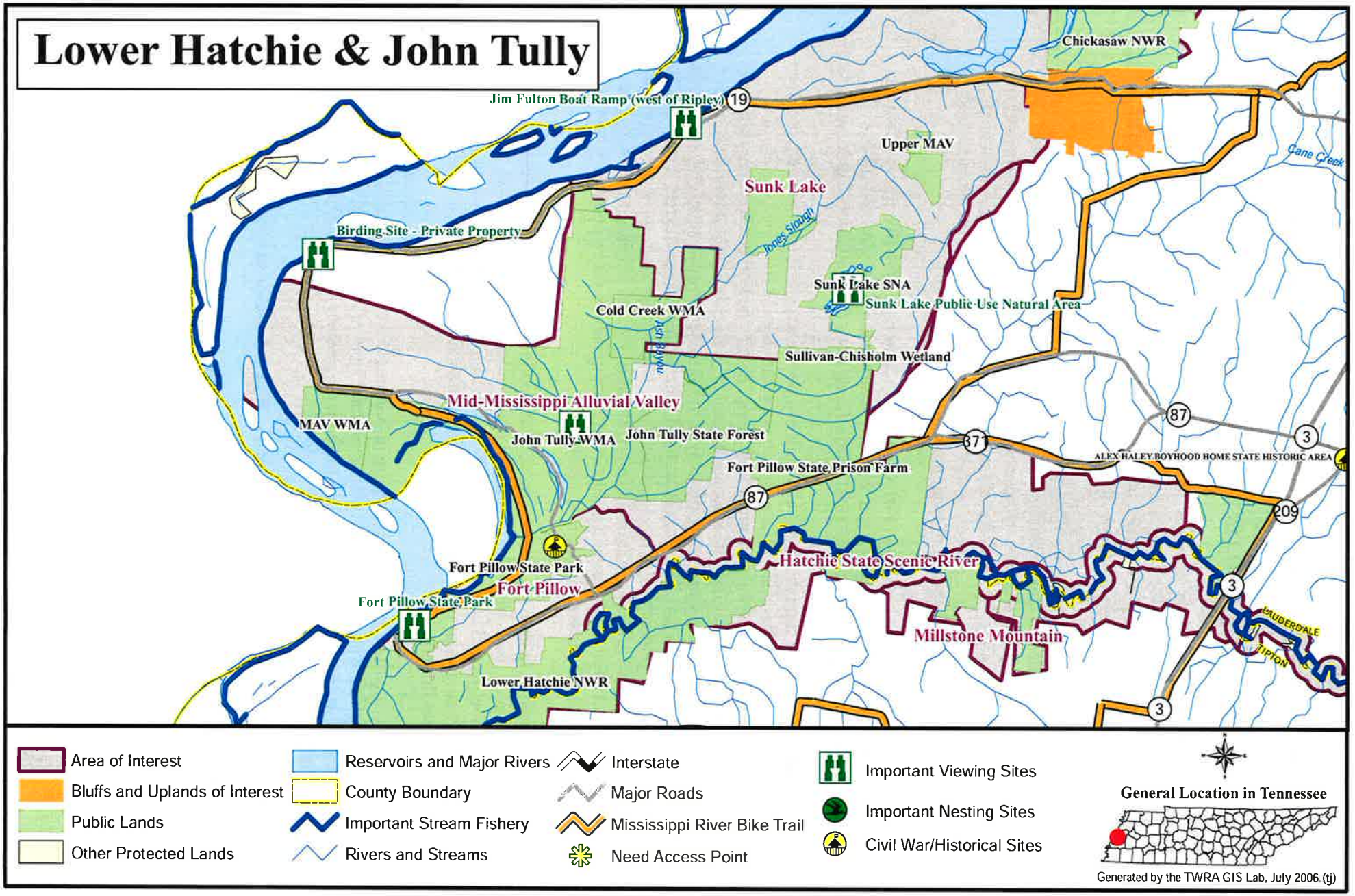
Adding to the area's cultural significance are six unprotected prehistoric Indian villages and temple mounds at Randolph, Richardson, and four other bluff sites south to and including northern Shelby County.

Land Protection Needs – Sunk Lake SNA - 23,402 acres at an estimated cost of $58,505,000; Fort Pillow SHP – 100 acres at an estimated cost of $2,000,000; Ft Wright – 200 acres at an estimated cost of $3,000,000; Millstone Mountain SNA – 589 acres at an estimated cost of $883,500; USFWS Refuge - 14,241 acres at an estimated cost of $31,600,000; TWRA WMA – 478 acres at an estimated cost of $1,793,014.

Potential Partners – Past partners include DU, NWTF, TCF, TNC, TDEC, TWRA, and others. The USFWS already has two refuges within the project area and has committed to acquire and protect thousands of additional acres as they develop these two areas. Grants through the North American Wetland Conservation Act and the Forest Legacy program have already helped secure large acreages.


Mid-Mississippi Alluvial Valley
Island #21
Moss Island Refuge WMA
DYER
LAUDERDALE
Below Tamm Bend Dikes
Ed Jones Boat Ramp (Halls, N. of Chickasaw NWR)
Nebraska Point Dikes
Keys Point Dikes
Observation Tower
Chickasaw NWR
Chickasaw NWR
Jim Fulton Boat Ramp (west of Ripley)
Upper MAV
Birding Site - Private Property
Sunk Lake Public Use Natural Area
Sunk Lake
Cold Creek WMA
Sunk Lake SNA
Sullivan-Chisholm Wetland
Mid-Mississippi Alluvial Valley
MAV WMA
John Tully WMA
John Tully State Forest
Fort Pillow State Prison Farm
Fort Pillow State Park
Hatchie State Scenic River
Fort Pillow State Park
Fort Pillow
Millstone Mountain
Lower Hatchie NWR
Hatchie Towhead
Island No. 35
Randolph Bar
Lower Forked Deer River
Rush Slough
Cold Creek
Cane Creek
Hyde Creek
N Fork Cane Creek
Fair Spring Creek
Nelson Creek
Cotton Slough
Indian Creek Canal
Rocky Branch
Matthis Creek
Town Creek
Flat Creek
Camp Creek
Hurricane Creek
Groggins Creek
Atkinson Creek
Smith Branch
Brigman Branch
Richland Creek
Knob Creek
Mill Creek
Sumrow
Crockett Creek
Edwards Creek
Obion River
Forked Deer River
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Chickasaw NWR
182
181
Rush Slough
Obion River
Island #21
Moss Island Refuge WMA
Rock Slough
Forked Deer River
DYER
LAUDERDALE
88
Obion River
Below Tamm Bend Dikes
Ed Jones Boad Ramp (Halls-N. of Chickasaw NWR)
Knob Creek
Mill Creek
Nebraska Point Dikes Keys Point Dikes
Observation Tower
Chickasaw NWR
Mid-Mississippi Alluvial Valley
Cold Creek
Middle Fork Forked Deer River
Rush Slough
Lower Forked Deer River
The Reach Coker Slough
Nelson Creek
209
Jones Slough
19
Upper MAV
Sunk Lake
Cane Creek
Hyde Creek
Fain Spring Creek
Cold Creek WMA
Cold Creek
Jones Slough
Sunk Lake SNA
Sunk Lake Public Use Natural Area
3
Irwin Creek
Sullivan-Chisholm Wetland
John Tully WMA Fort Pillow State Prison Farm
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
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General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)


Lower Hatchie & John Tully
Jim Fulton Boat Ramp (west of Ripley)
19
Chickasaw NWR
Upper MAV
Cane Creek
Sunk Lake
Jones Slough
Birding Site - Private Property
Sunk Lake SNA
Sunk Lake Public Use Natural Area
Cold Creek WMA
Ash Bayou
Sullivan-Chisholm Wetland
Mid-Mississippi Alluvial Valley
MAV WMA
John Tully WMA
John Tully State Forest
87
371
3
ALEX HALEY BOYHOOD HOME STATE HISTORIC AREA
Fort Pillow State Prison Farm
87
209
Fort Pillow State Park
Hatchie State Scenic River
Fort Pillow
Fort Pillow State Park
3
LAUDERDALE
TIPTON
Millstone Mountain
Lower Hatchie NWR
3
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MIDDLE FORK OF FORKED DEER HABITAT CORRIDOR

Location – (N35.8972, W98.1817) This habitat corridor encompasses the Middle Fork of the Forked Deer River in Dyer, Crockett and Gibson Counties upstream from Dyersburg to just west of Humbolt. Included as subunits of this project are Tigrett WMA, Eaton Bottoms Wetland, and Horns Bluff Refuge.

Description of Property – The Middle Fork has been subjected to extensive channelization over the past century. Only about 20% of the original bottomland hardwood forests remain and even those areas are under threat due to poor wetland function. Much of the land near the old meander scares are scrub vegetation including privet, willow, buttonbush, cypress, water tupelo and maple. There are isolated pockets on the higher ridges composed of overcup, willow and water oak.

In 1958 the Tennessee Game and Fish Commission purchased the first tract of land that now makes up the 7,600 acre Tigrett WMA. Eaton Bottoms and Horns Bluff Refuge were purchased by TWRA in the 1990's with funds from the Wetlands Conservation Act.

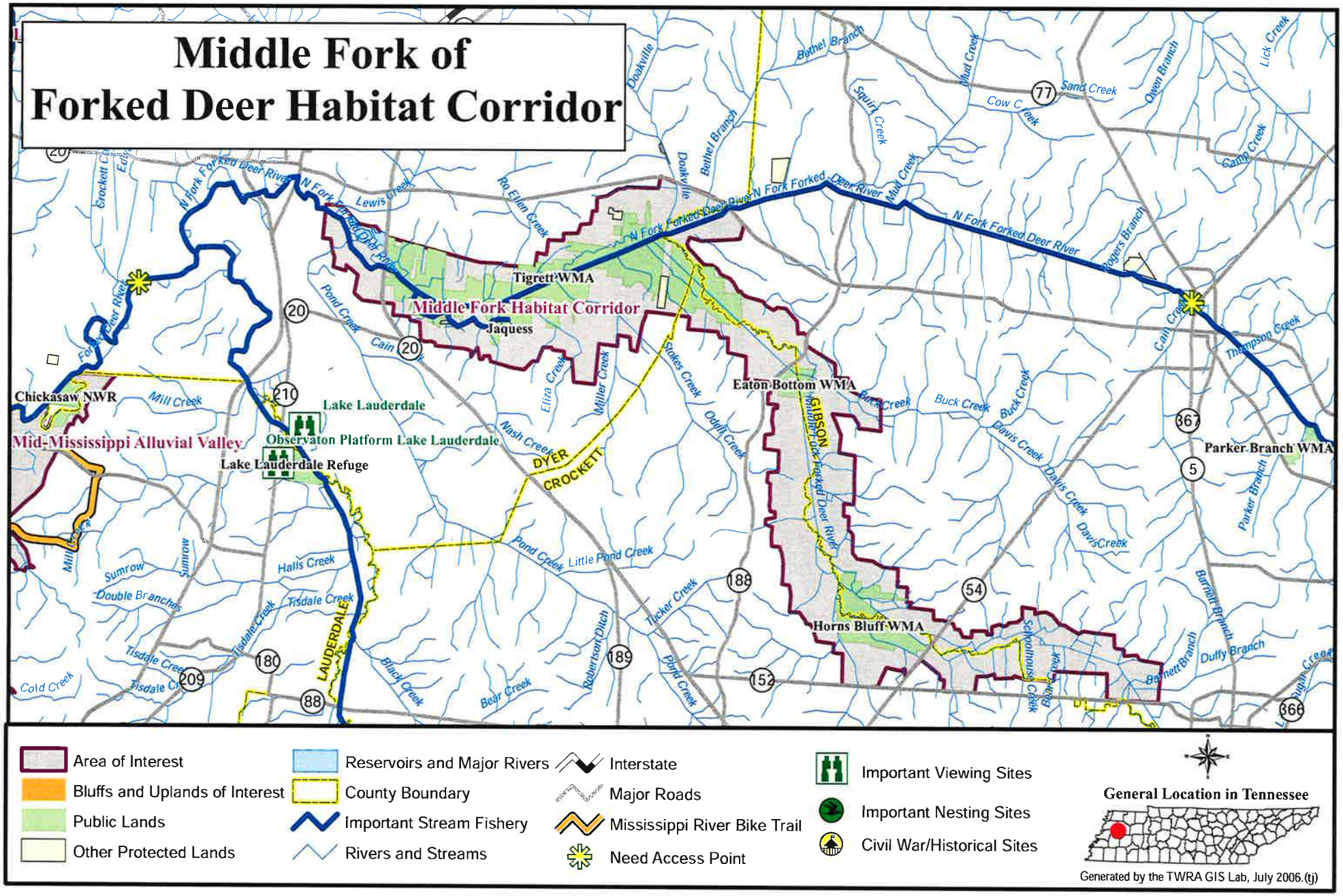
Significance –Even though the Middle Fork has been extensively channelized, the river and its associated terrestrial habitats remain important habitat for a vast variety of wildlife species. As a tributary of the Mississippi River, the Forked Deer lies within the Mississippi Flyway, perhaps the most significant migratory bird migration route in the world. Tigrett WMA is an important ecosystem for wading birds, waterfowl, mammals, reptiles and amphibians. Some of the wetland species that inhabit Tigrett WMA that are in need of management are, bald eagles (nesting), Mississippi kites, great egrets (nesting), northern harriers, little blue herons(nesting), alligator gar and alligator snapping turtles. In addition, Tigrett WMA provides important nesting habitat for prothonotary warblers, wood ducks, and great and little blue egrets.

The potential to restore river and its associated floodplain makes this project a very high priority project. Not only would habitats that are created benefit waterfowl, wading birds, shorebirds and other migratory species, but improved wetland functions could enhance groundwater recharge, reduce sediment transfer downstream, and help minimize downstream flooding.

Strategy – It will be important to acquire in-holdings first. The next priority will be land adjoining already protected areas with the ultimate goal of acquiring significant properties within the 5-year floodplain to begin the process of restoration of the river and the habitats.

Land Protection Needs – 22,983 acres at an estimated cost of $45,396,400.

Potential Funding – Wetland Acquisition Fund, North American Wetland Conservation Fund, Tennessee Parks and Greenways, DU, NWTF, and QU.


Middle Fork of
Forked Deer Habitat Corridor
Tigrett WMA
Middle Fork Habitat Corridor
Jaquess
Eaton Bottom WMA
Horns Bluff WMA
Parker Branch WMA
Chickasaw NWR
Mid-Mississippi Alluvial Valley
Lake Lauderdale
Observaton Platform Lake Lauderdale
Lake Lauderdale Refuge
DYER
CROCKETT
GIBSON
N Fork Forked Deer River
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

NATCHEZ TRACE STATE FOREST & STATE PARK

Location – (N35.8176, W88.2432) Natchez Trace State Forest is located along I-40 in Henderson, Carroll, Benton and Decatur Counties approximately 10 miles northeast of Lexington, TN.

Description - Natchez Trace State Forest - (35,904 acres)

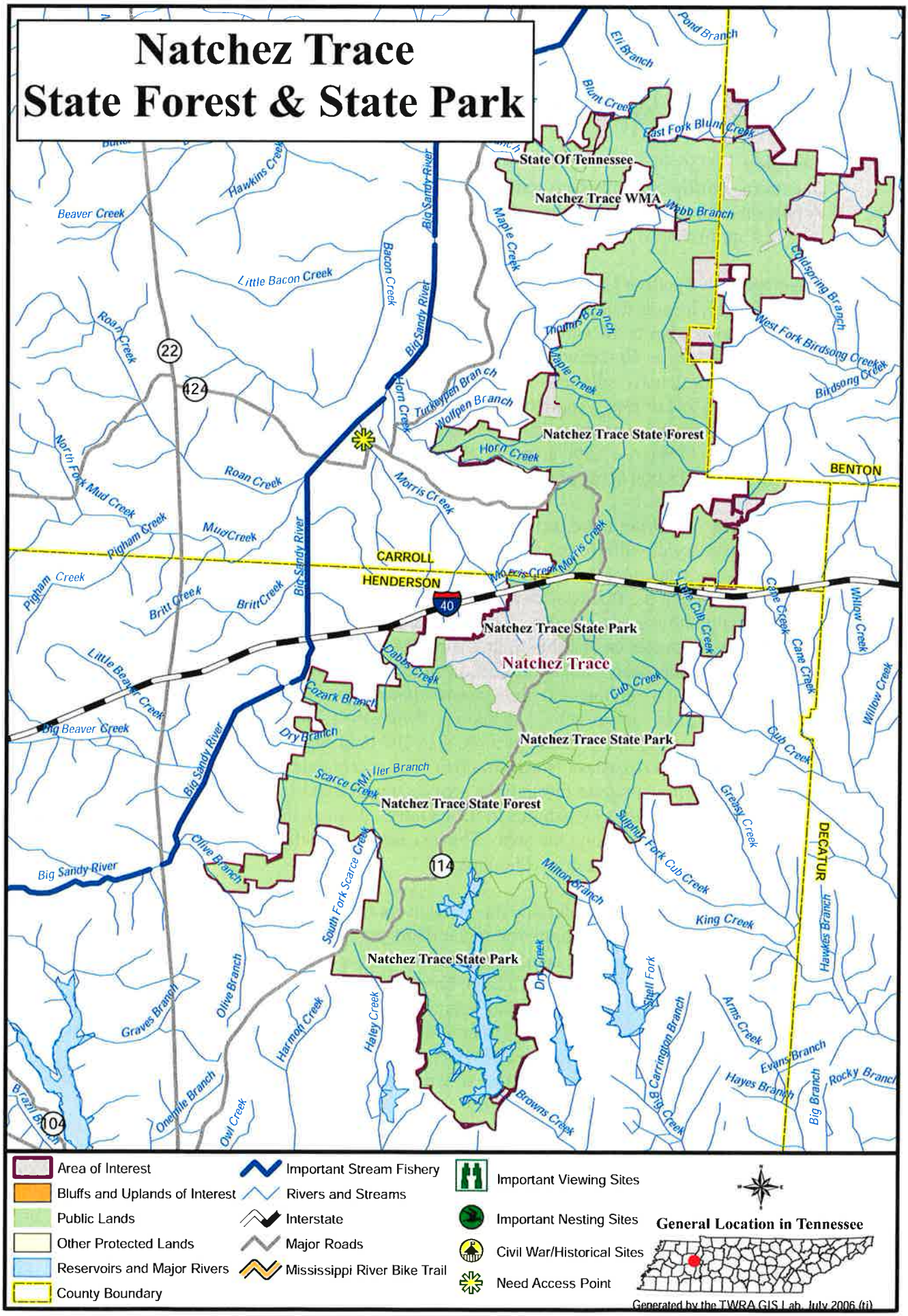
The Forest originated from lands purchased by the Resettlement Administration and became a State Forest in 1949. At the time of purchase the land was severely abused by poor agricultural practices that caused severe erosion and resulted in a deeply gullied landscape. When the TDF took over management of the land, the emphasis for many years was on fire control and establishment of vegetation to prevent erosion. Loblolly pine, because of high rates of litter production, proved very satisfactory for that purpose and hundreds of acres of pine plantations were established. The Forest now supports 24,057 acres of hardwood types and 11,153 acres of pines. Hardwood stands exceeding 60 years of age occur on 13,926 acres on land that was never cleared for agriculture or had been abandoned for farming. On the other hand, 20,301 acres support trees whose age is 10 to 60 years and probably originated on former farmland.

Significance – The State Forest and Park complex located along I-40 make this area important for recreation of all types, demonstrations and public education of forestry practices.

Strategy - Inholdings and connections to isolated parcels of the forest are the primary criteria for acquisitions, with forest access and access control being very important.

Land Protection Needs – 2,640 acres at an estimated cost of $2,045,300.

Potential Partners – unknown


Natchez Trace
State Forest & State Park
State Of Tennessee
Natchez Trace WMA
Natchez Trace State Forest
Natchez Trace State Park
Natchez Trace
Natchez Trace State Park
Natchez Trace State Forest
Natchez Trace State Park
BENTON
CARROLL
HENDERSON
DECATUR
Big Sandy River
Beaver Creek
Little Bacon Creek
Bacon Creek
Roan Creek
North Fork Mud Creek
Pigham Creek
Mud Creek
Britt Creek
Little Beaver Creek
Big Beaver Creek
Dry Branch
Scarce Creek
Olive Branch
South Fork Scarce Creek
Graves Branch
Harmon Creek
Haley Creek
Owl Creek
Onemile Branch
Brazil Branch
Maple Creek
Horn Creek
Tuckeyfen Branch
Wollpen Branch
Thomas Branch
Coldspring Branch
West Fork Birdsong Creek
Birdsong Creek
Morris Creek
Dabbs Creek
Cazark Branch
Cub Creek
Cane Creek
Willow Creek
Sulphur Fork Cub Creek
Greasy Creek
Milton Branch
King Creek
Hawkes Branch
Shell Fork
Carrington Branch
Arms Creek
Evans Branch
Hayes Branch
Rocky Branch
Big Branch
Browns Creek
Blum Creek
East Fork Blum Creek
Webb Branch
Eli Branch
Pond Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (ti)

REELFOOT LAKE COMPLEX

Location – (N36.4039, W89.3272) Reelfoot Lake is located in Lake and Obion Counties in extreme northwest Tennessee and near the communities of Samburg and Tiptonville. A portion of the lake extends into southwestern Kentucky near the town of Fulton. The lake lies approximately three miles east of the Mississippi River.

Description – Reelfoot Lake was created by a series of earthquakes in the winter of 1811-1812. It is largest natural lake in Tennessee encompassing more than 10,000 acres of water and another 5,000 acres of marshes and hardwood wetlands. While the lake may have been as deep as 40 feet when first created, lake depths now are generally less than 20 feet due to extensive siltation. It is estimated that more than 40% of the lake has a depth of three feet or less. Approximately 30,000 acres of the lake and surrounding marshes and watershed are protected. Management of the lake is primarily vested with three agencies (TWRA-17,500 acres; USFWS-12,300 acres; TDEC-300 acres). Approximately 18,000 acres of the lake have been designated as a SNA.

Significance – Reelfoot Lake and its associated habitats are internationally recognized for their diversity of wildlife species, scenic beauty and recreational opportunities. Reelfoot is designated by the USDI as one of only 14 National Natural Landmarks. Wildlife inhabiting the Reelfoot area includes over 50 species of mammals and over 70 species of amphibians and reptiles. Reelfoot is the only area of the state in which seven species of watersnakes can be found, including the midland, yellow-bellied, broad-banded, Mississippi green, diamond-backed, northern and red-bellied watersnakes. There are more than 34 rare animal and plant species that occur on the area including more than 14 rare bird species such as peregrine falcons, Swainson's warblers, and Mississippi kites. The lake is the winter home of more than 300 bald eagles and is one of the premier eagle viewing areas in eastern North America. Large populations of shorebirds, wading birds, and waterfowl migrate through the area each year making it one of the most significant natural migratory habitats in the country. At peak times, more than 750,000 waterfowl can be found using the area. The lake has had a national reputation for decades for its excellent waterfowl hunting.

Reelfoot Lake has seen considerable increases in sport fishing effort over the last decade and now boasts the highest number of angler hours per acre of any waterbody in the state. Marketing efforts by Reelfoot area business owners have been very effective in bringing in out-of-state anglers who provide a large boost to the area's economy. TWRA's 2003 creel survey indicated that 75.9% of interviewed anglers drove one-way distances greater than 100 miles to fish the lake. More than half of the anglers interviewed came from the states of Illinois, Indiana, Missouri, and Ohio. The creel survey estimated that 2003 anglers had a direct economic impact of $2.9 million dollars, which was the third highest value reported for any waterbody that year.

It is estimated that more than 1.7 million visitor trips each year are made to Reelfoot as people enjoy the very diverse natural resource recreational opportunities provided. The area contains nine of the birding sites listed in the "Great River Birding Trail" and has two observation towers, the most of any project area in West Tennessee.

Despite its abundant populations and the habitats that support them, the lake is being subjected to severe actions that are degrading and destroying the area. It is estimated that 1.4 million tons of silt are deposited in the lake each year, depending on the severity of rainfall events. According to an analysis by the TDEC in 1986, current rates of sedimentation will reduce the depth of the three major basins of Reelfoot Lake to less than two feet in 60 to 210 years. When created, the lake was surrounded by extensive bottomland hardwood forests. Today, only small fragments of the original forestland remain as agricultural encroachment pressures have resulted in the clearing of almost all of the unprotected floodplain areas and a significant portion of the "bluff" areas east of the lake.

The primary goal of the Reelfoot Lake project is to protect and restore the functional integrity of the Reelfoot Lake ecosystem, and to enhance the capability of this ecosystem to provide habitat for priority migratory birds and other fish and wildlife. To achieve this goal, we have identified important features in the Reelfoot Lake area primary zone of interest: 1) Sediment Retention Basin feature to reduce the sediment load entering the lake; 2) Water Fluctuation feature to remove agricultural constraints from the lower hydric soils around Reelfoot Lake, and allow managers greater flexibility in managing lake water levels; 3) Lake Outlet and Lake Isom NWR feature to restore wetland corridor between Reelfoot Lake and the lower end of Lake Isom; 4) Phillipy Pits feature to develop critical habitat for migrating shorebirds, and; 5) Reelfoot Bluffs feature to establish and protect a large patch of upland forest habitat for priority songbirds.

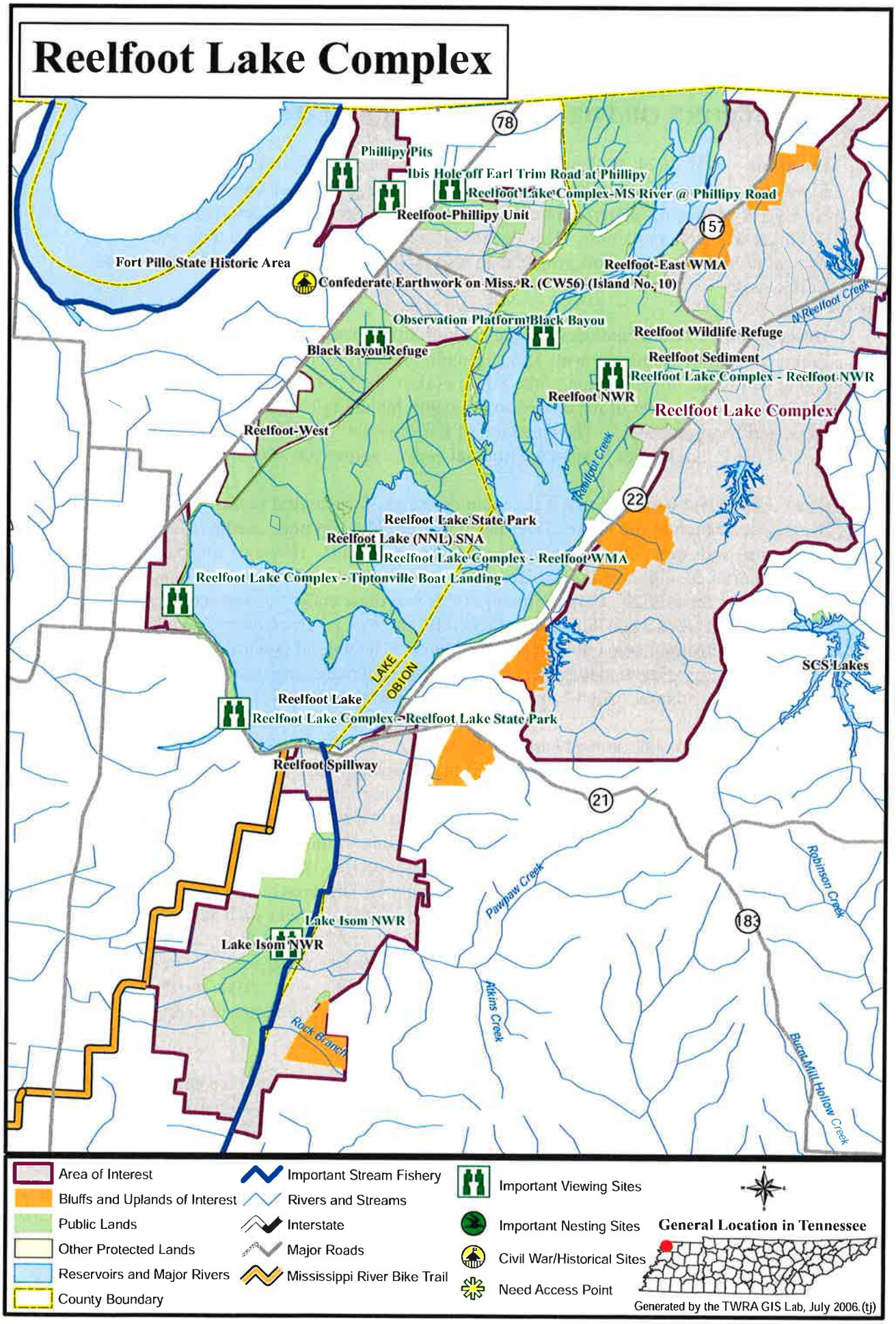
This project will protect this key area by at least slowing further degradation plus allow for enhanced management activities that will increase the area's ability to provide habitat for at least 23 species of shorebirds including the least sandpiper and greater yellowlegs, 17 waterfowl species, 11 landbird species, and at least one waterbird species of concern in the Mississippi Flyway, the state and federally endangered interior least tern. Other rare birds that frequent the area include the Mississippi kite, Swainson's warbler, little blue heron and great egret. Activities to provide habitat for shorebirds during critical migratory periods will be undertaken. Protecting existing forest patches and reforestation will result in creating larger functional forest patches for species that require large to very large blocks of forest in order to maintain "source" breeding populations. This area could provide a functional forestland patch of 20,000 acres and critical habitat for Swainson's and cerulean warblers. Development of the Sediment Basin project should significantly reduce siltation and extend the life of the lake.

The Hill District to the east of Reelfoot is unique in many ways. It provides habitat for many species of wildlife that require forest cover. This is especially important since much of the floodplain has been cleared. It also provides a stark contrast to the alluvial valley below and it contains some of the best relief in northwest Tennessee. The hollows and ridges are similar in appearance to the Western Highland Rim and provide opportunities for hiking and camping in a rugged terrain that is the most diverse within the entire West Tennessee area. There are numerous sites along the edge of the Hill District to provide overlook opportunities.

Associated with this project are the significant areas to the west of New Markham known as the Phillipy Pitts/Ibis Hole. This is a key birding area and is one of the sites identified in Audubon's Great Birding Trail. Additionally, the land on the south end of this project is site of a Confederate Army "Cremaillere" line used in the defense of Island 10 during the Civil War. This unprotected site is one only of only a few remaining sites of its type in Tennessee.

Land Protection Needs – 19,820 acres at an estimated cost of $37,702,385.

Potential Partners – Due to its regional and national significance, several entities have already expressed an interest in this project. The USACE completed a Reconnaissance Report in 1994, and in 1999 completed a feasibility study for a Reelfoot Lake project under the authority of the Water Resources Development Act, which included features to replace the spillway, develop a sediment retention basin, enhance circulation channels, and develop additional waterfowl habitat. Due to opposition from landowners in Kentucky, this project has not been funded, but less controversial components may be funded in the future. The USFWS has previously identified both the Sediment Basin Unit and the Lake Isom Unit as priority activities for funding. DU, NWTF, TPGF, and TCF are potential partners as well.


Reelfoot Lake Complex
78
Phillipy Pits
Ibis Hole off Earl Trim Road at Phillipy
Reelfoot Lake Complex-MS River @ Phillipy Road
Reelfoot-Phillipy Unit
157
Fort Pillo State Historic Area
Reelfoot-East WMA
Confederate Earthwork on Miss. R. (CW56) (Island No. 10)
N Reelfoot Creek
Observation Platform Black Bayou
Reelfoot Wildlife Refuge
Black Bayou Refuge
Reelfoot Sediment
Reelfoot Lake Complex - Reelfoot NWR
Reelfoot NWR
Reelfoot Lake Complex
Reelfoot-West
Reelfoot Creek
22
Reelfoot Lake State Park
Reelfoot Lake (NNL) SNA
Reelfoot Lake Complex - Reelfoot WMA
Reelfoot Lake Complex - Tiptonville Boat Landing
LAKE
OBION
SCS Lakes
Reelfoot Lake
Reelfoot Lake Complex - Reelfoot Lake State Park
Reelfoot Spillway
21
Robinson Creek
Pawpaw Creek
Lake Isom NWR
Lake Isom NWR
183
Atkins Creek
Rock Branch
Buck Mill Hollow Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
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SOUTH FORK OF THE FORKED DEER RIVER SYSTEM

Location – (N35.4674, W88.6080) The upper portion of the South Fork of the Forked River System area of interest starts near the Perry Switch Wetland east of Bemis near Hwy 45 in Madison County and traverses through Chester County down toward the town of Finger in McNairy County. This corridor is approximately 25 miles long and 2 miles wide at its widest point. This project area also includes Pinson Mounds State Park and Turk Creek.

Description - The area includes the typical bottomland hardwood/wetland type habitat found in western Tennessee with some agricultural lands found near the river proper. Lying within the upper portion of the South Fork of the Forked Deer River System, this area contains a number of major stream drainages including Huggins, Clarks, Horse, Bear, and Hunters Creeks. The elevation of this area is 400-500 above sea level. The soils of the Forked River System are alluvial and are somewhat silty and fertile.

The Forked Deer River System is the main drainage of the central portion of West Tennessee. Much of the Forked Deer basin was initially wetlands used by Native Americans and early settlers as hunting and fishing grounds. However much of this area has been drained and most Forked Deer tributaries have been channelized for agricultural purposes. In the mid 20th Century much of this was done under the auspices of the Obion-Forked Deer Basin Authority. Presently, environmental concerns have led to the cessation of channelization on a widespread basis. The federal government's "no net loss" policy regarding wetlands means that further channelization must be offset by creating new wetlands, called "mitigation lands", elsewhere.

Significance - The bottomland hardwoods/wetland areas found along the South Fork of the Forked Deer River System are some of the most biodiverse in the state having a species richness of over 160 species. This area has been indicated as an area of Biological Significance in many plans including the "West Tennessee Conservation Plan" and "Tennessee's Comprehensive Wildlife Conservation Strategy". This area supports good populations of game and fish species such as white-tailed deer, eastern wild turkey, waterfowl, largemouth bass, and crappie. This area also supports populations of non-game species that are in–need-of-management such as the Swainson's warbler, Mississippi kite, Chickasaw darter (recently separated out from the firebelly darter), barking treefrog, and alligator gar, state threatened species such as the lark sparrow, and state endangered species such as the Bewick's wren. Also, the Forked Deer River is the site of three ongoing species restoration projects (alligator gar, alligator snapping turtle, Mississippi kite).

Turk Creek (Site Importance High B1) in the town of Pinson supports a community of whorled sunflower (*Helianthus verticillatus*) between the Norfolk Southern railroad and Old Anderson Road. The plants are primarily located along wooded stream corridors, edges of agricultural fields, and along the Hwy. 45 right-of-way. The plants are numerous, probably numbering in the hundreds, and scattered across four tracts of land encompassing approximately 90 acres. Measures should be taken to work with the landowners to ensure protection of this population. The major threats include water

drainage, herbicide application, land conversion (construction), and road construction. *H. verticillatus* is a globally rare species with only three extant populations known in the world. Protection of the single Tennessee population is imperative to the overall conservation of *H. verticillatus*.

Pinson Mounds, one of two state archaeological parks, is a special park set aside to protect the prehistoric remains found there. Managed by the TDEC's Division of State Parks, the Pinson Mounds grouping consists of at least 17 earthen mounds, a geometric enclosure, habitation areas and related earthworks in an area that incorporates almost 1,200 acres. Pinson Mounds is a National Historic Landmark and is listed on the National Register of Historic Places.

It is believed that Pinson Mounds functioned as a ceremonial center and did not have a residential population. It contains more than 17 mounds with an earthen geometric enclosure. Radiocarbon dating indicates that the major mound building occurred about 50 B.C.E. to 380 C.E., and is considered to be of the Middle Woodland Period, although there are also features of the Mississippian Culture. It is the largest Middle Woodland Period mound complex in the southeast.

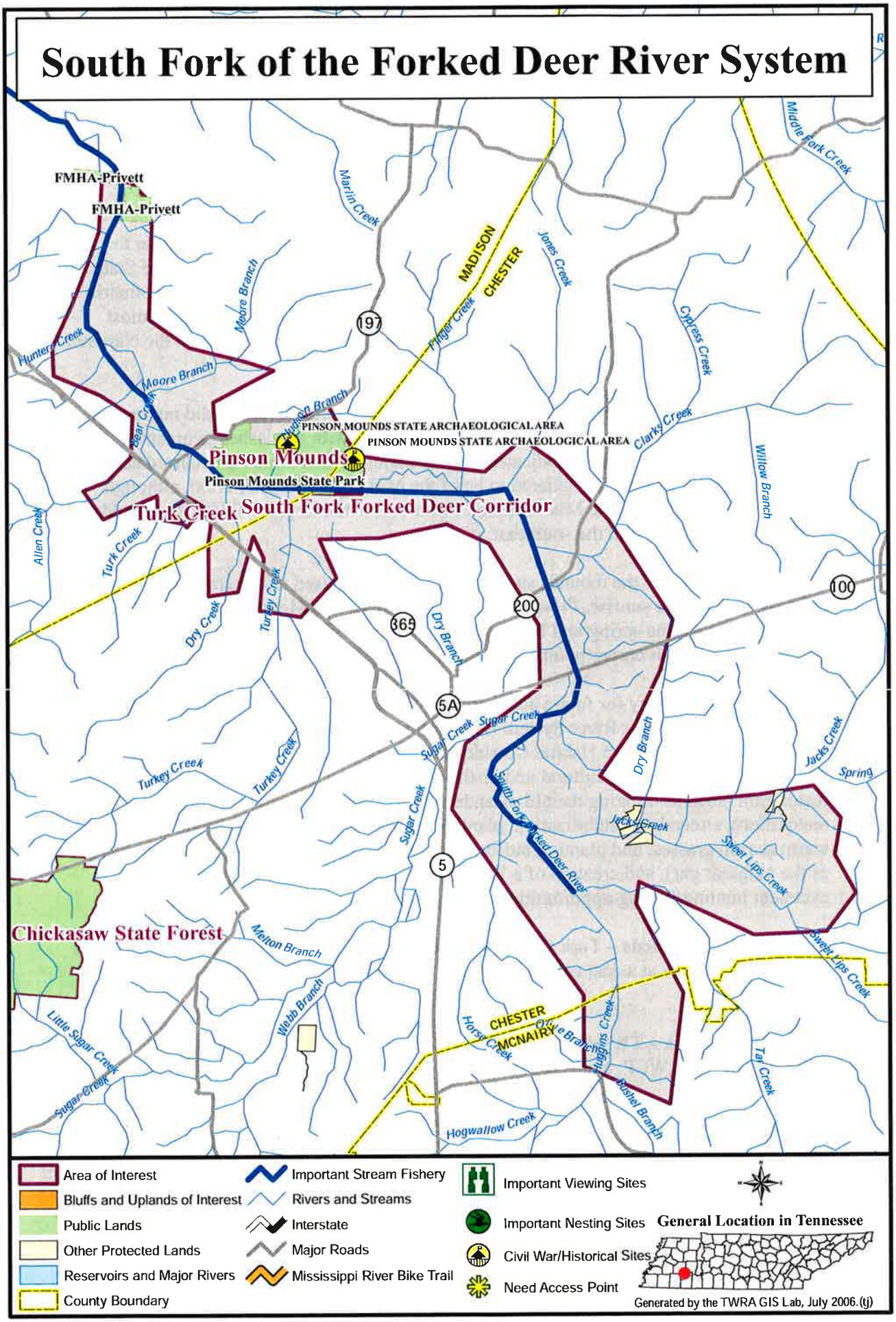
Placement of some of the mounds suggests that they were used to determine the solar equinox and solstice sunrise. From the largest mound, Saul's Mound, the sun may be observed rising at the spring and fall equinoxes over top of Mound 29. Saul's Mound is 72 feet tall with each corner pointing toward a cardinal direction.

Strategy - The strategy for future acquisition(s) within the upper portion of the South Fork of the Forked Deer River System is to acquire properties surrounding the Lower Forked Deer River System Habitat Corridor for access control, watershed protection, critical habitat protection, cultural and historic preservation of sensitive areas, habitat restoration (such as utilizing the old meanders within the river system for stream restoration), streambank stabilization, planting of bottomland hardwoods and native warm season grasses, and planting buffer strips along the river, species restoration (such as the alligator gar), and creation of a WMA with minimal lands management and excellent hunting/fishing opportunities.

Land Protection Needs – Turk Creek- 79 acres at an estimated cost of $158,000; Pinson Mounds - 200 acres at a cost of $400,000; TWRA - 16,000 acres at an estimated cost of $20,000,000.

Potential Partners – TWRA, USFWS, TDEC, TNC, QU, NRCS, University of Tennessee, TCF, LWCF, and NWTF.

South Fork of the Forked Deer River System



T.O. FULLER STATE PARK

Location – (N35.0620, W90.1140) T.O. Fuller State Park is located on Mitchell Road near the Mississippi River, just 11 miles south of downtown Memphis.

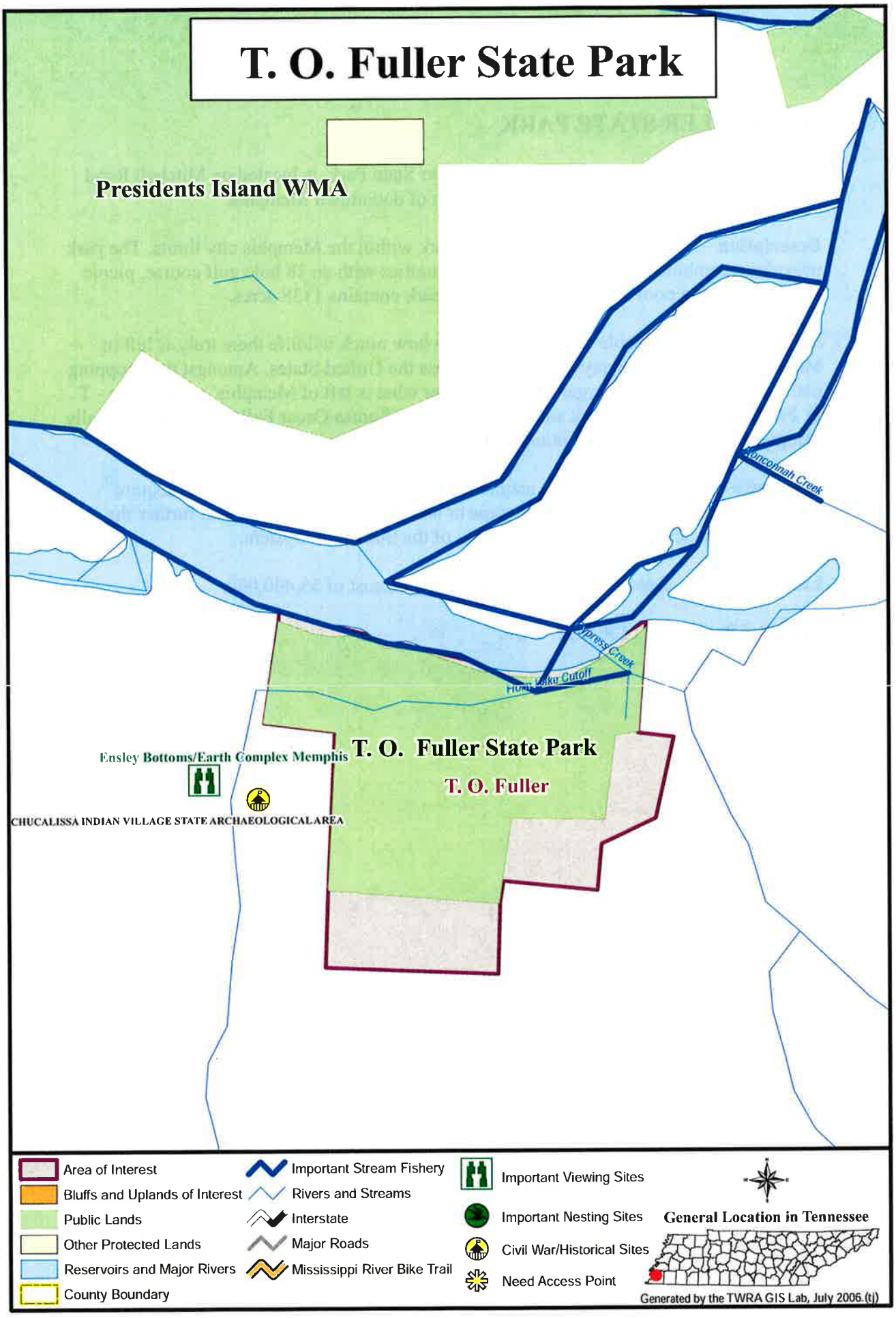
Description –. T.O Fuller is the only state park within the Memphis city limits. The park provides a combination of recreational opportunities with an 18 hole golf course, picnic areas, swimming pool and campground. The park contains 1138 acres.

Significance - Few people ever stop to realize how much wildlife there truly is left in Memphis compared to many major cities across the United States. Amongst the shopping malls and drive-through burger dives, there lies what is left of Memphis' wild nature - T. O. Fuller State Park. The park was named for Dr. Thomas Oscar Fuller, an internationally recognized African American minister and educator.

Strategy - The strategy for future acquisitions at T.O. Fuller State Park is to acquire properties surrounding the park for access or access control and those that further the wildlife, aesthetics, and recreation missions of the State Park System.

Land Protection Needs - 369 acres at an estimated cost of $5,400,000.

Potential Partners - TCF, the LWCF.


T. O. Fuller State Park
Presidents Island WMA
Ensley Bottoms/Earth Complex Memphis
CHUCALISSA INDIAN VILLAGE STATE ARCHAEOLOGICAL AREA
T. O. Fuller State Park
T. O. Fuller
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
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UPPER OBION RIVER PROJECT

Location – (35.2616, W88.9960) The upper Obion River Project includes several subprojects along the upper Obion River and its three main stems (North, Middle and South Forks) located in Gibson, Obion, and Weakley Counties. These subprojects include the Bean Switch Refuge. Big Cypress Tree State Park, Gooch WMA, Hop-In Refuge, Maness Swamp Refuge, and Obion River WMA.

Significance – The Upper Obion River provides habitat for at least 22 species identified in Tennessee's State Wildlife Action Plan as species of greatest conservation need. These species include:

crawfish frog	Kentucky warbler
grasshopper sparrow	prothonotary warbler
Chuck-will's widow	dickcissel
cerulean warbler	Bell's vireo
little blue herron	hooded warbler
wood thrush	southeastern shrew
orchard oriole	meadow jumping mouse
least bittern	bald eagle
loggerhead shrike	American woodcock
Swainson's warbler	red-headed woodpecker

Bean Switch Refuge contains an old river oxbow that serves as permanent water for fisheries, wading birds, and important habitat for amphibians and reptiles. Most of the area is covered by scrub-shrub type vegetation. Swamp privet, willow, button bush, cypress, and water tupelo are located close to oxbows. Some wetland species of oaks are located on higher ground. Approximately 35 acres of open crop ground is located in the center of the refuge. Warm season grasses surround the crop ground. Approximately 710 acres are now protected.

A very high percentage of the land along the Middle Fork of the Obion River has been cleared and artificially drained for agricultural use. The Obion River and most tributaries have been channelized and the timber cleared. Bean Switch Refuge, even in a ponded swamp state, contains necessary habitat for a large diversity of both game and non-game wetland species.

It is a high priority to private properties within the refuge boundaries as well as properties around the refuge that are in the five-year floodplain.

Big Cypress Tree State Park lies in the floodplain of the Middle Fork of the Obion River. It consists of bottomland hardwood forests including species like bald cypress and tupelo, beaver and fox squirrel.

Big Cypress is a popular park with the Boy Scouts of America and usually hosts several scout camporees each year as well as individual troop camping trips. Boy Scout leaders

have used Big Cypress as a training site for new scout leaders, churches use the park and its picnic shelter for special services and cookouts, families host family reunions and area schools find the park popular for field trips.

The natural area is named for a champion bald cypress tree that was located on the area. The tree was once the largest and oldest bald cypress tree in the United States and the largest tree of any species east of the Mississippi River. However, a severe thunderstorm in July, 1976 produced a lightning bolt that struck the tree killing it.

The strategy for future acquisitions at Big Cypress Tree State Park are to acquire properties surrounding the park for access or access control and those that further the wildlife, aesthetics, and recreation missions of the State Park System.

Gooch WMA is located in the river floodplain and contains bottomland hardwoods, open agriculture fields, semi-permanent water (slough systems) and old river oxbows. This area was purchased by the Tennessee Game and Fish Commission from the C.M. Gooch family and declared a WMA in 1961. The original land purchase was approximately 6,658 acres. 1,000 acres of this tract was developed into a public waterfowl-hunting unit. The remaining acreage is managed for bottomland hardwoods. Additional land purchases were made in 1990 (Hopkins Tract- 372 acres, Town of Obion- 17 acres and Bank of Troy- 645 acres). Additional land was added as part of lands deeded to the State of Tennessee to mitigate losses of wetlands as a result of West Tennessee Tributaries Project. The land was purchased by the USACE with federal dollars to mitigate loss of wetlands due to channelization of the adjacent Obion River. The land purchase was completed in 1983.

Most all of the land along the Obion River has been cleared and artificially drained for agricultural use. Gooch WMA is one of the few areas where the bottomland timber remains. During high water the old river meanders still function and produce excellent habitat for a large diverse group of wetland species. However, due to river channelization and lack of drainage some areas of timber have died or the trees are under stress. Gooch WMA provides needed habitat for many different species of wading birds, mammals, amphibians, fish, waterfowl and reptiles.

Hop-In Refuge was a former bottomland hardwood system that was cleared and converted to agriculture by previous owners. The refuge is 660 acres in size and almost all of the acres are open agricultural fields.

The Hop-In Refuge property was part of land deeded to the State of Tennessee to mitigate losses of wetlands as a result of the West Tennessee Tributaries Project. The land was purchased by the USACE with federal dollars. The development money for the project came from a federal grant. The total cost of development for Hop-In Refuge was $62,500.00 dollars. The design and construction was by contract with DU. The area was declared a refuge in 1991.

This area now holds one of the largest populations of migrating waterfowl in the Obion River system. Hop-In Refuge is one of the few places left in the surrounding area that

waterfowl can go and not receive hunting pressure. Along with the waterfowl, the refuge attracts approximately 2000 sandhill cranes during migration, the most significant population in West Tennessee. bald eagles also visit the area on an annual basis.

It will be important to begin acquiring land north of the refuge. In 1995 the first sandhill cranes were seen on Hop-In Refuge. Since that time the population has grown from five birds to as many as 2200. The sandhill cranes roost on the refuge and move in the early morning to private property north of the refuge. This property, known as the McRight tract, is out of the annual floodplain and would be excellent for future development.

Maness Swamp Refuge was part of lands deeded to the State of Tennessee to mitigate losses of wetlands as a result of West Tennessee Tributaries Project. The land was purchased by the USACE.

Most all of the land along the South Fork of the Obion River has been cleared and artificially drained for agricultural use. Maness Swamp Refuge is one of the few areas where bottomland timber remains. During high water the old river meander still functions and produces excellent habitat for a large diverse group of wetland species.

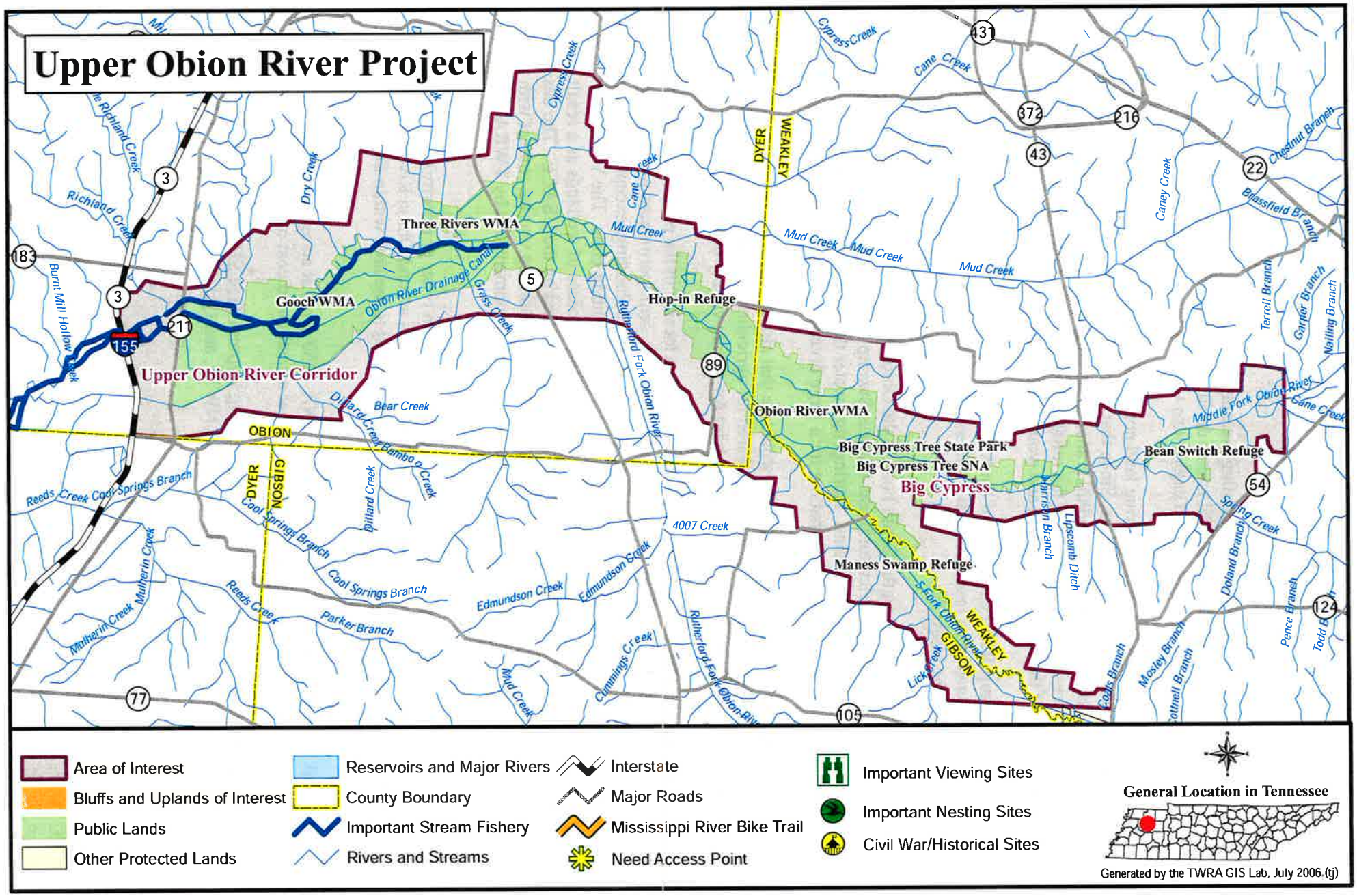
The most important property to acquire would be that along the river corridor. The property adjacent to the refuge and not cleared for agriculture should be first priority. This type of property would be the best habitat for a wide variety of species.

Obion River WMA is a 9,175 acre management area located in the river floodplain and contains bottomland hardwoods, open agriculture fields, semi-permanent water (slough systems) and old river oxbows. All of the area is subject to flooding, except the 600 acre Beech Ridge Unit and 150 acres of the Maness Swamp Hunting Unit. The WMA was part of lands deeded to the State of Tennessee to mitigate losses of wetlands as a result of West Tennessee Tributaries Project. The land was purchased by the USACE. The design for a portion of the WMA to be used for public waterfowl hunting was by contact with DU. Construction of the waterfowl unit and all other development was by TWRA. The area was declared a WMA in 1991.

The most important properties to acquire would include (in order or priority) the wetlands and forested lands adjacent to the management area, lands around Obion River WMA that will allow more public access, and property adjacent to the area within the five-year floodplain.

Land Protection Needs – Big Cypress Tree SNA - 250 acres at an estimated cost of $500,000; Refuges and WMA's – 18,800 acres at an estimated cost of $21,330,000

Potential Partners – TWRA, The Friends of Big Cypress Tree SNA, Wetland Acquisition Fund, DU, USACE (1135 Fund), NWTF, and QU.


Upper Obion River Project
Three Rivers WMA
Gooch WMA
Upper Obion River Corridor
Hop-in Refuge
Obion River WMA
Big Cypress Tree State Park
Big Cypress Tree SNA
Big Cypress
Bean Switch Refuge
Maness Swamp Refuge
Obion River Drainage Canal
Richland Creek
Dry Creek
Cypress Creek
Cane Creek
Mud Creek
Caney Creek
Chestnut Branch
Brassfield Branch
Terrell Branch
Garner Branch
Nailing Branch
Burnt Mill Hollow Creek
Grass Creek
Rutherford Fork Obion River
Middle Fork Obion River
Bear Creek
Dillard Creek
Bamboo Creek
Reeds Creek
Cool Springs Branch
Mutherin Creek
Edmundson Creek
4007 Creek
Parker Branch
Cummings Creek
Harrison Branch
Lipscomb Ditch
Spring Creek
Doland Branch
Pence Branch
Mosley Branch
Cottnell Branch
Coats Branch
Lick Creek
S Fork Obion River
OBION
DYER
GIBSON
WEAKLEY
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WOLF RIVER CORRIDOR

Location – (N35.0429, W89.4095) The Wolf River begins in Holly Springs National Forest about one mile southwest of Hwy 72 and the Benton-Tippah County Mississippi line. The river flows north as it enters Tennessee then passes through Hardeman, Fayette and Shelby Counties along its 86 mile journey before emptying into the Mississippi River at Memphis. This project includes Wolf River WMA, Ghost River SNA, William B. Clark SNA, Riverwoods SNA, Lucius Burch Jr. SNA, and Shaws Creek Bottoms.

Description - The Wolf River carves a deep green passage through nearly 90 miles of forest, fields and communities in western Tennessee. Its watershed is 819 square miles, including 562 square miles in Tennessee and 257 square miles in Mississippi. The timbered areas of the floodplain consist primarily of oak-hickory species climax forest. Streams have cut relatively broad valleys with gently rolling uplands that end abruptly at the bluffs overlooking the Mississippi River floodplain. Meanders, sloughs, wetlands and bottomland hardwood forests characterize the river. The Wolf River is a significant component of the 24 million-acre Mississippi River Alluvial Plain Ecoregion, which covers seven states in the lower Mississippi River Valley.

Ghost River SNA is a 2,200-acre SNA, located within a larger 7,000 WMA. The natural area includes approximately 14 miles of the Wolf River beginning from the parking area near La Grange to Bateman Bridge. The Ghost River section of the Wolf River is an unchannelized river section that meanders through bottomland hardwood forests, cypress-tupelo swamps, and open marshes. The low ridges above the river bottoms support tulip poplar, beech, and white oak with northern red oak infrequently occurring. The Ghost River section of the Wolf River received its name from the loss of river current as the water "flows" through open marshes and bald cypress-water tupelo swamps. A canoe trail has been blazed through the disorienting maze of Virginia willow, cypress, tupelos, and stunted pumpkin ash. Trail development is on-going and includes a 600 ft. boardwalk in the Minnow Slough area.

The natural area also includes other ecologically significant uplands and sandy hills adjacent to the floodplain and mesic forests. Some of the most impressive trees that occur here are large oaks that include cherrybark, water willow, and swamp chestnut.

Ghost River SNA is managed cooperatively by TWRA and TDEC. The site conservation plan proposes the protection of 8,766 additional acres. Acquisition of properties adjacent to and the along the Wolf River, extending the Ghost River Natural Area, would provide an opportunity for greater protection of intact bottomland hardwood forest and increase habitat for numerous target conservation species. It would also provide protection for a unique sand hill plant community.

Shaws Creek Bottoms is approximately 1500 acres. Shaws Creek Bottoms surrounds the section of the Wolf River east of the Fayette/Shelby county line and is within the Wolf River Macrosite which contains the entire unchannelized river corridor from eastern Shelby County east through southwestern Tennessee. Although the river drainage in Shaws Creek is dotted with small towns and agricultural fields, it boasts significant

patches of mature bottomland hardwood forest (50+ years old). Other attributes include large tracts of younger forested bottomlands, cypress/tupelo marshes and wetlands, and upland woods. These and other ecologically significant areas were identified through TNC's Wolf River Resource Inventory project and guided Shaws Creek Bottoms' high prioritization for preliminary site design work in the Wolf River Macrosite.

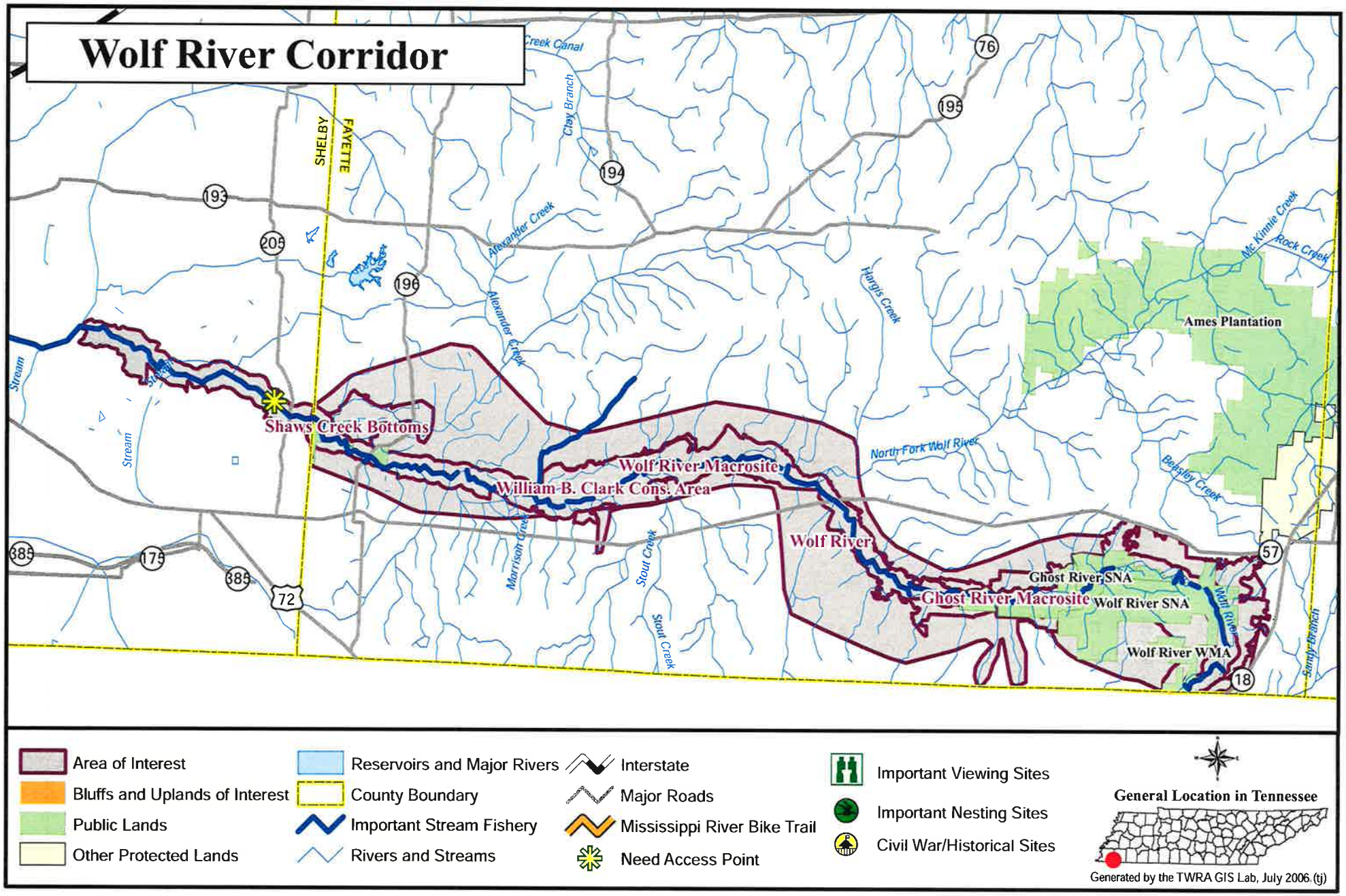
William B. Clark Conservation Area SNA, near Rossville on Hwy 194 is a 460-acre owned by TNC. A variety of aquatic and terrestrial habitats offer opportunities for observing birds and other wildlife. An interpretive boardwalk exists on site and meanders through the bald cypress-water tupelo forest for about 1,600 feet. From the boardwalk, wildlife such as snakes (even cottonmouths), turtles, amphibians, beavers, wading birds, and aquatic vegetation are a common site. Cypress knees are seen eerily protruding from the moist forest floor and shallow water. The boardwalk provides access to rarely seen interior of a riparian bald cypress-water tupelo swamp, which have been quickly disappearing from West Tennessee.

This area is a B3 site. The natural area protects an unchannelized section of the Wolf River that includes meanders, sloughs, and bottomland hardwood forests. The river and its sloughs provide excellent habitat for rare and endangered freshwater mussels and other aquatic organisms. A variety of aquatic and terrestrial habitats offer opportunities for observing birds and other wildlife. Examples of unchannelized river and functional bottomland forests are becoming increasingly rare in west Tennessee.

Significance - The Wolf River includes meanders, sloughs, wetlands and bottomland hardwood forests. The river and its sloughs provide excellent habitat for rare and endangered freshwater mussels (25 species occur in the Wolf), over 100 species of fish, and other aquatic organisms. A variety of aquatic and terrestrial habitats offer opportunities for observing the more than 250 known bird species and other wildlife. There are 15 species of birds of the basin that are declining rapidly over wide areas. Bald cypress-water tupelo forests afford habitat for wildlife such as snakes, turtles, amphibians, beavers, wading birds, and aquatic vegetation. The riparian bald cypress-water tupelo swamp is quickly disappearing and examples of unchannelized river and functional bottomland forests are becoming increasingly rare in West Tennessee. State threatened or special concern state species include the copper iris, southern twayblade, cluster fescue, small-flowered beardtongue, southern hickorynut, southern rainbow, and fatmucket mussels, naked sand darter, and northern madtom.

This river system is a critical component of the Memphis water supply. Protecting and restoring wetland functions and water quality along this system has tremendous implications to the welfare of citizenry and economy of the greater Memphis area.

Strategy - The Wolf River conservation plan identifies 42,000 acres in its 100-year floodplain. Already 17,000 acres are in some form of public ownership. Connecting contiguous protected areas to state owned lands along the river is a major approach to making the Wolf River a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, and conservation buyer identifications. Public


Wolf River Corridor
SHELBY
FAYETTE
Clay Branch
Creek Canal
Alexander Creek
Hargis Creek
Mc Kinnie Creek
Rock Creek
Ames Plantation
Shaws Creek Bottoms
Wolf River Macrosite
William B. Clark Cons. Area
North Fork Wolf River
Beasley Creek
Wolf River
Morrison Creek
Stout Creek
Ghost River SNA
Ghost River Macrosite
Wolf River SNA
Wolf River WMA
Sandy Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

and private partnerships are key to protecting and maintaining this relatively unspoiled river.

Land Protection Needs – Ghost River SNA-8,766 acres at an estimated cost of $8,766,350; Shaws Creek – 1,673 acres at an estimated cost of $2,509,500; Wolf River WMA – 14,500 acres at an estimated cost of $28,500,000; William B. Clark SNA – 3,087 acres at an estimated cost of $3,087,000.

Potential Partners: TDEC, TWRA, CBA, TNC, USFWS, USACE, Shelby County Government, Fayette County Government, DU, and Wolf River Conservancy.

TENNESSEE RIVER WEST

TABLE OF CONTENTS ..... PAGE

TN RIVER COUNTY AND PROJECT MAP 1

TENNESSEE RIVER IMPORTANT AQUATIC HABITAT AREAS 2

ARCHAEOLIGICAL SITES - TENNESSEE RIVER WEST 5

TENNESSEE RIVER – ARCHAEOLOGICAL SITES 7

TENNESSEE RIVER FISHING ACCESS 9

BAUGUS CAVE 13

BEASON CREEK HABITAT CORRIDOR (NORTH & SOUTH FORK) 16

BEECH CREEK BLUFFS (See Eagle Creek Habitat Corridor)

BUFFALO RIVER HABITAT CORRIDOR 18

CAROL CABIN BARRENS SNA (See The Coalings)

THE COALINGS 20

DUCK RIVER/BUFFALO RIVER CONFLUENCE HABITAT CORRIDOR 23

DRY CREEK (See Pickwick Landing State Park)

EAGLE CREEK AND BEECH CREEK BLUFF 26

GUMDALE SILURIAN GLADE SITE (See The Coalings)

JOHNSONVILLE STATE HISTORIC AREA 29

LACEFIELD FALLS RSNA (See Wildcat Hollow & Lacefield Falls RSNA)

LITTLE BEECH CREEK 31

MIDDLE CYPRESS CREEK 33

MOUSETAIL LANDING STATE PARK 35

NATHAN BEDFORD FORREST STATE PARK 37

NINE-ACRE GLADE COMPLEX (See The Coalings)

PARIS LANDING STATE PARK 39

PICKWICK LANDING STATE PARK & DRY CREEK AREA 41

RUSHING CREEK HABITAT CORRIDOR 44

STEWART STATE FOREST 46

TOBACCOPORT CAVE 48

TUNNEL CAVE AND WATERFALL (See Little Beech Creek)

WALKER BRANCH SNA 51

WHITE OAK CREEK WMA 53

WILDCAT HOLLOW AND LACEFIELD FALLS REGISTERED SNA'S 55

Tennessee River Region



Generated by the TWRA GIS Lab, April 2006 (JJ)

TENNESSEE RIVER IMPORTANT AQUATIC HABITAT AREAS

Locations - Important aquatic habitat areas are located in the channel and floodplains of the Tennessee, Buffalo, and Duck rivers, and Indian Creek. See map of aquatic projects on the following page.

Description - In this region, the Tennessee River is impounded by Kentucky Dam, hence the river is also known as Kentucky Lake. River discharge and elevation is determined by several dams operated by the Tennessee Valley Authority. The river channel is routinely dredged to maintain depth for barge traffic and to harvest sand and gravel for industrial uses. The most important habitat is between Pickwick Dam and the confluence with the Duck River (96 miles). Several large islands occur in this reach of Kentucky Lake. The primary land uses in the adjacent floodplains are agriculture and forestry.

The Duck River flows approximately 308 miles from it origin in Coffee County to its mouth on Kentucky Lake. The floodplain on the lower Duck River is managed by the USFWS as the Tennessee National Wildlife Refuge. The USFWS creates quality waterfowl habitat by cooperative farming practices and water level management.

Buffalo River flows about 110 miles through a patchwork of forested and agricultural lands. Riparian habitat and floodplains are relatively undeveloped, although much of the forested riparian zones are not wide enough to provide long-term habitat.

Indian Creek is a relative large stream that flows about 50 miles through predominantly agricultural land. Due to highly erodible soils, the stream actively meanders through the floodplain. A forested riparian zone is found adjacent to stream throughout most of the corridor, but the width of these zones is often too narrow. In the absence of riparian trees the stream quickly erodes adjacent fields. The creek is typically very clear and the substrate consists primarily of gravel.

Significance - The Tennessee River is an important recreation area for boaters, wildlife viewing, and fishing. It supports commercial fisheries for catfish, paddlefish, buffalo, and mussels. Most of the cultured pearls in the world are propagated using mussels from Kentucky Lake. The Tennessee River is home to rare species of mussels and fishes that are listed as threatened and endangered by the USFWS and TWRA. Habitat for these species is threatened by the dredging of sand and gravel.

The Duck and Buffalo rivers support a rich diversity of aquatic species and recreational opportunities. The Duck River is considered to have the highest biodiversity of any river in North America. The mouth of the Duck River is part of the Tennessee National Wildlife Refuge which provided habitat for migratory and resident waterfowl. The Buffalo River is one few unregulated rivers in the state and it has been designated as a State Scenic River by TDEC. Indian Creek supports a high diversity of fishes including an exceptional smallmouth bass fishery. All these areas are highly valued for their natural treasures, but their habitats are at risk due to many common threats: increased sedimentation due to land use, loss of forested riparian zones, and increased water withdrawal.

Land Management Strategy - Biologists have identified corridor along these waterways as critical habitats. Although rivers are threatened by stressors throughout the watershed, these lands in the floodplain have the greatest ability to protect aquatic resources. The goal of land management projects would be to establish or protect wide forested buffer zones along the river corridor. Projects would also promote the use of best management practices for farming, forestry, and construction projects. On the lower reaches of the larger rivers (Tennessee, lower Duck, lower Buffalo rivers) maintaining or possibly increasing connectivity (allowing flooding of the floodplain) would be beneficial to a variety of fish and wildlife. Management at the National Refuge has demonstrated that this can benefit a variety of species.

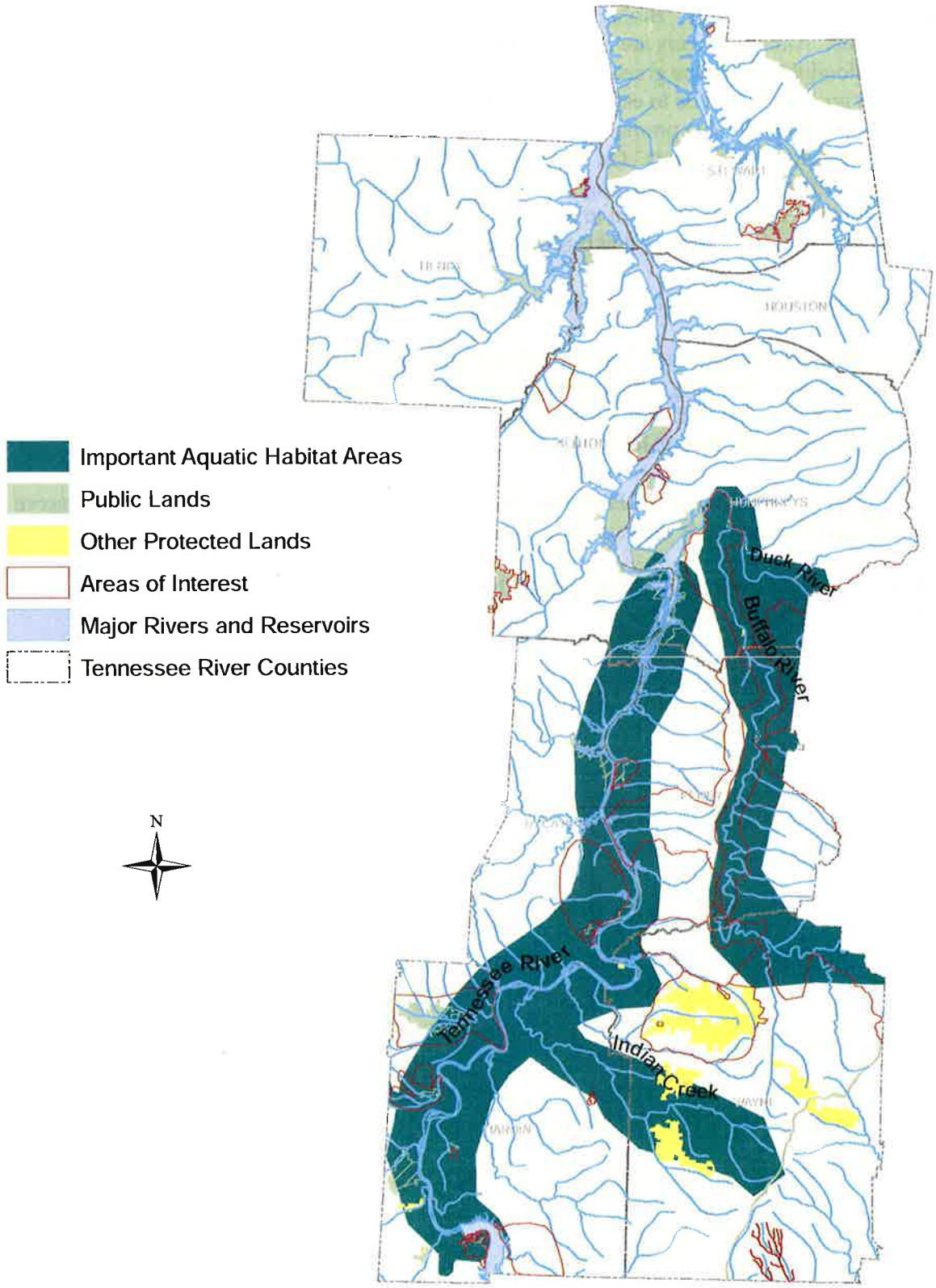
Land Protection Needs – Acquisition needs included in other projects.

Given the large area of these waters and floodplains, it is not possible to target all the important areas for acquisition. Working with existing landowners on projects designed to improve habitats may be more effective. For example, the NRCS could focus on these areas using Farm Bill Programs to improve aquatic habitats.

Diamond Island and Swallow Bluff Island on the Tennessee River should be acquired to preserve mussel habitat in the river near these islands.

Potential Partners – TWRA, USFWS, NRCS, TNC, World Wildlife Fund, and local watershed organizations.

Important Aquatic Habitat Areas for the Tennessee River Region



Generated by the TWRA GIS Lab, August 2006 (jj)

ARCHAEOLIGICAL SITES - TENNESSEE RIVER WEST

Location - Benton, Decatur, Hardin, Henry, Houston, Humphreys, Perry, Stewart, and Wayne Counties.

Description - These counties occupy portions of the Coastal Plain, the Western Valley, and the Western Highland Rim physiographic regions. The varied terrain and environmental conditions in this region makes for considerable variety in the kinds of cultural resources found.

Prehistoric Sites - Prehistoric archaeological sites recorded within these three physiographic regions are classified into four major time periods: (1) Paleo-Indian, 10,000 B.C. to 8000 B.C.; (2) Archaic, 8000 B.C. to 1500 B.C.; (3) Woodland 1500 B.C. to A.D. 800; and (4) Mississippian, A.D. 900 to A.D. 1500. These sites range in size and complexity from relatively small Paleo-Indian and Archaic camps to substantial Mississippian mound centers.

As with other regions of the state, the prehistoric sites included in the attached table represent significant cultural resources in danger of destruction due to a variety of man-made (agriculture, construction) and natural (erosion) forces. It is important to acquire some of these non-renewable resources before they are lost forever. One example is the Dover Flint Mines (40SW64) in Stewart County. Prehistoric natives exploited these mines to acquire high-quality flint (chert) to manufacture a variety of utilitarian (hoes and chisels) and ceremonial (swords and maces) items. Two substantial Mississippian period mound centers (Link Farm, 40HS6 and Obion Mounds, 40Y14) also occur within this region. Much of the Link Farm site in Humphreys County is located on State of Tennessee property. However, adjacent tracts with a portion of the site need to be purchased from private landowners to secure the entire site area. The world-famous Duck River Cache artifacts, manufactured from the previously mentioned Dover chert, were recovered from the Link Farm site. The Obion Mounds site represents a significant early Mississippian period mound center on private property in Henry County.

Historic-Period Sites -Non-Native American settlement of many of the Tennessee River Region counties did not occur until after the Chickasaw cessions of 1818. In general those counties on the east side of the river (Houston, Humphreys, Perry, Stewart, and Wayne) had an earlier period of settlement than those on the west (Benton, Decatur, Hardin, and Henry). An important early industry in several of these counties was the manufacture of iron. A 1988 Division of Archaeology study of iron industry sites ("A Cultural Resource Survey of Tennessee's Western Highland Rim Iron Industry, 1790s–1930s") identified 91 sites of former iron furnaces, forges, and related operations, and discussed a need for preservation of these important resources, especially in Stewart County which was a major participant in this industry. One other industrial theme, pottery making, was of minor importance in this region. The Civil War had some impact in the Tennessee River Region, and a few sites related to this theme are also considered important candidates for acquisition for preservation. One large, unique historic-period resource is the site of Camp Tyson in Henry County, the nation's only World War II barrage balloon training center. The "camp" was situated on a tract of 1,600 acres that included a planned town with over 400 buildings and a huge balloon hanger, which is one of only four buildings still remaining on the site.

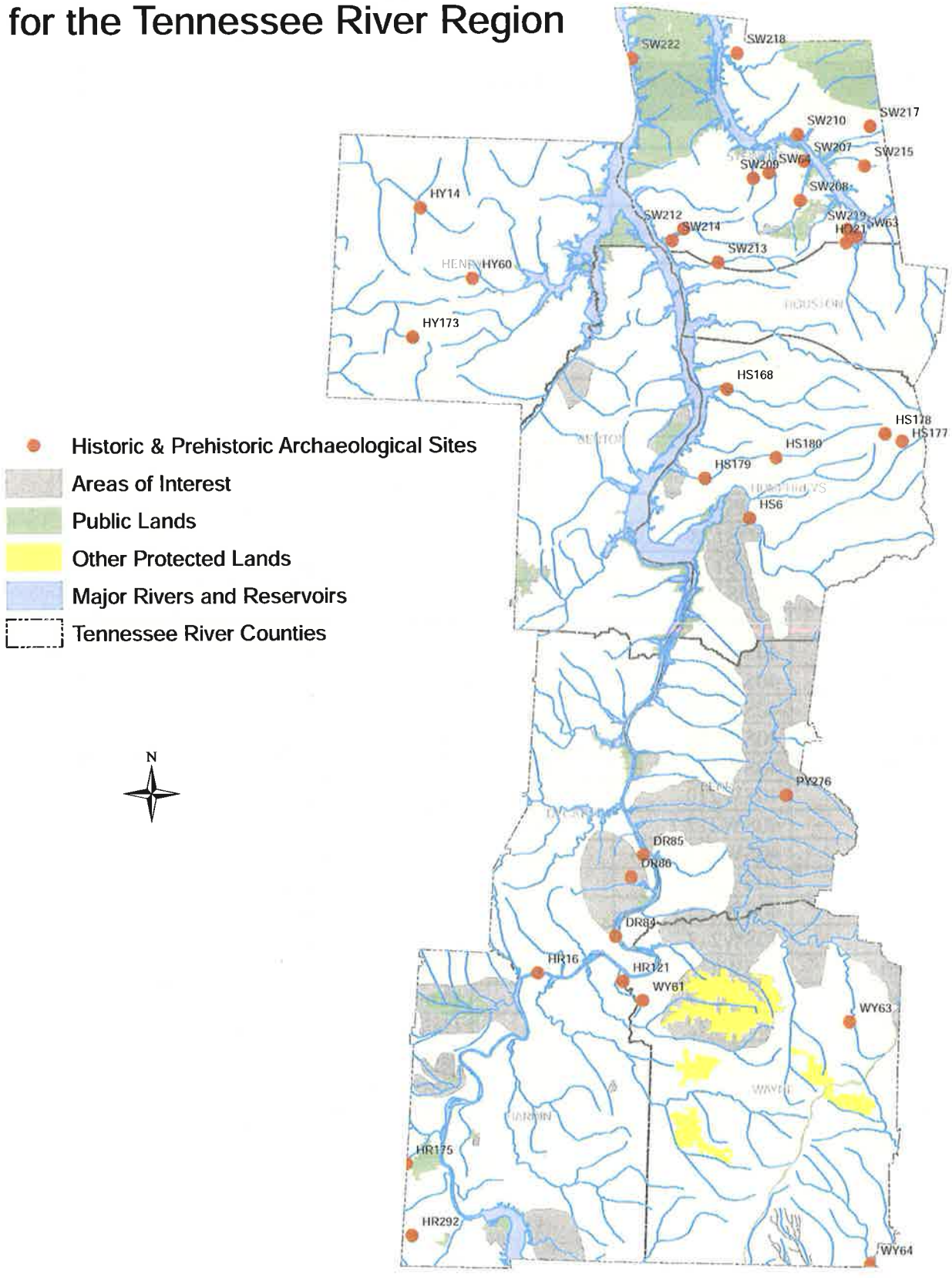
Land Protection Needs - 1,388 acres at an approximate cost of $6,052,000.

Potential Partners - The Archaeological Conservancy, Tennessee Council for Professional Archaeology, Tennessee Wars Commission

TENNESSEE RIVER – ARCHAEOLOGICAL SITES

County	Site Number	Estimated Acreage	Name
Decatur	40DR84	10	Decatur Furnace
Decatur	40DR85	10	Brownsport I Furnace
Decatur	40DR86	11	Brownsport II Furnace
Hardin	40HR16	30	Swallow Bluff Island
Hardin	40HR121	10	Tanyard Branch Furnace
Hardin	40HR175	5	Camp Station (CW)
Hardin	40HR292	5	Entrenchment (CW)
Henry	40HY14	20	Obion Mounds
Henry	40HY60	5	Currier-weaver Pottery
Henry	40HY173	900	Camp Tyson
Houston	40HO21	10	Byron Forge
Humphreys	40HS6	25	Link Farm
Humphreys	40HS168	15	Fairchance Furnace
Humphreys	40HS177	7	Section 55 RR Posts (CW)
Humphreys	40HS178	5	Section 57 RR Posts (CW)
Humphreys	40HS179	7	Trace Creek Earthwork (CW)
Humphreys	40HS180	5	Fort Hill (CW)
Perry	40PY276	10	Trull
Stewart	40SW63	20	Wells Creek Crater
Stewart	40SW64	50	Dover Quarry
Stewart	40SW207	10	Bear Spring Furnace
Stewart	40SW208	10	Dover/Carlisle Furnace
Stewart	40SW209	10	Randolph Furnace
Stewart	40SW210	10	Bellwood Furnace
Stewart	40SW212	70	Clark Furnace and Mines
Stewart	40SW213	10	Eclipse Furnace
Stewart	40SW214	20	LaGrange Furnace
Stewart	40SW215	10	Rough and Ready Furnace
Stewart	40SW217	15	Cross Creek Furnace
Stewart	40SW218	10	Saline Furnace
Stewart	40SW219	10	Brunsoni Furnace
Stewart	40SW222	10	Union Earthwork (CW)
Wayne	40WY61	10	Marion Furnace
Wayne	40WY63	10	Forty-eight Forge
Wayne	40WY64	15	Vanleer Furnace
TOTAL		**1390**	

Historic Archaeological Sites and Prehistoric Archaeological Sites for the Tennessee River Region



Generated by the TWRA GIS Lab, April 2006 (jj)

TENNESSEE RIVER FISHING ACCESS

Locations - The aquatic projects map indicates locations where access is needed on 15 important stream fisheries (yellow asterisks and yellow-lined streams).

Descriptions - There are two distinct types of property needed to provide fishing access to streams: 1) boat access points for launching small boats, and 2) linear tracts in and adjacent to streams for wade fishing access.

Boat access points are needed on Big Sandy (1) and Buffalo (8) rivers. These areas were chosen to complement existing access areas and improve the value of recreational fisheries. All areas are located adjacent to the named river. The exact location is not critical; it is possible that another parcel located within one mile could be substituted for the indicated location. Boat access points would be relatively small parcels (up to 2 acres) located in the floodplain, preferably near existing roads.

Wade fishing access is needed on 14 streams. These would provide parking for a few vehicles and provide access for anglers to walk in and along the stream for 1-3 miles. Areas adjacent to bridges would be ideal locations for small parking areas.

Recreational Significance - Kentucky and Barkley lakes give boat anglers unlimited fishing opportunities, but access to stream and small river fisheries is very limited. These streams support some of the best smallmouth bass fishing in Tennessee but anglers must have the landowner's permission to wade in the creek. The task of contacting multiple landowners and getting permission can be overwhelming for many anglers, especially those that are not nearby residents. Establishing public corridors would greatly increase the recreational value of these fisheries. With the appropriate management, these streams can attract many more anglers and still provide high quality angling opportunities.

Each summer thousands of canoeists float the Buffalo River which has been designated as a State Scenic River by TDEC. Many of the existing access areas are owned by outfitters that operate canoe rental and shuttle services. Additional public access areas would complement these enterprises by providing more launching options. More public access would allow anglers to avoid high-use paddling areas. Public areas would allow anglers access to fish even when the outfitters are closed on weekdays and in the off-season.

The stream corridors needed to provide wade fishing access include the stream channel and the adjacent riparian zones. Riparian and instream habitats are essential for supporting aquatic life in streams. Public ownership of these important habitats would ensure their protection and provide opportunities for enhancement.

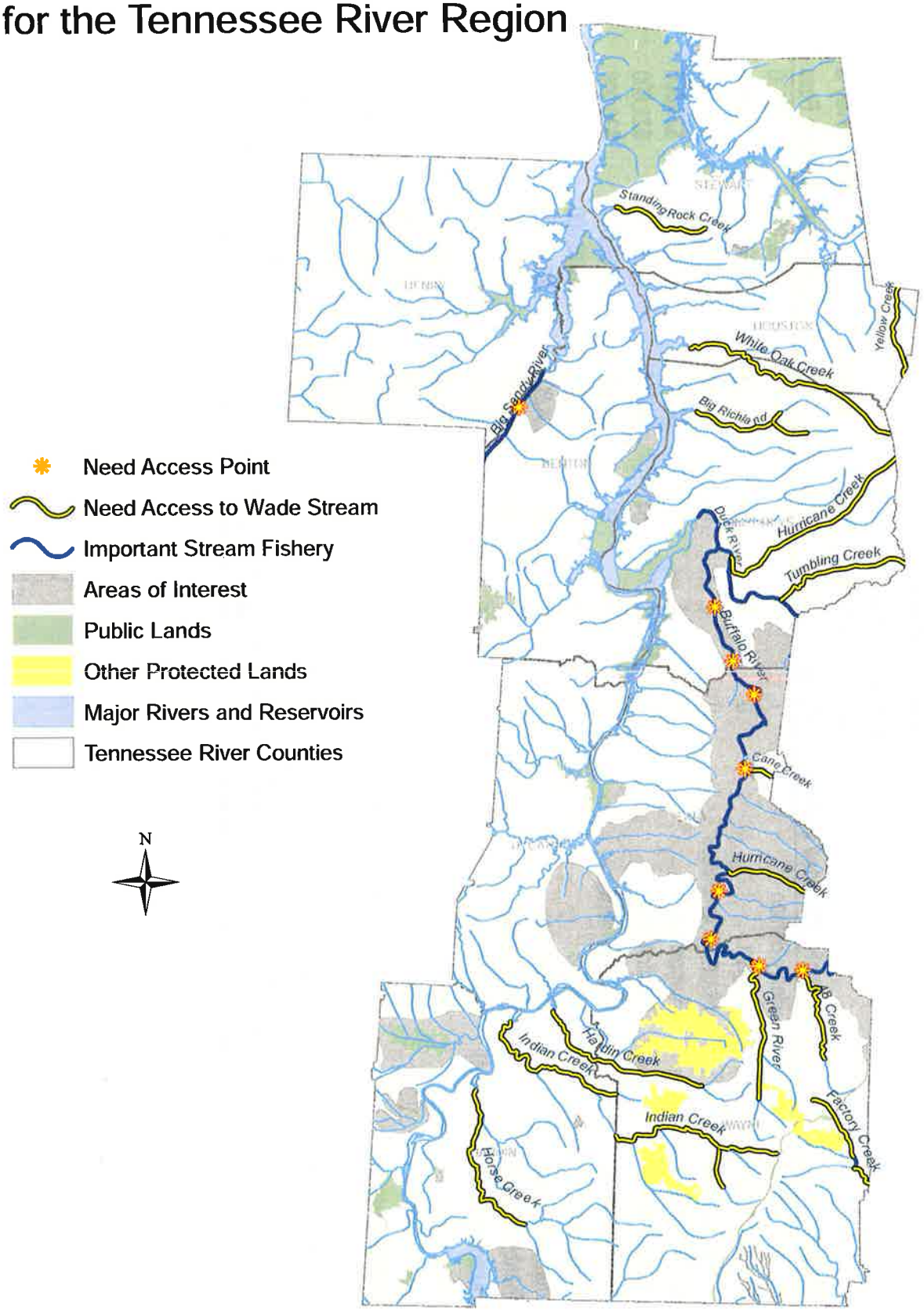
Strategy - TWRA would establish a small, gravel parking area at all access areas, and provide a narrow gravel or concrete ramp at boat access points. TWRA would develop access areas in a manner that would minimize the footprint on the land and maximize the amount of forested riparian vegetation.

Land Protection Needs - See table on following page. Total cost is approximately $4 million.

Potential Partners - TPGF, TWRA, TWRF, local tourism boards, and local watershed organizations.

Watershed	Stream	County of needed access	Number of boat access needed	Miles of wade access needed	Total Acres	Cost/ Acre	Land Cost	10% Survey & Closing Fees	Total Cost
Big Sandy	Big Sandy River	Henry/Benton	1	0	2	$1,000	$2,000	$200	$2,200
Tennessee	Standing Rock Creek	Stewart	0	3	54	$1,000	$54,000	$5,400	$59,400
Tennessee	White Oak Creek	Houston/Humphreys	0	5	90	$1,000	$90,000	$9,000	$99,000
Tennessee	Big Richland Creek	Humphreys	0	4	72	$4,000	$288,000	$28,800	$316,800
Tennessee	Hardin Creek	Hardin/Wayne	0	3	54	$4,000	$216,000	$21,600	$237,600
Tennessee	Indian Creek	Hardin/Wayne	0	5	90	$4,000	$360,000	$36,000	$396,000
Tennessee	Horse Creek	Hardin	0	3	54	$4,000	$216,000	$21,600	$237,600
Duck	Hurricane Creek	Humphreys	0	3	54	$4,000	$216,000	$21,600	$237,600
Duck	Tumbling Creek	Humphreys	0	3	54	$4,000	$216,000	$21,600	$237,600
Buffalo	Hurricane Creek (Wild Trout)	Perry	0	5	90	$10,000	$900,000	$90,000	$990,000
Buffalo	Cane Creek	Perry	0	1	18	$5,000	$90,000	$9,000	$99,000
Cumberland	Yellow Creek	Houston	0	2	36	$5,000	$180,000	$18,000	$198,000
Buffalo	Buffalo River	Humphreys/Perry/Wayne	8	0	16	$20,000	$320,000	$32,000	$352,000
Buffalo	Green River	Wayne	0	3	54	$4,000	$216,000	$21,600	$237,600
Buffalo	Forty-Eight Creek	Wayne	0	2	36	$4,000	$144,000	$14,400	$158,400
Elk	Factory Creek	Wayne	0	2	36	$4,000	$144,000	$14,400	$158,400
	TOTAL		**9**	**44**	**810**		**$3,652,000**	**$365,200**	**$4,017,200**

Stream Fishing Access Project for the Tennessee River Region



Generated by the TWRA GIS Lab, May 2006 (jj)

BAUGUS CAVE

Location – (N35.7526, W88.0853) The cave is located in Decatur County at the mouth of Baugus Hollow, just east of Hwy. 69, approximately one mile northeast of Jeannette.

Description – According to Barr (1961): "The entrance is 15 feet wide & 5 feet high. The cave averages 4 feet high & 12 feet wide. It extends south for 115 feet, then southeast for an additional 650 feet, at which point the stream and ceiling meet."

The cave is well known locally, and the following account is published on at least two web sites:

> "Other wonders of Decatur County include its caves. One such Cave is known as Baugus Cave and is located on Highway 69 six miles north of Parsons. The cave is topped with layer after layer of limestone rock formation and has a wide opening at the mouth. There is a walkable ceiling but after passing three rooms it becomes necessary to crawl. Water drips into the cave at various points. There are six rooms reaching a quarter of a mile in distance. It became highly publicized in 1928 when two men from Waverly attempted to explore the cave. One of them, while crawling in the rooms, got hung in a crevice of the cave. Excitement went on a rampage. An S.O.S. reached the town of Parsons late in the afternoon and a large crowd gathered at the mouth of the cave. Volunteers worked until near midnight before rescuing the victim, safe and sound except from shock." (Younger, 1978)

Significance – Site importance moderate (B4) – Baugus Cave is home to a small population of state and federally endangered gray bats (*Myotis grisescens*) and to the state in need of management southern cavefish (*Typhlichthys subterraneus*).

Subnational Scientific Name	Subnational Common Name	Global Rank	Subnational Rank
Typhlichthys subterraneus	Southern Cavefish	G4	S3
Myotis grisescens	Gray Bat	G3	S2

According to the DNH Biotics database, 100 gray bats were observed in 2002. The southern cavefish was last reported in 1986, and was seen in some abundance in 1973 (Biotics Data System, 2005).

Strategy – The primary concern for the conservation of the two known rare species is uncontrolled access. Disturbance of gray bats during roosting periods can significantly reduce colony size, and this may be the case at present. In addition to protecting an initial one-acre around the mouth of the cave, the cave may need to be posted to discourage inappropriate access. Other exclusion measures may be necessary. To better protect the water quality of the stream flowing through the cave, the balance of Baugus Hollow should be brought under some form of conservation, either by agreement with existing landowners or fee simple purchase. Maintenance activities along SR 69 should be protective of Baugus Hollow Creek.

Immediate needs include research of current site conditions to ensure the cave and surrounding area are still intact, research of landowner information, and additional faunal and plant community inventories.

Land Protection Needs – 222 acres within the recharge area of cave at estimated cost of $247,000.

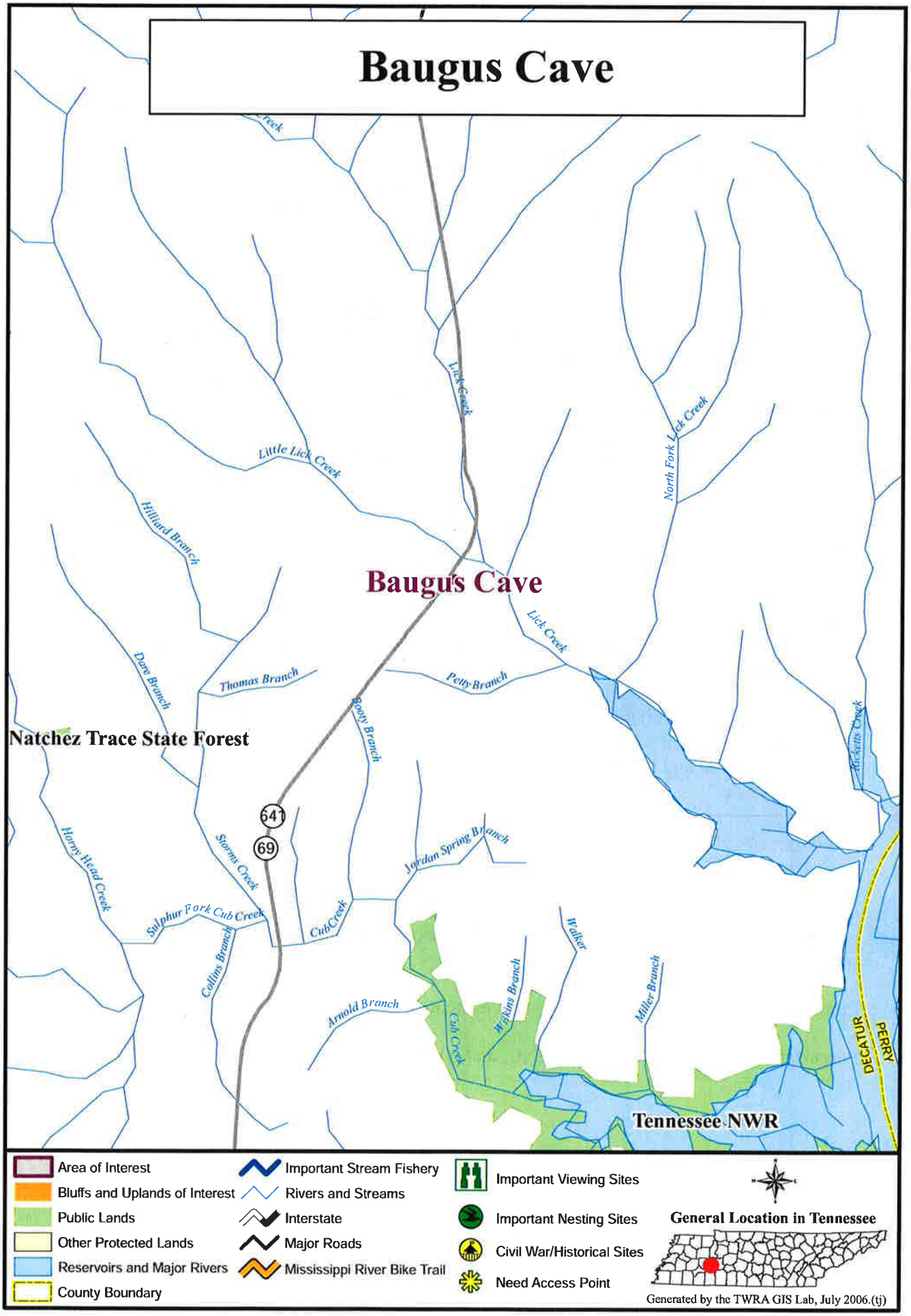
Potential Partners –TNC, TWRA, TDOT, TDEC.

References –

Barr, Thomas C. Jr. 1961. Caves of Tennessee. 567 Pp. Tennessee Department of Conservation, Div. of Geology, Bulletin 64.

Biotics Data System. Division of Natural Heritage, Nashville.

Younger, Lillye. 1978. *The History of Decatur County Past and Present* (Southhaven, MS: Carter Printing Company), pp. 34-43.


Baugus Cave
Baugus Cave
Natchez Trace State Forest
Tennessee NWR
DECATUR
PERRY
Lick Creek
Little Lick Creek
North Fork Lick Creek
Hilliard Branch
Daw Branch
Thomas Branch
Petty Branch
Booty Branch
Ackerts Creek
Horny Head Creek
Storms Creek
Jordan Spring Branch
Sulphur Fork Cub Creek
Cub Creek
Collins Branch
Arnold Branch
Walker
Wilkins Branch
Miller Branch
641
69
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BEASON CREEK HABITAT CORRIDOR (NORTH & SOUTH FORK)

Location – (N35.2382, W88.3104) The Beason Creek area of interest is located in Hardin County just east of Coffee Bottoms, north of the town of Crump, and west of the Tennessee River. This area lies northeast of the town of Adamsville and flows east ending near Coffee Landing on the Tennessee River. This habitat corridor is approximately 8 miles long and 1 mile wide (1/2 mi. of each fork of the creek).

Description - The topography of this area is typical rolling upland hardwood habitat type with some flat bottomland hardwoods/wetlands located near creek bottoms. Lying within the Tennessee River Watershed, this area contains a number of major springs including Phillips Spring and Rock Spring. The elevation of this area ranges from 400 to 500 feet above sea level. Soils are mostly sandy with gravel bottoms, typical of Tennessee River tributaries.

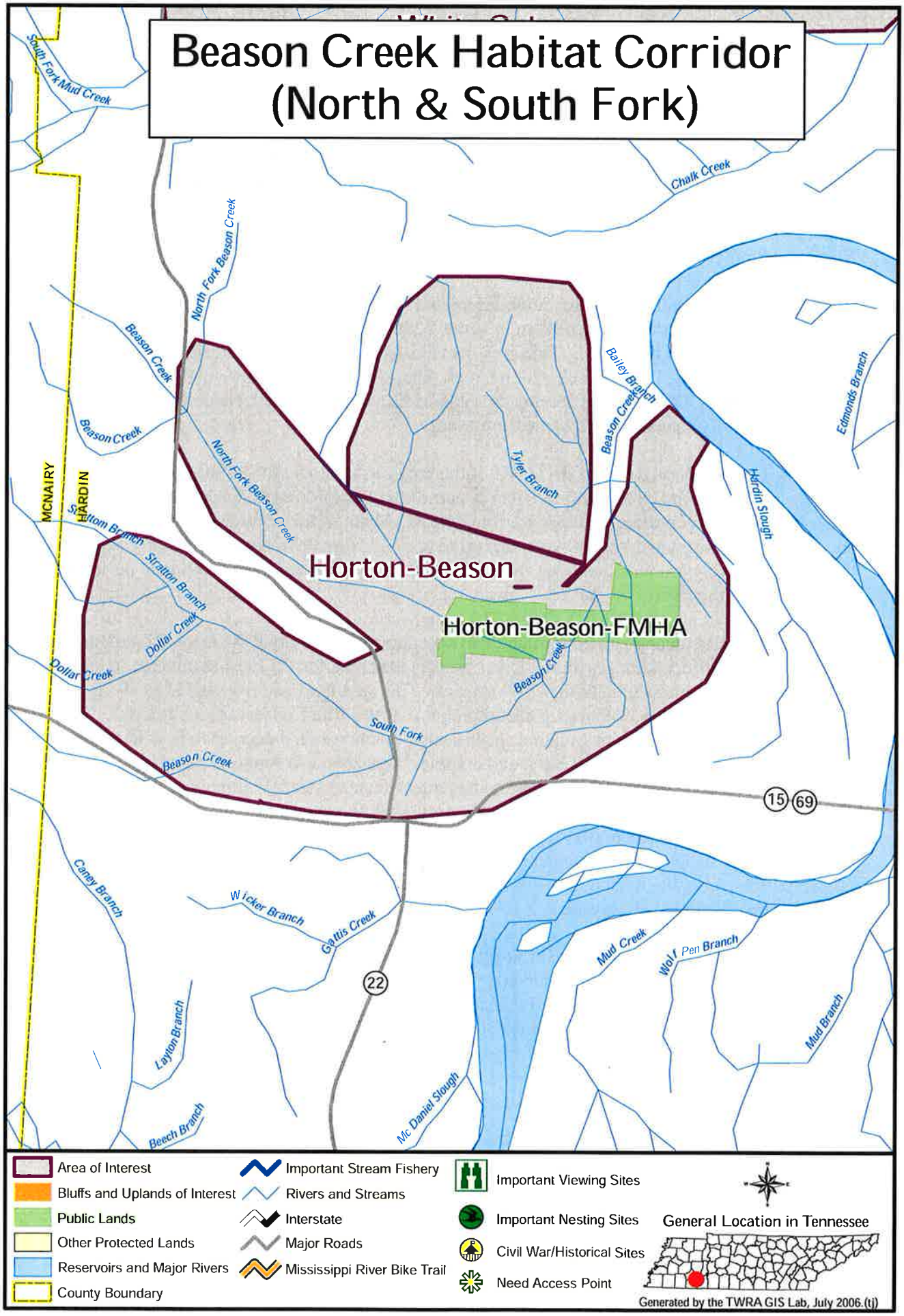
History - In recent years, the Beason Creek area has seen much development along its banks. Much of the Tennessee River/Beason Creek area was upland and bottomland hardwood habitat types that were used by Native Americans and early settlers as hunting and fishing grounds. However much of the native habitat has been lost due to agricultural practices, logging, and development around the watershed.

Significance - The upland and bottomland hardwood areas found along Beason Creek (along with the Tennessee River) are some of the most biodiverse in the state, having a species richness greater than 120 species. This area has been recognized as an area of biological significance in the "Tennessee's Comprehensive Wildlife Conservation Strategy". This area supports good populations of game and fish species such as white-tailed deer, eastern wild turkey, waterfowl, largemouth bass, smallmouth bass, and crappie. The area also supports populations of non-game species deemed in-need-of-management such as southern brook lamprey, meadow jumping mouse, bird-voiced and barking treefrogs and state endangered species such as the Hardin County crayfish.

Strategy - The strategy for the Beason Creek area is to acquire properties surrounding the area for access control, watershed protection, habitat and species restoration, and creation of a WMA with minimal land management and excellent hunting/fishing opportunities. This is a long-term management strategy (50-100 years) to acquire land in and around this habitat corridor. This will help protect a natural upland/bottomland hardwood corridor that will benefit hundreds of species.

Land Protection Needs - 2,500 acres at an estimated cost of $3,300,000.

Potential Partners – TWRA, DEC, TNC, and NWTF.


Beason Creek Habitat Corridor
(North & South Fork)
South Fork Mud Creek
Chalk Creek
North Fork Beason Creek
Beason Creek
Beason Creek
North Fork Beason Creek
Tyler Branch
Bailey Branch
Beason Creek
Edmonds Branch
Hardin Slough
MCNAIRY
HARDIN
Stratton Branch
Stratton Branch
Dollar Creek
Dollar Creek
Horton-Beason
Horton-Beason-FMHA
Beason Creek
South Fork
Beason Creek
15
69
Caney Branch
Wicker Branch
Gattis Creek
22
Mud Creek
Wolf Pen Branch
Mud Branch
Layton Branch
Mc Daniel Slough
Beech Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BUFFALO RIVER HABITAT CORRIDOR

Location - The Buffalo River Habitat Corridor area of interest starts near the Perry/Wayne County line in Perry County and traverses north into Humphreys County to the Duck River. The corridor extends near the town of Flatwoods at the Perry/Wayne County line into Humphreys County, near the town of Bakerville. The corridor is approximately 25 miles long from South to North and 2 miles wide from East to West.

Description of Property - The area includes upland hardwood habitat types with bottomland hardwoods located near the river bottom in some locations. There are many caves and sinkholes located throughout the watershed. This area contains a number of major stream drainages including Cane Creek, Brush Creek, Coon Creek, Short Creek, Hurricane Creek, Rockhouse Creek, and Sinking Creek. Soils are mostly light acidic sandy soils with sinkholes, and caves made up of mostly sandstone and some limestone.

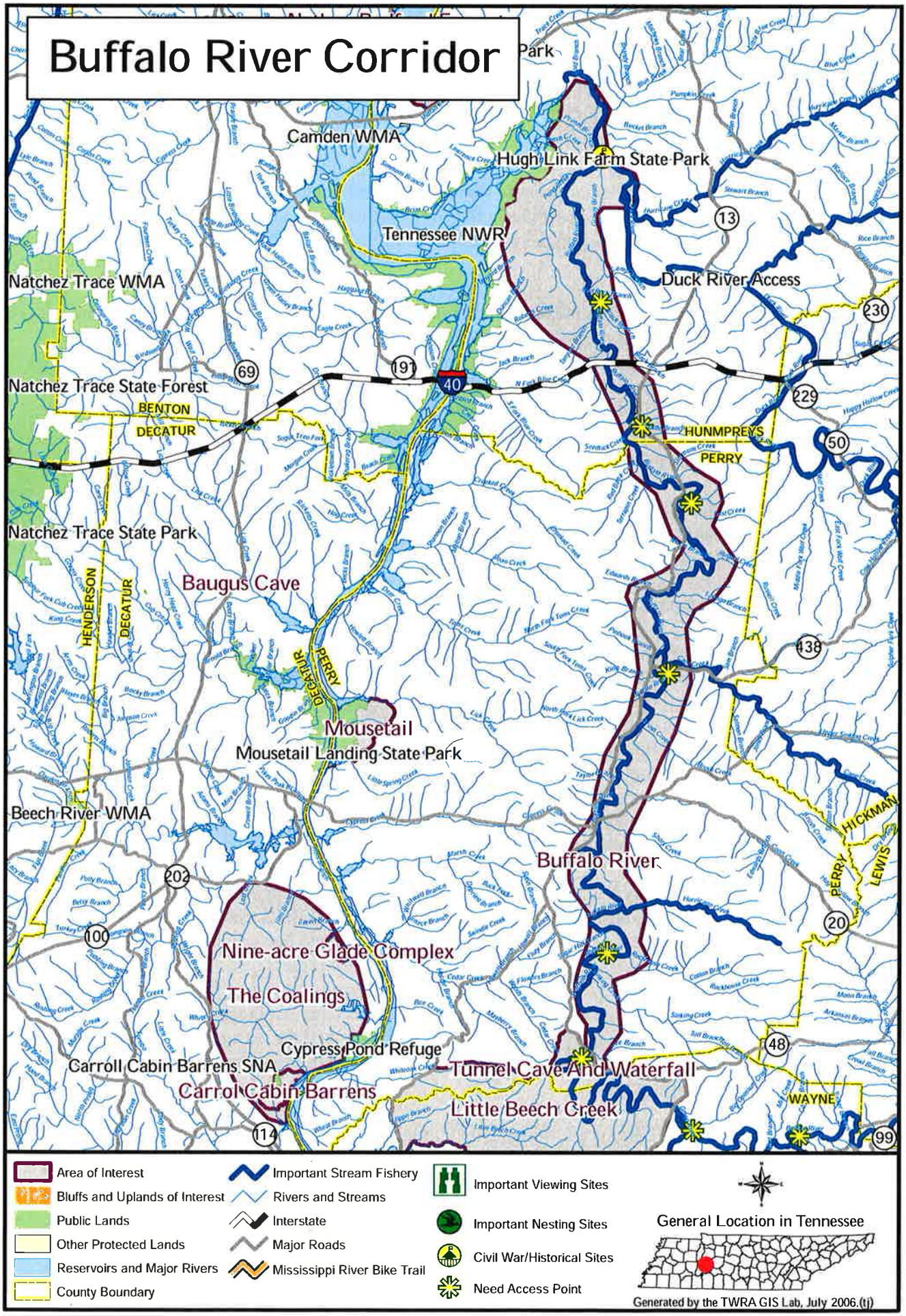
History - The Buffalo River System is one of the major tributaries of the Tennessee River on the Western Highland Rim. The Buffalo River is part of the Duck River Watershed and gets its name from the many buffalo fish that are found there. Much of this corridor was initially upland and bottomland hardwood habitat types that were used by Native Americans and early settlers as hunting and fishing grounds; however much of the native habitat has been lost due to agricultural practices along the rivers.

Significance - The upland and bottomland hardwood areas found along the Duck River/Buffalo River Habitat Corridor (along with the River proper) are some for the most biodiverse in the state having a species richness greater than 160 species. This area has been recognized as an area of biological significance in "Tennessee's Comprehensive Wildlife Conservation Strategy". This area supports good populations of game species such as white-tailed deer, eastern wild turkey, waterfowl, smallmouth bass, rock bass, and crappie. This area also supports populations of non-game species that are deemed in-need-of-management such as meadow jumping mouse, alligator snapping turtle, hellbender, southern brook lamprey, highfin carp-sucker, and slenderhead darter, state threatened such as the northern pine snake, saddled madtom, coppercheek darter, ashy darter, and blue sucker, state endangered such as Bewick's wren, egg-mimic darter, and the golden darter. Also, the habitat corridor is home to federally threatened/endangered species such as the pygmy madtom and gray bat.

Strategy - The strategy within the Buffalo River System is to acquire properties surrounding the Buffalo River for access control, watershed protection, habitat and species restoration, and creation of a WMA with minimal land management and excellent hunting/fishing opportunities. This is a long-term management strategy (50-100 years) to acquire land in and around this river system.

Land Protection Needs - 32,000 acres at an estimated cost of $45,000,000.

Potential Partners - USFWS, TWRA, TDEC, TNC, and NWTF.


Buffalo River Corridor
Camden WMA
Hugh Link Farm State Park
Tennessee NWR
Natchez Trace WMA
Duck River Access
Natchez Trace State Forest
BENTON
DECATUR
HUNMPREYS
PERRY
Natchez Trace State Park
Baugus Cave
HENDERSON
DECATUR
PERRY
Mousetail
Mousetail Landing State Park
Beech River WMA
Buffalo River
HICKMAN
PERRY
LEWIS
Nine-acre Glade Complex
The Coalings
Cypress Pond Refuge
Carroll Cabin Barrens SNA
Carroll Cabin Barrens
Tunnel Cave And Waterfall
Little Beech Creek
WAYNE
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

THE COALINGS

Location – (N355197, W88.0447) The Coalings is located southeast of Decaturville, west of the Tennessee River, and northwest of Cypress Pond Refuge in Decatur County. The area is about 7 miles long from north to south and 4 miles wide from east to west. The project area also includes the Decatur County (Gumdale) Glades and Barrens Complex and the Carroll Cabin Barrens SNA.

Description - The topography is mostly rolling hills and forest types of the area include some mature hardwood forests and recently clear-cut hardwoods that have been replanted in pines. There are few public roads in the area and it is not densely populated. The elevation of the area ranges from 400 to 500 feet above sea level. This area contains a number of stream drainages including Whites Creek, Lost Creek, and Turnbo Creek. Soils are sandy in most locations. The major landowners include RMK Select Timberland that owns over 5,000 acres and Graham Lumber Company that owns over 1,500 acres.

This area has thousands of acres of undeveloped timberland. At one time, much of the land belonged to the Tennessee River Paper and Pulp Company. This area is rich in diversity and was used as hunting grounds for Native Americans. Currently, the area is known as "The Coalings" because historically much of this area was used to provide timber for charcoal production for the Brownport Iron Furnace Company.

This area is one of the few remaining locations on the Tennessee River that is relatively undeveloped with few roads. The upland hardwoods of this area are very biodiverse having a species richness of over 120 species. This area has been indicated as an area of biological significance in the "West Tennessee Conservation Plan". The area supports good populations of game species such as white-tailed deer, eastern wild turkey, spotted/largemouth bass and crappie. This area also supports populations of non-game species such as federally endangered ring pink mussel, pink mucket mussel, and the gray bat, federally threatened bald eagle, state endangered rustic rocksnail and southern cavefish, state threatened such as the western pigmy rattlesnake, species deemed in-need-of-management such as the eastern woodrat and barn owl.

Carroll Cabin Barrens SNA is a 200-acre natural area located near the Tennessee River in Decatur County in the Western Valley of the Tennessee River. Carroll Cabin Barrens is a series of dramatic Silurian limestone glades and barrens. The glades and barrens are well developed and occur in longitudinal bands on the hillsides above the Tennessee River. Little bluestem dominates the open, gravelly portions of the glades as well as the margins. Forbs, unique to the glades and barrens complex, grow sporadically in open glades and congregate around the barren periphery. The surrounding woods are a mixture of hardwoods of varied ages with the edges of the glades dominated by stunted eastern red cedars. The most common forest is an oak-hickory with short leaf and Virginia pine.

The Silurian glades and barrens are floristically similar to but lacking the endemism associated with Middle Tennessee glades. There are several state rare plants considered disjunct from the Southern Great Plains and Ozarks found at Carroll Cabin that give an interesting western affinity to the flora. Rare plant species found at Carroll Cabin Barrens include the state threatened

barrens silky aster (*Aster pratensis*), hairy fimbristylis (*Fimbristylis puberula*), and slender blazing star (*Liatris cylindracea*), and state special concern blue sage (*Salvia azurea var. grandiflora*). The Silurian limestone outcroppings in the Western Valley are considered some of the most extensive in the un-glaciated United States. This glade/barrens complex is classified as a Western Valley Limestone Hill Barren community and is considered a globally imperiled community.

The Decatur County Silurian Glades and Barrens Complex (Site Importance High - B3) includes several smaller sites such as 9-acre Glade and Gumdale Glade disbursed though a larger tract owned by a Timber Investment Management Organization (TIMO) These are xeric sites with a Silurian limestone substrate. The soils are fossil rich and crumbly, being exposed in large patches. The characteristic conical hills, capped with whitish clays, are surrounded by a landscape dominated by herbaceous communities of little bluestem and big bluestem, with clumps of red cedar and hardwoods scattered in areas with greater spoil depths. During late summer and early fall many of these grassy glades are covered with slender blazing star and silphium. In between the glades there are pine plantations and hardwood forests.

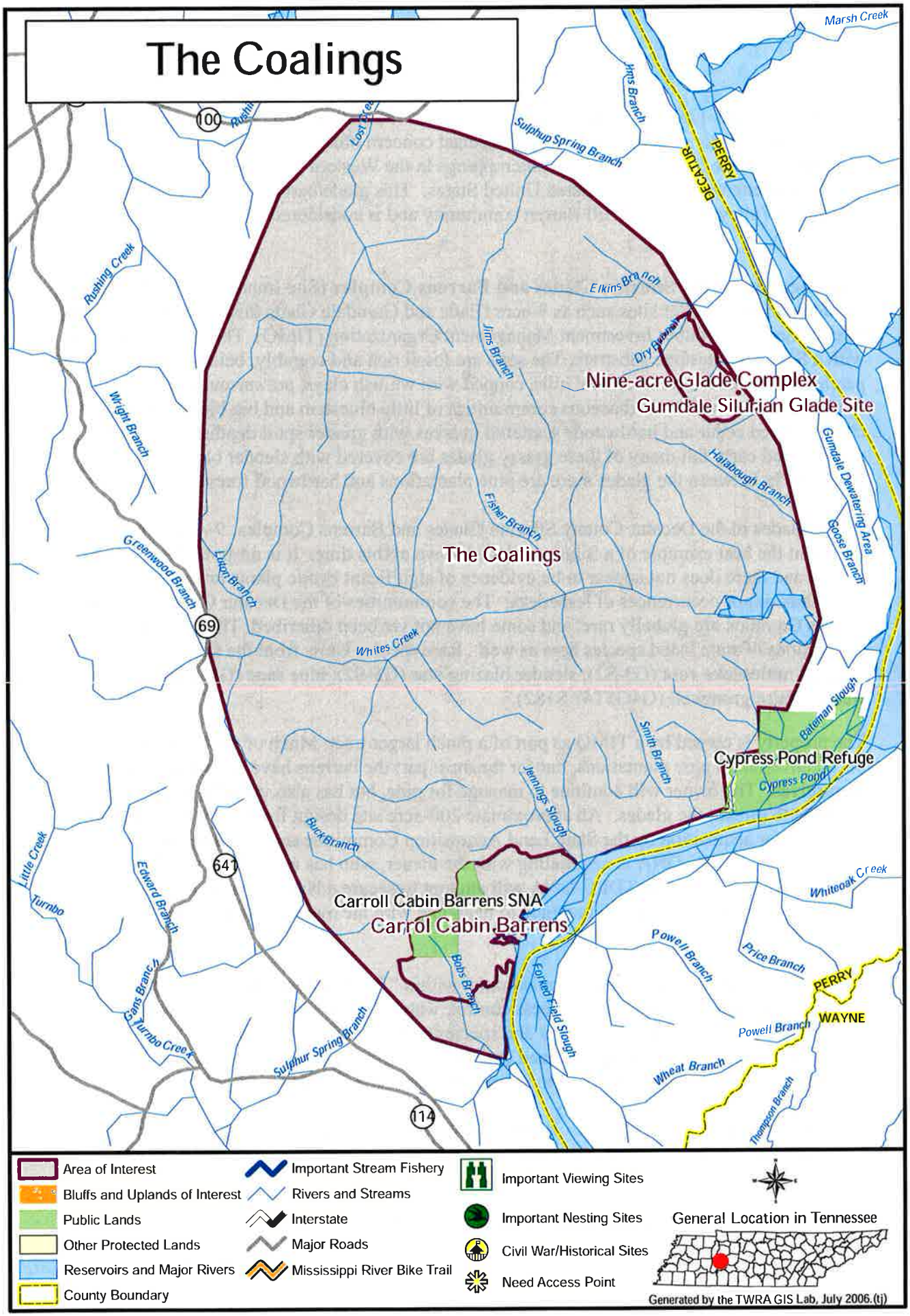
Of the glades in the Decatur County Silurian Glades and Barrens Complex, 9-Acre Glade may represent the best example of a Silurian Glade known at this time. It is unspoiled by human impact and there does not appear to be evidence of significant exotic plants invading the glade other than minor occurrences of lespedeza. The communities of the Decatur County Silurian Glades Complex are globally rare, and some have not yet been described. There are good populations of state listed species here as well. Rare species know from the site include: bearded rattlesnake-root (G3-S2); slender blazing-star (G5-S2); blue sage (G4G5T4? S3); western false gromwell (G4G5T4? S1S2).

The property is owned by a TIMO as part of a much larger tract. Much of the larger tract has been converted to pine plantations, but for the most part the barrens have not been converted themselves. The owner will continue to manage for pine, but has also verbally agreed to continue to protect the glades. An approximate 200-acre site design for 9-Acre Glade has been approved for acquisition by the State Land Acquisition Committee and the State Building Commission. TDEC-DNA is negotiating with the owner, who has refused the state's appraisal based offer. In the interim, TDEC-DNA will attempt to secure a Natural Areas Registry Agreement for the site, and will continue to negotiate with the owner to acquire or otherwise protect the site.

Strategy: The strategy for future acquisition(s) within "The Coalings" area is to acquire properties surrounding the area for access control, watershed protection, critical habitat protection for sensitive species, habitat and species restoration, and creation of a WMA/Wetland Area with minimal land management and excellent hunting opportunities. This is a long term management strategy (50-100 years) to acquire land near the Tennessee River.

Land Protection Needs – TWRA - 10,000 acres at an estimated cost of $13,000,000; Carroll Cabin Barrens SNA – 720 acres at an estimated cost of $720,000; Decatur County Silurian Glades and Barrens – 500 acres at an estimated cost of $500,000

Potential Partners: U.SFWS, TDEC, TNC, QU and NWTF.


The Coalings
Marsh Creek
Sulphup Spring Branch
Elkins Branch
Jims Branch
Dry Gulch
Nine-acre Glade Complex
Gumdale Silurian Glade Site
Gumdale Dewatering Area
Goose Branch
Halabaugh Branch
Fisher Branch
Rushing Creek
Wright Branch
Greenwood Branch
Lyon Branch
Whites Creek
The Coalings
Bateman Slough
Smith Branch
Cypress Pond Refuge
Cypress Pond
Jennings Slough
Buck Branch
Carroll Cabin Barrens SNA
Carrol Cabin Barrens
Bobs Branch
Forked Field Slough
Whiteoak Creek
Powell Branch
Price Branch
Wheat Branch
Thompson Branch
Little Creek
Turnbo
Edward Branch
Gans Branch
Turnbo Creek
Sulphur Spring Branch
DECATUR
PERRY
WAYNE
100
69
641
114
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DUCK RIVER/BUFFALO RIVER CONFLUENCE HABITAT CORRIDOR

Location - The Duck/Buffalo River System area of interest is at Cherry Bottoms located in Humphreys County. The habitat corridor extends from near Whirl Bar on the Duck River to Caigletown on the Buffalo River. The Duck River/Buffalo River Corridor is approximately 6 miles long and approximately 2 miles wide.

Description - This area includes the typical rolling upland hardwood habitat type with flat bottomland hardwoods and agricultural lands located near the river bottom. There are also many caves and sinkholes located throughout the watershed. Lying within the Duck River Watershed, this area contains a number of major stream drainages including Blue Creek, Hurricane Creek, and Tumbling Creek. The elevation of this area ranges from 400 to 500 feet above sea level. Soils are mostly light acidic sandy soils with sinkholes, caves, and underground streams made up of mostly sandstone and some limestone.

History - The Duck/Buffalo River System is one of the major tributaries of the Tennessee River on the Western Highland Rim. The Duck River consists of various tributaries within the Watershed. Much of the Duck River System was initially upland and bottomland hardwood habitat types that were used by Native Americans and Early Settlers as hunting and fishing grounds; however much of the native habitat has been lost due to agricultural practices along the rivers.

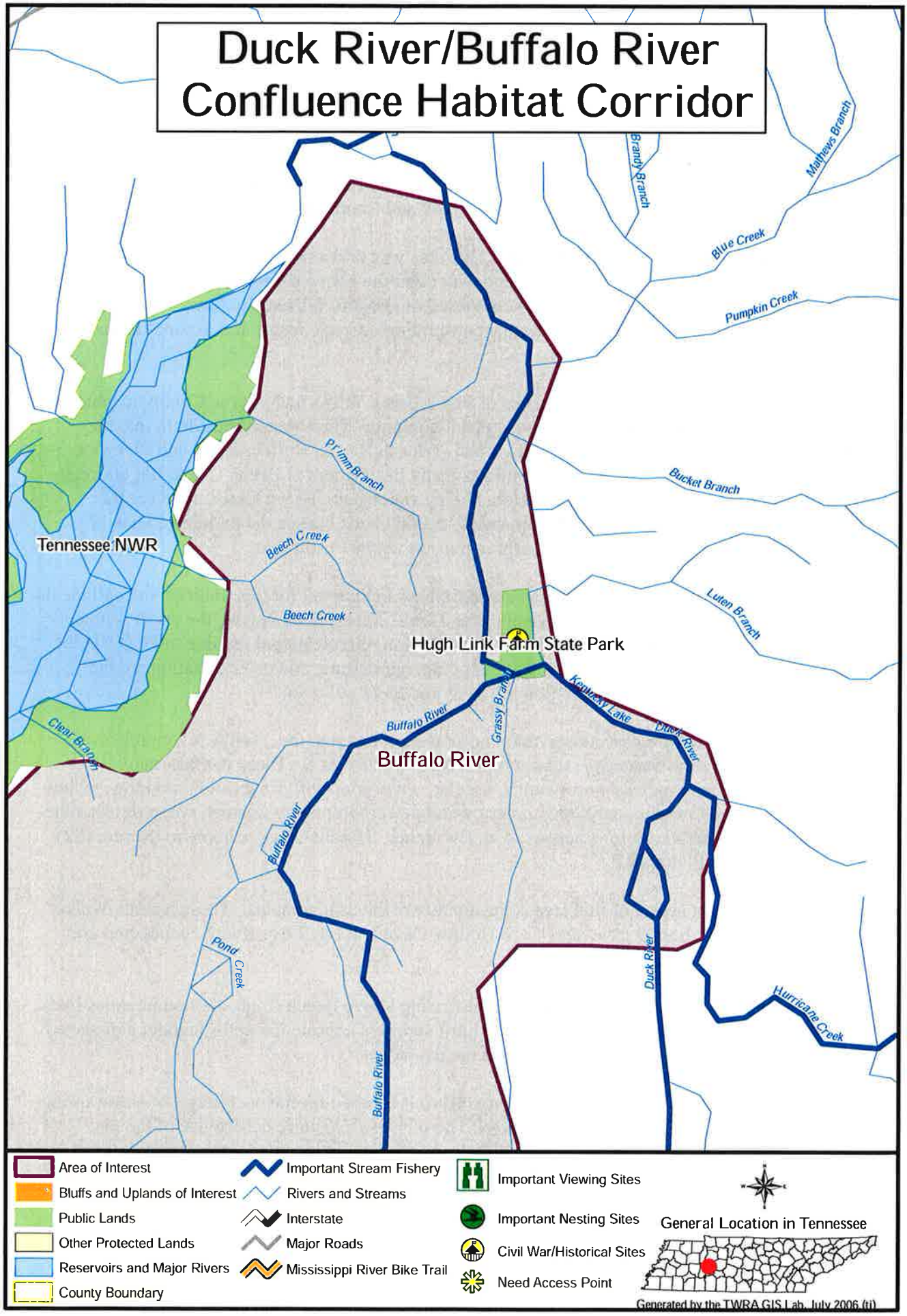
Significance - The upland and bottomland hardwood areas found along the Duck/Buffalo River Habitat Corridor (along with the River proper) are some of the most biodiverse in the state having a species richness of greater than 160 species. This area has been recognized as an area of biological significance in plans such as "Tennessee's Comprehensive Wildlife Conservation Strategy" and the "Duck River Watershed Plan" conducted by the Center for Watershed Protection. This area supports good populations of game species such as white-tailed deer, eastern wild turkey, waterfowl, largemouth bass, smallmouth bass, and crappie. This area also supports populations of non-game that are deemed in-need-of-management such as meadow jumping mouse, alligator snapping turtle, hellbender, southern brook lamprey, highfin carpsucker, and slenderhead darter, state threatened such as the saddled madtom, coppercheek darter, and blue sucker, state endangered such as Bewick's wren, egg-mimic darter, and the golden darter. Also, the Duck River/Buffalo River Habitat Corridor is home to many federally threatened/endangered species such as the pygmy madtom, gray bat, and mussels such as the fanshell, oyster mussel, yellow blossom, tan riffleshell, slabside pearlymussel, rabbitsfoot, and the pale lilliput.

Strategy - The strategy within the Duck River System is to acquire holdings surrounding the Duck River Habitat Corridor for access control, watershed protection, habitat and species restoration, and creation of a WMA providing additional waterfowl hunting opportunities. The Cherry Bottoms area of interest offers an excellent opportunity to manage for waterfowl and shorebirds alike. With the acquisition of the 7,500 acres, an excellent waterfowl/shorebird management area could be established. The acquired acreage plus any adjoining property would provide a wildlife habitat corridor along Cherry Bottoms to manage forested, moist soil and cropland habitat for waterfowl and shorebirds. The Duck/Buffalo River area would provide a

source of water for flooding various habitat types. If necessary or desirable, water could be pumped from the Buffalo River to provide quality habitat for waterfowl, shorebirds and other wildlife. This is a long-term management strategy (50-100 years) to acquire land in and around this river system. This will help protect a natural upland/bottomland hardwood corridor that will benefit hundreds of wildlife species.

Land Protection Needs - 7,500 acres at an estimated cost of $13,100,000.

Potential Partners – TWRA. USFWS, TDEC, TNC, and NWTF.


Duck River/Buffalo River
Confluence Habitat Corridor
Brandy Branch
Mathews Branch
Blue Creek
Pumpkin Creek
Primm Branch
Bucket Branch
Tennessee NWR
Beech Creek
Beech Creek
Luten Branch
Hugh Link Farm State Park
Kentucky Lake
Duck River
Buffalo River
Grassy Branch
Buffalo River
Clear Branch
Buffalo River
Pond Creek
Duck River
Hurricane Creek
Buffalo River
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (ti)

EAGLE CREEK AND BEECH CREEK BLUFF

Location – (N35.3475, W87.8587) Eagle Creek WMA is located in Wayne County approximately 5 miles NW of Waynesboro. Beech Creek Bluff is located on the north side of the project area near the confluence of Beech Creek and Smith Branch (N35.2303, W87.5003).

Eagle Creek WMA is a 22,900-acre tract. This area was previously oak/hickory hardwood forest. It is now being harvested by the landowner and the native hardwoods are being converted to loblolly pine plantations. This area is composed of streams, hills and hollows. This land acquisition project proposes to purchase the current Eagle Creek WMA and expand the size to 41,248 acres.

One of the most significant characteristics of Eagle Creek WMA and Wayne County in general is the number of headwaters of watersheds that it contains. Three watersheds drain into the Tennessee River - the Tennessee Western Valley (Beech River), Buffalo River and Pickwick Lake watersheds. Eagle Creek WMA contains many headwaters of Beech Creek, Eagle Creek and Hardin Creek in the Tennessee Western Valley watershed. Beech Creek traverses the northern edge of the area and has 36 tributaries. Eagle Creek bisects the middle and has 12 tributaries. Hardin Creek drains the southern portion with 41 tributaries.

Wayne County is known for its great smallmouth bass fishing but for this tradition to continue its streams must be kept healthy. According to the TDEC 2004 (305b) Report, the upper segments of Beech Creek do not support their designated function of recreational use due to PCB's in the sediment. In this report TDEC states that, "logging, agriculture, and channelization are the primary pollution sources with siltation the most prevalent pollutant."

Numerous species of greatest conservation need as designated in the TWRA "Comprehensive Wildlife Conservation Strategy" occur within Eagle Creek WMA. These include many neotropical migrants such as worm-eating warbler, whip-poor-will, Chuck-will's-widow, yellow-billed cuckoo, yellow-throated vireo, eastern wood pewee, Kentucky warbler, wood thrush, blue-winged warbler, orchard oriole, and Acadian flycatcher. Hardin Creek is home to the rare (S2) Tennessee snaketail dragonfly

Another significant aspect of this area is the number of caves it contains. These include Walker Spring Cave, Cave Spring Cave and Cove Hollow Cave and Lay Cave where endangered gray bats have been observed.

Beech Creek Bluff is a steep north facing bluff rising above Beech Creek about nine miles from the confluence of the Tennessee River. The bluff supports a mesic forest throughout a dissected upland above the bluff, and a xeric forest on the dry ridges.

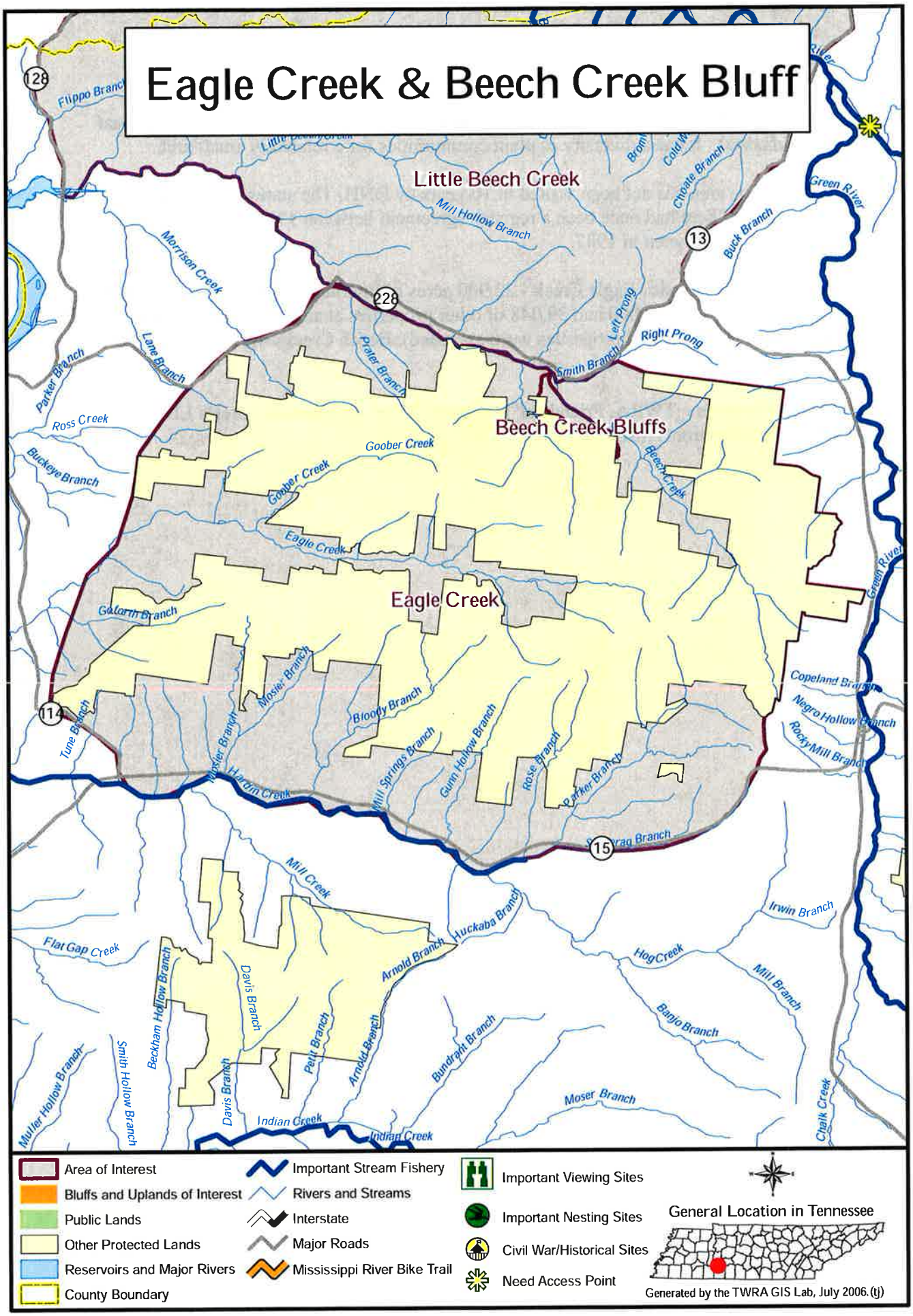
This 111-acre site is on the Western Highland Rim. It is noted for the occurrence of a rare spring flowering trout lily (*Erythronium rostratum*). There is also a historic occurrence of the rare towering mustard (*Arabis glabra*). It has a rich spring flora and mature second growth forest. The plant community is of interest in places where the shrub layer has an abundance of oak leaf

hydrangea (*Hydrangea quercifolia*), big leaf snowbell (*Styrax grandifolia*), and leatherleaf (*Dirca palustris*). It has a diversity of plant communities for a relatively small area.

Strategy – The area has not been visited in 10 years by DNH. The status of the property should be determined. There had once been a registry agreement between TNC and the landowner Mr. and Mrs. Ray Holt signed in 1987.

Lands protection needs –Eagle Creek - 22,900 acres of International Paper property at an estimated cost of $15,400,000 and 39,048 of other properties at an estimated cost of $27,333,600 (commercial and residential properties were excluded); Beech Creek Bluff - 111 acres at an estimated cost of $123,000.

Potential Partners – TWRA, Friends of Tennessee River, Sustainable Forests LLC, Tennessee Heritage Conservation Trust, NWTF, QU, TNC.


Eagle Creek & Beech Creek Bluff
Little Beech Creek
Beech Creek Bluffs
Eagle Creek
Mill Hollow Branch
Morrison Creek
Lane Branch
Parker Branch
Ross Creek
Buckeye Branch
Prater Branch
Goober Creek
Eagle Creek
Gatorfin Branch
Tune Branch
Mosier Branch
Bloody Branch
Mill Springs Branch
Gunn Hollow Branch
Rose Branch
Parker Branch
Hardin Creek
Smith Branch
Left Prong
Right Prong
Buck Branch
Green River
Chicote Branch
Copeland Branch
Negro Hollow Branch
Rocky Mill Branch
Irwin Branch
Mill Creek
Huckaba Branch
Arnold Branch
Flat Gap Creek
Beckham Hollow Branch
Davis Branch
Petit Branch
Bundrant Branch
Hog Creek
Mill Branch
Banjo Branch
Moser Branch
Chalk Creek
Muller Hollow Branch
Smith Hollow Branch
Indian Creek
128
228
13
114
15
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

JOHNSONVILLE STATE HISTORIC AREA

Location – (N35.0537, W87.9548) Three miles north of U.S. Hwy 70 and the town of New Johnsonville in Humphreys County

Description - This is the site of a unique Civil War battle and the location of Johnsonville prior to the creation of Kentucky Lake. This 600 acre park has a wide variety of plant and animal life. The park was established to preserve and to protect the rich cultural and natural resources that exist there.

Significance - Johnsonville, named for then Military Governor of Tennessee, Andrew Johnson, was the site of a unique Confederate military victory. On November 4, 1864, Nathan Bedford Forrest and his cavalry attacked and destroyed the river port depot of Johnsonville. Union losses included three gunboats, eleven transports, eighteen barges, and over 8 million dollars in lost supplies. This victory for the Confederate Army is the only recorded defeat of a naval force by a cavalry force.

Strategy - The strategy for future acquisitions for Johnsonville State Historic Area is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive and historic mission of the park.

Land protection needs – 1,750 acres at an estimated cost of $4,050,000.

Potential Partners - TCF and other land conservancy groups.


Johnsonville State Historic Area
191
BENTON
HUMPHREYS
Johnsonville State Historical Park
Johnsonville
Trace Creek
1
Little Indian Creek
Tennessee NWR
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LITTLE BEECH CREEK

Location – (N35.4480, W87.8524) This area is located in western Wayne County approximately 8 miles NW of Waynesboro. The property is bounded by Hwy's 13, 228, and 128. This project also includes Tunnel Cave and Waterfall (N35.4789, W87.8469) which is located along Whittaker Bend of the Buffalo River between river mile 61 and 62.

Little Beech Creek is an area of hills and hollows that contain many of the headwaters to Beech Creek, Green River and Buffalo River. This is a scenic area that is leased by several parties for horseback riding, hiking, hunting and fishing.

Many neotropical bird species that are listed as species of greatest conservation need in the TWRA "Comprehensive Wildlife Conservation Strategy" breed in this area. Those include Chuck-will's-widow, whip-poor-will, yellow-billed cuckoo, eastern wood peewee, cerulean warbler, Acadian flycatcher, worm-eating warbler, wood thrush, orchard oriole, Kentucky warbler, blue-winged warbler, yellow-throated vireo, and hooded warbler. Red-headed woodpeckers both winter and breed here. There are records of bald eagles (federally threatened) and gray bats (federally endangered). Many fish federally listed as of management concern occur in this section of the Buffalo River. Those are coppercheek darter, ashy darter, saddled madtom, and blotchside logperch. Other species of concern in this area include the round hickorynut and Tennessee clubshell mussels and the aquatic geniculate snail.

Tunnel Cave is a natural tunnel with a series of small waterfalls. The mouth of the tunnel is shaded with sugar maple, red cedar, and winged elm, while the ravine contains a second-growth forest of chinquapin oak, red oak, white ash, basswood, and beech. Information on the site is a bit dated, but the following is recorded by Quarterman and Powell (1978):

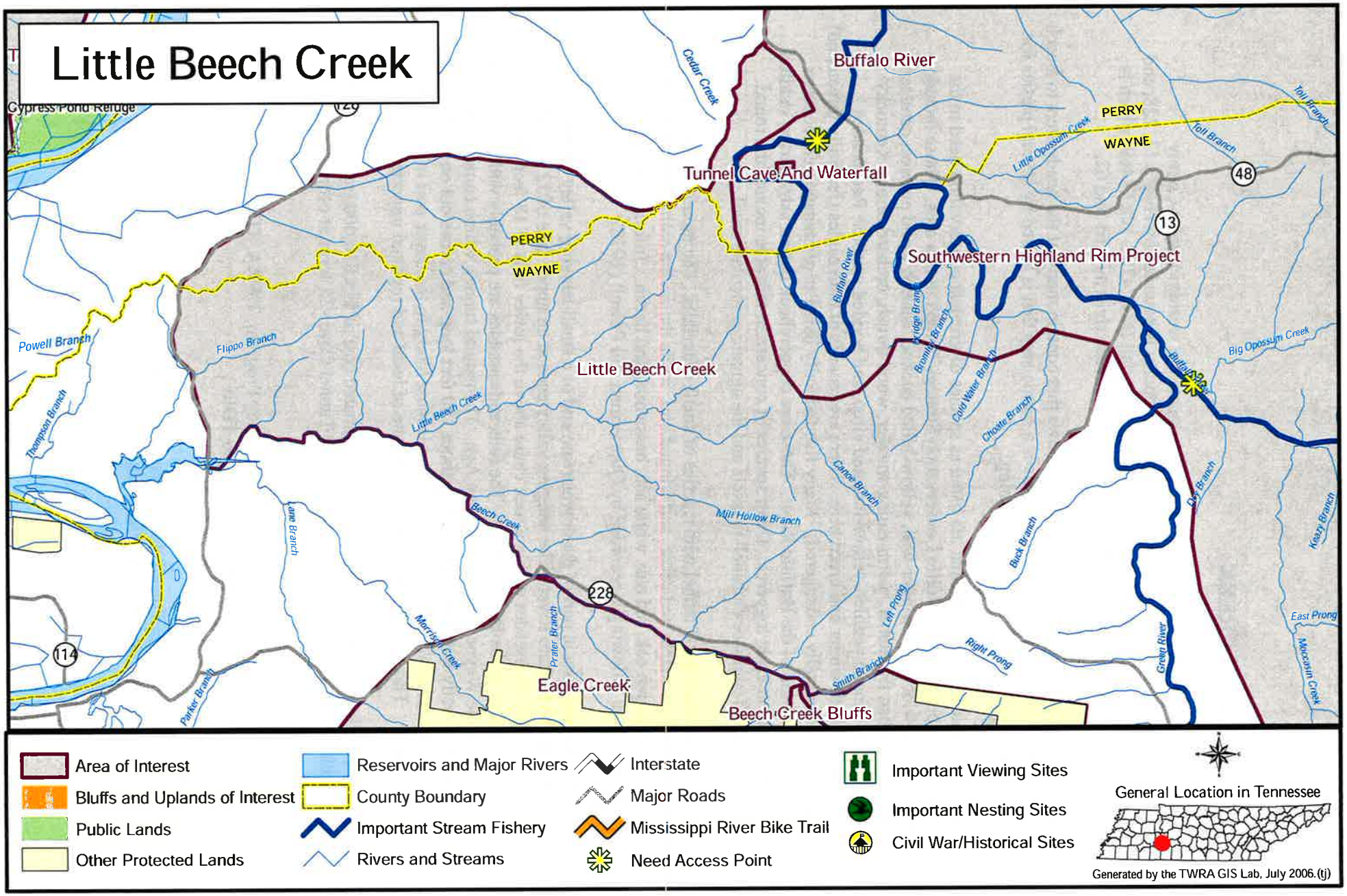
> The site consists in part of the downstream end of a small hanging valley on the north side of the Buffalo River. The hanging valley ends at an upper falls of 12 feet which is at the head of cascades within a rock chute above the lower falls of 18 feet above a rocky valley at the Buffalo River. The falls and cascades are probably within limestone units of the Wayne Group of Silurian Age. The natural tunnel, which connects the valley directly with the river bluff, is about 180 feet long and comes out on the bluff about 85 feet above the river. The tunnel is most likely in the upper part of the Wayne Group. . . .This area is a delightful scenic site of local and regional importance."

Land Protection Needs – 32,355 acres at an estimated cost of $19,830,000 (residential and commercial class properties have been omitted); Tunnel Cave -25 acres at estimated cost of $30,000.

Potential Partners – USFS Service's Forest Legacy Program, TWRA, TDA, Tennessee Heritage Conservation Trust, NWTF, TNC, and TDEC.

Reference –

Quarterman, E., and R. L. Powell. 1978. Potential ecological/geological landmarks of the interior low plateaus. Vanderbilt University, Nashville, TN. 739 pp.


Little Beech Creek
Buffalo River
Tunnel Cave And Waterfall
Southwestern Highland Rim Project
Little Beech Creek
Eagle Creek
Beech Creek Bluffs
PERRY
WAYNE
Cypress Pond Refuge
Cedar Creek
Little Opossum Creek
Toll Branch
Powell Branch
Flippo Branch
Thompson Branch
Bromley Branch
Cold Water Branch
Choate Branch
Big Opossum Creek
Carlee Branch
Mill Hollow Branch
Beech Creek
Lane Branch
Morrison Creek
Prater Branch
Parker Branch
Left Prong
Right Prong
Smith Branch
Buck Branch
Dry Branch
Keazy Branch
East Prong
Mocassin Creek
Green River
48
13
228
114
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MIDDLE CYPRESS CREEK

Location – (N35.0417, W87.7525) This project is located in Wayne County and includes the Tennessee portion of Middle Cypress Creek and its tributaries from the Alabama border upstream approximately 6.5 miles. This stream segment roughly parallels Middle Cypress Creek Road, Spain Road, and Harper Cemetery Road.

Description – The site includes Middle Cypress Creek itself, its tributaries, springs, and adjacent seasonally wet pasture.

Significance – Site importance outstanding (B1) – Middle Cypress Creek is believed to be the most extensive known spawning site for the state and federally threatened slackwater darter (*Etheostoma boschungi*). The stream also supports populations of the crown darter (*E. corona*, state endangered) and several species deemed in-need-of-management including the flame chub (*Hemitremia flammea*), southern brook lamprey (*Ichthyomyzon gagei*), and the crayfish (*Orconectes alabamensis*).

The slackwater darter is known to migrate considerable distances during late winter, when specimens leave streams and enter "seepage areas in open fields…during flooded periods" and spawn "among the stems of rushes in very shallow water." (Etnier, 1993)

Strategy – The primary concerns for the conservation of the slackwater darter include degradation of water quality in Middle Cypress Creek and its tributaries, instream modifications, and the loss of suitable breeding habitats in adjoining pasturelands. Because the slackwater darter depends on flooded fields or meadows for breeding, lands adjoining streams in this watershed must be included in a conservation design. Strategies may include acquisition, conservation easements, livestock exclusion fencing, and stream bank restoration.

Land Protection Needs – 1,077 acres of stream bottom, riparian area, and adjoining pastureland at an estimated cost of $1,765,500.

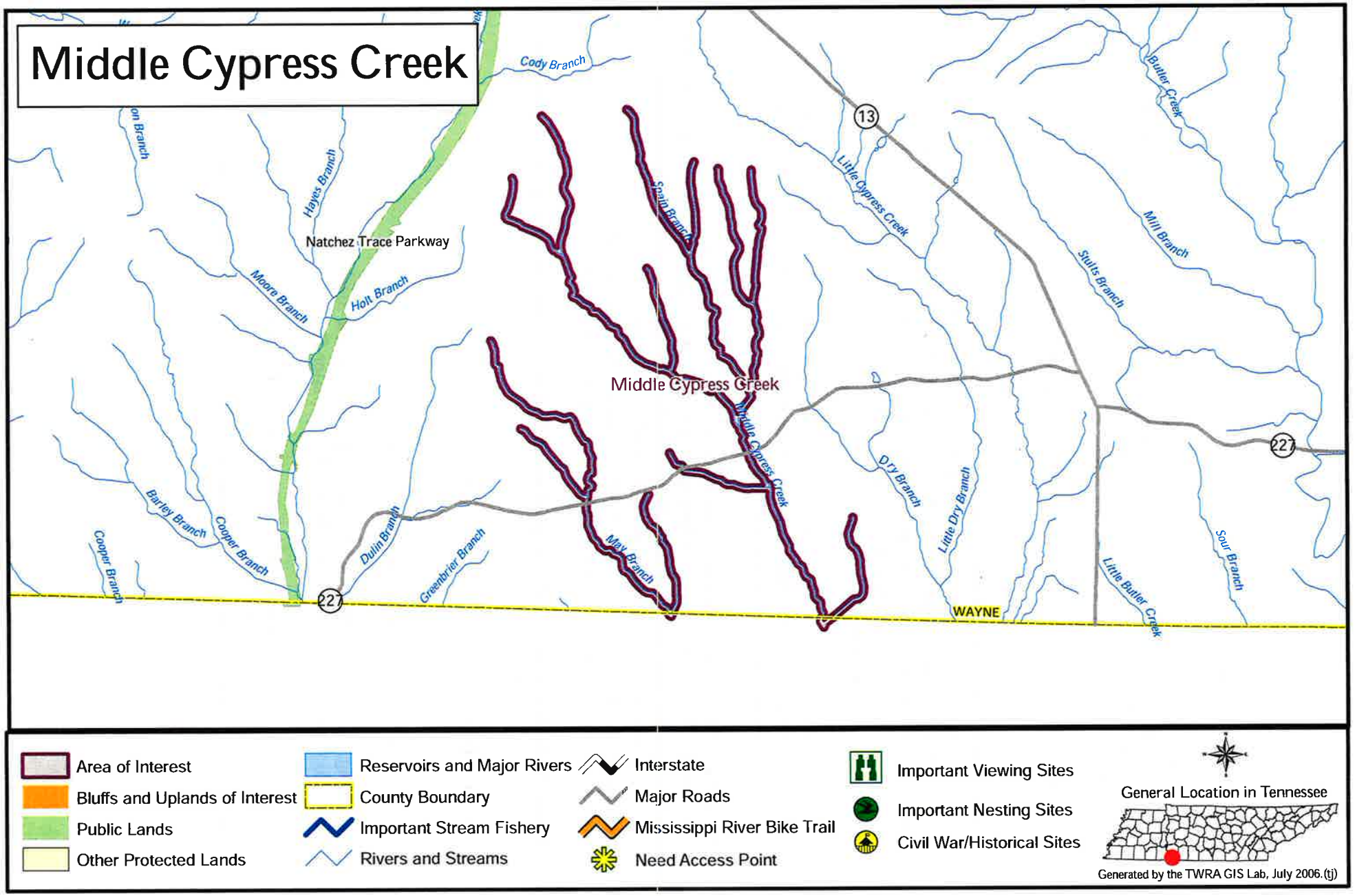
Potential Partners – USFWS, TNC, TWRA, and TDEC.

References –

Biotics Data System, Division of Natural Heritage, Nashville.

Boschung, H. T. 1979. Report on The Breeding Habits of The Slackwater Darter. Unpublished Report to Auburn University, U.S.D.A. Soil Conservation Service. 26 Pp.

Etnier, David A. and Wayne C. Starnes. 1993. The Fishes of Tennessee. University of Tennessee Press, Knoxville. 681 pp.
University of Alabama Museum of Natural History, P.O. Box 1927, Tuscaloosa, Al 35486.


Middle Cypress Creek
Cody Branch
Hayes Branch
Natchez Trace Parkway
Moore Branch
Holt Branch
Middle Cypress Creek
Little Cypress Creek
Butler Creek
Mill Branch
Stults Branch
Dry Branch
Little Dry Branch
Sour Branch
Little Butler Creek
Barley Branch
Cooper Branch
Dulin Branch
Greenbrier Branch
May Branch
13
227
WAYNE
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MOUSETAIL LANDING STATE PARK

Location – (N35.6708, W87.9921) Mousetail Landing is located on the east bank of the Tennessee River on state route 438 approximately 5 miles north of Hwy 100 in Perry County.

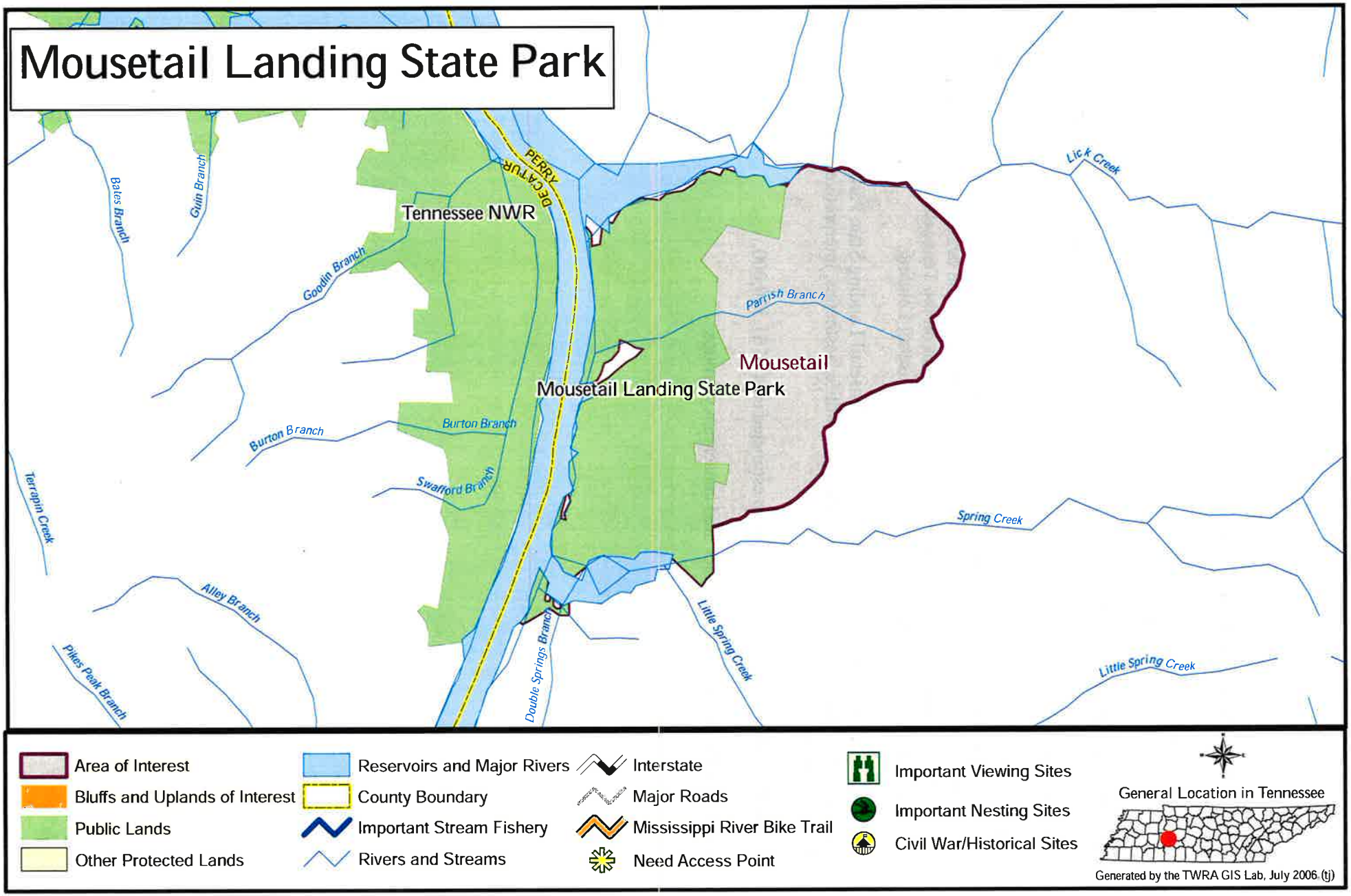
Description of Property - The park consists of 1,247 acres and includes 11 miles of hiking trails, a campground, boat ramp and picnic areas. The park has an abundance of wildlife such as deer, turkey, raccoon, fox, beaver as well as many species of birds.

Significance- The park received its name from one of the tanneries in the area. The first tannery was started in the 1800's. When one of its storage buildings caught fire, the exodus of rats was so great that it got the name Rattail Landing. Shortly after this a second tannery was established in the area with a general store, post office, and shipping point on the Tennessee River. Being smaller than Rattail Landing, it was given the name Mousetail Landing.

Strategy - The strategy for future acquisitions for Mousetail Landing State Park is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive, recreation and historic mission of the park.

Land Protection Needs – 654 acres at an estimated cost of $1,320,000.

Potential Partners - TCF and other land conservancy groups.


Mousetail Landing State Park
Tennessee NWR
PERRY
DECATUR
Bates Branch
Guin Branch
Goodin Branch
Burton Branch
Burton Branch
Swafford Branch
Terrapin Creek
Alley Branch
Pikes Peak Branch
Double Springs Branch
Little Spring Creek
Little Spring Creek
Spring Creek
Lick Creek
Parrish Branch
Mousetail
Mousetail Landing State Park
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

NATHAN BEDFORD FORREST STATE PARK

Location – (N36.1279, W87.9592) Nathan Bedford Forest State Park is located on the west side of the Tennessee River approximately 10 miles east of Camden in Benton County.

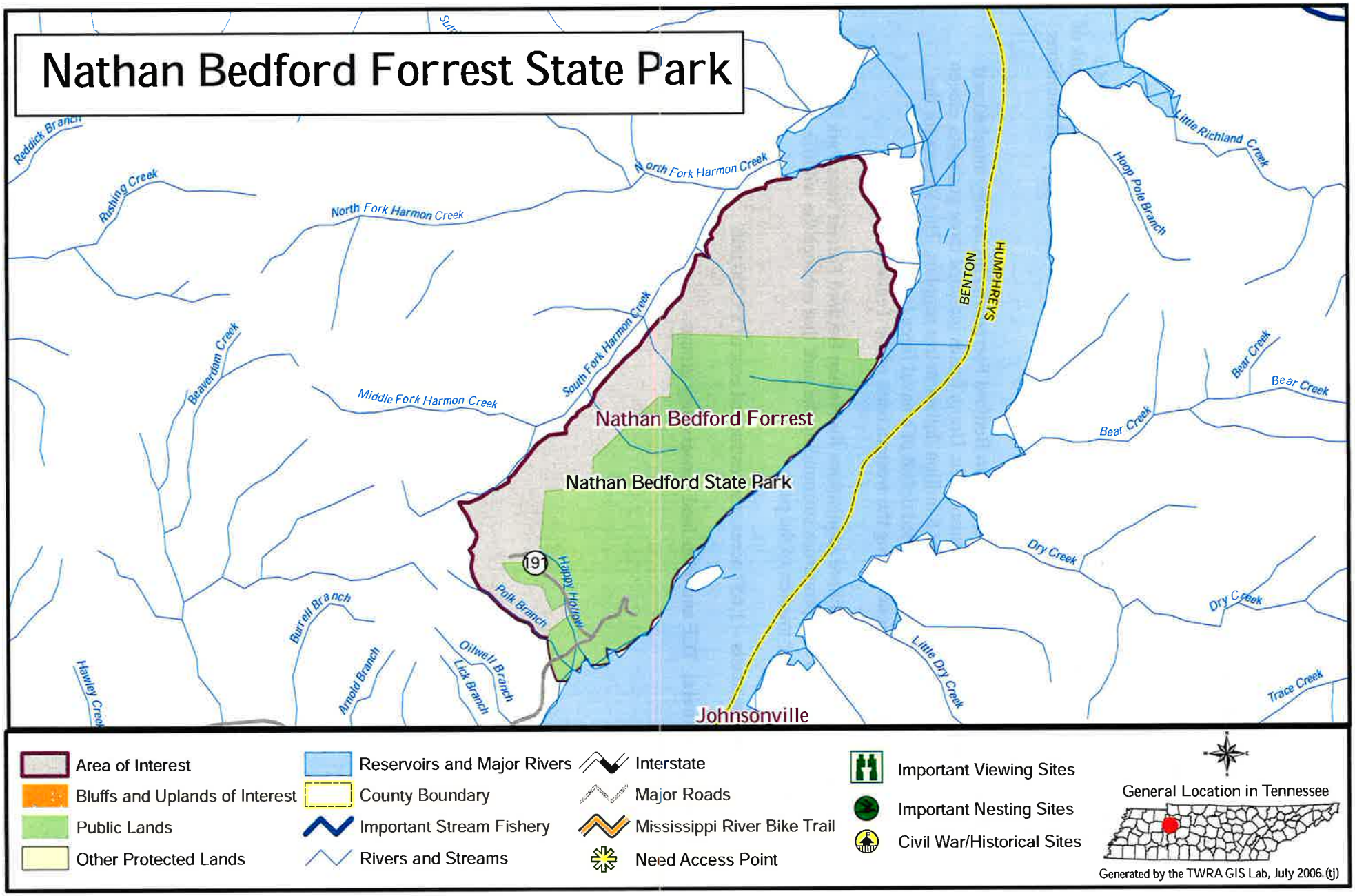
Description - The park consists of 2,587 acres and commemorates General Nathan Forrest's victorious battle with the Union Navy. Forrest's troops were stationed along the western bank of the Tennessee River near the park during Forrest's calvary raid on Union supply and munitions depot at Johnsonville.

Significance - On November 4, 1864, Nathan Bedford Forrest and his cavalry attacked and destroyed the river port depot of Johnsonville. Union losses included three gunboats, eleven transports, eighteen barges, and over 8 million dollars in lost supplies. This victory for the Confederate Army is the only recorded defeat of a naval force by a cavalry force.
Forrest's troops were stationed along the western bank of the Tennessee River.

Strategy - The strategy for future acquisitions for Nathan Bedford Forrest State Park is to acquire all inholdings and properties surrounding the park that enhance the wildlife, aesthetics, interpretive and historic mission of the park.

Land protection needs – 1,657 acres at an estimated cost of $3,200,000

Potential Partners: TCF and other land conservancy groups.


Nathan Bedford Forrest State Park
Reddick Branch
Rushing Creek
North Fork Harmon Creek
North Fork Harmon Creek
Beaverdam Creek
Middle Fork Harmon Creek
South Fork Harmon Creek
Nathan Bedford Forrest
Nathan Bedford State Park
191
Happy Hollow
Polk Branch
Burrell Branch
Arnold Branch
Oilwell Branch
Lick Branch
Hawley Creek
BENTON
HUMPHREYS
Hoop Pole Branch
Little Richland Creek
Bear Creek
Bear Creek
Bear Creek
Dry Creek
Dry Creek
Little Dry Creek
Trace Creek
Johnsonville
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

PARIS LANDING STATE PARK

Location – (N35.4322, W88.0909) Paris Landing State Park consists of 841 acres and is located on the western shore of the Tennessee River which is dammed to form Kentucky Lake. Paris Landing is approximately 31 miles northeast from Paris, Tennessee on Highway 79.

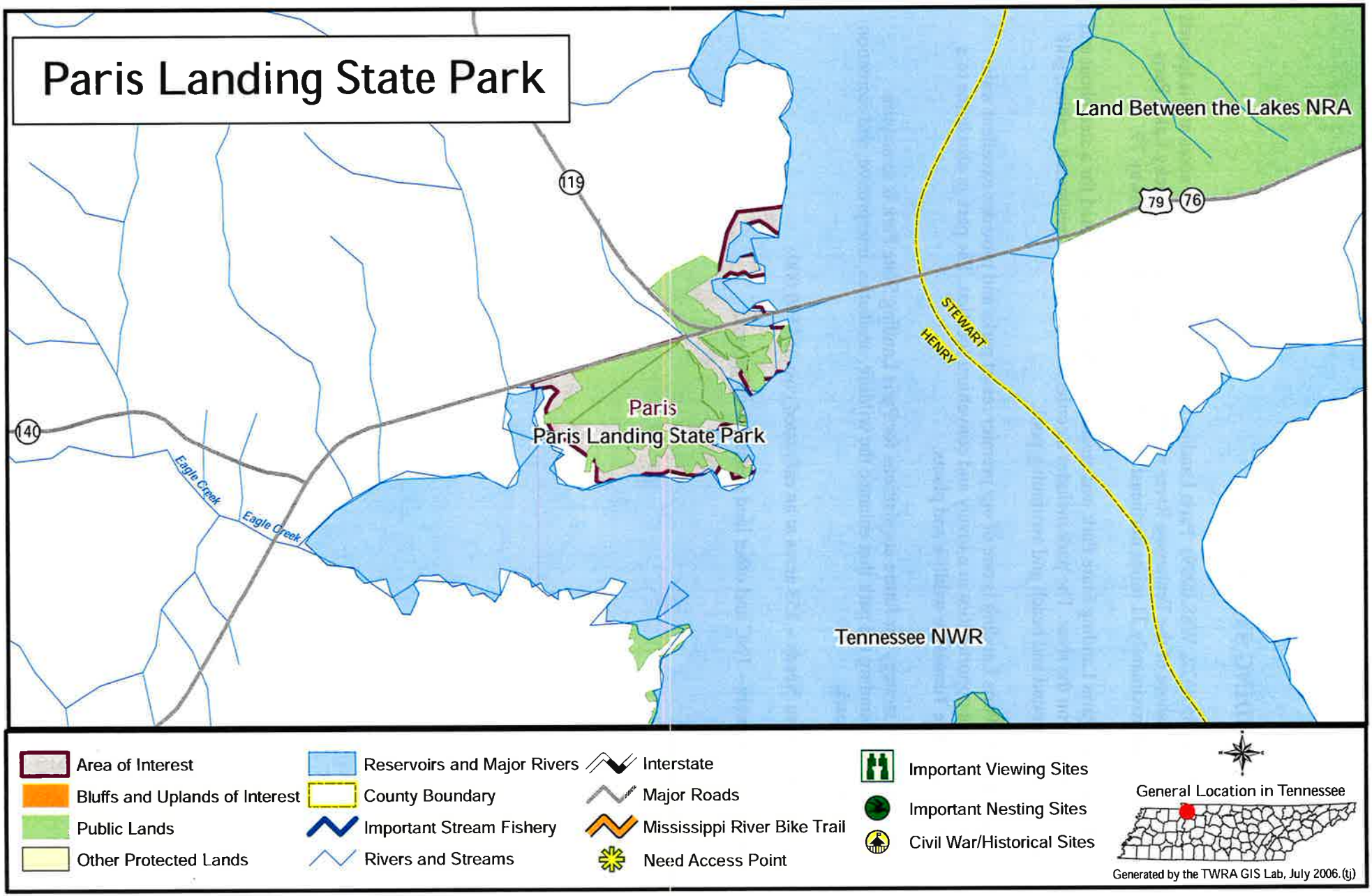
Description - Paris Landing State Park was created in 1945 and was named for a steamboat and freight landing on the river. The park includes a conference center, inn, restaurant, cabins, golf course, campground and beach and swimming pool.

Significance - Paris Landing is one of our premier resort parks and provides excellent water based recreation opportunities in a lovely and convenient location. The park is also home to a variety of native Tennessee wildlife and plants.

Strategy - The strategy for future acquisitions for Paris Landing State Park is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive, and recreation mission of the park.

Land Protection Needs – 153 acres at an estimated cost of $550,000

Potential Partners - TNC and other land conservancy groups.


Paris Landing State Park
Land Between the Lakes NRA
119
79
76
STEWART
HENRY
Paris
Paris Landing State Park
140
Eagle Creek
Eagle Creek
Tennessee NWR
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

PICKWICK LANDING STATE PARK & DRY CREEK AREA

Location – (N35.0386, W88.2215) Pickwick Landing State Park is located just south of Pickwick Dam, 12 miles south of Savannah in Hardin County. The Dry Creek area (N35.0402, W88.1361) is located east/southeast of Pickwick Landing State Park and encompasses Pompeys Branch Creek to the north, over to the City of Pollards Mill to the east, south to the Alabama state line, and west over to the Pickwick Lake area. The area encompasses approximately 5 miles from east to west and approximately 4 miles from north to south.

Pickwick Landing was a riverboat stop dating from the 1840's. Pickwick Dam was constructed there in the 1930's. What comprises the park today was once the living area for TVA workers and their families during the construction of the dam. The park consists of 1400 acres of forested hills and hollows. The park includes a modern conference center, inn, restaurant, cabins, marina, golf course, swimming and playfields. Pickwick Landing State Park began with the initial purchase of 681 acres from TVA in 1969 and has added an additional 719 acres since then. Pickwick Landing is one of our premier resort style parks.

Dry Creek includes the typical upland hardwood habitat types with some bottomland hardwoods located near the creek bottoms. Lying within the Tennessee River Watershed, this area contains a number of major stream drainages including Pompeys Creek, Mill Creek, Scout Springs, and Dry Creek. The elevation of this area ranges from 400 to 500 feet above sea level. The soils of the Dry Creek area are mostly light acidic sandy soils, typical of the Tennessee River area.

Dry Creek (along with the Tennessee River proper) is one of the most biodiverse areas in the state having a species Richness greater than 120 species. This area has been recognized as an area of biological significance in plans such as "Tennessee's Comprehensive Wildlife Conservation Strategy". This area supports good populations of game species such as white-tailed deer, eastern wild turkey, waterfowl, largemouth bass, smallmouth bass, and crappie. This area also supports populations of non-game that are deemed in-need-of-management such as southern brook lamprey and meadow jumping mouse, state threatened such as the saddled madtom and coppercheek darter, and federally endangered species such as the rustic rocksnail and federally threatened bald eagle.

The Dry Creek area is one of the few remaining locations around Pickwick Lake that has not been lost to development. Dry Creek consists of various habitat types within the watershed. Much of the Tennessee River/Pickwick Lake area was initially upland and bottomland hardwood habitat types that were used by Native Americans and early settlers as hunting and fishing grounds; however much of the native habitat has been lost due to major development around the Pickwick Lake area.

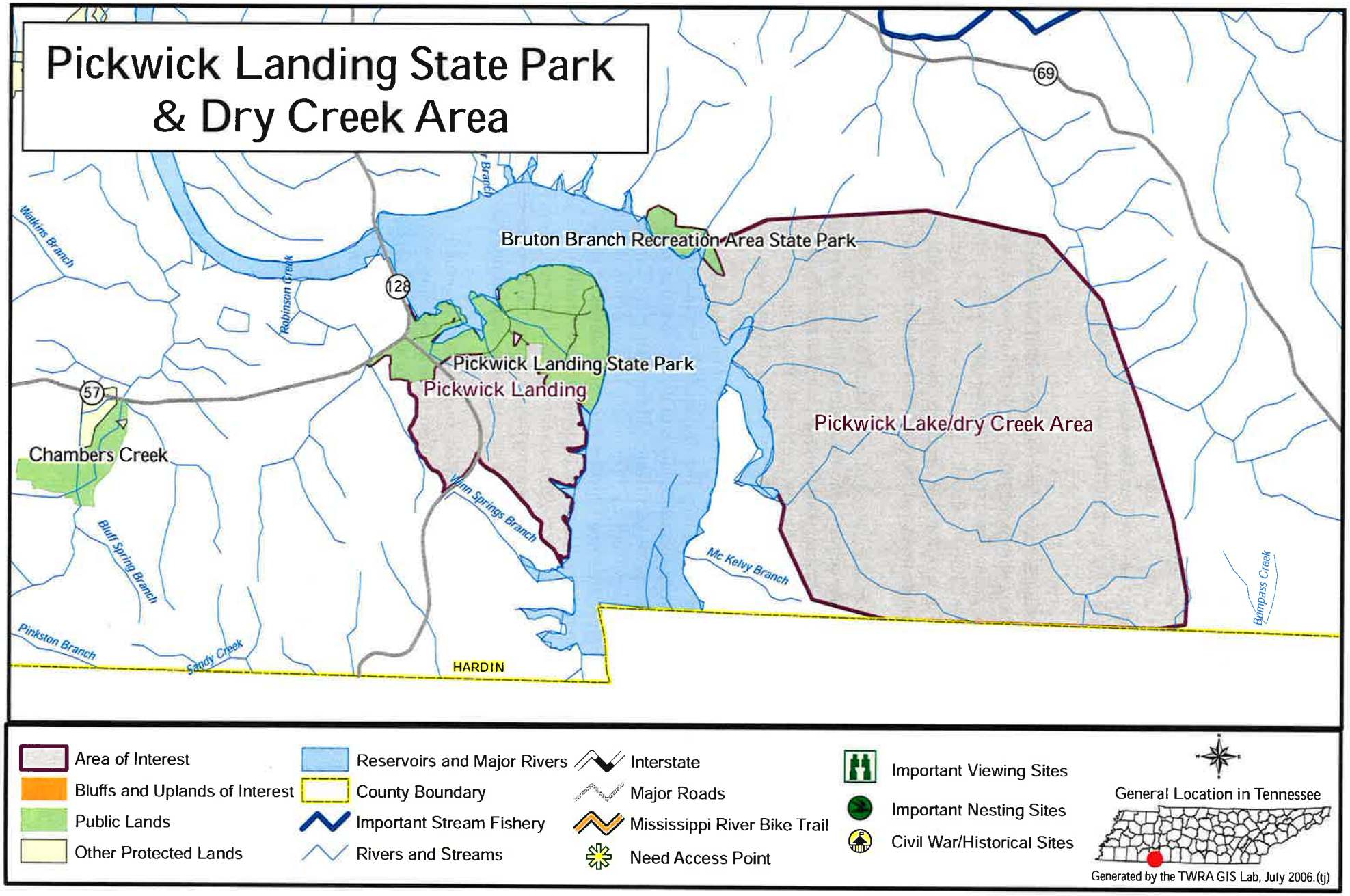
Strategy - The strategy for future acquisitions for Pickwick Landing State Park is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

The strategy for acquisition within the Dry Creek area is to acquire properties for access control, watershed protection, habitat and species restoration, and creation of a WMA with minimal land

management and hunting/fishing opportunities. This is a long-term management strategy (50-100 years) to acquire land in and around this tributary. This will help protect a natural upland/bottomland hardwood corridor that will benefit hundreds of wildlife species.

Land Protection Needs – TWRA-12,000 acres at an approximate cost of $16,000,000; TDEC-1,453 acres at an estimated cost of $3,300,000

Potential Partners: UFWS, TDEC, TNC, NWTF, TCF and other land conservancy groups.


Pickwick Landing State Park
& Dry Creek Area
Bruton Branch Recreation Area State Park
Pickwick Landing State Park
Pickwick Landing
Pickwick Lake/dry Creek Area
Chambers Creek
Watkins Branch
Robinson Creek
Bluff Spring Branch
Pinkston Branch
Sandy Creek
Winn Springs Branch
Mc Kelvy Branch
Bumpass Creek
HARDIN
69
128
57
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

RUSHING CREEK HABITAT CORRIDOR

Location – (N36.1771, W88.1262) This Tennessee River System area of interest is at Rushing Creek located in Benton County. The area is bounded on the north by Ramble Creek, by the Big Sandy River on the west, by HWY 641 on the south, and by Greenbrier Road on the east. This corridor is approximately 2 miles long north to south and approximately 1 mile wide, east to west.

Description - This area includes the typical flat bottomland hardwoods and agricultural lands located near the creek bottom with some rolling upland hardwoods away from the creek bottom. Lying within the Big Sand River Watershed, this area contains two major stream drainages including Rushing Creek and Ramble Creek. The elevation of this area ranges from 350 to 400 feet above sea level. The soils of Ramble Creek are mostly light acidic sandy soils with a lot of moist soil habitat that could be managed for waterfowl and shorebirds.

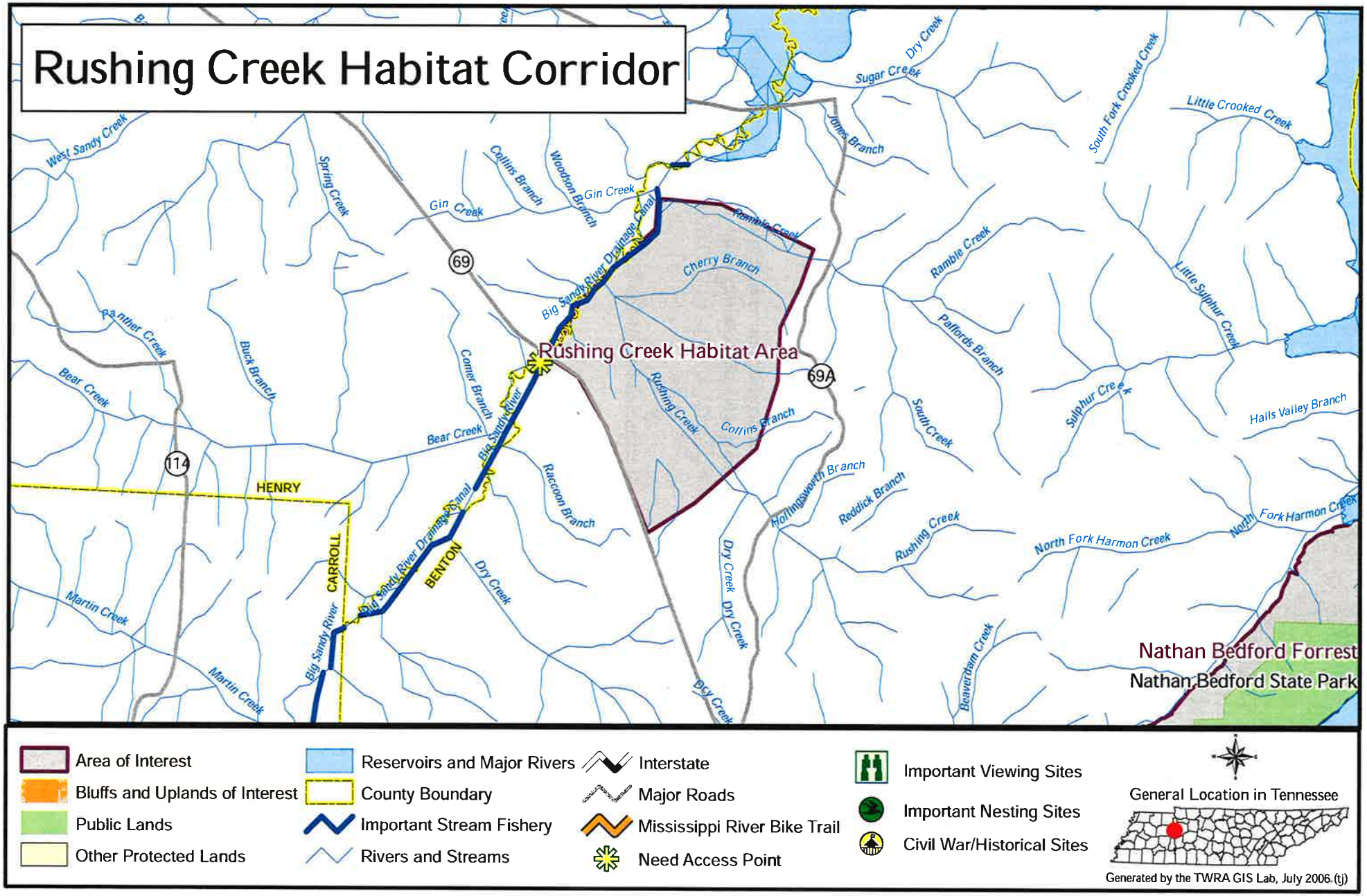
History - Historically, this area consisted of bottomland hardwood/upland hardwood habitat that has been transformed into agricultural land throughout time. Much of the Big Sandy River Habitat Corridor (including Rushing and Ramble Creek) was initially bottomland hardwoods that were used by Native Americans and early settlers as hunting and fishing grounds; however much of the native habitat has been lost due to agricultural practices along the river.

Significance - The remaining bottomland hardwood/upland hardwood areas found along the Rushing Creek Habitat Area (along with the Big Sandy River proper) are some of the most biodiverse in the state having a species richness of greater than 120 species. This area has been recognized as an area of biological significance in plans such as "Tennessee's Comprehensive Wildlife Conservation Strategy" and the "Tennessee Implementation Plan for Wetland and Waterfowl Conservation". This area supports good populations of game species such as white-tailed deer, eastern wild turkey, waterfowl, largemouth bass, smallmouth bass, and crappie. This area also supports populations of non-game that are deemed in-need-of-management such as alligator snapping turtle and meadow jumping mouse. Also, the corridor is home to federally threatened/endangered species such as the bald eagle and the pink mucket mussel.

Strategy: The Rushing Creek Corridor offers an excellent opportunity to manage a variety of habitat types for waterfowl and shorebirds. With the acquisition of approximately 1,200 acres of mostly agricultural land north of Hwy 641, an excellent waterfowl/shorebird management area could be established. This 1,200 area plus the adjoining 750 acres owned by TVA would provide an opportunity to manage the habitat for waterfowl and shorebirds alike.
The proposed Rushing Creek site would total 2,000 acres (including TVA land). If the area was fully developed, approximately 700 acres of bottomland hardwood/wetland habitat and 500 acres of moist soil/cropland habitat (benefiting waterfowl and shorebirds) could be flooded. There is also 600 acres of upland habitat that could be managed for Canada Geese and other upland wildlife.

Land Protection Needs - 1,200 acres at an approximate cost of $3,300,000.

Potential Partners - USFWS, TDEC, TVA, TNC, TWRA, and NWTF.


Rushing Creek Habitat Corridor
Rushing Creek Habitat Area
West Sandy Creek
Spring Creek
Gin Creek
Collins Branch
Woodson Branch
Big Sandy River Drainage Canal
Cherry Branch
Ramble Creek
Sugar Creek
Dry Creek
Jones Branch
South Fork Crooked Creek
Little Crooked Creek
Ramble Creek
Little Sulphur Creek
Palfords Branch
Sulphur Creek
Halls Valley Branch
South Creek
Hollingsworth Branch
Reddick Branch
Rushing Creek
North Fork Harmon Creek
Panther Creek
Buck Branch
Bear Creek
Corner Branch
Big Sandy River
Raccoon Branch
Collins Branch
Dry Creek
Martin Creek
Beaverdam Creek
69
69A
114
HENRY
CARROLL
BENTON
Nathan Bedford Forrest
Nathan Bedford State Park
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

STEWART STATE FOREST

Location – (N36.3916, W87.7552) Stewart State Forest is located on the Western Highland Rim in south-central Stewart County southeast of Dover.

Description - Stewart State Forest - (4,375 acres)

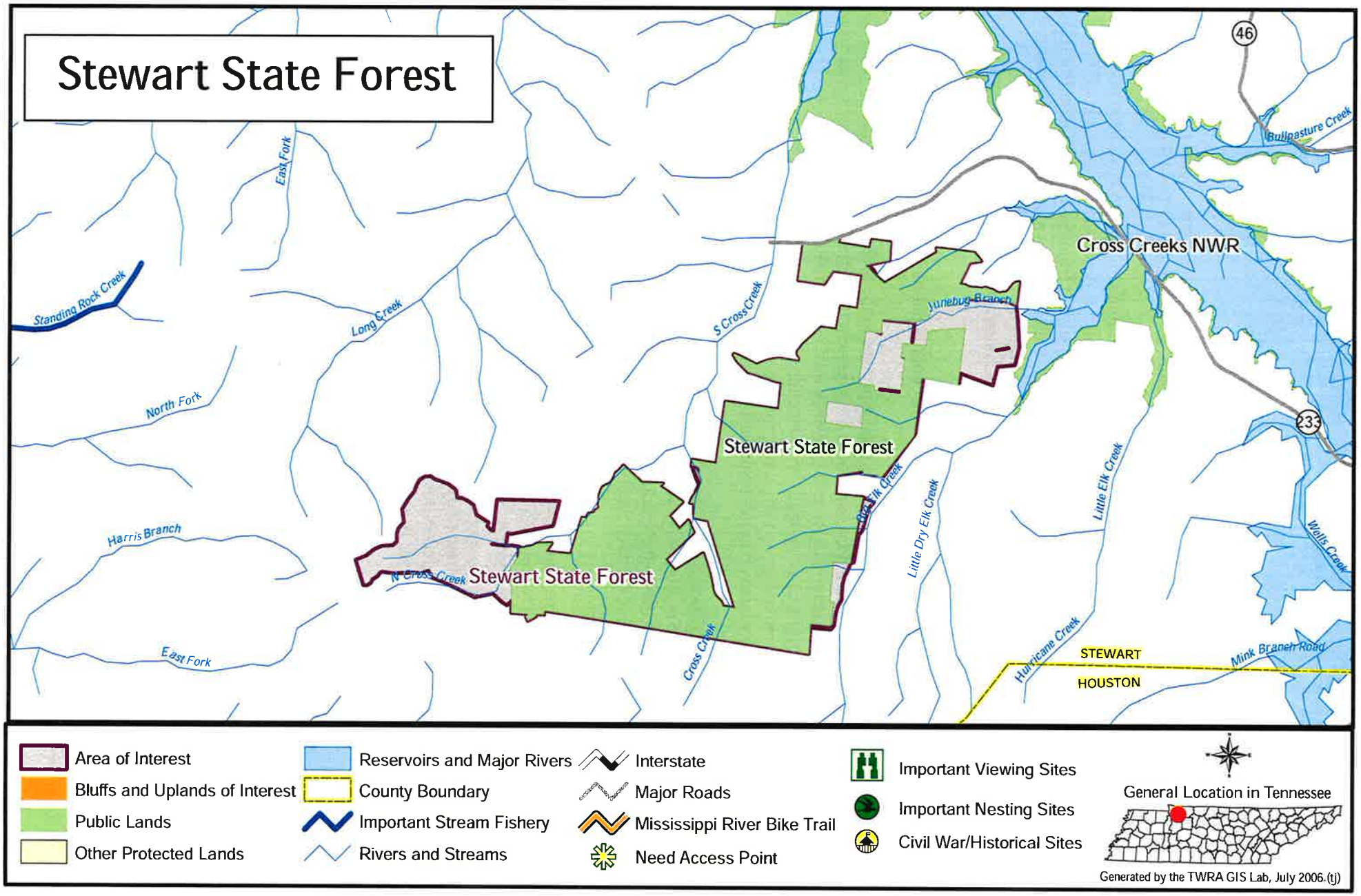
The Forest is part of a larger tract of land acquired by the State in 1935 from the Cumberland River Land Company in lieu of taxes. The forests had been cut over time and again for production of charcoal that once fueled iron furnaces. In addition, the land was subject to repeated burning. Approximately 4,255 acres is in hardwoods and only about 120 acres are in pines. The dominant hardwood type is oak/hickory and is generally even aged (70-95 years) containing mostly mature to over-mature hardwood in a declining state, especially the dominant and co-dominant red oaks.

Significance – Historic use of Stewart Forest was for charcoal production for iron furnaces once located nearby. Most of these old charcoal "pits" have been located and mapped and associated historical write-ups published. This area has historically been heavily used for hunting with good populations of squirrel, deer and turkey.

Strategy - Forest access is the major criteria for acquisitions with inholdings and access control also being very important. The forest is rather even-aged resulting from the production of charcoal up until the 1930's.

Land Protection Needs – 1,496 acres at an estimated cost of $981,500.

Potential Partners - Unknown


Stewart State Forest
Cross Creeks NWR
Stewart State Forest
Stewart State Forest
46
233
Standing Rock Creek
East Fork
Long Creek
North Fork
Harris Branch
East Fork
S Cross Creek
Junebug Branch
Cross Creek
Little Dry Elk Creek
Little Elk Creek
Hurricane Creek
Bullpasture Creek
Wolfs Creek
Mink Branch Road
STEWART
HOUSTON
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

TOBACCOPORT CAVE

Location – (N36.6458, W87.8825) Tobaccoport Cave is located in Stewart County approx. 0.45 miles northeast of Tobaccoport, near Shelby Creek Road. Elevation is 445 feet (Barr, 1961).

Description – According to Barr (1961): "Much saltpeter mining appears to have been done in this cave. The entrance is 20 feet wide and 8 feet high and slants downward at an angle of 30° for 50 feet. The main chamber of the cave extends northeastward from the mouth and is 100 feet wide and 600 feet long. The floor is comparatively dry. Slab breakdown occupies much of the floor space, but where this is absent the room is 20 feet high. Toward the back of the cave is a pool of water and the remains of an old boat which was constructed to float people across this pool."

The cave is well known locally, and the following account is published on the web:

> "This early settlement [Tobaccoport] was important to the tobacco industry, as tobacco crops were loaded on boats here for shipment to Clarksville tobacco markets via the Cumberland River… It was a thriving community during the 1800's. Tobaccoport Cave abounds with legends, one of which being that a treasure taken from a ship on the Cumberland River is hidden there." (Excerpted from http://www.rootsweb.com/~tnstewar/communit.htm)

Even now the current landowner talks about finding gold in the cave, though this may not be a new fancy (Garland, 2005). According to a 1991 observation, electric lights were found strung along one side of the cave inside the entrance and a considerable amount of trash and graffiti were present- indicating that the cave receives rather heavy visitation by the public or its owners (Biotics Data System, 2005).

To counter this level of trespass and disturbance a primitive cave gate was installed in 1993. That gate was replaced by TNC in 1998 and subsequently modified to a more bat-friendly design in 2000. TNC placed a photosensitive visitation logger in the cave in 2004 (Garland, 2005).

Significance – Site importance high (B3) – Tobaccoport Cave is home to a significant summer maternity roost for the state and federally endangered gray bat (*Myotis grisescens*). It also provides a winter hibernaculum for this species and also for the likewise endangered Indiana bat (*Myotis sodalis*).

Element ID	Subnational Scientific Name	Subnational Common Name	Global Rank	Subnational Rank
7800	Myotis sodalis	Indiana Bat	G2	S1
7799	Myotis grisescens	Gray Bat	G3	S2

The gray bat population was estimated at 16,500 during summer and 170 during winter of 2002 (Harvey & Britzke, 2002). The wintertime Indiana bat population was estimated at 310 at this location in 2002 (Harvey & Britzke, 2002). Garland (2005) noted that 99 gray bats and 139 Indiana bats were tallied in February 2004. A similar count was reported in 1999 (Biotics Data System, 2005).

In addition to these species, the cave also is home to at least three other bat species (little brown bat, eastern pipistrelle, and big brown bat).

Strategy – The primary concern for the conservation of the two known rare bats is uncontrolled access. Disturbance of these bats during roosting periods can significantly reduce colony size of both winter and summer populations. Although the modified gate is believed to be acceptable for both species, it does represent a compromise between bat access and human exclusion. Though a great deterrent, humans can still pass through this gate without deliberately damaging the structure.

Immediate needs include continued monitoring of bat populations and trespassing, and the conduct of additional floral and faunal inventories in the vicinity of the cave.

TNC and the TWRA currently maintain a CMA with the landowner.

Land Protection Needs – 204 acres surrounding the cave at an estimated cost of $222,000.

Potential Partners –TNC, TWRA, TDEC-Division of Natural Heritage.

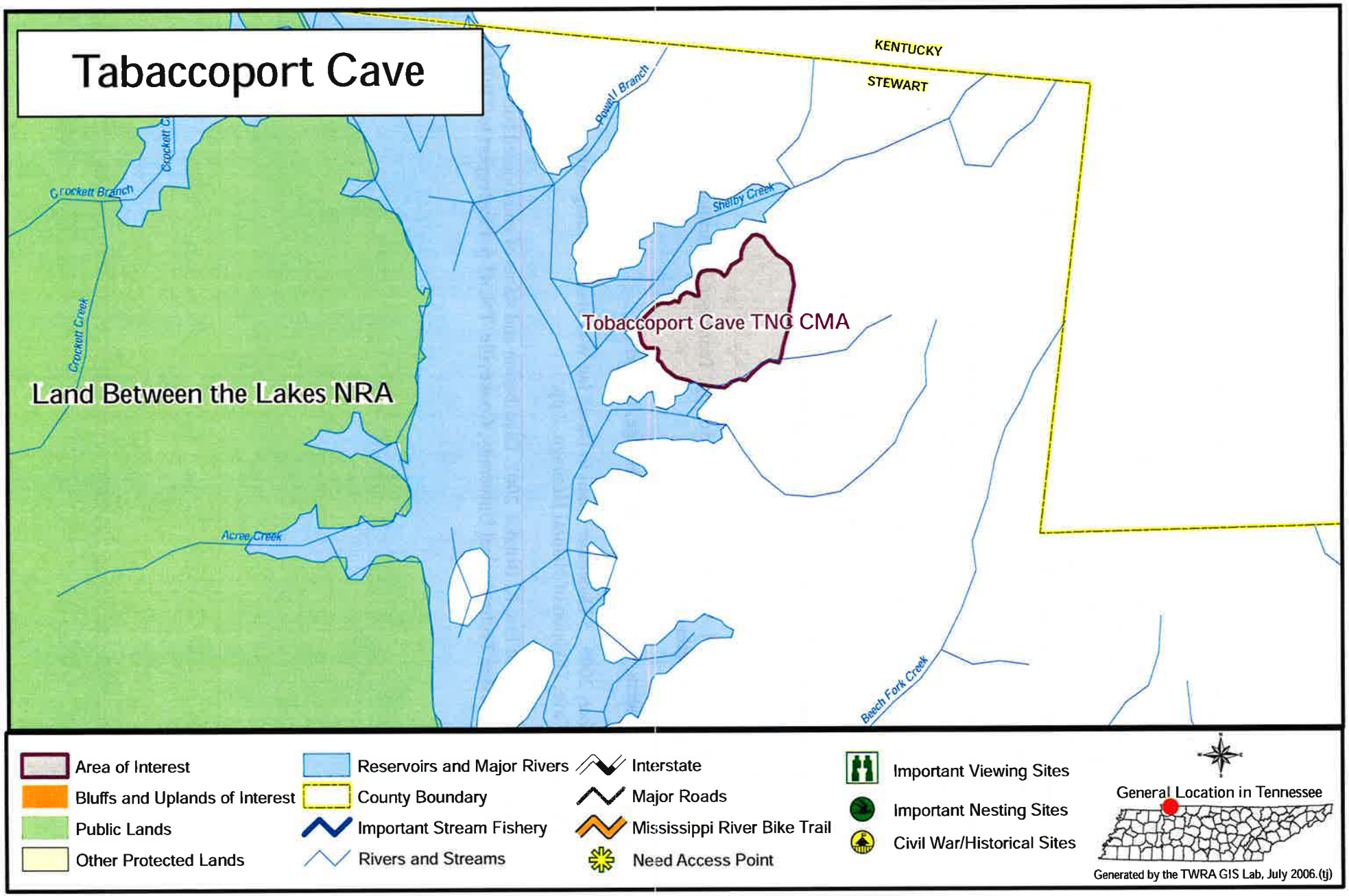
Reference –

Barr, Thomas C. Jr. 1961. Caves of Tennessee. 567 pp. Tennessee Department of Conservation, Div. of Geology, Bulletin 64.

Biotics Data System, Division of Natural Heritage, Nashville.

Garland, Heather, 2005. 5 December email to David Ian Withers concerning status of Tobaccoport Cave, Division of Natural Heritage, 2 pp.

Harvey, Michael J. and Eric R. Britzke. 2002. Distribution and status of endangered bats in Tennessee. Tennessee Technological University, Cookeville, TN. 43 p. Final report to TWRA.


Tabaccoport Cave
KENTUCKY
STEWART
Powell Branch
Crockett Branch
Crockett Creek
Shelby Creek
Tobaccoport Cave TNC CMA
Land Between the Lakes NRA
Acree Creek
Beech Fork Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WALKER BRANCH SNA

Location – (N35.1673, W88.2620) Walker Branch is located in Hardin County southwest of Savannah off of Pittsburg Landing Rd.

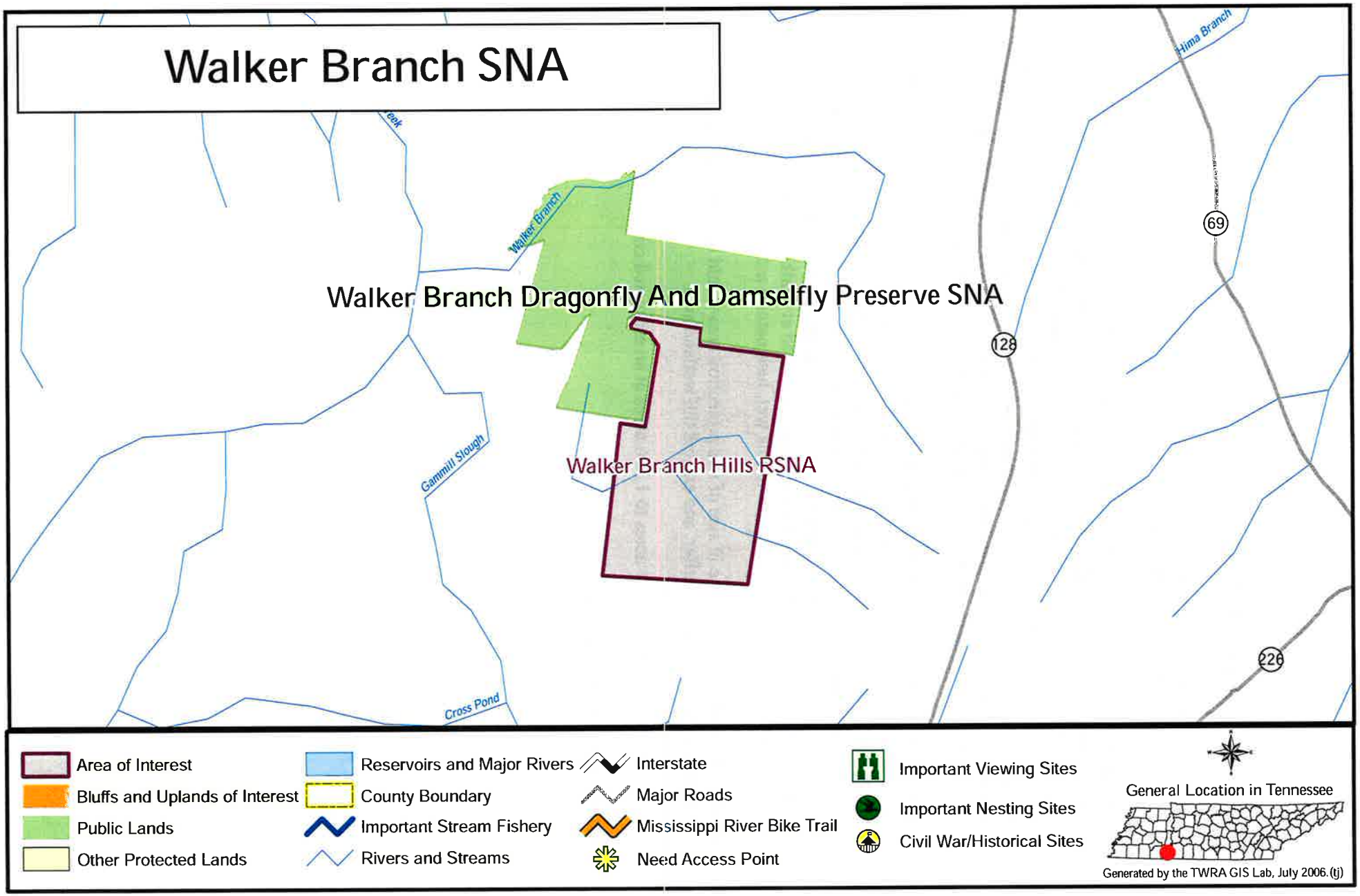
Description - The site design for Walker Branch SNA is 1,336 acres and includes the 225 acre Walker Branch Dragonfly and Damselfly Preserve. It is located in the West Tennessee Uplands, which is a subunit of the Coastal Plain Physiographic Province. The site would include the immediate floodplain of the Tennessee River with its steep hills rising abruptly 225 feet and forming the adjacent uplands. The area is noted for its seeps that occur along the lower and mid slopes and drain into the many small spring feed sand and gravel bottomed creeks at the base of the hills. These seep-fed creeks flow in and out of the marshes and swamp forests.

Significance - There is an example of an undisturbed bald cypress forest that emerges at the base of these hills grading into mature tupelo gum forest in the floodplain. A mesic forest comprised of northern red oak, American beech, tulip poplar, and white oak is found on lower to mid slopes. Southern red oak and short leaf pine are dominant species that occur on drier slopes and ridges. The upland seeps provide significant breeding habitat for dragonflies and damselflies. An astonishing 37 species of these taxa have been identified at Walker Branch SNA. There is a vast diversity of sedges, rushes, and ferns in this wet, lush natural area.

Strategy/Criteria – An increase in size of this protection area would help protect the ecological core area, provide substantial buffer, and expand the wetland area.

Land Protection Needs – 1,111 acres to 1,336 acres at an estimated cost of $1,796,500.

Potential Partners – TWRA and TDEC.


Walker Branch SNA
Walker Branch Dragonfly And Damselfly Preserve SNA
Walker Branch Hills RSNA
Walker Branch
Gammill Slough
Cross Pond
Hima Branch
69
128
226
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WHITE OAK CREEK WMA

Location – (N35.3307, W88.2936) White Oak Creek is located in Hardin County on the west side of the Tennessee River. The project area is bounded on the north and west by Hwy.69, on the east by the Tennessee River, and on the south by Marshall Road, Saltillo Road, and Old Cravens Road. The area is approximately seven miles long and four miles wide.

Description - Habitat types include bottomland hardwoods, wetlands, upland hardwoods, grasslands, and agricultural fields. The elevation ranges from 350 to 450 feet. This area contains a number of stream drainages including White Oak Creek, Middleton Creek, Hurricane Creek, Mud Creek, Flats Creek, Bingham Creek, Crooked Creek, Miles Creek, and Chalk Creek. Soils in this area consist of silt loam, silt clay loam, fine sandy loam, and hydric soils.

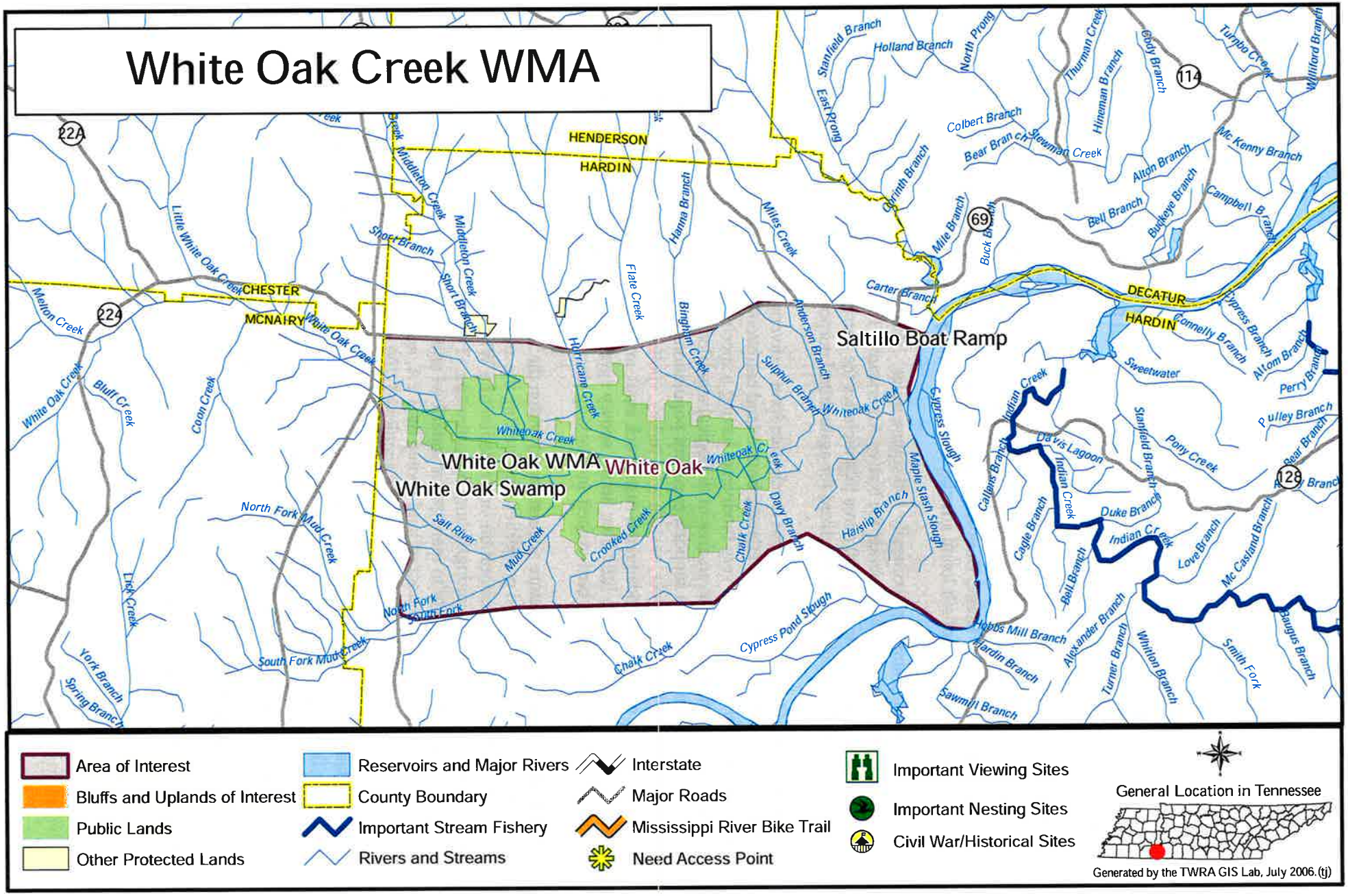
White Oak Creek drains approximately 190 square miles. This area is rich in diversity and was valuable hunting and fishing grounds for Native Americans. The entire area of interest encompasses approximately 20,000 acres that includes the currently state owned 7,000 acre White Oak WMA which was channelized for agricultural purposes several decades ago.

Significance - This area has numerous creeks that have a diversity of aquatic species. It contains a diversity of habitats including wetlands, bottomland hardwoods, grasslands and upland hardwoods. This entire area is very biodiverse having a species richness of over 160 species. This area has been indicated as an area of biological significance in the "West Tennessee Conservation Plan". The area supports excellent populations of both game and non-game species such as white-tailed deer, eastern wild turkey, spotted/largemouth bass, crappie, federally threatened bald eagle, state endangered rustic rock snail, and state threatened lark sparrow. Other rare species include the little blue heron, snowy egret, meadow jumping mouse, eastern woodrat, southeastern shrew, bird-voiced and barking treefrogs, and eastern slender glass lizard.

Strategy: The strategy for future acquisition(s) within the White Oak Creek drainage area is to acquire private inholdings and properties surrounding the area for watershed protection, access control, habitat and species restoration, and creation of a WMA/Wetland Area with minimal land management and excellent hunting/fishing opportunities. The Hooker's Bend area of interest offers an excellent opportunity to manage for waterfowl and shorebirds alike. With the acquisition of the 1,700 acre tract of land owned by TVA, an excellent waterfowl/shorebird management area could be established. The acquired 1,700 acres plus any adjoining property would provide a wildlife habitat corridor along White Oak Creek to manage forested, moist soil and cropland habitat for waterfowl and shorebirds. White Oak Creek would provide a source of water for flooding various habitat types. If necessary or desirable, water could be pumped from White Oak Creek to provide quality habitat for waterfowl, shorebirds and other wildlife. This is a long term management strategy (50-100 years) to acquire land east of the White Oak WMA and to restore channelized streams in and around the White Oak WMA. This will help protect a natural bottomland and upland habitat corridor that will benefit hundreds of species of wildlife.

Land Protection Needs - 12,000 acres at an estimated cost of $18,700,000.

Potential Partners – TWRA, UFWS, TDSEC, TVA, TNC, QU, and NWTF.


White Oak Creek WMA
HENDERSON
HARDIN
CHESTER
MCNAIRY
DECATUR
HARDIN
Saltillo Boat Ramp
White Oak WMA
White Oak
White Oak Swamp
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WILDCAT HOLLOW AND LACEFIELD FALLS REGISTERED SNA's

Location – (N35.2405, W88.0428) Wildcat Hollow and Lacefield Falls SNA's are located in Hardin County approximately 3 miles southeast of the community of Olive Hill on Shady Grove Rd. .

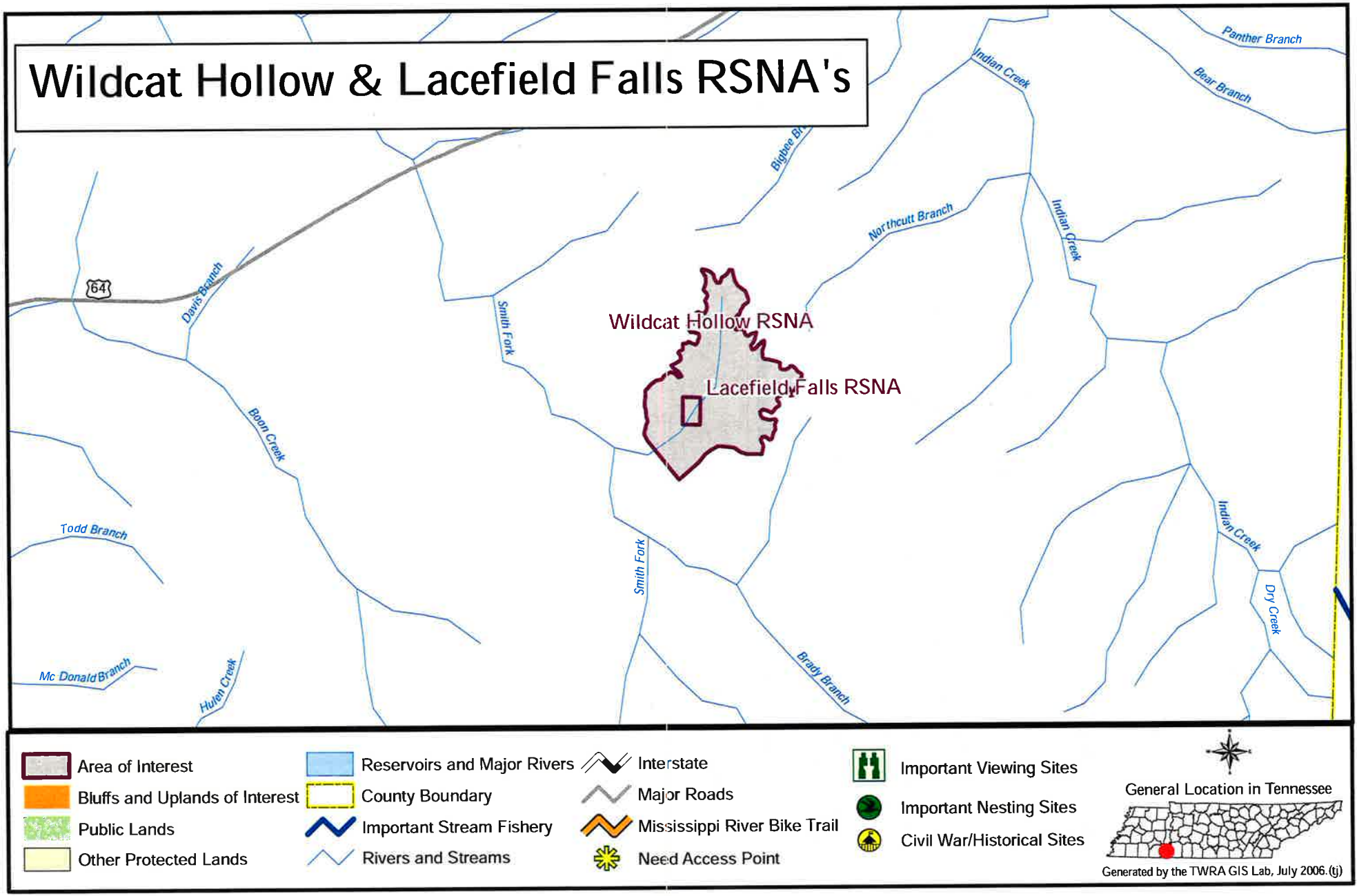
Wildcat Hollow SNA is a small, scenic hollow on the southwestern Highland Rim in Hardin County. This site is significant because it supports a population of the rare beaked trout lily (*Erythronium rostratum*). This spring flowering plant is currently known from only a few localities in Tennessee, none of which are protected.

Lacefield Falls SNA is a forested area with an upland oak-hickory forest community. A clear water stream, which traverses the area from northeast to southwest., has cut its way into the sandstone rock, forming steep slopes and bluffs. This is a 55-acre area which has an oak – hickory forest that supports a population of beaked trout lily (*Erythronium rostratum*).

Strategy/Criteria – These sites were registered as SNA's in 1987 and 1988, respectively. Both require site visits to determine their status.

Land Protection Needs – 100 acres (50 acres at each site) at an estimated cost of $120,000

Potential Partners – TDEC.


Wildcat Hollow & Lacefield Falls RSNA's
Wildcat Hollow RSNA
Lacefield Falls RSNA
Panther Branch
Bear Branch
Indian Creek
Bigbee Br.
Northcutt Branch
Indian Creek
64
Davis Branch
Smith Fork
Boon Creek
Todd Branch
Smith Fork
Indian Creek
Dry Creek
Brady Branch
Mc Donald Branch
Hulen Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
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MIDDLE TENNESSEE

TABLE OF CONTENTS PAGE

MIDDLE TENNESSEE COUNTY AND PROJECT MAP 1

IMPORTANT AQUATIC HABITAT AREAS OF MIDDLE TENNESSEE 2

ARCHAEOLOGICAL SITES – MIDDLE TENNESSEE 4

STREAM FISHING ACCESS – MIDDLE TENNESSEE 11

AUNTNEY HOLLOW (See Little Grinders Creek)

BARNETT'S WOODS SNA 15

BASIN SPRING SNA 17

BILLY SWAMP 19

BLEDSOE CREEK STATE PARK 20

BLOWHOLE CAVE 22

BON AQUA FOREST 24

BRAWLEYS FORK 26

BRIDGEWATER CAVE 28

BRIGGS CHAPEL HOLLOW 30

BUFFALO STATE SCENIC RIVER AND CORRIDOR 31

BURNT HILL ROAD GLADE 33

CANEY FORK RIVER BLUFFS 35

CEDAR GROVE GLADE 37

CEDAR HILL SWAMP WMA 39

CEDARS OF LEBANON STATE FOREST, SNA AND STATE PARK 41

CHEATHAM WMA/HARPETH RIVER STATE PARK 44

COLLINS TRIFOLIUM GLADE / ROCKY HILL ROAD GLADES 47

COUCHVILLE CEDAR GLADE (See Longhunter State Park)

CUMBERLAND RIVER (HAYNES BOTTOMS/SHELTON FERRY) 49

CUMBERLAND RIVER BLUFFS AT HARTSVILLE AND OLDHAM ROAD 51

CUMBERLAND RIVER BLUFFS AT SULPHUR SPRINGS 53

DAVID CROCKETT STATE PARK 55

DEVIL'S BACKBONE AREA 57

DRIPPING ROCK BLUFF SNA 62

DRY BRANCH 63

DUCK RIVER BLUFFS (See Duck River Habitat Corridor & State Scenic River)

DUCK RIVER HABITAT CORRIDOR AND STATE SCENIC RIVER 64

DUKE, WITTY, AND MCMAHAN CREEKS 69

DUNBAR CAVE SNA 71

FLAT ROCK SNA 73

FLINT RIVER BOTTOM SNA 75

FOREST MILL POND 77

GATTINGER'S GLADE AND BARRENS SNA 78

GLADEVIEW BARRENS SNA AND GLADEVIEW GLADE 79

GRASSY POND 80

HARPETH RIVER STATE PARK (See Cheatham WMA/Harpeth River State Park)

HARPETH STATE SCENIC RIVER AND CORRIDOR 81

HASKINS CHAPEL ROAD/RATTLESNAKE LODGE ROAD CEDAR GLADES 83

HAWS SPRING FORK 84

HAY HOLLOW 86

HAYNES BOTTOM (See Cumberland River (Haynes Bottom/Shelton Ferry)

HENRY HORTON STATE PARK 88

HERRON (HERRING) CAVE 90

HICKMAN COUNTY BAT CAVE (See Devil's Backbone Area)

HICKORY FLATS WMA (See May Prairie SNA

HIDDEN LAKE STATE PARK (See Cheatham WMA/Harpeth River State Park)

HIGHWAY 53 ROADSIDE BARRENS (See Parks Creek Swamp)

HILL CREEK AND CAVE 91

INDIAN CREEK (See Mill Creek)

LANE FARM 92

LANGFORD BRANCH SNA (See Devil's Backbone Area)

LEWIS STATE FOREST 93

LINCOLN COUNTY BAT CAVE 95

LITTLE GRINDERS CREEK (HICK HILL WMA) & AUNTNEY HOLLOW SNA ... 97

LONG HUNTER STATE PARK AND COUCHVILLE CEDAR GLADE SNA 100

LONG POND SLOUGH 102

MCMAHAN CREEK (See Duke Creek)

MANUS ROAD CEDAR GLADE SNA 103

MAY PRAIRIE SNA/HICKORY FLATS WMA 105

MCMINNS BLUFF AND RISING SUN BLUFF 107

MILL CREEK 110

MONTGOMERY BELL STATE PARK 113

MOUND BOTTOM STATE PARK (See Cheatham WMA/Harpeth River State Park)

MULBERRY BRIDGE BLUFF 115

NARROWS OF THE HARPETH STATE PARK (See Cheatham WMA/Harpeth River State Park)

NEWSOME'S MILL STATE PARK (See Cheatham WMA/Harpeth River State Park)

OLD STONE FORT STATE ARCHAEOLOGICAL PARK 116

OWL CREEK (See Mill Creek)

OVERBRIDGE SNA 118

PARKS CREEK SWAMP AND HIGHWAY 53 ROADSIDE BARRENS 119

PHILADELPHIA AND TEXTBOOK GLADES 121

PICKADILLY PRAIRIE 122

PIPER CAVES 124

PORTER'S BLUFF 126

RADNOR LAKE SNA 127

RATTLESNAKE FALLS (See Stillhouse Falls and Rattlesnake Falls)

RATTLESNAKE LODGE ROAD CEDAR GLADE (See Haskin Chapel Road Cedar Glade)

RIDGETOP BARRENS 129

RISING SUN BLUFF (See McMinns Bluff)

ROCKY HILL ROAD GLADES (See Collins Trifolium Glade)

RUTLEDGE FALLS 130

SALT LICK CREEK FOREST 131

SANDY MITCHELL HOLLOW (See Devil's Backbone Area)

SCALES MOUNTAIN KNOBS SNA 133

SHELTON FERRY (See Cumberland River (Haynes Bottom/Shelton Ferry)

SHORT MOUNTAIN SNA AND SHORT MOUNTAIN SANCTUARY SNA..... 135

SHORT SPRINGS SNA 137

SMITH GLADE..... 139

SOUTH BERLIN GLADE 140

SOUTHWESTERN HIGHLAND RIM PROJECT..... 141

SPRING CREEK BOTTOMS AND GLADES..... 145

STILLHOUSE HOLLOW FALLS SNA AND RATTLESNAKE FALLS 147

SULLENGER BEND SNA 150

SUMMITVILLE MOUNTAIN SPRING..... 151

SUNNYBELL GLADE SNA 153

SVENSON'S BLUFF (See Turnbull Creek)

TAYLOR HOLLOW SNA 155

TEXTBOOK GLADES (See Philadelphia Glades)

THE SWAMPS..... 157

TURNBULL CREEK, TURNBULL CREEK BLUFF, AND SVENSON'S BLUFF ... 159

TWIN FALLS HOLLOW (See Devil's Backbone Area)

TYNES GLADE 162

TYREE SPRINGS 163

WALTERHILL FLOODPLAIN SNA 165

WAYSIDE SWAMP 166

WILLOUGHBY TRACT 167

WITTY CREEK (See Duke Creek)

YANAHLI WMA (See Duck River Habitat Corridor)

Middle Tennessee Region



Generated by the TWRA GIS Lab, March 2006 (jj)

IMPORTANT AQUATIC HABITAT AREAS OF MIDDLE TENNESSEE

Locations - Important aquatic habitat areas are located in the channel and floodplains of several major rivers and smaller streams throughout the Middle Tennessee Region as depicted on the following map.

Description of Properties - The areas of interest would include a stream or river channel, riparian zones, and floodplains. Land use varies across the region including urban development, agricultural lands, and bottom land hardwood forests. Agricultural land is most common, and is commonly used for livestock, haying, and some row crops.

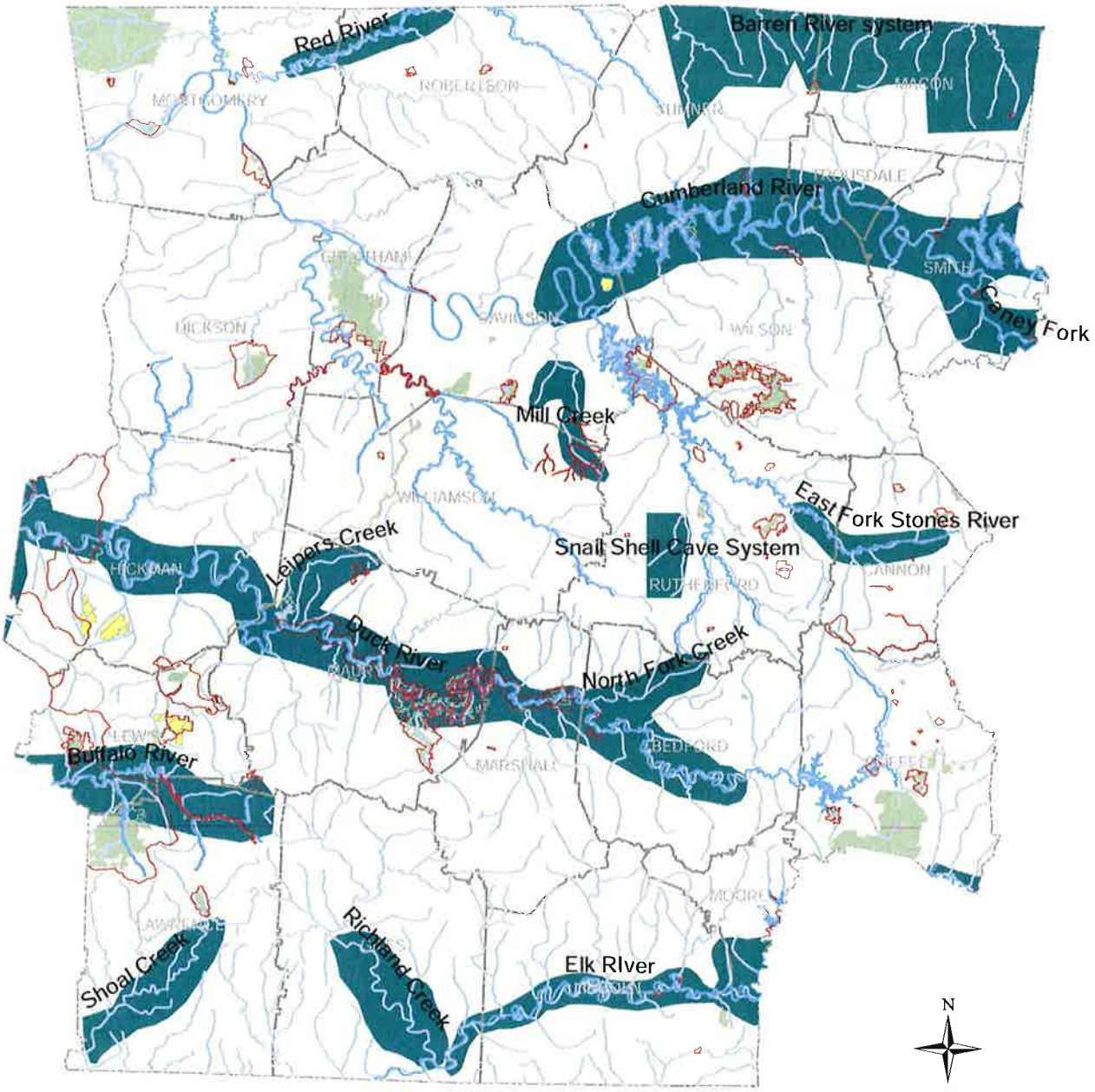
Significance - Conservation of these waterways and their adjacent lands is needed to maintain the high biodiversity of aquatic species in these rivers. For example, protection of the Duck River would provide protection for hundreds of aquatic species in the most diverse aquatic ecosystem in North America. Other areas on the map are important to just one or two extremely rare species, such as the federally listed Nashville crayfish which inhabits the Mill Creek watershed. These areas have been identified by several conservation agencies (e.g. TWRA, TNC, WWF) as warranting the highest priority for conservation needs. Most of these species are endemic to this region, meaning they can be found nowhere else in the world. Several Tennessee species have been lost, and without proactive measures to protect habitat, more losses are expected.

Land Management Strategy - Biologists have identified the corridor along these waterways as critical habitats. Although rivers are threatened by stressors throughout the watershed, these lands in the floodplain have the greatest ability to protect aquatic resources. The goal of land management projects would be to establish or protect wide forested buffer zones along the river corridor. Projects would also promote the use of best management practices for farming, forestry, and construction projects.

Lands that need to be acquired - Given the large area of these waters and floodplains, it is not possible to target all the important areas for acquisition. Working with existing landowners on projects designed to improve habitats may be more effective. For example, the NRCS could focus on these areas using Farm Bill Programs to improve aquatic habitats.

Potential Partners – USFWS,NRCS, TNC, Word Wildlife Fund, Tennessee Scenic Rivers Association, and local watershed organizations.

Important Aquatic Habitat Areas for the Middle Tennessee Region



Generated by the TWRA GIS Lab, August 2006 (jj)

ARCHAEOLOGICAL SITES – MIDDLE TENNESSEE

Location - Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Giles, Hickman, Lawrence, Lewis, Lincoln, Macon, Marshall, Maury, Montgomery, Moore, Robertson, Rutherford, Smith, Sumner, Trousdale, Williamson, and Wilson counties.

Description - This large 23-county area covers portions of three physiographic regions, the Western Highland Rim, the Central Basin, and the Eastern Highland Rim. There is much variety in the kinds of terrain and environmental conditions found, and consequently much variety in prehistoric and historic-period cultural resources. The northern portion of the area is bisected by the Cumberland River, which was a major artery and draw for settlement during late prehistoric and early historic periods. Other major water courses to the south are the Harpeth, Duck, and Elk rivers and their tributaries.

Prehistoric Sites - Prehistoric archaeological sites recorded within these three physiographic regions are classified into four major time periods: (1) Paleo-Indian, 10,000 B.C. to 8000 B.C.; (2) Archaic, 8000 B.C. to 1500 B.C.; (3) Woodland 1500 B.C. to A.D. 800; and (4) Mississippian, A.D. 900 to A.D. 1500. These sites range in size and complexity from relatively small Paleo-Indian and Archaic camps to substantial Mississippian mound centers.

As with other regions of the state, the prehistoric sites included in the attached table represent significant cultural resources in danger of destruction due to a variety of man-made (agriculture, construction) and natural (erosion) forces. The THCP will provide an important means to acquire some of these non-renewable resources before they are lost forever.

Numerous Mississippian period mound centers once existed across this region. A few of these sites have survived the destructive forces mentioned above, although the threat of destruction is always present. One example is the Rutherford-Kizer mound center (40SU15) located on Drakes Creek in Sumner County. The southern one-half of this large site was severely disturbed by subdivision development. However, the northern one-half of this site is privately owned and currently in pasture. Acquisition of this northern portion is necessary before the owners decide to sell the property for subdivision development. Another example is the Pack site (40CH1) in Cheatham County. The future of this large Mississippian mound center along the Harpeth River is unclear due to the recent deaths of the aged landowners who protected the site. This site is clearly related to the adjacent Mound Bottom mound center owned by the State of Tennessee. This relationship, however, has yet to be adequately defined.

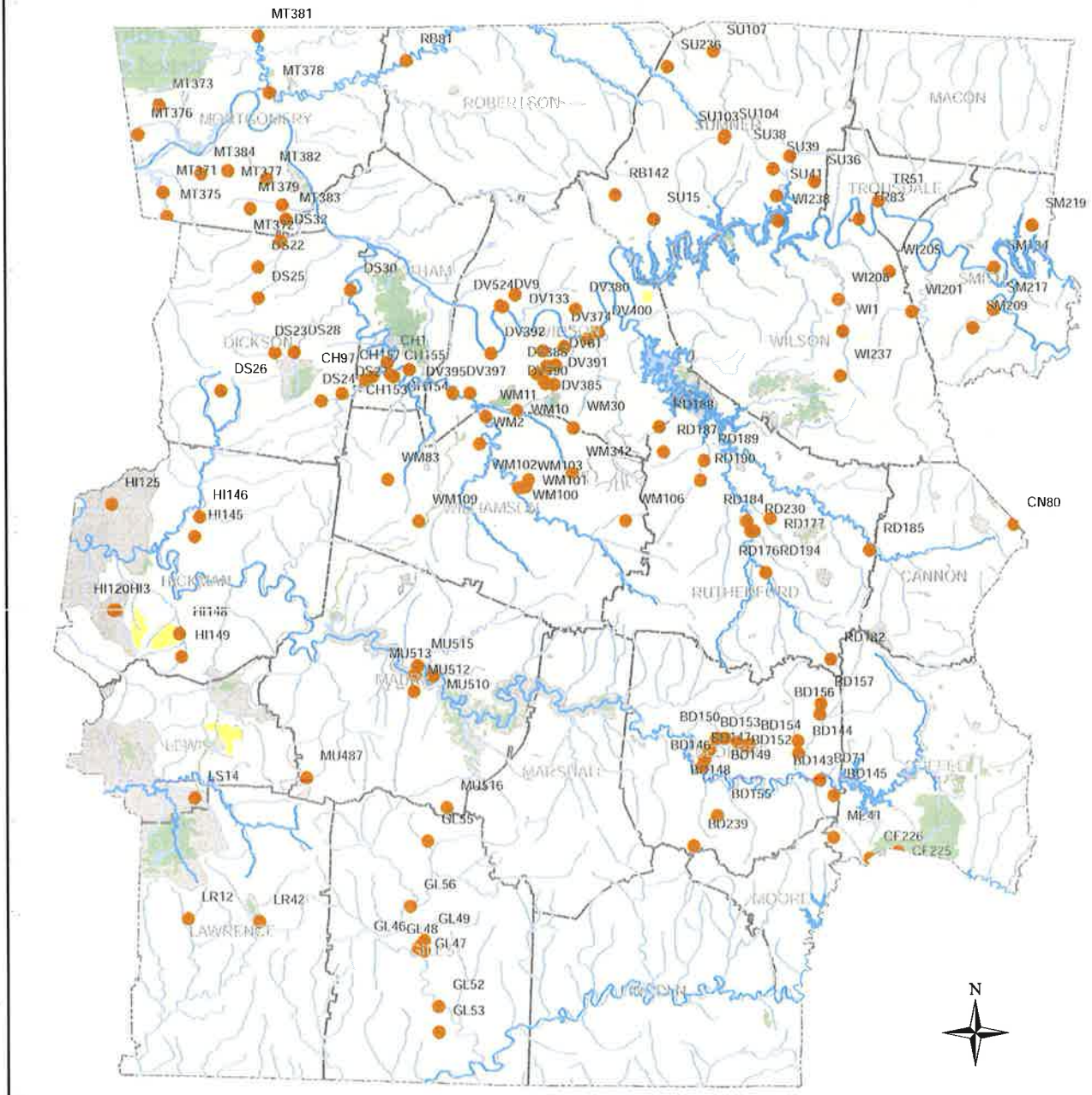
Historic-Period Sites - Historic-period settlement in the northern portion of Middle Tennessee began in the 1780s, and the rest of the area was open for settlement by Euro-Americans by the early 1800s. A few important sites relating to this early settlement period are included on the attached table. As was the case for the THCP's Tennessee River area, the Western Highland Rim portion of Middle Tennessee played an active role in the historic production of iron. The Tennessee Division of Archaeology's 1980s

survey of cultural resources related to the Western Highland Rim iron industry found a majority of the relevant sites in the counties of Montgomery, Dickson, and Hickman. The impact of the Civil War was enormous in Middle Tennessee. Beginning with the Federal occupation of Nashville in early 1862 there was continuous military activity by both Confederate and Union forces throughout the area for the duration of the war. Sites relating to this activity, including such things as troop encampments, battlefields, railroad defenses, and a variety of fortification types, are numerous but extremely threatened and in need of preservation actions. One other major military presence in Middle Tennessee occurred in connection with World War II. From 1942 to early-1945 at least 850,000 soldiers participated in the training exercises know as the Tennessee Maneuvers, carried out over a 21 county area surrounding 2nd Army headquarters, which was on the campus of Cumberland University in Lebanon (Wilson County). A recent Division of Archaeology site survey project has focused on this subject, and some of the more important sites are included on the table.

Lands Protection Needs – 3,626 acres at an estimated cost of $15,620,000.

Potential Partners - The Archaeological Conservancy, Tennessee Council for Professional Archaeology, Tennessee Wars Commission

Historic Archaeological Sites and Prehistoric Archaeological Sites for the Middle Tennessee Region



Generated by the TWRA GIS Lab, March 2006 (jj)

County	Site Number	Estimated Acreage	Name
Bedford	40BD71	15	Duck River Blockhouse (CW)
Bedford	40BD143	185	Wartrace Camps (CW and WWII)
Bedford	40BD144	5	Garrison Fork Blockhouse (CW)
Bedford	40BD145	10	Norman's Creek Blockhouse (CW)
Bedford	40BD146	5	Shelbyville Defenses (CW)
Bedford	40BD147	5	Shelbyville Defenses (CW)
Bedford	40BD148	20	Shelbyville Defenses (CW)
Bedford	40BD149	15	Shelbyville Defenses (CW)
Bedford	40BD150	12	Shelbyville Defenses (CW)
Bedford	40BD152	5	Shelbyville Defenses (CW)
Bedford	40BD153	5	Shelbyville Defenses (CW)
Bedford	40BD154	10	Shelbyville Defenses (CW)
Bedford	40BD155	5	Shelbyville Defenses (CW)
Bedford	40BD156	20	Shelbyville Defenses (CW)
Bedford	40BD157	150	Shelbyville Defenses (CW)
Bedford	Field # BD-11	140	Bellville Encampment (WWII)
		0	
Cannon	40CN80	5	Jones / Nash Pottery
		0	
Cheatham	40CH1	50	Pack Site (Prehistoric)
Cheatham	40CH97	10	Turnbull Forge
Cheatham	40CH153	5	Big Harpeth No. 5 Trestle (CW)
Cheatham	40CH154	5	Big Harpeth No. 6 Trestle (CW)
Cheatham	40CH155	5	Big Harpeth No. 7 Trestle (CW)
Cheatham	40CH157	5	Sullivan's Branch Trestle (CW)
		0	
Coffee	40CF225	8	Tullahoma Defenses (CW)
Coffee	40CF226	5	Tullahoma Defenses (CW)
Coffee	Field # CF-01	20	William Northern Bunker (WWII)
		0	
Davidson	40DV9	20	Wittenmeir Site (Prehistoric)
Davidson	40DV61	10	Confederate Earthwork (CW)
Davidson	40DV133	15	Eaton's Second Station
Davidson	40DV189	52	Part of Fort Negley (CW)
Davidson	40DV374	14	Union Earthwork (CW)
Davidson	40DV379	5	Battle Entrenchment (CW)
Davidson	40DV380	5	Battle Entrenchment (CW)
Davidson	40DV382	5	Battle Entrenchment (CW)
Davidson	40DV384	5	Redoubt No. 1 (CW)
Davidson	40DV385	8	Battle Entrenchment (CW)
Davidson	40DV388	5	Redoubt No. 4 (CW)

County	Site Number	Estimated Acreage	Name
Davidson	40DV390	5	Union Entrenchment (CW)
Davidson	40DV391	11	Battle Entrenchment (CW)
Davidson	40DV392	5	Battle Entrenchment (CW)
Davidson	40DV395	5	Big Harpeth Bridges (CW)
Davidson	40DV397	5	Big Harpeth Bridges (CW)
Davidson	40DV400	20	Johnson Site (Prehistoric)
Davidson	40DV524	20	Radio Tower Site (Prehistoric)
		0	
Dickson	40DS22	10	Cumberland Furnace (1st site)
Dickson	40DS23	20	Belleview Furnace
Dickson	40DS24	10	Jackson Furnace
Dickson	40DS25	10	Carroll Furnace
Dickson	40DS26	70	Worley Furnace
Dickson	40DS27	10	White Bluff Forge
Dickson	40DS28	20	Valley Forge
Dickson	40DS30	10	Jones Creek Forge
Dickson	40DS32	10	Upper Forge
		0	
Giles	40GL46	7	Pulaski Defenses (CW)
Giles	40GL47	8	Pulaski Defenses (CW)
Giles	40GL48	6	Pulaski Defenses (CW)
Giles	40GL49	5	Pulaski Defenses (CW)
Giles	40GL52	5	Richland Bridge (CW)
Giles	40GL53	5	Richland Bridge (CW)
Giles	40GL55	5	Union Entrenchment (CW)
Giles	40GL56	5	Union Entrenchment (CW)
		0	
Hickman	40HI3	10	Coble Pottery
Hickman	40HI120	10	Coble / Chessor Pottery
Hickman	40HI125	14	Lee and Gould Furnace
Hickman	40HI145	30	Standard Furnace
Hickman	40HI146	15	Oakland Furnace
Hickman	40HI148	10	Old Aetna Furnace
Hickman	40HI149	25	New Aetna Furnace
		0	
Lawrence	40LR12	10	Kelly forge
Lawrence	Field # LR-01	20	Prisoner of War Camp (WWII)
		0	
Lewis	40LS14	60	Napier Furnace
		0	
Lincoln		0	
		0	
Macon		0	

County	Site Number	Estimated Acreage	Name
		0	
Marshall		0	
		0	
Maury	40MU487	0	Rockdale Furnace
Maury	40MU510	5	Columbia Defenses (CW)
Maury	40MU512	5	Columbia Defenses (CW)
Maury	40MU513	5	Columbia Defenses (CW)
Maury	40MU515	5	Duck River Blockhouse (CW)
Maury	40MU516	5	Blockhouse (CW)
		0	
Montgomery	40MT371	15	Yellow Creek Furnace
Montgomery	40MT372	30	Lafayette Furnace
Montgomery	40MT373	20	Blooming Grove Furnace
Montgomery	40MT375	20	Sailor's Rest Furnace
Montgomery	40MT376	10	Poplar Spring Furnace
Montgomery	40MT377	20	Mount Vernon Furnace
Montgomery	40MT378	10	Gracey-Woodward Furnace
Montgomery	40MT379	75	Louisa Furnace
Montgomery	40MT381	15	Red River Furnace
Montgomery	40MT382	15	Washington Furnace
Montgomery	40MT383	10	Tennessee Furnace
Montgomery	40MT384	10	Montgomery Furnace
		0	
Moore		0	
		0	
Robertson	40RB81	20	Red River Bridge (CW)
Robertson	40RB142	25	Maulding's Station
		0	
Rutherford	40RD176	5	Part of Fortress Rosecrans (CW)
Rutherford	40RD177	5	Part of Stones R. Battlefield (CW)
Rutherford	40RD182	10	Hoovers Gap (CW)
Rutherford	40RD184	5	Part of Stones R. Battlefield (CW)
Rutherford	40RD185	10	Readyville Defenses (CW)
Rutherford	40RD187	5	Blockhouse No. ?(CW)
Rutherford	40RD188	5	Blockhouse No. 4 (CW)
Rutherford	40RD189	5	Blockhouse No. 6 (CW)
Rutherford	40RD190	5	Blockhouse No. ? (CW)
Rutherford	40RD194	5	Stones River Blockhouse (CW)
Rutherford	40RD230	5	Part of Fortress Rosecrans (CW)
		0	
Smith	40SM134	24	Battery Knob (CW)
Smith	Field # SM-06	10	Old Middleton Bivouac (WWII)
Smith	Field # SM-14	160	Bluff Creek Bivouac (WWII)

County	Site Number	Estimated Acreage	Name
Smith	Field # SM-16	150	Kempville Bivouac (WWII)
		0	
Sumner	40SU15	25	Rutherford-Kizer (Prehistoric)
Sumner	40SU36	10	Hall Station
Sumner	40SU38	10	Morgan Station
Sumner	40SU39	10	Saunders Station
Sumner	40SU41	10	Ziegler's Station
Sumner	40SU103	6	South Tunnel (CW)
Sumner	40SU104	6	South Tunnel (CW)
Sumner	40SU107	100	Camp Trousdale (CW)
Sumner	Field # SU-01	110	Evacuation Hospital (WWII)
		0	
Trousdale	40TR51	250	Hartsville Battlefield (CW)
Trousdale	Field # TR-01	65	Averitt's Ferry (WWII)
		0	
Williamson	40WM2	15	Old Town (Prehistoric)
Williamson	40WM10	20	Kelly Town (Prehistoric)
Williamson	40WM11	5	Gray Farm (Prehistoric)
Williamson	40WM30	10	Mayfield's Station
Williamson	40WM83	10	Harpeth Furnace
Williamson	40WM100	10	Fort Granger (CW)
Williamson	40WM101	20	Roper's Knob (CW)
Williamson	40WM102	5	Franklin Defenses (CW)
Williamson	40WM103	5	Franklin Defenses (CW)
Williamson	40WM106	250	Triune Defenses (CW)
Williamson	40WM109	20	Butler's Cantonment
Williamson	40WM342	15	Inglehame (Prehistoric)
		0	
Wilson	40WI1	30	Sellars Farm Addition (Prehistoric)
Wilson	Field # WI-11	50	Smith Farm Bivouac (WWII)
Wilson	Field # WI-15	220	Bellwood Bivouac (WWII)
Wilson	Field # WI-18	100	Vance House Bivouac (WWII)
Wilson	Field # WI-47	60	Doaks X-roads Bivouac (WWII)
Wilson	Field # WI-48	120	Cairo Bend Bivouac (WWII)
Total		**3,656**	

STREAM FISHING ACCESS – MIDDLE TENNESSEE

Locations - The aquatic projects map indicates locations where access is needed on 32 important stream fisheries (yellow asterisks and yellow-lined streams).

Description of Properties - There are two distinct types of property needed to provide fishing access: 1) boat access points for launching small boats, and 2) linear tracts in and adjacent to streams for wade fishing access.

Boat access points are needed on the Duck (2), Buffalo (1), Red (2), Harpeth (3), Elk (5), and Caney Fork (1) rivers. These areas were chosen to complement existing access areas and improve the value of recreational fisheries. All areas are located adjacent to the named river. The exact location is not critical; it is possible that another parcel located within one mile could be substituted for the indicated location. Boat access points would be relatively small parcels (up to two acres) located in the floodplain, preferably near existing roads.

Wade fishing access is needed on 27 streams. These would provide parking for a few vehicles and provide access for anglers to walk in and along the stream for 1-3 miles. Areas adjacent to bridges would be ideal locations for small parking areas.

Recreational Significance - Middle Tennessee has a long tradition of providing stream and river fisheries for smallmouth bass, rock bass, catfish, and even trout in some locations. Anglers must have the landowner's permission to wade and fish in streams. The task of contacting multiple landowners and getting permission can be overwhelming for many anglers, especially those that are not nearby residents. Establishing public corridors would greatly increase the recreational value of these fisheries. With the appropriate management, these streams can attract many more anglers and still provide high quality angling opportunities.

Most rivers in this region have some public access for boats or canoes, but there are still vast reaches of river that are not accessible. These access points are used by anglers and recreational paddlers. Some of the existing access areas are owned by outfitters that operate canoe rental and shuttle services. Additional public access areas would complement these enterprises by providing more launching options. More public access would allow anglers to avoid high-use paddling areas. Public areas would allow anglers access to fish even when the outfitters are closed on weekdays and in the off-season.

The stream corridors needed to provide wade fishing access include the stream channel and the adjacent riparian zones. Riparian and instream habitats are essential for supporting aquatic life in streams. Public ownership of these important habitats would ensure their protection and provide opportunities for enhancement.

Land Management Strategy - TWRA would establish a small, gravel parking area at all access areas, and provide a narrow gravel or concrete ramp at boat access points. TWRA

would develop access areas in a manner that would minimize the footprint on the land and maximize the amount of forested riparian vegetation.

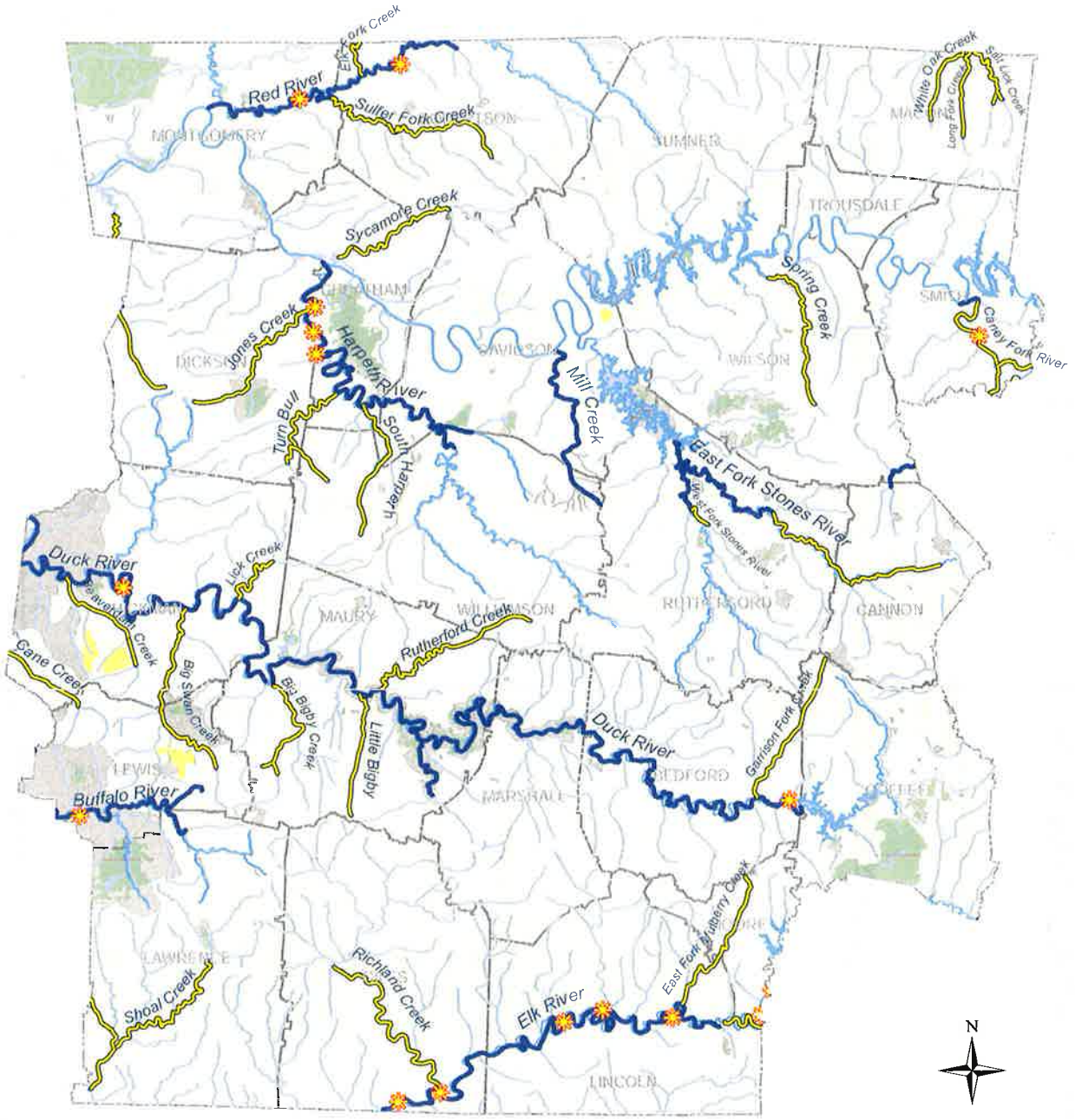
Land Protection Needs – 1,417 acres at an estimated cost of $13,609,200. See table on following page

Potential Partners - TPGF, TWRF, Trout Unlimited, Tennessee Scenic Rivers Association, local tourism boards, and local watershed organizations.

Stream Fishing Access Needed in Middle Tennessee

Watershed	Stream	County of needed access	Number of boat access needed	Miles of wade access needed	Total Acres	Cost/ Acre	Land Cost	10% Survey & Closing Fees	Total Cost
Duck	Duck River	Hickman/Bedford	2	0	6	20,000	120,000	12,000	132,000
Duck	Beaverdam Creek	Hickman	0	3	54	4,000	216,000	21,600	237,600
Duck	Big Swan Creek	Hickman/Lewis	0	5	90	4,000	360,000	36,000	396,000
Duck	Lick Creek	Hickman	0	3	54	4,000	216,000	21,600	237,600
Duck	Big Bigby Creek	Maury	0	3	54	4,000	216,000	21,600	237,600
Duck	Little Bigby Creek	Maury	0	3	54	4,000	216,000	21,600	237,600
Duck	Rutherford Creek	Maury	0	3	54	4,000	216,000	21,600	237,600
Duck	Garrison Fork	Bedford/Coffee	0	3	54	4,000	216,000	21,600	237,600
Buffalo	Buffalo River	Lewis	1	0	2	20,000	40,000	4,000	44,000
Buffalo	Cane Creek	Hickman	0	2	36	4,000	144,000	14,400	158,400
Elk	Elk River	Lincoln/Giles	5	0	10	20,000	200,000	20,000	220,000
Elk	Richland Creek	Giles	0	3	54	4,000	216,000	21,600	237,600
Elk	East Fork Mulberry Creek	Moore/Lincoln	0	3	54	4,000	216,000	21,600	237,600
Red	Red River	Montgomery/Robertson	2	0	4	15,000	60,000	6,000	66,000
Red	Elk Fork Creek	Robertson	0	1	18	4,000	72,000	7,200	79,200
Red	Sulfur Fork Creek	Robertson	0	3	54	4,000	216,000	21,600	237,600
Cumberland	Yellow Creek	Montgomery/Dickson	0	2	36	4,000	144,000	14,400	158,400
Cumberland	Sycamore Creek	Cheatham	0	3	54	4,000	216,000	21,600	237,600
Cumberland	Spring Creek	Wilson	0	3	54	15,000	810,000	81,000	891,000
Harpeth	Harpeth River	Cheatham	3	0	6	20,000	120,000	12,000	132,000
Harpeth	Jones Creek	Dickson	0	3	54	4,000	216,000	21,600	237,600
Harpeth	Turnbull Creek	Dickson/Cheatham	0	4	72	4,000	288,000	28,800	316,800
Harpeth	South Harpeth	Williamson	0	3	54	30,000	1,620,000	162,000	1,782,000
Stones	East Fork Stones River	Rutherford/Cannon	0	5	90	4,000	360,000	36,000	396,000
Stones	West Fork Stones River	Rutherford	0	2	36	4,000	144,000	14,400	158,400
Barren	White Oak Creek	Macon	0	1	18	4,000	72,000	7,200	79,200
Barren	Long Fork Creek	Macon	0	1	18	4,000	72,000	7,200	79,200
Barren	Salt Lick Creek	Macon	0	1	18	4,000	72,000	7,200	79,200
Shoal	Shoal Creek	Lawrence	0	5	90	4,000	360,000	36,000	396,000
Shoal	Factory Creek	Lawrence	0	2	36	4,000	144,000	14,400	158,400
Caney Fork	Caney Fork River (Trout Section)	Smith	1	5	93	50,000	4,650,000	465,000	5,115,000
Caney Fork	Smith Fork Creek	Smith/Wilson	0	2	36	4,000	144,000	14,400	158,400
		TOTAL	**14**	**77**	**1417**		**$12,372,000**	**$1,237,200**	**$13,609,200**

Stream Fishing Access Project for the Middle Tennessee Region



- Need Access Point
- Need Access to Wade Stream
- Important Stream Fishery
- Areas of Interest
- Public Lands
- Other Protected Lands
- Major Rivers and Reservoirs
- Middle Tennessee Counties

Generated by the TWRA GIS Lab, March 2006 (jj)

BARNETT'S WOODS SNA

Location – (N36.5193, W86.5601) Barnett's Woods is located in Montgomery County approximately 16 miles west of Clarksville on Cooper Creek Road. (See Cumberland River (Haynes Bottom/Shelton Ferry) map)

Description - Barnett's Wood's is a high quality species rich second growth forest that was last cut in the 1950's. The invasive exotic Japanese honeysuckle, which occurs here, poses a serious threat to native vegetation including the Price's potato bean. Illegal off-road-vehicle use and artifact digging also poses a threat to the natural area.

Significance – Site Importance High (B3) – Barnett's Woods is a 40-acre SNA located on the Western Highland Rim. TNC acquired the area in 1981 and transferred it to the State in 2004. It is most significant because it supports a population of the federally listed Price's potato bean (*Apios priceana*) and because federally endangered Indiana bats (*Myotis sodalis*) have also been known to use Foster Cave (Barnett's Cave) as a temporary roost while moving from breeding to hibernation. Barnett's Woods is also noteworthy because it is floristically diverse for its size with 443 vascular plant species present representing 95 plant families. It is a favorite place for Austin Peay State University students and faculty to botanize because of its floristic significance and close proximity to Clarksville.

While sinks and caves are known for this area, Foster Cave is the most important cave at Barnett's Woods. It has a large east-facing opening at the base of a 100-foot bluff. Cooper Creek enters the SNA near a second large cave on the property. The creek's many tributaries have dissected the landscape creating rich hollows and slopes resulting in a variety of slope aspects. The many different site conditions associated with the alluvial woodland created by the creek and its tributaries, the rock outcropping and steep vertical slopes create habitat for a rich flora.

A mesic (moist, rich) forest community found here is noteworthy. It is comprised of sugar maple, beech, white ash, tulip poplar, shagbark hickory, pignut hickory, mockernut hickory, black cherry, sycamore, slippery elm, and many oak species. Kentucky coffee-tree (*Gymnocladus dioicus*), which is uncommon in Tennessee, also grows in this forest community. This rich condition is also why sixteen species of ferns and fern allies occur here. Other plants of interest reported from Barnett's Woods include lesser ladies tress (*Spiranthes ovalis*), Indian-pipe (*Monotropa uniflora*), and butternut (*Juglans cinerea*). The butternut tree, sometimes-called white walnut, is in serious decline throughout its range because of the butternut canker that is caused by an exotic fungus.

Rare elements include: *Apios priceana* (state status: endangered, federal status: listed threatened), *Panax quinquefolius*, *Lilium michiganensis*, *Hydrastis canadensis*, *Pseudanophthalmus colemanensis, Orconectes pellucidus, Myotis sodalis*, and *Sorex longirostris*.

Strategy – The strategy for acquisition at Barnett's Woods is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 217 acres at an estimated cost of $350,000.

Potential Partners – TDEC, and USFWS.

BASIN SPRING SNA

Location - (N35.9557, W86.0366) The approximately 218-acre site is located in Williamson County in the Fernvale community near Bedford Creek.

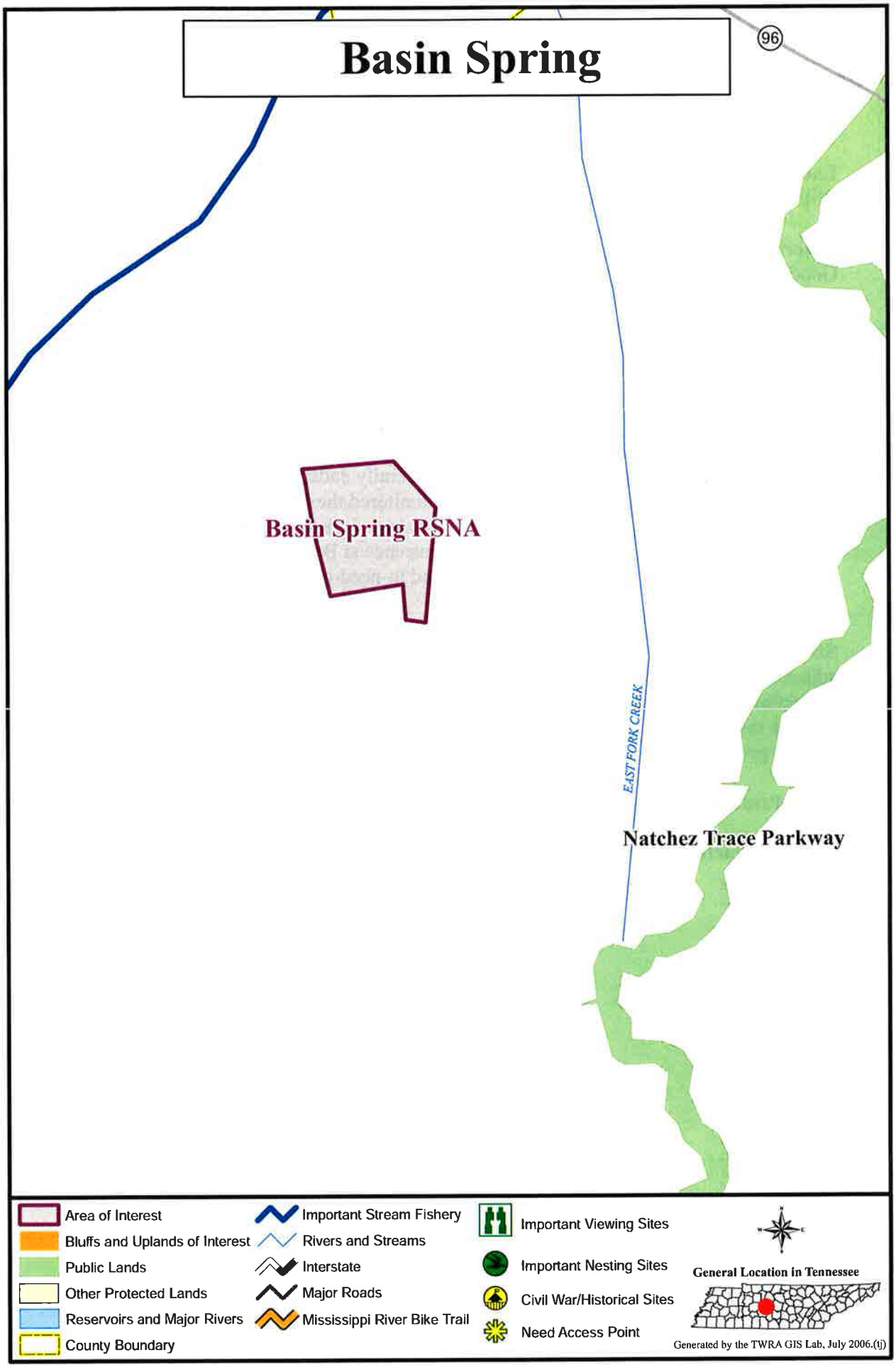
Description - Basin Spring is a 200+ acre forested tract which has been owned by the Goodpasture family for about 35 years. During that time no timber has been harvested from the land, which has been passively managed as a family nature preserve. Historically the local post office was located here, but it has been years since the post office has operated or anyone has resided on the property.

Significance – Site Importance High (B3) - The major portion of the area supports a maturing second growth mesic oak woods with a diversity of herbaceous plants which indicates a lack of disturbance. However, along an exposed roadside at the base of a small slope is a relatively small population of federally endangered Price's potato bean (*Apios priceana*). Dr. Katherine Goodpature monitored these plants until her death and counted 6-10 individuals in 1983. Price's potato bean is listed as endangered in Tennessee and currently has one protected occurrence at Barnett's Wood SNA. The sharp-shinned hawk (*Accipiter striatus*); deemed in-need-of-management has also been seen on the site.

Strategy - The strategy for acquisition at Basin Spring is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 218 acres at an estimated cost of $352,000.

Potential Partners – USFWS and TDEC


Basin Spring
96
Basin Spring RSNA
EAST FORK CREEK
Natchez Trace Parkway
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BILLY SWAMP

Location – (N35.6125, W85.9615) Billy Swamp is located in Coffee County near the Coffee/Warren County line just northeast of Shady Grove. (See Parks Creek Swamp & Highway 53 Roadside Barrens map)

Description – This site is approximately 120 acres and is located on the Eastern Highland Rim. The site contains a depressional wetland with standing water and much of the site is forested with willow oak, sweetgum, red maple and white oak. A portion of the site contains an open shallow pond. The northeastern portion is a grassland system kept in an early successional state by annual mowing. Although mowed, this area provides habitat for grassland and forb species which are indicative of the barrens region of the Eastern Highland Rim. In the grassland portion of the site, plant species such as southern bog club moss (*Lycopodiella adpressum*), camphor weed (*Pluchea camphorate*), royal fern (*Osmunda regalis*), needle spike rush (*Eleocharis acicularis*), and narrowleaf primrose willow (*Ludwigia linearis*) have been documented.

Significance – Site Importance Moderate (B4) - Billy Swamp contains two state-listed plant species: wide-leaved yellow-eyed grass (*Xyris laxifolia* var. *iridifolia*) and Barrett's sedge (*Carex barrattii*). Both plants are obligate wetland species. Wide- leaved yellow-eyed grass is threatened and is considered very rare and imperiled (S2) in Tennessee. The Tennessee Division of Natural Areas knows of only ten extant occurrences of this species in the state. At Billy Swamp, wide-leaved yellow-eyed grass grows in a low wet portion of the grassland area while Barrett's sedge is located in the forested wetland. Barrett's sedge is endangered and is considered very rare and imperiled (S2) in Tennessee. There are only thirteen extant occurrences known from two counties in Tennessee. These rare species were documented during a few visits to the site and additional inventory would likely yield more rare species and/or extend the range of the currently known rare species.

Strategy – Both the forested and grassland sites are wetlands and TWRA wetland acquisition funds could be applied. The site is a grassland in parts and the NRCS grassland reserve program may be a potential source of funding.

Land Protection Needs - 88.3 acres at an estimated cost of $165,000.

Potential Partners – TWRA, NRCS, TNC, TDEC.

BLEDSOE CREEK STATE PARK

Location – (N36.3843, W86.3560) Bledsoe Creek State Park is located on Ziegler's Fort Road off of Hwy 25, near Gallatin in Sumner County on the shores of Old Hickory Lake.

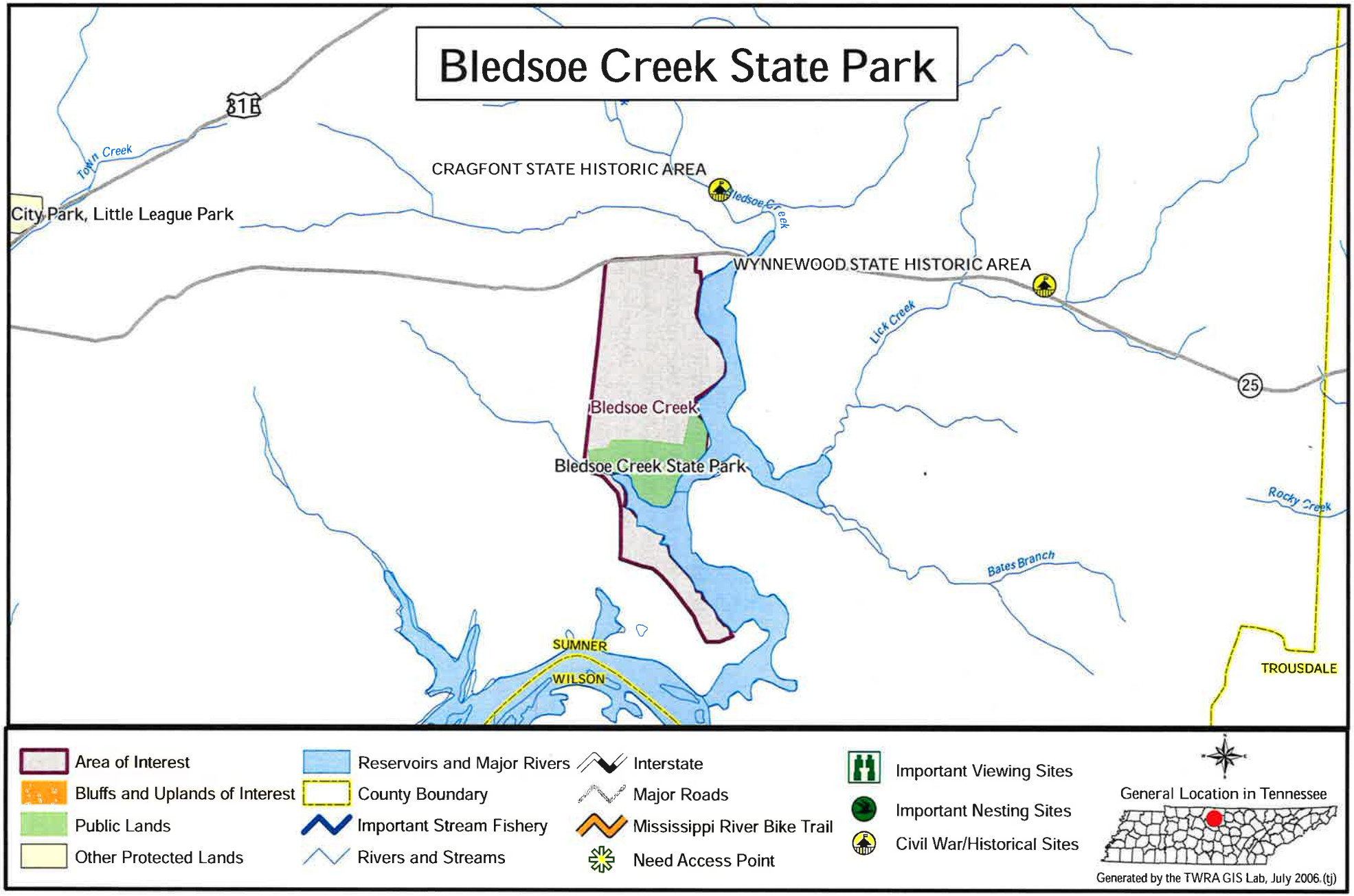
Description - Bledsoe Creek State Park is surrounded on three sides by Old Hickory Lake and forest cover. It consists of 164 acres and has a campground, boat ramp, fishing, picnicking and hiking.

Significance - This 164 acre park offers campers and day-use visitors an opportunity to observe an abundance of songbirds, waterfowl, mammals, reptiles and amphibians. The surrounding community is rich with history. The park was named for settler Isaac Bledsoe, who built a frontier fort close to he site in 1779. Bledsoe's Lick provided water and attracted game for Native Americans at Castallian Springs, a large prehistoric Mississippian village, and white settlers, who hunted abundant buffalo.

Strategy - The strategy for future acquisitions for Bledsoe Creek State Park is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 381 acres at an estimated cost of $1,375,000

Potential Partners: TCF and other land conservancy groups


Bledsoe Creek State Park
31E
Town Creek
City Park, Little League Park
CRAGFONT STATE HISTORIC AREA
Bledsoe Creek
WYNNEWOOD STATE HISTORIC AREA
Lick Creek
25
Bledsoe Creek
Bledsoe Creek State Park
Rocky Creek
Bates Branch
SUMNER
WILSON
TROUSDALE
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BLOWHOLE CAVE

Location – (N35.9119, W86.0621) Blowhole Cave is located in Cannon County. The entrance is approximately 2.8 miles southeast of Auburntown on the east side of Hurricane Creek. (See Short Mountain Designated SNA & Short Mountain Sanctuary RSNA map)

Description – Blowhole Cave is comprised of an extensive karst system that has never been fully documented, although approximately 5 miles have been mapped or explored (Tennessee Cave Survey, 2003). This is a highly aquatic system with four known major streams and more than 100 minor inflows. The four streams merge into one main stream that flows from the cave's mouth. Originally the cave could be accessed only through the spring resurgence of the stream channel. In 1958, a man-made opening was dug just north of the stream outflow. Both this and the aquatic entrance were sealed in the late 1980's and replaced with another man-made opening just above and to the south of the stream mouth. This was accomplished by the current owner and a caver who had explored the site for many years. Apparently no significant geologic features were directly impacted by this action. This entrance is gated by a solid iron door and has never been breached. The original man-made entrance has been breached only once (1992), though allegedly little damage to the cave's geologic features occurred.

The explored portion of the cave includes four distinct levels, with canyons, stream passages, dry upper levels, waterfalls, dome pits (vertical shafts), and rooms to 80' high and 100' wide. Claw marks from bears and fragile bear vertebrae are reported by the caretaker (cave steward). A large variety and number of formations and minerals are present, including stalactites, stalagmites, flowstone, draperies, soda straws, cave pearls, helictites, a rare white helictite ("hodtite"), dogtooth spar, gypsum hair and crystals, moon milk, and columns. The "hodtite" helictite is unique to this site. According to the steward, the site contains the largest concentration of varied formations of any cave he has visited. Legal access to the cave is accomplished only with the steward's cooperation, so the number of persons utilizing this system has been limited.

Properties surrounding the entrance were formerly used for agriculture and pasture when the property was occupied. The highly sloped portions of these lands currently contain a mixed hardwood forest.

Significance – Site Importance Moderate (B4) – The known fauna of Blowhole Cave is limited to a few relatively common species as observed by Heritage personnel in 1993. Apparently the cave has never supported large numbers of bats, as evidenced by the lack of guano. The steward reports seeing a species of cave cricket *(Ceuthophilus* sp.) deep into the cave, an important observation since cave biodiversity often directly is linked to the presence and abundance of cave crickets. The eastern woodrat (*Neotoma magister*), a species deemed in-need-of-management, was confirmed from the site in 2001. This species also is key to nutrient flow in Tennessee cave systems. Recent surveys of other wet caves in Tennessee have documented numerous G1 or G2 species, including many new to science.

Strategy – The site needs to be examined further by personnel qualified to assess the aesthetic value of the formations within, and requires a more thorough inventory particularly of its invertebrate community. All lands within the recharge area of the cave need to be acquired and protected in order to prevent potential agricultural runoff from entering the system. Closure of the 1958 man-made entrance needs to be evaluated and possibly repaired or reinforced. Airflow around the more recent man-made entrance needs to be evaluated and reduced to the maximum extent practical.

Land Protection Needs – 410 acres at an estimated cost of $665,000

The current owner of the entrance and surrounding 77 acres also owns 123 acres of cave and mineral rights on adjacent properties. This nonresident owner has for several years intended to commercialize the cave to permit large-scale viewing of its formations. Though this has never materialized, modification of the cave for this purpose could have marked negative and irreversible impacts on its geologic and biologic diversity.

Potential Partners – TNC, TWRA, SCCi (Southeastern Cave Conservancy, Inc.), TDEC

BON AQUA FOREST

Location - (N35.9456, W86.3169) The approximately 38-acre site is located in Hickman County approximately 0.75 miles south of the Bon Aqua community on Hwy 46 .

Description - Located on the Western Highland Rim, the site contains a stand of purported "virgin timber". More than likely the timber was cut many decades ago but the mature hardwood forest is well established.

Significance – Site Importance Moderate (B4) – A qualitative assessment indicated a large portion of the 30-acre site is dominated by white oak. Most of the overstory trees were over 24 inches dbh with many near 36 inches. Many are well-spaced trees and these are not "open" grown, but had tall straight trunks. Other oaks include *Quercus rubra*, *Q. velutina*, *Q. falcata*, and *Q. shumardii*, but in much smaller numbers, and their sizes are also impressive with many individual trees over 25 inches dbh and one *Q. velutina* at 34 inches . Tulip poplar is also present, but not a dominant or even co-dominant level. The few tulip poplar trees present are just as large as the oaks. Various hickories including *Carya glabra* and *C. alba* occur here as do large persimmon trees. Some of the hickories are nearly 20 inches dbh with one *Carya glabra* at 30 inches.

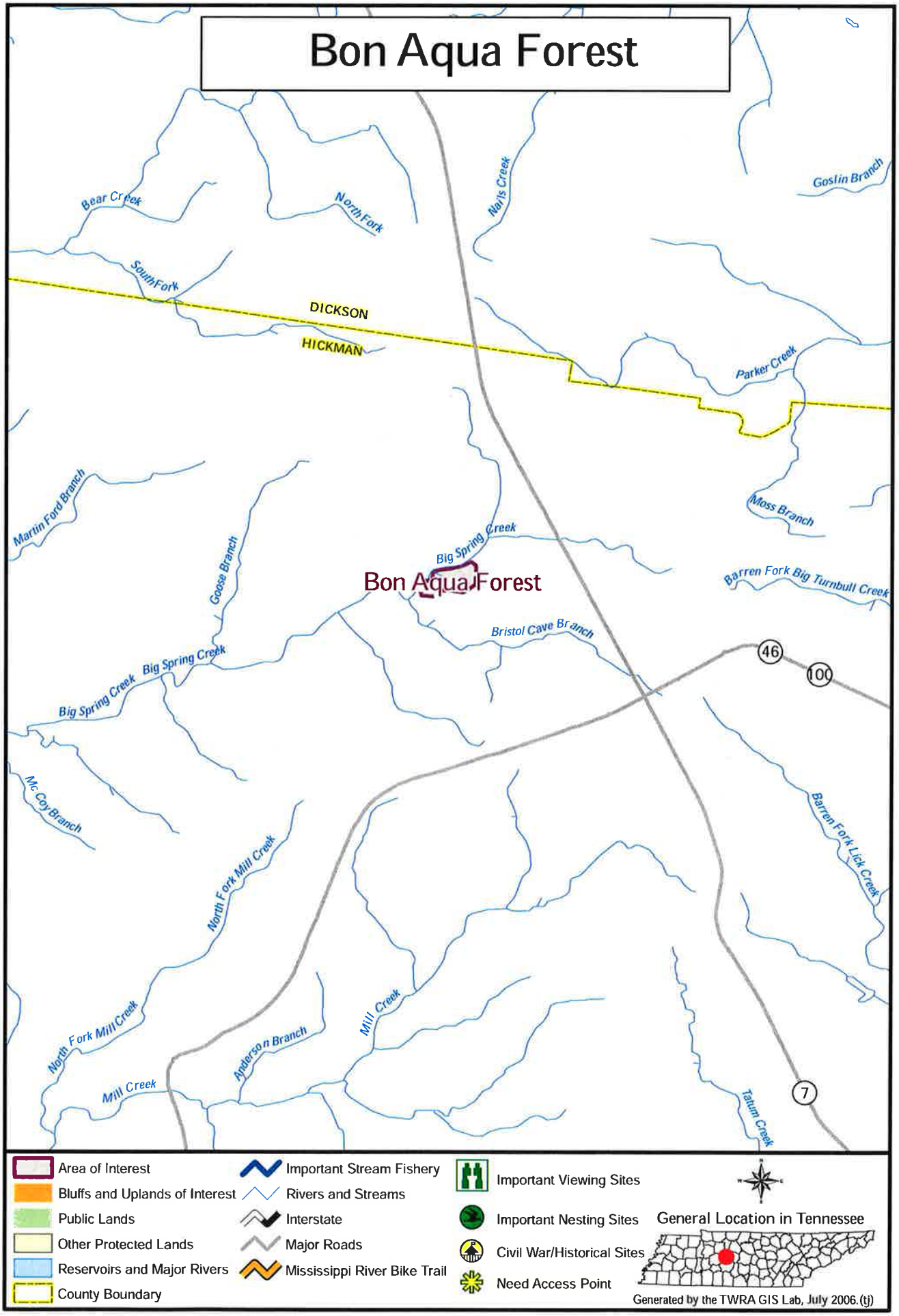
Sugar maple and beech (to a much less extent) occur as saplings or sub-canopy, but in low numbers. This seems uncommon for many oak forests have a dominance of these two species. The sapling and tall shrub layer contains the various canopy trees represented as well as good deal of spicebush, dogwood, *Ostrya virginiana*, paw paw, *Ilex decidua*, sourwood, etc. Umbrella magnolia is a dominant understory species in the stands dominated exclusively by white oak.

The herb layer contains much poison ivy, and the common ferns, as well as *Chimaphila maculata*, and a somewhat large amount of *Desmodium nudiflorum*. *Panax quinquefolius* is the only rare species found on the site (state status: special concern, commercially exploited).

Strategy - The strategy for acquisition at Bon Aqua Forest is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 50 acres at an estimated cost of $220,000

Potential Partners – TDEC


Bon Aqua Forest
Bear Creek
North Fork
South Fork
Nails Creek
Goslin Branch
DICKSON
HICKMAN
Parker Creek
Martin Ford Branch
Goose Branch
Big Spring Creek
Moss Branch
Bon Aqua Forest
Barren Fork Big Turnbull Creek
Bristol Cave Branch
46
100
Big Spring Creek
Big Spring Creek
Mc Coy Branch
North Fork Mill Creek
Barren Fork Lick Creek
North Fork Mill Creek
Mill Creek
Anderson Branch
Mill Creek
Tatum Creek
7
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BRAWLEYS FORK

Location - (35.6934, W86.1717) Brawleys Fork is located on the Eastern Highland Rim in southwestern Cannon County near the community of Bradyville.

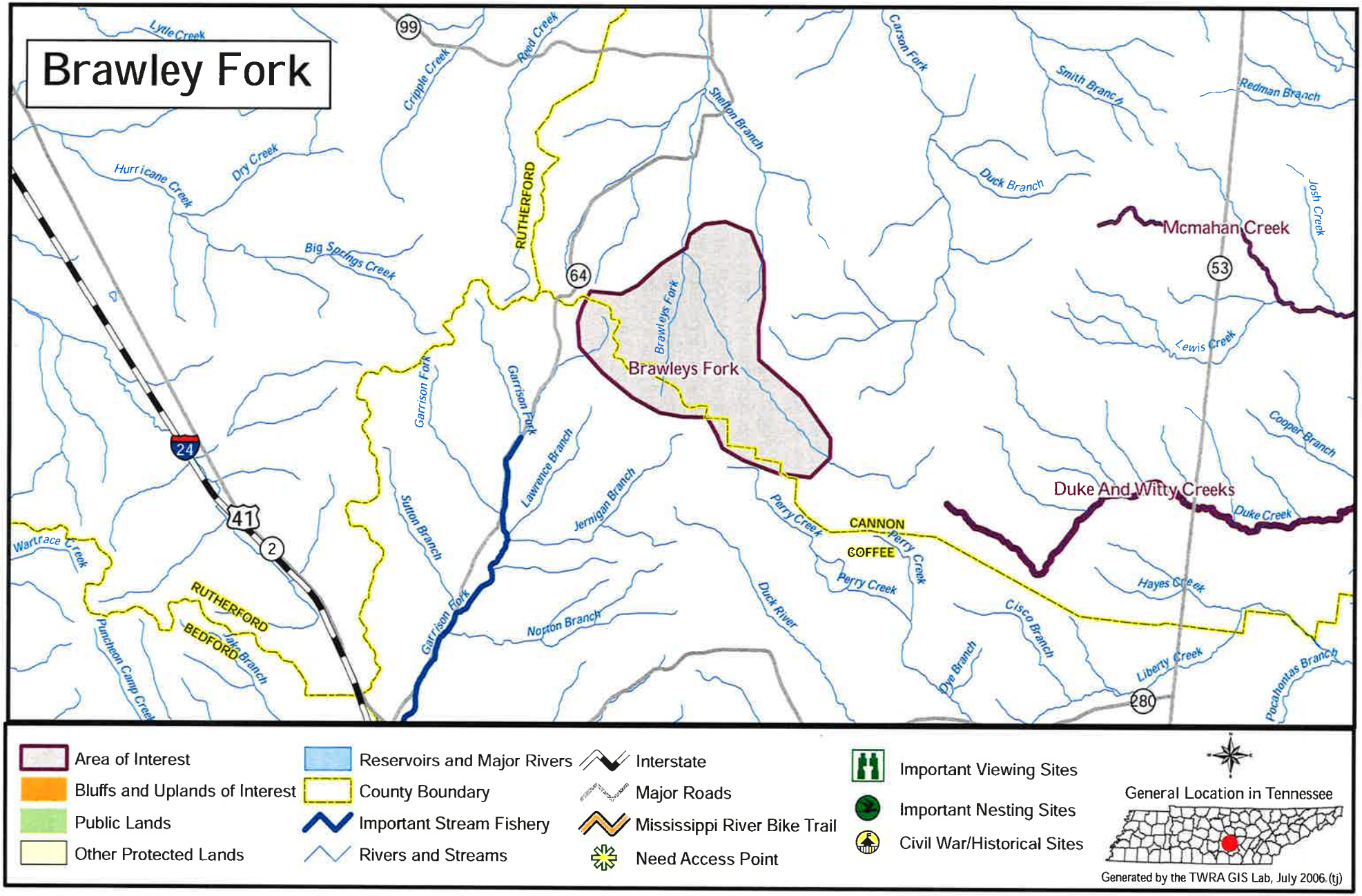
Description of Properties - These properties are located in a cove along Brawley's Fork on the Eastern Highland Rim. They total 934 acres of mostly dry to mesic oak forests.

Significance - The endemic *Cambarus williami* (Brawley's Fork crayfish) occurs in this spring fed stream. The species was first collected at Brawley's Fork in 1971. It wasn't until 1995 that this species was described as new to science. Until 2000, *C. williami* was only known from the type locality of Brawley's Fork, but surveys conducted by DNA biologists have extended the known range of the species. In 2001, the species was listed as state endangered and it is currently considered very rare and imperiled (G2). Even with additional surveys *C. williami* is not known to occur outside of the headwaters of the Stones River watershed and is limited to only two hydrologic units (East Fork Stones River and Brawley's Fork). To date, it does not occur on protected land. The primary threat to this crayfish is sedimentation, therefore protection of the above area should be a high conservation priority.

Many other species of greatest conservation need also occur in this area. They include Chuck-wills-widow, yellow-billed cuckoo, sharp-shinned hawk, eastern wood peewee, orchard oriole, yellow-throated vireo, wood thrush, wood rat and the endangered gray bat.

Land Protection Needs - 934 acres at an estimated cost of $1,330,000.

Potential Partners – TDEC and TWRA.


Brawley Fork
Lytle Creek
Cripple Creek
Reed Creek
Hurricane Creek
Dry Creek
Big Springs Creek
RUTHERFORD
Shelton Branch
Carson Fork
Smith Branch
Redman Branch
Duck Branch
Josh Creek
Mcmahan Creek
Brawleys Fork
Brawleys Fork
Lewis Creek
Cooper Branch
Garrison Fork
Garrison Fork
Lawrence Branch
Jernigan Branch
Sutton Branch
Duke And Witty Creeks
Duke Creek
Perry Creek
CANNON
COFFEE
Perry Creek
Perry Creek
Hayes Creek
Wartrace Creek
RUTHERFORD
BEDFORD
Jake Branch
Puncheon Camp Creek
Garrison Fork
Norton Branch
Duck River
Cisco Branch
Dye Branch
Liberty Creek
Pocahontas Branch
99
64
53
24
41
2
280
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BRIDGEWATER CAVE

Location – (N36.1912, W85.9749) Bridgewater Cave is located in Smith County approximately 1.2 miles north of Monoville, west of Hwy. 80, at an elevation of 660 feet." (Barr, 1961).

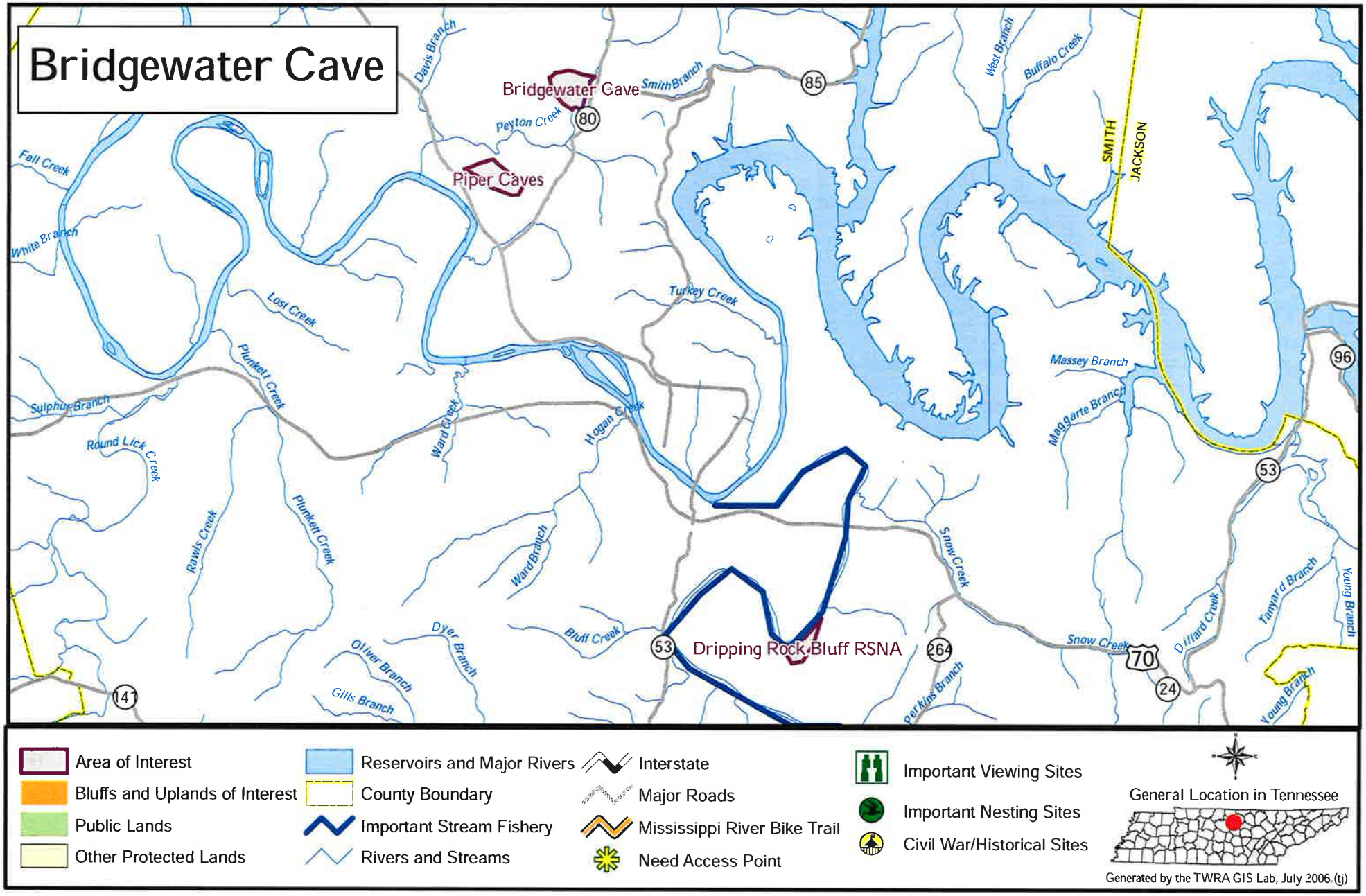
Description – This cave occurs in Bigby-Cannon limestone. According to Barr (1961): "The main entrance to the cave lies 275 yards west-southwest of the old Bridgewater house in a dense cedar thicket. Many evidences of saltpeter mining are to be seen in the cave, although the leaching vats probably were located outside. The cave has two entrances. The main entrance is a hole 5 feet by 4 feet, which extends downward for about 25 feet into a gallery 20 feet wide and 10 feet high. This gallery extends N. 70° W. for 135 feet and forks. The left fork is a wide crawl which runs S. 10° E. for 90 feet, and the right fork runs S. 50° W. for 135 feet. A trench has been dug at the opening to this fork, and pick marks may be seen in the damp fill beneath some of the large breakdown slabs. The heads of the picks, presumably belonging to the saltpeter miners, were about 2 inches wide and 12 inches long. Both branches of this part of the cave end in breakdown. At 60 feet a side passage leads northward, down into a lower level of the cave. In this section are three large rooms-each about 25 feet wide, 40 feet long, and 30 feet high-a 20-foot drop negotiable by climbing down on ledges, and a long canyon 8 feet wide and 60 to 70 feet high. Part of the lower level extends beneath the upper cave. Many pieces of wood used for ladders and bridges by the miners are in this level, and a dug trench has made a crawlway leading into the high canyon readily accessible. This part of the cave trends north-northeast for 750 feet and finally emerges at the second entrance-a pitlike hole 10 feet in diameter and 30 feet deep-on the hillside a short distance north and west of the main entrance. The second entrance has nearly been blocked by breakdown, and it is necessary to crawl beneath a huge mass of broken rocks to enter the cave by this route." The total length of mapped passages is 1500 feet (Tennessee Cave Survey, 2003).

Significance – Site Importance High (B3) – Bridgewater Cave is home to a large maternity roost of state and federally endangered gray bats (*Myotis grisescens*). This species is considered vulnerable and imperiled (G3S2). A population of 12,410 gray bats was reported at this location in the summer of 2002 (Harvey, 2002).

Strategy – The primary concern for the conservation of the gray bat is uncontrolled access. Disturbance of gray bats during roosting periods can significantly reduce colony size, and ultimately drive them away. In addition to protecting an initial one-acre around each entrance of the cave, the cave may need to be posted to discourage inappropriate access. Other exclusion measures may be necessary. Acquisition of additional acreage will provide for establishment and maintenance of a forested corridor from the entrances to Peyton Creek.

Land Protection Needs – 130 acres at an estimated cost of $142,000.

Potential Partners - TNC, TWRA, USFWS, TDEC.


Bridgewater Cave
Bridgewater Cave
Piper Caves
Dripping Rock Bluff RSNA
Davis Branch
Smith Branch
Peyton Creek
Fall Creek
White Branch
Lost Creek
Plunkett Creek
Sulphur Branch
Round Lick Creek
Rawls Creek
Ward Creek
Hogan Creek
Turkey Creek
Ward Branch
Dyer Branch
Oliver Branch
Gills Branch
Bluff Creek
West Branch
Buffalo Creek
SMITH
JACKSON
Massey Branch
Maggarte Branch
Snow Creek
Perkins Branch
Tanyard Branch
Young Branch
Dillard Creek
85
80
96
53
264
70
24
141
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

BRIGGS CHAPEL HOLLOW

Location – (35.8277, W87.5609) Briggs Chapel Hollow site is located in Hickman County at the confluence of Piney River and Duck River northwest of Centerville on Briggs Chapel Road. (See Southwestern Highland Rim Project map)

Description – The site encompasses approximately 10 acres along Briggs Chapel Road and is adjacent to the floodplain and bank of Piney River. The bluff/slope is steep to moderate and has blocky limestone outcrops with large trees and a well developed understory. The forest is mesic with dominant trees of white oak, beech and white ash. Springs are prevalent along the slope. The low adjacent floodplain area is very mesic and appears to be undisturbed. Price's potato bean (*Apios pricean*) plants are located on the slope and at the top of the bluff on the west side of the road, and a few plants are located on the floodplain (east) side of the road. The only apparent disturbance to the site is grading of the roadway which is probably done at least annually.

Significance – Site Significance is High to Very High (B2/B3) – *A. priceana* is a federally endangered plant and is globally rare and imperiled (G2). In 2004, the Briggs Chapel Hollow site was surveyed and about 24 vines, with at least twelve in flower/fruit of moderate vigor, were observed along a 10-15 m stretch of the road. Threats to this population include road maintenance, mowing, bush-hogging, herbicide application, and logging. There is also a population along the bluff line of *Elymus svensonii* (Svenson's wild rye), a state endangered species considered globally rare (G3).

Strategy - The first strategy would be to survey and delineate the extent of the population at this site. Suitable habitat for *A. priceana* exists throughout the Piney River valley. The site is owned, or was previously owned, by a timber company. Property should be acquired within and adjacent to the site boundary to ensure watershed protection, and preservation of rare species and representative plant communities.

Land Protection Needs – 10 acres at an estimated cost of $10,000.

Potential Partners – TDEC and TNC

BUFFALO STATE SCENIC RIVER AND CORRIDOR

Location – (N35.3933, W87.3657) The Buffalo River watershed includes parts of Hickman, Humphreys, Lawrence, Lewis, Perry and Wayne Counties, draining 1,823 square miles of the Interior Low Plateau Physiographic Province before emptying into the Duck River. Its entire watershed is in southern middle Tennessee, flowing into the Duck River just upstream of its confluence with the Tennessee River.

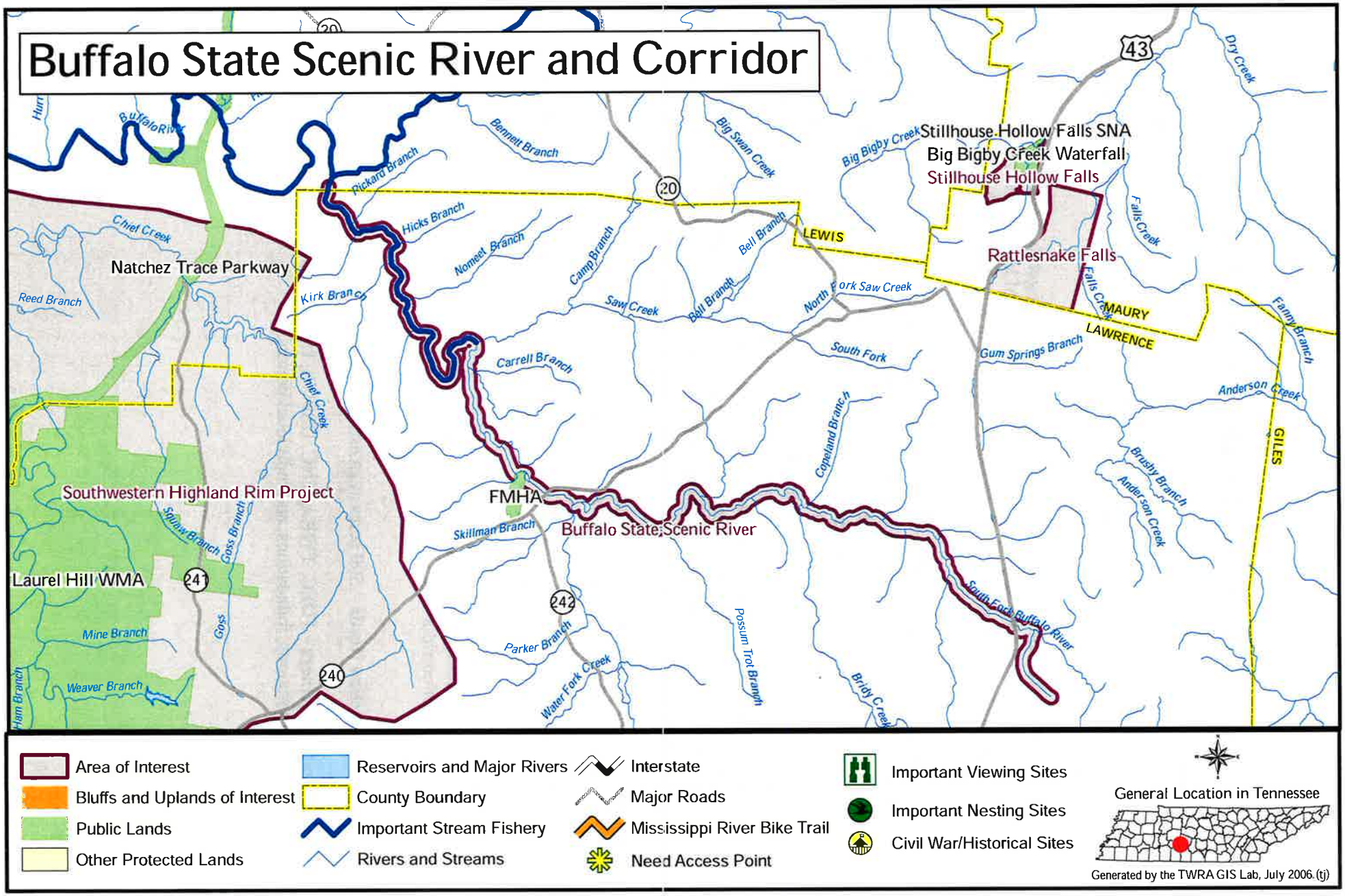
Description - The Buffalo River travels some 110 miles as it gently makes its way through rural middle Tennessee. It travels through a variety of landscapes, often pastoral through rural and agricultural lands, and at times between limestone bluffs more than 30 feet high.

Significance - The Buffalo River is one of Tennessee's most biologically diverse and significant rivers, with at least 11 rare species of fish and mussels including at least four with a federal status. It is the longest unimpounded river in middle Tennessee, flowing through the southern and western portions of that region before emptying into the Duck River near its confluence with the Tennessee River. It is the largest tributary of the Duck River and is a major stream for canoeing and fishing. Many river outfitters servicing the river attest to its value as a recreational canoeing resource in middle Tennessee. Recreational fishing and hunting are also popular activities. A part of the Buffalo River is listed as a State Scenic River because of its pastoral qualities. Approximately 18 miles of the Buffalo River in its uppermost section in Lawrence County is designated as a Class II Pastoral River.

Strategy - The site conservation plan for the Buffalo State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 450 feet from the usual banks on either side of the river. Additionally, connecting contiguous protected areas to state and other publicly owned lands along the entire river corridor are a major approach toward protecting the Buffalo River and making it a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, landowner assistance programs, and conservation buyers. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river. Public ownership of the entire river corridor is not practical; rather public ownership of key access points will be targeted.

Land Protection Needs – 500 acres at an estimated cost of $545,000.

Potential Partners - TDEC, TWRA, TNC, USFWS, USACE, county governments, private corporations, foundations, and individual donors.


Buffalo State Scenic River and Corridor
Stillhouse Hollow Falls SNA
Big Bigby Creek Waterfall
Stillhouse Hollow Falls
Rattlesnake Falls
Natchez Trace Parkway
Southwestern Highland Rim Project
Laurel Hill WMA
FMHA
Buffalo State Scenic River
LEWIS
MAURY
LAWRENCE
GILES
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BURNT HILL ROAD GLADE

Location – (N35.5607, W86.6225) Burnt Hill Road Glade is located in Bedford County between Burnt Mill Road and the Duck River. The site is located about 3 miles west of Halls Mill, a community about 5 miles south of Unionville. (See Duck River Habitat Corridor and State Scenic River map)

Description – The site encompasses approximately 200 acres between Burnt Hill road and a bend in the Duck River. The area includes seasonally wet limestone gravel glades, old fields in various stages of succession, several scattered barrens areas and a river bluff. The rare plants are restricted to the open and forested limestone glades. Soils are very heavy clay and are deeper, around 25 cm, than those in adjacent glades. Seasonal flooding is likely very important to this community and the leafy prairie clover. The running glade clover is located in a mossy cedar/hardwood forest just upslope of the above-mentioned drainage that flows into the River.

Osborne Cave, or Critter Cave, is formed in a sinkhole on the NE corner of Burnt Hill Road Glade, the most obvious feature of a NW-SE oriented strike containing numerous sinks and depressions.

Significance – Site Significance Very High (B2) – This site has one federally listed plant species, *Dalea foliosa* (leafy prairie clover), and three state listed plant species, *Schoenolirion croceum* (Yellow sunnybells), *Polygala boykinii* (milkwort) and *Trifolium calcaricum* (running glade clover). *T. calcaricum* is a very rare plant recently discovered in Middle Tennessee at a few sites. It is globally ranked as G1 and there are no sites protected in Tennessee for this species. Only one other population exists in Virginia.

This wet area has been determined to be a globally rare plant community type, a "wet calcareous meadow." Species include *Schoenolirion croceum*, *Eleocharis compressa*, *Nothoscordum bivalve*, *Carex craweii*, *Scirpus cyperinus* and *Dalea foliosa* (at this site).

In the fall of 1993, a small population of gray bats (*Myotis grisescens*), listed federally endangered, was reported in the Osborne Cave by TNC staff. Although unconfirmed, this population probably uses this site as a transition cave between summer and winter roosts. The proximity of Osborne Cave to the Duck River provides access to a natural dispersal corridor and feeding grounds. At this time only 74 feet of mapped passage is known. Access to the cave needs to be limited until the exact nature of this colony is determined.

Strategy - The first strategy would be to contact the current landowners and survey and delineate the populations of *Dalea* and *Trifolium*. There was significant disturbance observed at the site in 2000 when it was last visited. Off-road vehicle traffic and wildlife food plots had been established, along with some clearing of the glades and forest. Lespedeza, an invasive exotic, was abundant in the area of the *Dalea foliosa*. Long-term protection of this site will ensure that these threats are addressed.

The strategy for acquisition is to acquire properties within and adjacent to the site boundary for access and access control, watershed protection, and preservation of rare species and the rare plant community.

Land Protection Needs – 200 acres at an estimated cost of $325,000.

Potential Partners – TDEC, TNC, and possibly TWRA.

CANEY FORK RIVER BLUFFS

Location – (N36.1417, W85.8117) Caney Fork River Bluffs is located in Putnam and Smith Counties approximately 0.75 mile west of the Buffalo Valley (Hwy. 96) interchange along the I-40 corridor. The bluffs of interest on Moss Bend begin just east of the bridge over the Caney Fork River and along the opposite bank from the rest area and continue westward approximately 1.0 mile to the next bridge crossing over the Caney Fork River.

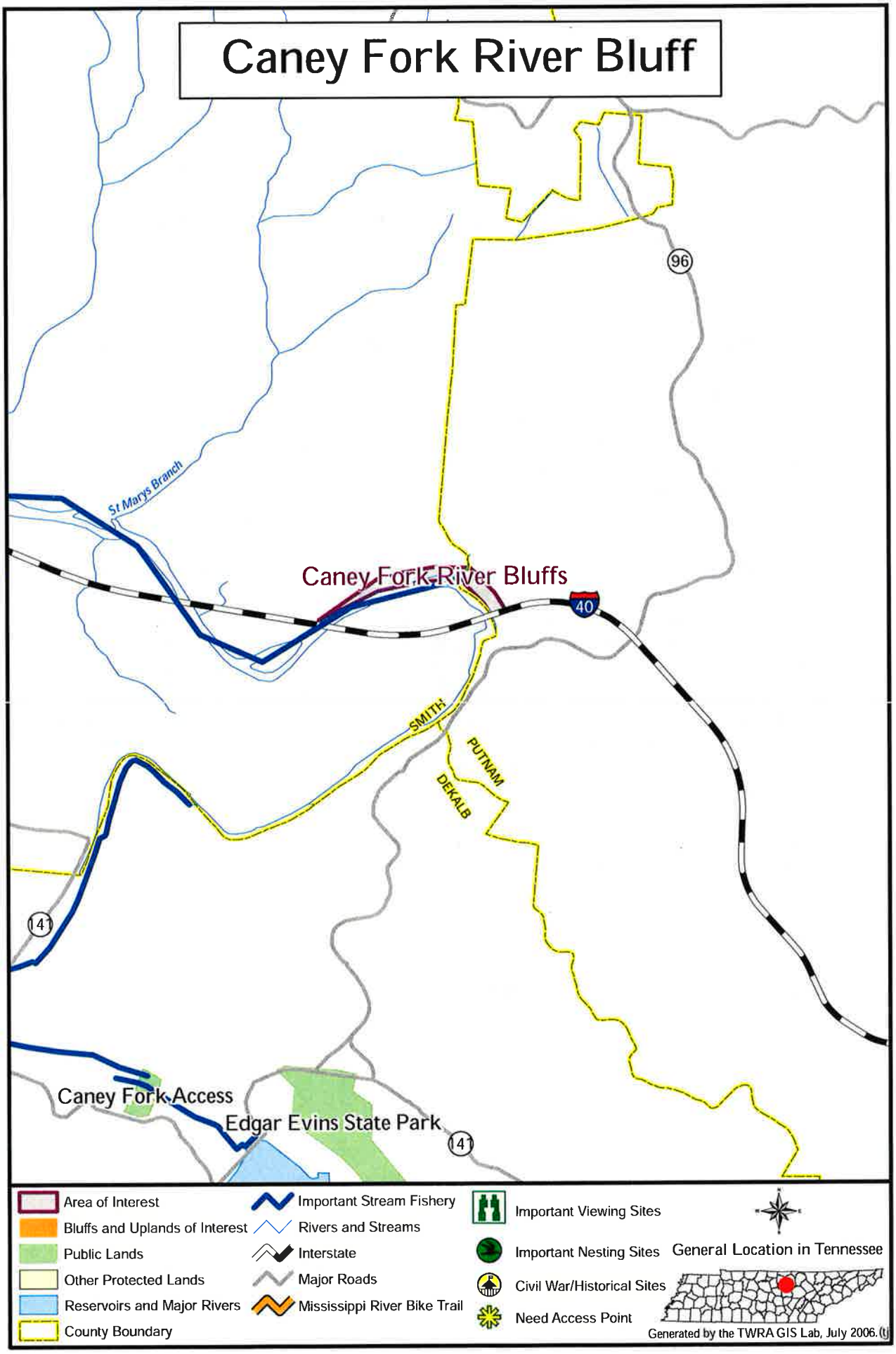
Description – The site is located on the Eastern Highland Rim Physiographic Province of the Interior Low Plateau. The site contains a thin layer of soil on dolomitic limestone ledges and in crevices of high bluffs above the Caney Fork River that support a number of state rare plants. The limestone cap on the bluffs has eroded forming a system of jumbled large boulders, irregularly blocky crests and ledges. The trees on the 100 ft. high bluffs form a low, open, dry woodland of red cedar, Shumard oak, chinquapin oak, and elm. The understory is comprised of a dense growth of shrubs such as redbud and rusty black haw, Carolina buckthorn, aromatic sumac, St. John's wort, and coralberry.

Significance – Site Importance High (B3) – Four rare plants, one rare bryophyte and one rare community exist on this site. The site harbors occurrences for Svenson's wild rye (*Elymus svensonii*), Harper's umbrella plant (*Eriogonum longifolium* var. *harperi*), western wallflower (*Erysimum capitatum*), and branching whitlow-grass (*Draba ramosissima*). This site is a high protection priority because it is the only known locality where these four species may be found together. An occurrence of the fragile tortula (bryophyte) (*Tortula fragilis*) is also present. The abundance of rare plant species on site may yet represent an undescribed forest community. The community is classified as *Quercus muehlenbergii-Quercus shumardii-Carya ovata* forest (Interior Plateau Chinquapin Oak-Shumard Oak forest).

Strategy - The strategy for acquisition would be to acquire this series of river bluffs and a setback from the top of the bluff adequate to buffer the rare plants and community on the bluffs. Fee simple acquisition or conservation easements could be utilized.

Land Protection Needs – 50 acres at an estimated cost of $100,000

Potential Partners – TDOT and TDEC.


Caney Fork River Bluff
St Marys Branch
Caney Fork River Bluffs
96
40
SMITH
PUTNAM
DEKALB
141
Caney Fork Access
Edgar Evins State Park
141
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.

CEDAR GROVE GLADE

Location – (N35.6943, W86.4124) Cedar Grove Glade Site is located in Rutherford County on the east side of Hwy 231, about 12 miles south of Murfreesboro.

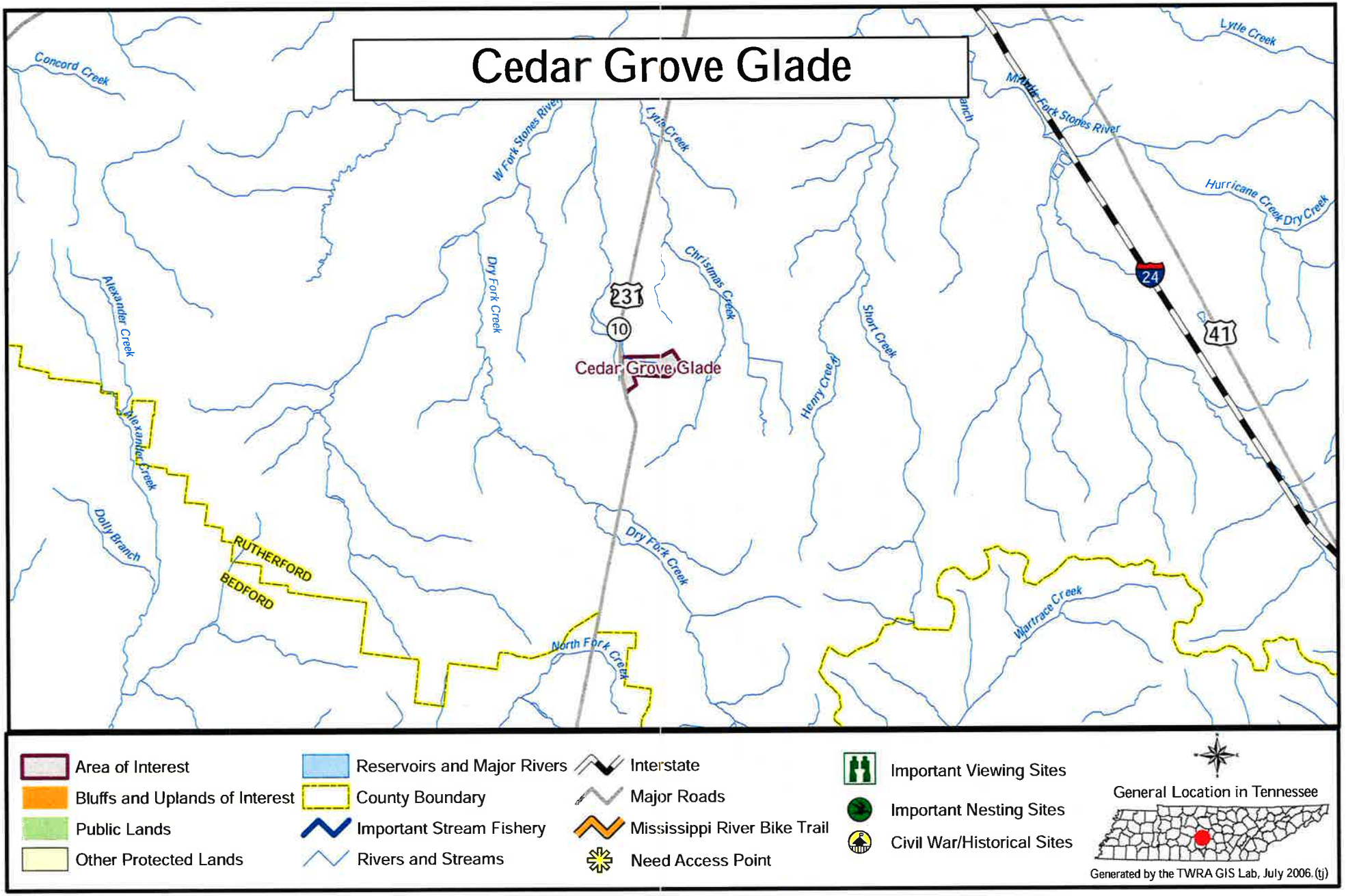
Description –The site encompasses approximately 100 acres of limestone cedar glades, sinkholes and cedar forest thickets. The property is a commercial site for heavy equipment storage and is very disturbed on the road front portion. The owner applied for a quarry permit but was denied; however, he has excavated rock in the front portion of the site. At the time of the last survey of this site in 2006, the sinkhole, glades and forests in the back of the property were intact. A wet weather stream flows through the middle of the site. The rare plants are scattered throughout the site, but the Alabama snow-wreath population is restricted to the sinkhole. The Pyne's ground plum population was impacted by the storage of the heavy equipment and excavated rock. It is believed that the Pyne's ground-plum population has been extirpated.

Significance – Site Importance Very High (B2) – Present at this site are two globally rare species. *Astragalus bibullatus* (Pyne's ground plum) is a listed federally endangered plant and is considered extremely rare and critically imperiled globally (G1). *Neviusia alabamensis* (Alabama snow wreath) is globally rare and imperiled (G2) and listed as state threatened. Other state listed species present at the site include *Polygala boykinii* (Boykin's, milkwort), *Astragalus tennesseensis* (Tennessee milk vetch), and *Onosmodium subsetosum* (false gromwell). Although the site has been disturbed, cedar glades habitats can be restored if the elements exist. The Alabama snow wreath population is important as it is one of only four known populations.

Strategy - Properties should be acquired within and adjacent to the site boundary for access control, preservation of rare species and cedar glade community type.

Land Protection Needs – 100 acres (perhaps less) at an estimated cost of $165,000

Potential Partners – TDEC and the USFWS


Cedar Grove Glade
Concord Creek
W Fork Stones River
Lytle Creek
Middle Fork Stones River
Hurricane Creek
Dry Creek
Alexander Creek
Dry Fork Creek
Christmas Creek
Short Creek
Henry Creek
231
10
24
41
Cedar Grove Glade
Dolly Branch
RUTHERFORD
BEDFORD
Dry Fork Creek
North Fork Creek
Wartrace Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CEDAR HILL SWAMP WMA

Location – (N36.5461, W86.9848) Cedar Hill Swamp is located in Robertson County northeast of Springfield along Hwy 41. The site is bisected by a railroad track and the center of the swamp is less than 1.0 mile southeast of the Cedar Hill town center.

Description - Cedar Hill Swamp is a forested, upland swamp of the Western Highland Rim. Its boundaries are easily discernable from the abrupt transition of forest or wetland to agriculture fields. On the southwest side of the railroad tracks, 164 acres are owned and managed by TWRA, but the site design includes an additional 220 acres. From wet to more mesic conditions, the dominant plant assemblages include swamp cottonwood, black willow, and button bush; red maple, blackgum, pin oak, cherrybark oak, willow oak, overcup oak, and sweetgum; and a more mesic assemblage of oaks including southern red, white, chestnut and black oaks. Annual flooding allows for a diversity of species with 33 birds, 13 amphibians/reptiles, and 50 woody plants documented.

Significance – Site Importance High (B3) – In their evaluation of Cedar Hill Swamp, Ellis and Chester (1982) considered the site one of the best examples of an oak swamp in the southern Pennyroyal Plain of Kentucky and Tennessee. Aside from the diverse wetland habitats there are three rare plants. *Carex buxbaumii* (brown bog-sedge) is listed as special concern and is considered extremely rare and critically imperiled in Tennessee. In Tennessee, it is known from only three counties. *Spiranthes odorata* (sweetscented ladies'-tresses) is state-endangered and like *C. buxbaumii* has a state rank of S1 and has only three extant occurrences from three counties. *Torreyochloa pallida* (pale manna grass, special concern/S1) occurs at the site and the only other known site for the species is Anderson Pond in White County Two other rare plants have been documented from Cedar Hill Swamp, but have not been seen since the late 1940s. It is possible that with additional inventories these rare species-and perhaps others-can be found.

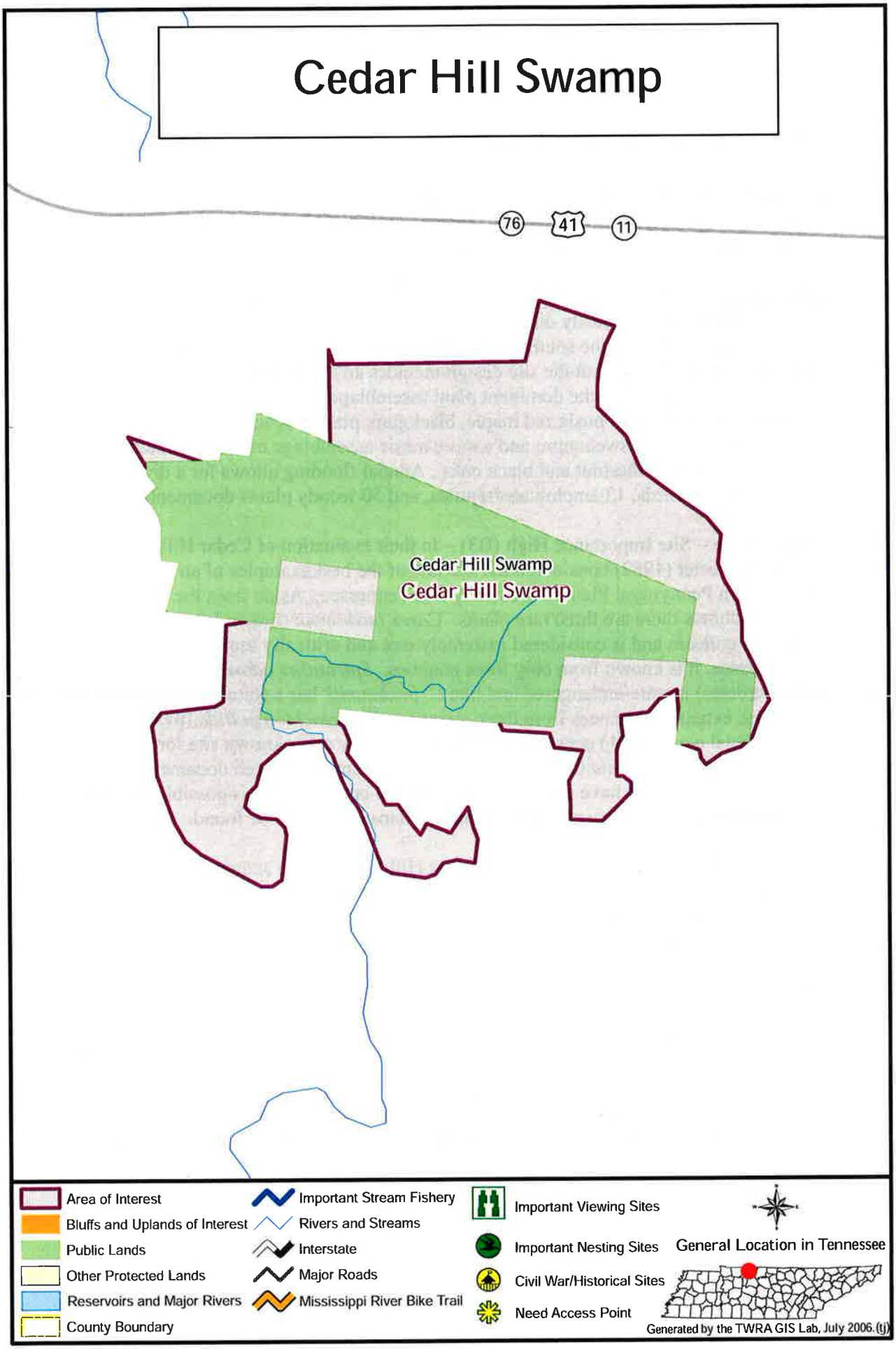
Strategy - The conservation strategy at Cedar Hill Swamp is to acquire additional wetland properties surrounding the existing wildlife management area. Additional botanical inventories would prove useful in delineating high-quality plant communities and updating existing rare plant records.

Land Protection Needs –220 acres at an estimated cost of $360,000

Potential Partners – TWRA and TDEC.

Reference - Ellis, W.H. and E.W. Chester. 1982. Evaluation of Cedar Hill Swamp Robertson County, Tennessee as a potential national natural landmark. Report to Division of Natural Landmarks, National Park Service, U.S. Department of the Interior.

Cedar Hill Swamp



CEDARS OF LEBANON STATE FOREST, SNA AND STATE PARK

Location – (N36.0829, W86.3354) Cedars of Lebanon is located in Wilson County approximately 9 miles south of I-40 at Lebanon on Hwy 231. This project also includes Vesta Cedar Glade and Vine Glade SNAs.

Description - Cedars of Lebanon State Forest (7,961 acres) originated from the Resettlement Administration. TDF assumed responsibility for the Forest in 1955. Before being purchased by the Resettlement Administration, numerous landowners with small acreage held the land. Land use was for row crops, pasture, and forests. The farmland was impoverished by erosion and the forestland was heavily cut, burned over, and damaged by grazing. About 14 % of the area is designated a Tennessee Natural Resource Area and contains at least two threatened or endangered plant species. The majority (85%) of the area is classified as forestland. Eastern red cedar is the predominant species and is found in pure stands on the very poor soils. On deeper soils and better sites it is found in mixture with hardwoods. The Forest includes 3 designated SNAs.

Cedars of Lebanon State Forest Natural Area is a 1,043-acre natural area contained within the 7,961 acre Cedars of Lebanon State Forest. 150-acre **Vesta Cedar Glade SNA** and 35 acre **Vine Cedar Glade SNAs** are also located in Cedars of Lebanon State Forest and are managed cooperatively by the Division of Forestry and the TDEC-Natural Areas Division. Each of these natural areas protects important populations of the rare Tennessee Coneflower as well as numerous other rare cedar glade flora and habitats, and are part of the largest contiguous cedar glade-barren complex in public ownership.

Cedars of Lebanon State Park consists of over 1,000 acres on the east side of Hwy 231 and roughly in the center of the State Forest. The park includes cabins, meeting rooms, swimming, group lodge, camping, picnicking, hiking, a nature center and approximately 6 miles of horse trails. Named for the dense Cedar Forest that existed in the Biblical lands of Lebanon, Cedars of Lebanon State Park is the home to the largest remaining stand of Red Cedars in the United States. In the mid 1930's land was purchased and combined into a single area for the purpose of replanting the "Red Cedars" which had been logged out for use in the pencil industry.

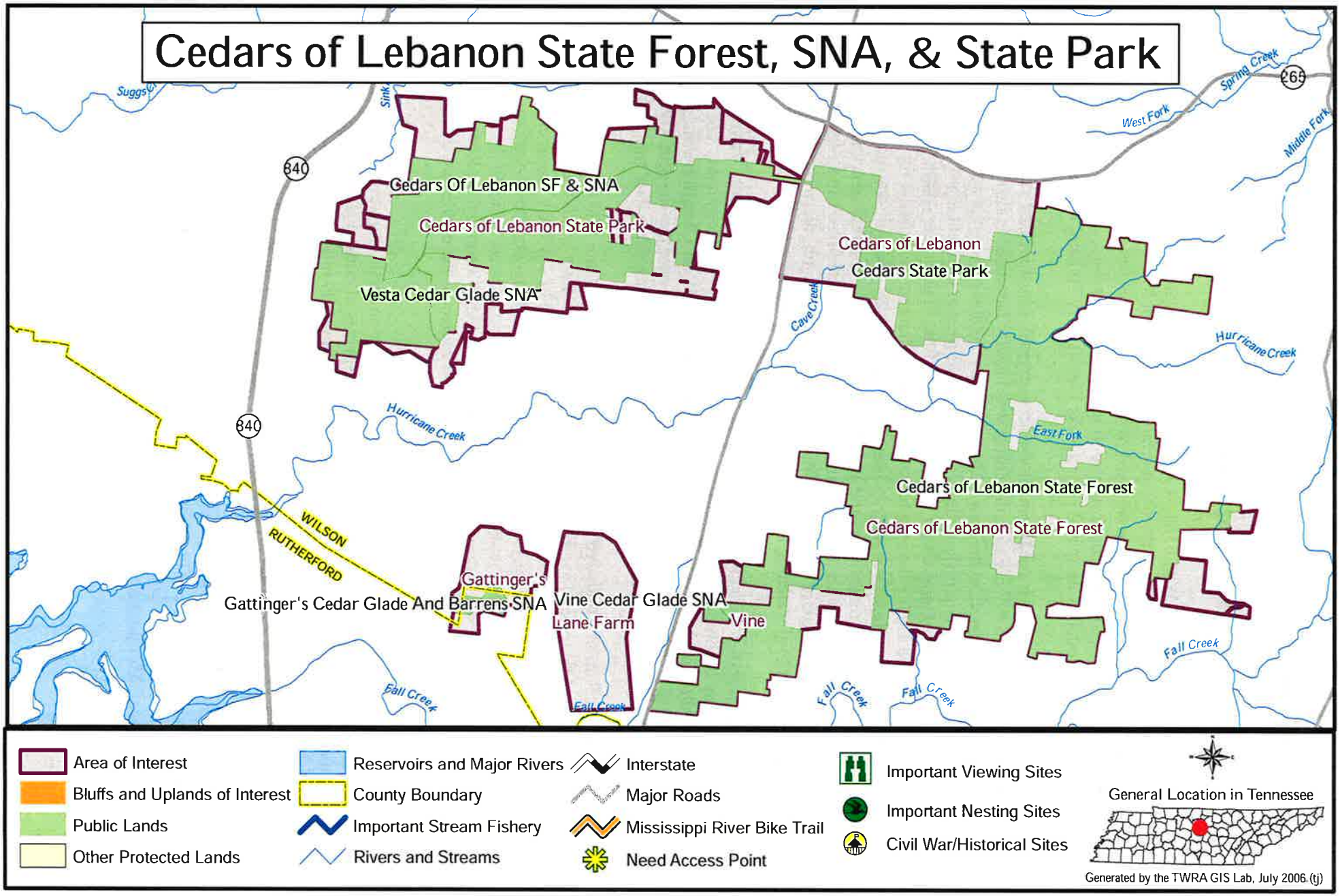
Significance – Site Importance Very High (B2) – The landscape scale of this forest, natural area, and state park area encompasses nearly all the plant communities associated with the karst topography in Middle Tennessee that supports cedar glades and barrens ecosystems. Cedar glades are commonly associated with limestone outcropping and shallow soil while barrens are prominent in deeper soils. Because of the presence of deeper soils and past fire suppression, many barrens that should be grassland have undergone succession and become cedar thickets and forests and require restoration using prescribed burning. Cedars of Lebanon also provide many excellent examples of cedar and cedar-hardwood forest community types, particularly where topography varies and there are rolling hills.

These ecologically significant glade and barrens complexes support many rare and endemic plants including the federally endangered Tennessee coneflower (*Echinacea tennesseensis*) and the federally endangered leafy prairie clover (*Dalea foliosa*). Some of the rare state species found here include Tennessee milk vetch (*Astragalus tennesseensis*), Evolvulus (*Evolvulus nuttallianus*), limestone flame flower (*Talinum calcaricum*) and yellow sunnybell (*Schoenolirion croceum*). There is much of this area's ecosystem that is fire dependent, particularly the barrens.

Strategy – The strategy for acquisition is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Access control is a major issue primarily to protect fragile species and ecosystems from motorized and non-motorized vehicle damage and is the main criteria for acquisitions. In-holdings and improvements to access the forests is the next level of criteria for acquisitions. Preservation of these communities, rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs - 3,405 needed acres at an estimated cost of $6,810,000.

Potential Partners – TDOF, TDEC


Cedars of Lebanon State Forest, SNA, & State Park
Gedars Of Lebanon SF & SNA
Cedars of Lebanon State Park
Vesta Cedar Glade SNA
Cedars of Lebanon
Cedars State Park
Cedars of Lebanon State Forest
Cedars of Lebanon State Forest
Gattinger's
Gattinger's Cedar Glade And Barrens SNA
Vine Cedar Glade SNA
Lane Farm
Vine
840
840
265
WILSON
RUTHERFORD
Hurricane Creek
Hurricane Creek
Cave Creek
West Fork
Spring Creek
Middle Fork
East Fork
Fall Creek
Fall Creek
Fall Creek
Fall Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

CHEATHAM WMA/HARPETH RIVER STATE PARK

Location – (N356.1265, W87.0584) Cheatham WMA is located approximately 5 miles south of Ashland City between the Cumberland and Harpeth Rivers in Cheatham County. The Harpeth River State Park is comprised of several separate sites along the Harpeth River in Cheatham and Davidson Counties. It includes the Narrows, Hidden Lakes, Newsome Mill, Mound Bottom and river access sites at Hwy 100 and Kingston Springs.

Description – Cheatham is predominantly a xeric-dry oak forest located on the Western Highland Rim. In the 19th century, this forest was heavily harvested to produce charcoal for several of the furnaces in the area. Approximately 20,800 acres were acquired by the TN Division of Game and Fish in the 1940's as a wildlife management area. The area was used as a source of animals for the early phases of the State's deer restoration program. Since the 1950's the area has been a favorite hunting destination for local sportsmen due to its close proximity to Nashville and has provided millions of days of hunting recreation. In recent years the area has become more important as prime habitat for many forest species since it is essentially a contiguous forested block in a region where forest fragmentation is becoming more common. As a result, the area is becoming more popular for bird watching and other wildlife recreational uses.

This project proposes to acquire two additional areas that border Cheatham. **Cave Springs Home** is composed of 918 acres on the south boundary of Cheatham. The majority of the land is covered in upland oak hickory forest. **West Cheatham** includes approximately 1,300 acres on the west boundary of Cheatham near the Harpeth River, Narrows of the Harpeth State Historic Area, and Mound Bottoms State Park properties.

This land acquisition would extend the boundaries of the Cheatham WMA. Cheatham County is being developed at a rapid rate and habitat conservation should be a high priority. This area is inhabited by many target species listed in TWRA's Comprehensive Wildlife Conservation Strategy. Those include sharp-shinned hawk, Chuck-will's-widow, whip-poor-will, yellow-billed cuckoo, eastern wood pewee, Acadian flycatcher, worm-eating warbler, wood thrush, orchard oriole, red-headed woodpecker, Kentucky warbler, yellow-throated vireo, hooded warbler, bald eagle and the cerulean warbler that is deemed in-need-of-management.

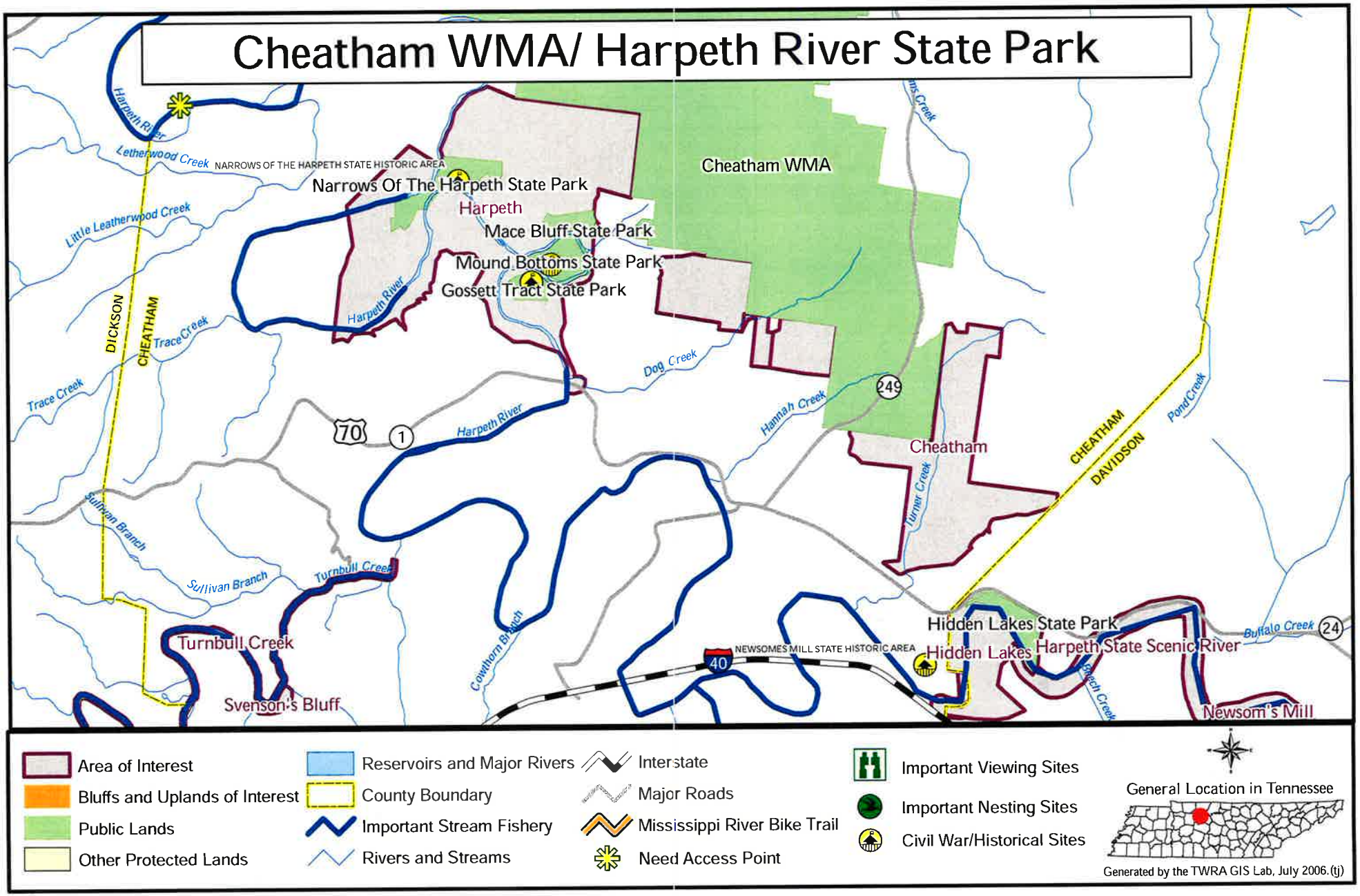
Acquisition of these properties would also afford greater protection to the watershed of the Harpeth River which is habitat for eight aquatic species of conservation need. Those include three federally endangered bivalves (dromedary pearly mussel, purple cat's paw pearly mussel, and winged mapleleaf), the finescale darter (federally listed as of management concern) Tennessee snaketail dragonfly, painted creekshell mussel, geniculate river snail, and Tippecanoe darter.

Harpeth River State Park provides canoe access, hiking trails and a collection of historic and cultural sites. **The Narrows of the Harpeth** is an ideal spot for hiking, picnicking, fishing and canoeing. It is also the site of one of the oldest man-made tunnels in Tennessee. **Mound Bottom** is a large Mississippian Mound Complex. **Hidden Lake**

is a naturalist's paradise featuring hiking trails, bluffs and abundant wildlife, while. **Newsom's Mill** is one of the oldest gristmill sites in Davidson County. Hidden Lake and Newsom's mill are also part of the Harpeth River which has been designated a state scenic river.

Lands Protection Needs – WMA - 2,217 acres at an estimated cost of $3,000,000; State Park – 1,230 acres at an estimated cost of $2,178,000.

Potential Partners – TWRA, TDEC, and the Land Trust for Tennessee


Cheatham WMA/ Harpeth River State Park
Harpeth River
Letherwood Creek
NARROWS OF THE HARPETH STATE HISTORIC AREA
Narrows Of The Harpeth State Park
Harpeth
Mace Bluff State Park
Mound Bottoms State Park
Gossett Tract State Park
Cheatham WMA
Little Leatherwood Creek
DICKSON
CHEATHAM
Trace Creek
Trace Creek
Harpeth River
Dog Creek
Hannah Creek
249
70
1
Harpeth River
Cheatham
CHEATHAM
DAVIDSON
Pond Creek
Turner Creek
Sullivan Branch
Sullivan Branch
Turnbull Creek
Turnbull Creek
Svenson's Bluff
Cowthorn Branch
NEWSOMES MILL STATE HISTORIC AREA
40
Hidden Lakes State Park
Hidden Lakes
Harpeth State Scenic River
Buffalo Creek
24
Beech Creek
Newsom's Mill
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

COLLINS TRIFOLIUM GLADE / ROCKY HILL ROAD GLADES

Location – (N35.9768, W86.3598) These two adjacent sites are located in Rutherford County on either side of Rocky Hill Road, just north of Holly Grove Road and east of Hwy 231.

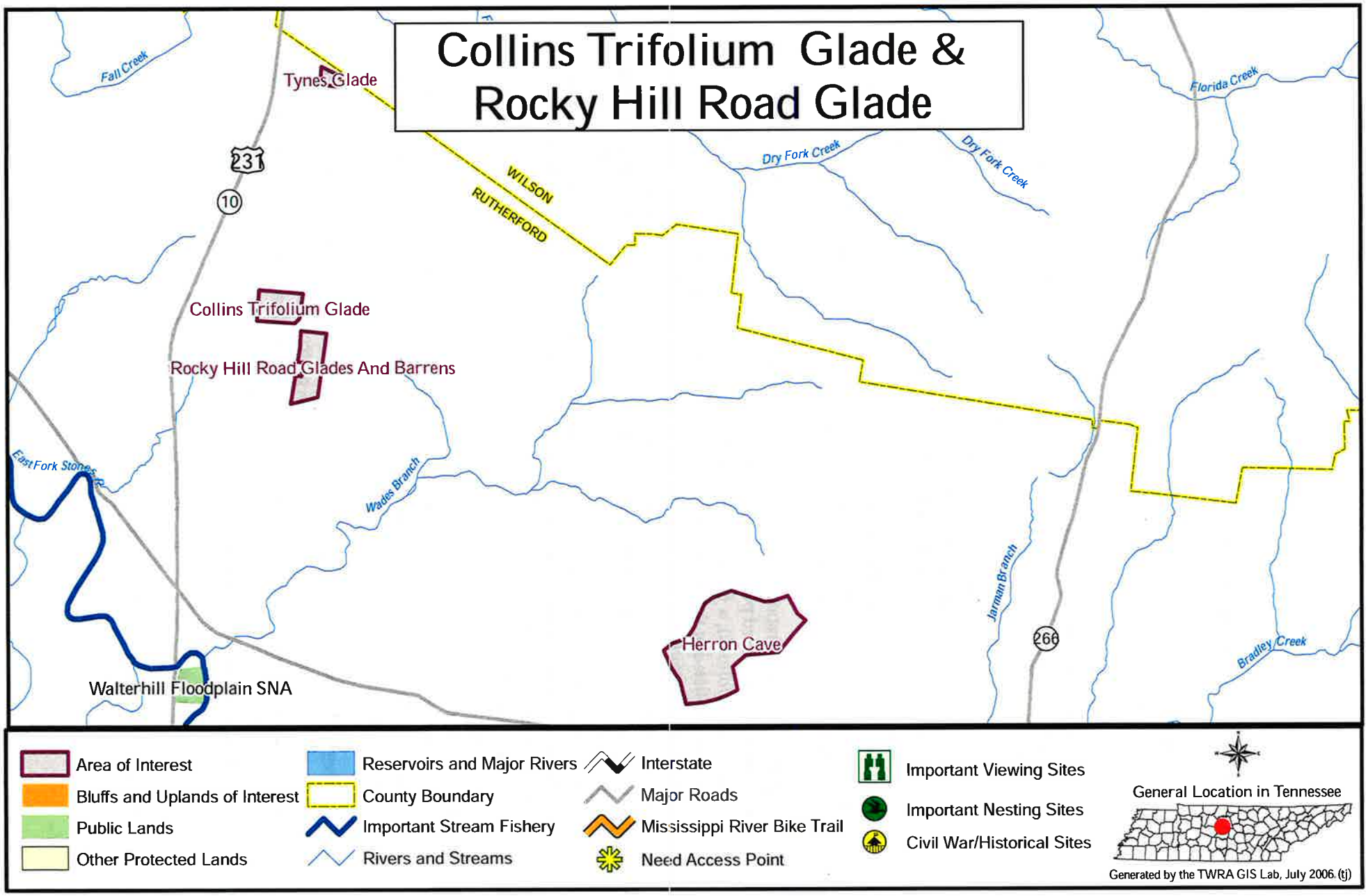
Description – The two sites together comprise 105 acres and are bisected by Rocky Hill Road. The habitat consists of Central Basin limestone cedar glades and barrens and dry limestone cedar/hardwood forests. The area is a mosaic of glades, barrens and dry woods. Cedar glades are easily recognizable habitats which lack tree canopy, often have exposed limestone at the surface, and the few woody plants (e.g. mainly eastern red cedar and glade privet) which do occur are often stunted. Even in these harsh conditions the area contains some showy plants such as Nashville breadroot (*Pediomelum subacaule*), rose vervain (*Glandularia canadensis*), star grass (*Hypoxis hirsuta*), etc. The barrens portion of the site is generally found on the edges of glades and is warm-season grass dominated. A portion of the east side of the road has a wet-weather conveyance which flows through the glade during the winter and spring.

Significance – Site Importance Outstanding (B1) – These habitats along Rocky Hill Road support five state listed plant species, and one federally listed species. Leafy prairie clover (*Dalea foliosa*), a federally endangered plant, is rare and uncommon globally. Although not listed at the federal level, the most significant species present is running glade clover (*Trifolium calcaricum*) located on the west side of the road. The species was first discovered by Leo Collins, botanist with the Tennessee Valley Authority, in 1979. A few years later he and another botanist from Virginia, Tom Wieboldt, found the species in Virginia and then described it as new to science. World-wide there are only seven known occurrences of this species, and although two occurrences are within a Virginia SNA, no Tennessee populations are protected. Running glade clover is truly a rare species and has been searched for at length by Tennessee Division of Natural Area botanists. Additional state-listed plants known from the sites include Tennessee milk-vetch (*Astragalus tennesseensis*), glade cleft phlox (*Phlox bifida* ssp. *stellaria*), which in Tennessee is restricted to the Stones River Watershed, sunnybells (*Schoenolirion croceum*) a striking spring-flowering plant of the lily family which occurs in the wet-weather washes of the glades, and limestone fame flower (*Talinum calcaricum*) which grows on open pavement-like limestone glades.

Strategy - The strategy for acquisition at Collins Trifolium Glade and Rocky Hill Road Glades is to preserve enough of the site to at least protect running glade clover, a species which could easily be extirpated from Tennessee. Properties on the east side of Rocky Hill Road should be targeted to protect significant occurrences of glade cleft phlox, sunnybells and leafy prairie clover.

Land Protection Needs – 105 acres at an estimated cost of $172,500.

Potential Partners – TDEC, USFWS. and Middle Tennessee State University.


Collins Trifolium Glade &
Rocky Hill Road Glade
Fall Creek
Tynes Glade
231
10
WILSON
RUTHERFORD
Dry Fork Creek
Dry Fork Creek
Florida Creek
Collins Trifolium Glade
Rocky Hill Road Glades And Barrens
East Fork Stones R
Wades Branch
Herron Cave
Jarman Branch
266
Bradley Creek
Walterhill Floodplain SNA
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

CUMBERLAND RIVER (HAYNES BOTTOMS/SHELTON FERRY)

Location – (N36.4537, W87.4993 and N36.3978, W87.2809) The Cumberland River (Haynes Bottoms and Shelton Ferry) project area is located along the Cumberland River floodplain in Montgomery County, approximately twelve miles southwest of Clarksville in the Dotsonville community.

Description - The project is adjacent to the Cumberland River with a small-forested riparian zone with broad alluvial bottomland agricultural fields that transition to grass and forested bluffs and back to agricultural fields. The upland areas are gently rolling with fields and scattered stands of forest. The fields are in agricultural production.

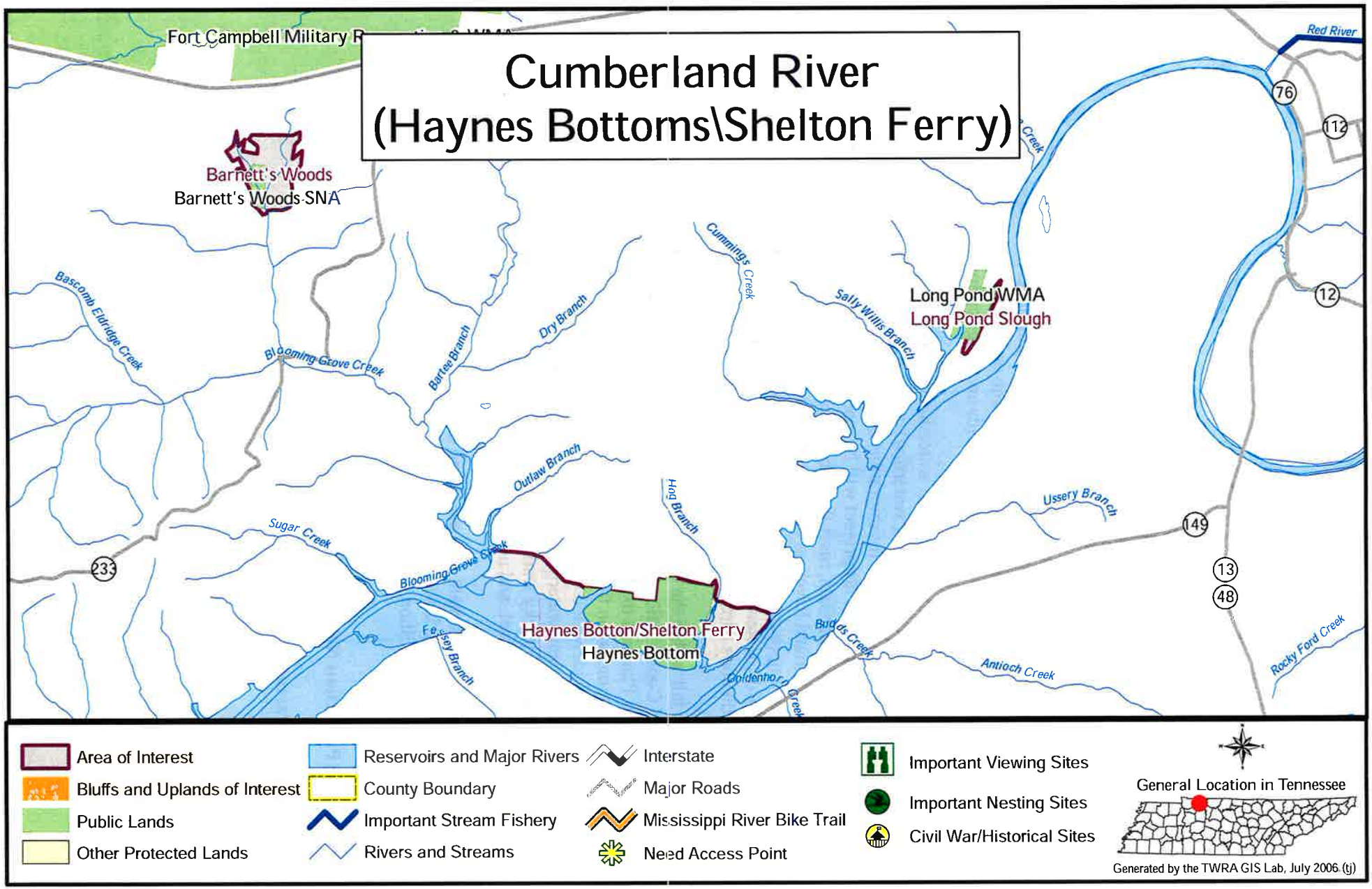
Significance - The Cumberland River watersheds of middle Tennessee serve as secondary migration corridors for waterfowl within the state of Tennessee. However, it is a major migratory corridor for migrating Canada Geese, particularly the Southern James Bay population. This project will be managed to protect critical wetlands and wetland-associated habitats, meet the habitat needs for waterfowl in middle Tennessee along the Cumberland River, as identified by the TWRA Strategic Plan for Waterfowl, and to provide important habitat benefits for priority waterfowl, neo-tropical migratory birds, shorebirds, waterbirds, and other migratory and non-migratory bird species of the Central Hardwoods Bird Conservation Region.

These areas fall within the geographic area covered by the Partners in Flight Interior Low Plateau Bird Conservation Plan and the Lower Tennessee-Cumberland Ecosystem Bird Conservation Plan and the Central Hardwoods BCR Implementation Plan. Wetland and grassland restoration on these properties will help meet habitat objectives for a number of priority species identified in these plans including American woodcock, Acadian flycatcher, Louisiana waterthrush, red-headed woodpecker, prothonotary warbler, worm-eating warbler, Kentucky warbler, field sparrow, grasshopper sparrow, eastern meadowlark, dickcissel, and northern bobwhite quail.

Four Tennessee-listed plant taxa are found on Haynes Bottom WMA. Similar habitats exist on the adjoining lands and therefore should provide suitable habitat for these listed species that include Short's rock cress, blue scorpion weed, short-beaked arrowhead and rock goldenrod.

Land Protection Needs – 1,750 acres at a cost of $3,795,360.

Potential Partners – DU and TWRA.


Cumberland River
(Haynes Bottoms\Shelton Ferry)
Fort Campbell Military R
Barnett's Woods
Barnett's Woods SNA
Red River
76
112
12
149
13
48
233
Long Pond WMA
Long Pond Slough
Haynes Botton/Shelton Ferry
Haynes Bottom
Cummings Creek
Sally Willis Branch
Dry Branch
Bartee Branch
Blooming Grove Creek
Bascomb Eldridge Creek
Outlaw Branch
Hog Branch
Ussery Branch
Sugar Creek
Blooming Grove Creek
Fessey Branch
Budds Creek
Antioch Creek
Rocky Ford Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

CUMBERLAND RIVER BLUFFS AT HARTSVILLE AND OLDHAM ROAD

Location – (N36.3768, W86.2180 and N36.37.68, W86.2166) Both of these bluff areas are located in Trousdale County on the Cumberland River, just south of Hartsville.

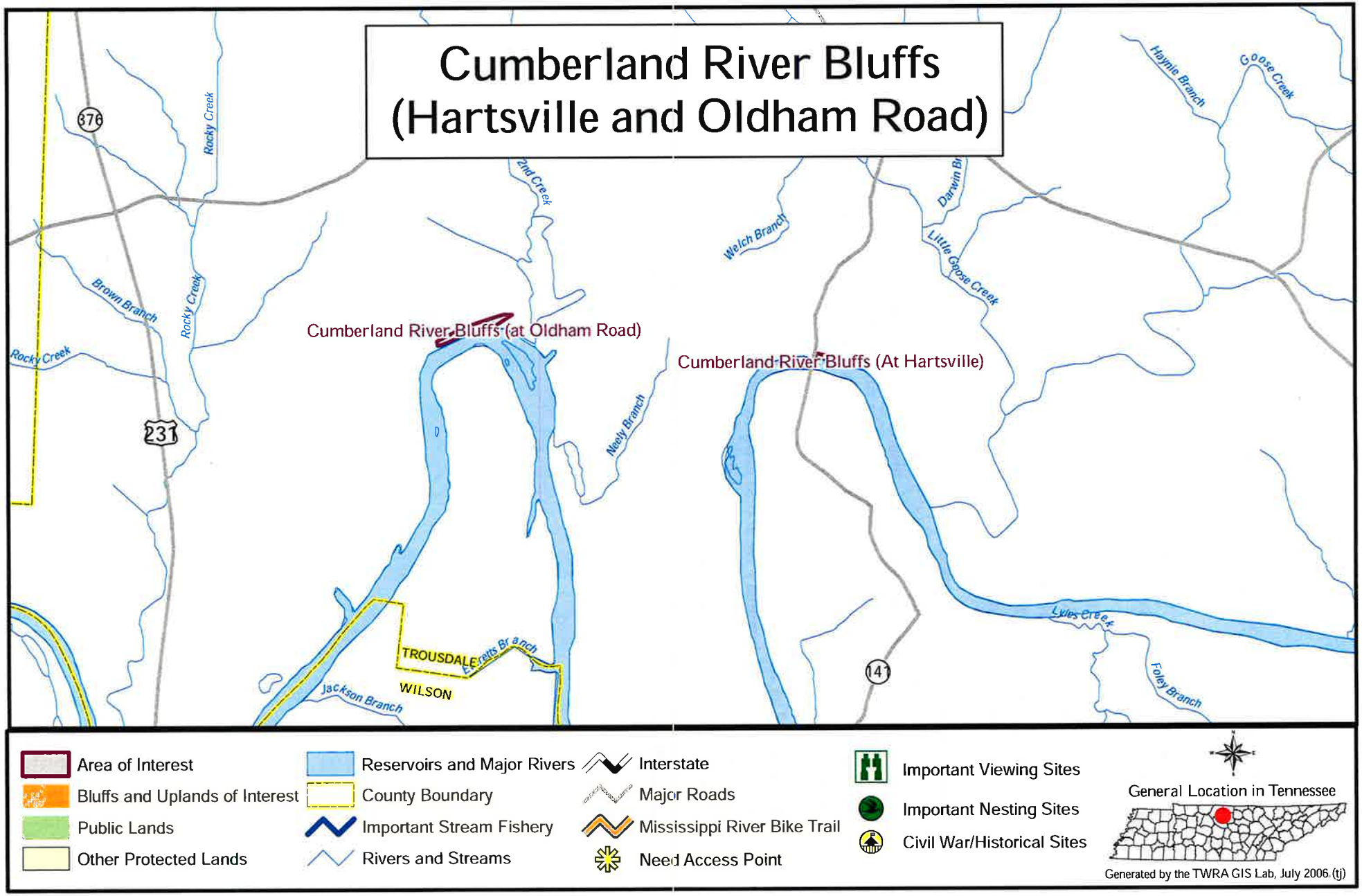
Both sites are south-facing, steep, wooded limestone bluff with 50-90% canopy cover. There are numerous rock ledges with shallow soil and herbaceous and shrub vegetation. This part of the Cumberland River is in the Old Hickory Lake Reservoir and managed by the USACE, however, the bluffs are private property. The water levels are controlled and probably fluctuate seasonally.

Significance - Site Importance High (B3). These sites consist of a moderate sized population of Short's bladderpod, *Lesquerella globosa*, a globally rare and imperiled(G2) species listed as state endangered. It is also listed as a "candidate for federal status" by the USFWS. Another rare plant species at these sites is *Stellaria fontinalis* (water stitchwort), which is listed as state threatened and is globally ranked as rare/vulnerable (G3).

Strategy - The strategy for acquisition of this site is to acquire properties within and adjacent to the site boundary for access control, watershed protection, and preservation of the rare species. There are no protected sites for Short's bladderpod in Tennessee and most of the sites are on the bluffs of the Cumberland River.

Land Protection Needs – 23 acres at an estimated cost of $45,000.

Potential Partners – TDEC, USFWS, and USACE.


Cumberland River Bluffs
(Hartsville and Oldham Road)
Cumberland River Bluffs (at Oldham Road)
Cumberland River Bluffs (At Hartsville)
Rocky Creek
Brown Branch
Rocky Creek
Rocky Creek
Welch Branch
Darwin Br
Little Goose Creek
Haynie Branch
Goose Creek
Neely Branch
Lyles Creek
Foley Branch
Jackson Branch
TROUSDALE
WILSON
376
231
141
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

CUMBERLAND RIVER BLUFFS AT SULPHUR SPRINGS

Location – (N36.2416, W87.0405) The Cumberland River Bluffs at Sulphur Springs site (also known as the Marrowbone Creek site) is located in Cheatham County near Ashland City.

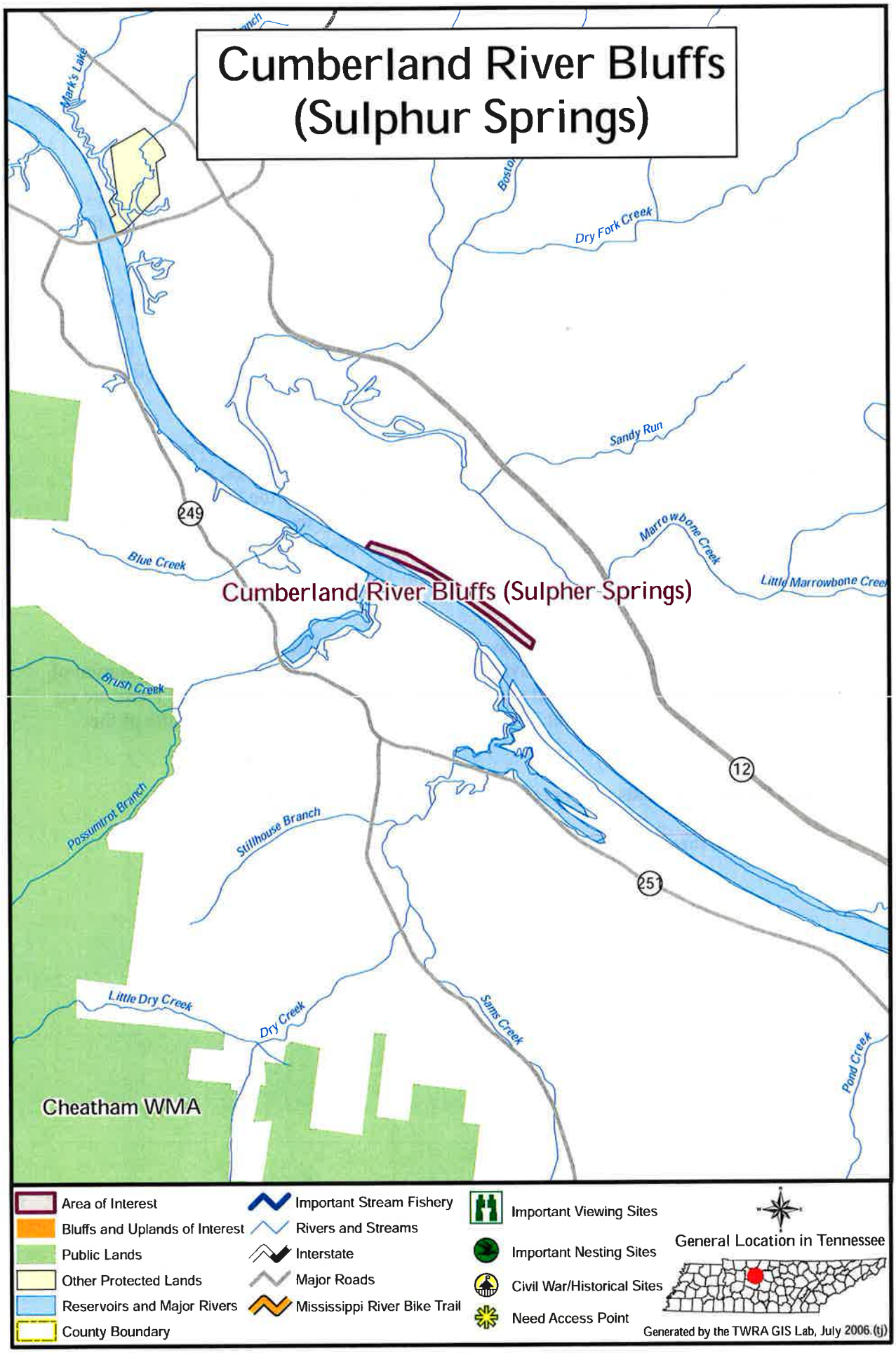
Description – The site encompasses approximately 33 acres along the limestone bluff line on the north side of the Cumberland River. A railroad runs along the base of the slope. The Short's bladderpod plants are growing along the railroad bed, on the ledges of the steep, open south-facing bluff and in talus at the base of the cliff. In 1998, it was observed that the site area had burned recently.

Significance – Site Importance High (B3). The site consists of a large population of Short's bladderpod, *Lesquerella globosa*, a globally rare (G2) species, and is state endangered. It is also listed as a candidate for federal status by the USFWS. In 1998, approximately 1,000 plants were scattered for 1 mile along the old railroad and bluff. The railroad along this stretch has not been operational for many years, however, maintenance is still done with clearing and herbicide spraying. This is a definite threat to the bladderpod population.

Strategy - The strategy for acquisition of this site is to acquire properties within and adjacent to the site boundary for access control, watershed protection, and preservation of the rare species. This is the largest site for Short's bladderpod in Tennessee. There are no protected sites for this species in Tennessee with most of the sites on the bluffs of the Cumberland River.

Land Protection Needs – 33 acres at an estimated cost of $66,000.

Potential Partners – TDEC, USFWS, and USCOE.


Cumberland River Bluffs
(Sulphur Springs)
Mark's Lake
Dry Fork Creek
Sandy Run
249
Blue Creek
Marrowbone Creek
Little Marrowbone Creek
Cumberland River Bluffs (Sulpher Springs)
Brush Creek
Possumtrot Branch
Stillhouse Branch
12
251
Little Dry Creek
Dry Creek
Sams Creek
Pond Creek
Cheatham WMA
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DAVID CROCKETT STATE PARK

Location – (N35.2650, W87.3618) David Crockett State Park is located off Highway 64, west of Lawrenceburg in Lawrence County.

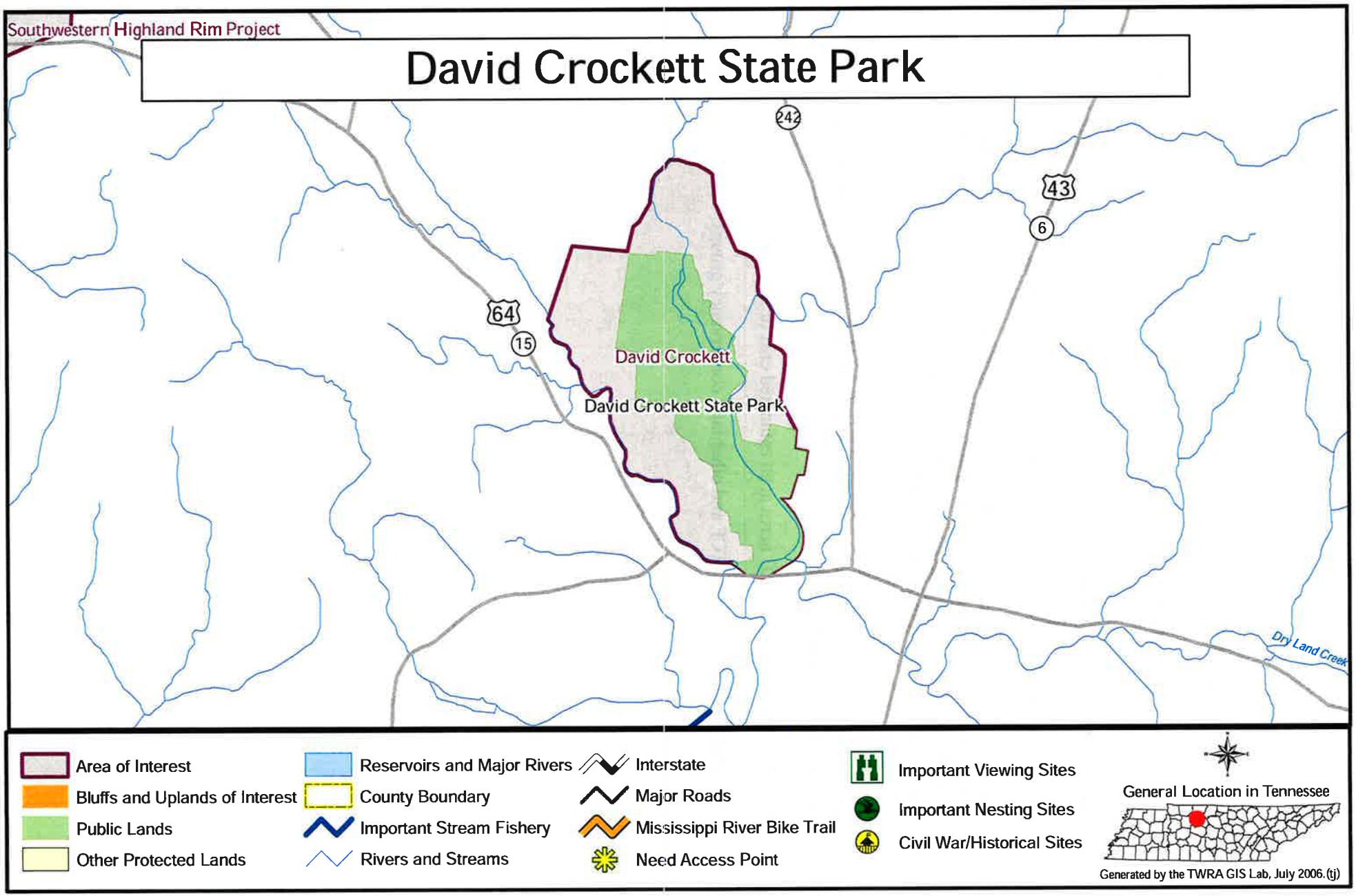
Description - David Crockett State Park was dedicated in 1959 in honor of one of Tennessee's favorite sons. The park has 1,100 acres with a lake where whitetail deer and wild turkeys can be easily viewed as you drive through the park.

Significance - David Crockett-pioneer, soldier, politician, industrialist, legislator, statesman, patriot and hero established a diversified industry consisting of a powder mill, gristmill and a distillery along the bank of Shoal Creek in what is now his namesake park. All three operations were washed away in a flood in 1821.

Strategy - The strategy for future acquisitions for David Crockett State Park is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 603 acres at an estimated cost of $1,370,000.

Potential Partners – TDEC, TCF and other land conservancy groups.


Southwestern Highland Rim Project
David Crockett State Park
242
43
6
64
15
David Crockett
David Crockett State Park
Dry Land Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DEVIL'S BACKBONE AREA

Location – (N35.6005, W87.3952) Devil's Backbone is located on the Western Highland Rim in Lewis, Hickman and Maury Counties. The project area is between Mt. Pleasant and Hohenwald and is bisected by the Natchez Trace Parkway. The area includes Devil's Backbone SNA, Hickman County Bat Cave, Langford Branch Designated SNA, Sandy Mitchell Hollow, and Twin Falls Hollow.

Devil's Backbone SNA (N35.5949, W87.3951) (Site Importance – B4) offers a visitor the opportunity for a quiet hike in a natural environment little affected by modern human action. It is located off of the Natchez Trace Parkway out along the ridges of Tennessee's Highland Rim. It is a highly dissected landscape with steep dry ridges and unfragmented forest.

Devil's Backbone has many important values that make it a significant ecological preserve. Its single most important value is community diversity. Many of the upland vegetation types of the Western Highland Rim occur here. These include: 1) white oak-northern red oak-hickory forest, 2) chestnut oak forest, 3) chestnut oak-black oak-hickory forest, 4) beech-tuliptree-white oak-sugar maple forest, 5) chestnut oak-shortleaf pine forest, 6) white oak-northern red oak-tuliptree forest, 7) scarlet oak-southern red oak-mockernut hickory forest and, 8) sycamore-tuliptree-beech forest.

Not many high quality examples of Western Highland Rim forest communities are known to exist because of present and past land use patterns. While Devil's Backbone represents second or third growth forest, it is unlikely many other sites on the Western Highland Rim will be identified that better represent the region's upland vegetative types. The forested area outside the existing boundary provides an important buffer and creates a much larger landscape scale ecosystem. The integrity is further improved since there is little exotic pest plant invasion compared to many other areas in the region. Another value relates to its recognition as a Class 1 scenic - recreation area. It can support day use activities and provide education opportunities regarding natural area values without impairing sensitive ecological areas. This opportunity is enhanced because of its location on the Natchez Trace Parkway.

The strategy for acquisition at Devil's Backbone is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Hickman County Bat Cave (N35.6327, W87.4390) (Site Importance B3) occurs in the Leipers formation and Brassfield limestone. According to Barr (1961): "Bat Cave is the largest known cave in Hickman County. Apparently, it is a tunnel cave, which is more than 3,000 feet in length. A stream sinks at the upper mouth and emerges at a cave on the bank of Swan Creek at an elevation of 580 feet. The writer has explored both upper and

lower caves but has not attempted to penetrate the low, wide, bedding-plane crawlway by which they are presumably connected. The upper mouth is 60 feet wide and 15 feet high. For 2,000 feet the cave adopts a sinuous course, but the predominant direction is southwest. Near the mouth the cave is rather large, but the average dimensions are 15 feet high and 5 to 10 feet wide. The lower mouth, which opens in a bluff, is 30 feet wide and 12 feet high. Within a short distance the ceiling height drops to 4 feet. This section of the cave was explored for 300 feet, and, although the width remains about 10 feet, the ceiling becomes progressively lower. Bat Cave is well known to the local residents, and the creek bank in front of the lower mouth is a favorite site for picnics." The total length of mapped passages is 3,000 ft (upper cave) and 500 ft (lower cave) (Tennessee Cave Survey, 2003).

This cave is home to a large summer roost of the state and federally endangered gray bat (*Myotis grisescens*). This species is considered vulnerable and imperiled (G3S2). A population of 10,000 gray bats was reported in the summer of 2002 (Harvey, 2002). Previous observations recorded in the DNA Biotics database indicate that this may be a maternity roost. The cave also supports a population of the eastern woodrat (*Neotoma magister*), deemed in-need-of-management. With the presence of woodrats and gray bats, the cave likely supports a diverse assemblage of cave-obligate invertebrates, many of which are extremely rare and narrowly endemic to the region.

The primary concern for the conservation of the gray bat is uncontrolled access. Disturbance of gray bats during roosting periods can significantly reduce colony size, and ultimately drive them away. In addition to protecting an initial one-acre around each entrance of the cave, the cave may need to be posted to discourage inappropriate access. Acquisition of additional acreage will provide for establishment and maintenance of a forested corridor from the entrances to Big Swan Creek, over which the bats may be expected to feed. Ideally, the entire recharge area of the cave should be acquired to protect it from incompatible land use.

Langford Branch (N35.5698, W87.3352) (Site Importance B2) is a 23-acre natural area in Lewis County owned by the Swan Conservation Trust. It is a forested landscape and supports a small Xyris seep. The steep slopes on the property support an oak barrens community.

Langford Branch is significant because of the occurrence of a population of the federally endangered Tennessee yellow-eyed-grass (*Xyris tennesseensis*), which is found in a small seep on the property. The seep is formed from a Paleozoic deposit of gravel and sand in a calcareous matrix, bounded over and beneath by shale. Tennessee yellow-eyed grass is one of the rarest plant species in the state, and is known only from locations in Lewis County. It occurs outside of Tennessee in only a few places in Georgia and Alabama. Tennessee yellow-eyed grass was first described to science in the 1980's from plants collected at Langford Branch by Dr. Robert Kral, who at the time was professor of botany at Vanderbilt University.

Langford Branch is a small hilly area that is mostly under an oak-hickory forest canopy. The steepest slopes support a good example of a small barrens grassland community with little bluestem and many species of legumes and sunflowers present. These steep slopes are underlain by cherty Fort Payne limestone outcroppings with eastern red cedar, post oak, and few other tree species growing where soils permit. The seep community occurs in an open area and is referred to as a Parnassia seep. The rare state listed Grass of Parnassia (*Parnassia grandifolia*) covers large areas of the seep. It is easy to identify because of its large round shaped leaves. The rare shorted-headed rush (*Juncus brachycephalus*) also occurs in this seep. This Parnassia seep community is ranked as a globally rare community type.

Sandy Mitchell Hollow (N35.57605, W87.3402) (Site Importance B2) is deeply dissected with calcareous sloping seeps along the steep stream banks of a small gravel bottomed stream. Herbaceous cover is relatively thick and the substrate is rarely visible. Such thin soiled calcareous sloping seep communities are very fragile unique habitats with a very limited distribution.

The focus of the site conservation plan for Sandy Mitchell Hollow will be protection of a population of *Xyris tennesseensis.* Protection and conservation of this species' very unique habitat is critical for its continued persistence and survival. *X. tennesseensis* generally inhabits seep slopes, spring meadows, or the banks of small streams in open or thinly wooded, wet habitats with calcareous rocks often at or near the surface. The population at Sandy Mitchell Hollow was first observed in 1984. The species was most often found at the site growing in association with the woody species *Alnus serrulata* and *Cornus amomum.* The surrounding tree canopy was dominated by various species of oak and hickory, particularly *Quercus alba* and *Fagus grandifolia.* Common associated herbs included *Amphicarpea bracteata, Parnassia grandifolia*, and *Rudbeckia fulgida.* Other associated herbs included *Cyperus strigosus, Impatiens campensis, Juncus brachycephalus, Lobelia siphilitica, Ludwigia alternifolia, Microstegium vimineum, Muhlenbergia sylvatica, Oxypolis rigidior*, *Phlox glaberrina*, *Polygonum spp, Scirpus cyperinsus, and Solidago uliginosa.* Two of these species are listed special concern plants in Tennessee: *J. brachycephalus* and *P. grandifolia.* Another species documented from this site is *Liparis loeselii* listed as state threatened. *J. brachycephalus*, *P. grandifolia*, and *Xyris tennesseensis* are also considered part of the larger globally rare seep community, the *Carex lurida-Carex leptalea-Parnassia grandifolia-Juncus brachycephalus* herbaceous community. This community generally forms on steep slopes with thin-layered soils containing slate. Layers of this soil and slate tend to gradually slough off serving as a means to retain the open habitat required by these plants.

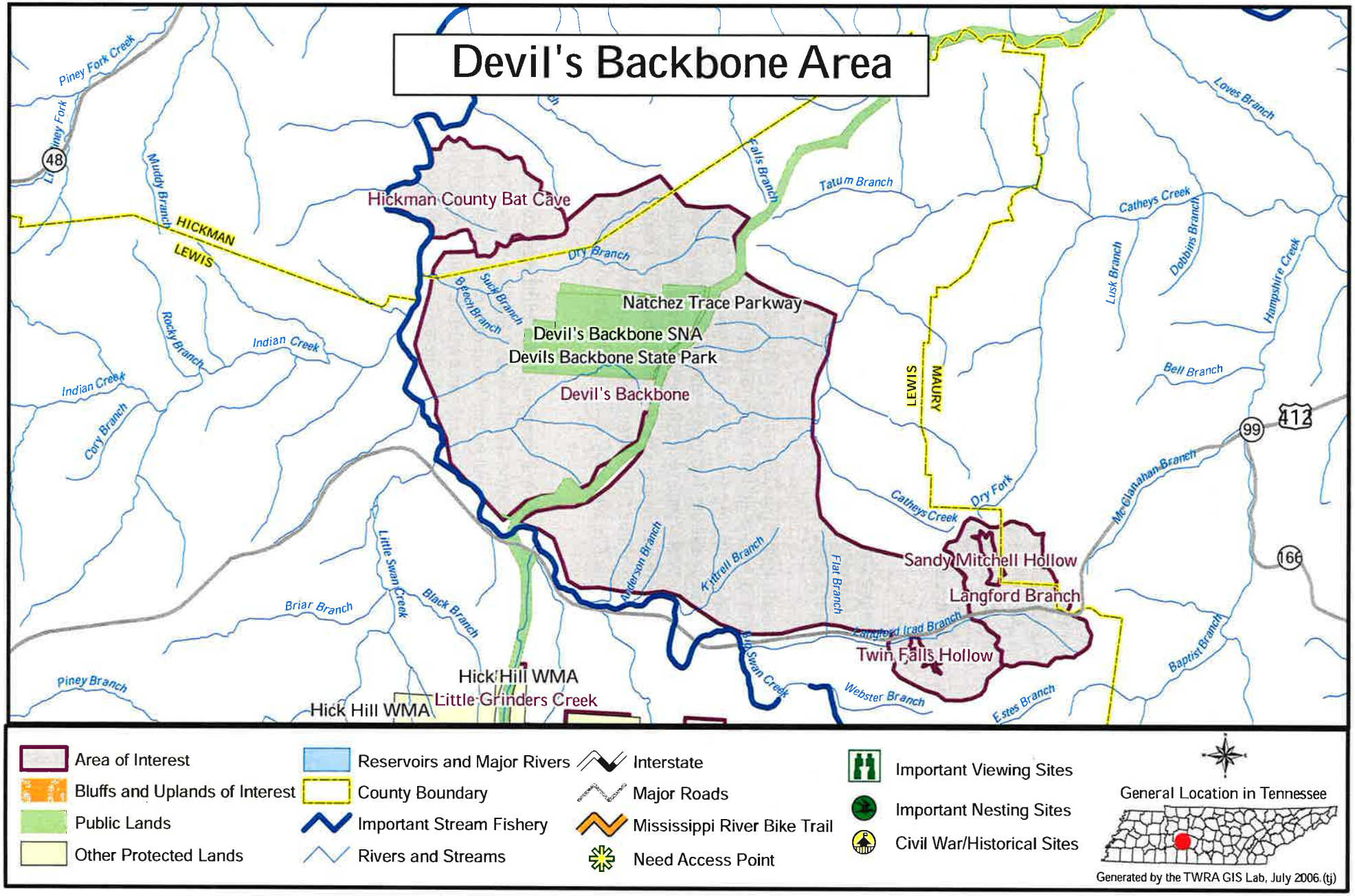
To date, the private landowner at Sandy Mitchell Hollow has been unwilling to enter into any agreements that would aid in the protection of the site. Knowing this, the current strategy is to continue dialogue with the landowner in hopes of obtaining such an agreement, particularly a conservation easement.

Twin Falls Hollow (N35.5612, W87.3533) (Site Importance B1) consists of a series of six calcareous seeps located along steep stream banks of a gravel-bottomed creek. The seeps are considered to be the largest such examples of this community in Tennessee, with the largest encompassing 3,500 ft^2. Twin Falls Hollow is also one of the highest quality locations for *X. tennesseensis*. The site contains G1 community (calcareous seeps).

Currently, TNC is under negotiations with the private landowner in order to acquire the 80-acre subwatershed of Twin Falls Hollow. Because the DNA lacks the flexibility in allowing the private landowner to retain hunting rights to the tract of land, TNC remains the primary negotiator in purchasing Twin Falls Hollow. Once TNC has obtained Twin Falls Hollow, then the primary goal will be to designate the site as a natural area in order to establish adequate levels of protection to the site.

Land Protection Needs – Devil's Backbone - 10,292 acres at an estimated cost of $16,438,000; Hickman County Cave - 918 acres at an estimated cost of $998,000; Langford Branch - 928 acres at an estimated cost of $1,003,000; Sandy Mitchell Hollow - 50 acres at an estimated cost of $55,000; Twin Falls Hollow - 24 acres at an estimated cost of $33,000.

Potential Partners – TDEC, NPS, TNC, TWRA, USFWS, TDEC, and Swan Conservation Trust.


Devil's Backbone Area
Hickman County Bat Cave
Natchez Trace Parkway
Devil's Backbone SNA
Devils Backbone State Park
Devil's Backbone
Sandy Mitchell Hollow
Langford Branch
Twin Falls Hollow
Hick Hill WMA
Little Grinders Creek
Hick Hill WMA
HICKMAN
LEWIS
LEWIS
MAURY
Piney Fork Creek
Muddy Branch
Rocky Branch
Indian Creek
Indian Creek
Cory Branch
Briar Branch
Little Swan Creek
Black Branch
Piney Branch
Beech Branch
Suck Branch
Dry Branch
Falls Branch
Tatum Branch
Anderson Branch
Kittrell Branch
Flat Branch
Langford Trad Branch
Little Swan Creek
Webster Branch
Estes Branch
Catheys Creek
Dry Fork
Catheys Creek
Lusk Branch
Dobbins Branch
Hampshire Creek
Loves Branch
Bell Branch
McGlanahan Branch
Baptist Branch
48
99
412
166
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DRIPPING ROCK BLUFF SNA

Location – (N36.2106, W85.9203) This 67 acre site is located in Smith County approximately four miles southeast of the city of Carthage. (See Bridgewater Cave map)

Description - Located in the Central Basin, Dripping Rock Bluff is a NW-facing slope overlooking Boulton Bend on the Caney Fork River approximately 3 miles from its junction with the Cumberland River at Carthage. This bluff is actually the steep slope rising from 460 feet along the Caney Fork to nearly 1,000 feet at the top of the hill. Just above the Caney Fork River there is a sheer, dripping rock face, which rises about 10 feet above the river. On this wet rock ledge a large population of the rare sandwort, *Stellaria fontinalis* (state status: threatened), was discovered by University of Tennessee botanists in 1980.

The slope above this rock face is forested by a mixture of young hardwoods consisting primarily of oaks, ash, hickory, hackberry, and sugar maple. Parts of this hill have been pastured in the past but the slope above the dripping rock face is too steep for pasturing.

Significance – Site Importance High (B3) - Most of the known populations of *Stellaria fontinalis* are in perilous situations and no protected populations are known. This species is being proposed for federal listing and has been reported from Maury, Williamson, Davidson, and Cheatham counties in Tennessee and two Kentucky counties as well as this Smith County record. Within one half mile of this site is a limestone mining operation which does not appear to pose any immediate threat to Dripping Rock Bluff, but future limestone mining of this hill is conceivable. In addition, adjacent land is owned by the American Zinc Co. who may also own the limestone mining operation in the area.

Strategy - The strategy for acquisition at Dripping Rock Bluff Registered SNA is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 66.8 acres at an estimated cost of $100,200.

Potential Partners – USFWS and TDEC.

DRY BRANCH

Location – (N35.6022, W87.6411) Dry Branch is located in Lewis County in the Western Highland Rim Physiographic Province. It is located north of Hwy 412 and east of Brush Creek Road. (See Southwestern Highland Rim Project map)

Description – This site is in an area of steep dissected hills and contains both seeps and small clumps of vegetation growing in limestone edges and cracks along Dry Branch Creek and its tributaries. The seeps and other *Xyris tennesseensis* locations within the Dry Branch watershed are located within Streamside Management Zones (SMZs) and have not been significantly altered or impacted and retain their natural forest composition. However, much of the ridges and slopes are being converted to pine plantations. The seeps and other *X. tennesseensis* locations within the Dry Branch watershed cover about 2,600 acres.

Significance – Site Importance Outstanding (B1) – The focus of the site conservation plan for Dry Branch will be protection and management of populations of Tennessee yellow-eyed grass *(Xyris tennesseensis)* (G2). *X. tennesseensis* is a small herbaceous perennial known from only 15 sites in Tennessee, Georgia, and Alabama. Six sites in Lewis County represent the only extant occurrences of the plant in Tennessee. *X. tennesseensis* is rare throughout the United States with a state and federal status of endangered. Protection and conservation of this plant's very unique habitat is critical for its continued survival.

X. tennesseensis generally inhabits seep slopes, spring meadows, or the banks of small streams in open or thinly wooded, wet habitats with calcareous rocks often at or near the surface. At Little Grinders Creek, the plant was found growing in association most commonly with state listed large-leaved grass-of-parnassus (*Parnassia grandifolia)*. The surrounding tree canopy was dominated by various species of oak and hickory, particularly *Acer rubrum* and *Quercus alba*. Common associated herbs included *Amphicarpea bracteata, Juncus effusus*, *Parnassia grandifolia*, and *Rudbeckia fuligida.* Other less common associated herbs include *Carex spp*, *Cyperus spp, Impatiens sp*, *Juncus effusus, Oxypolis rigidior*, and *Phlox glaberrina.*

Strategy - The strategy for acquisition at Dry Branch is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 1,117 acres at an estimated cost of $1,100,000.

Potential Partners – TDEC, TWRA, USFWS, TNC

DUCK RIVER HABITAT CORRIDOR AND STATE SCENIC RIVER

Location – (N35.5733, W86.9327) The Duck River project area includes a one-half mile buffer approximately seventy-three miles long along the Duck River in Marshall and Maury counties from the community of Williamsport upstream to Henry Horton State Park. The Tennessee Scenic Rivers Act designates a 450 feet corridor from the usual banks on either side of the river as a Class II Pastoral State Scenic River for 37 miles. This project includes the subprojects of Duck River Bluffs, Sowell Mill Glade, and Yanahli WMA.

Description - The Duck River begins in Coffee County and winds for 269 miles through eleven counties draining a watershed of 29,396 square miles (1,747,858 acres) before it empties into the Tennessee River. It is the longest flowing river in Tennessee and flows through forested and agricultural areas. The land adjoining the river has been extensively cleared in certain areas and supports a variety of agricultural uses, especially beef cattle production. The major urbanized areas along the Duck River are Manchester, Shelbyville, and Columbia.

The Duck River Habitat Corridor is the most biologically diverse watershed in the United States and is globally significant due to its extraordinary biological diversity. It supports the greatest diversification of freshwater mussels (55 taxa) in Tennessee including four endangered species: oyster mussel, tan rifleshell, birdwing pearly mussel, and the Cumberland monkeyface. To protect this important mussel resource, the entire river has been designated as a mussel sanctuary by TWRA, thereby prohibiting the commercial harvesting of mussels or disturbance of their habitat. Additionally, the river habitat supports a population of the endangered pygmy madtom. The TWRA has a restoration project underway to augment the population strengths of this species. It supports a significant sport fishery and is excellent habitat for smallmouth bass, rock bass, largemouth bass, and various species of catfish.

TWRA manages two properties along the Duck River. They are the 1,600 acre Williamsport WMA and the 12,800 acre Yanahli WMA. Both of these areas support a diverse avian community ranging from wetland-associated species to upland forest associated species. Yanahli has had 149 bird species documented as using this area and Williamsport 186 species. Of these; the yellow-billed cuckoo, red-headed woodpecker, eastern wood-peewee, blue-winged warbler, Louisiana waterthrush, Kentucky warbler, and field sparrow are designated as priority species by Partners In Flight and the Central Hardwoods Bird Conservation Region Implementation Plan.

The Duck State Scenic River is clearly one of the most biologically rich and diverse rivers in North America. Over 500 species of aquatic plants, fish and invertebrates have been documented in the section of the Duck River that has been designated as a State Scenic River alone, including 39 mussel and 84 fish species. Indeed, the Duck River itself contains more species of fish than all of Europe. The river is reported to support an amazing 140 different species of fish in its waters and 50 mussel species. Along its

journey the Duck River passes through several public lands, including Henry Horten State Park and Yanahli WMA.

For the recreational boater, the Duck River is characterized as a Class I River, meaning that there is moving water with a few riffles and small waves with few or no obstructions. These gentle and scenic characteristics contribute to the popularity of the Duck River for canoeing and fishing. Located nearby are several commercial canoe rental businesses and boat launching areas.

As an important water supply in the watershed, water quality in the Duck is also an important issue for a number of communities and provides a basis of mutual interest for developing long-term conservation strategies.

Duck River Bluffs (35.5883, W86.9800) **(**Site Importance Moderate - B3) is a 35 acre site located in Maury County. It is approximately 1.1 miles east of Mapleash Avenue on Sowell Mill Pike. Bluffs are on the south side of the road.

This old forest is composed of a mixture of oaks and hickories with chinquapin oak and shagbark hickory being among the dominant species. The dominant herbaceous plants include round-leaved ragwort, poison ivy, and Japanese honeysuckle.

Duck River Bluffs is one of only two known locations in Tennessee for the velvety cerastium (*Cerastium arvense var. velutinum*). This plant reaches the southern limit of its distribution at this location and ranges north through Missouri and Virginia to Idaho and Ontario. Because of its rarity in Tennessee the velvety cerastium is listed as state endangered. The state threatened water stitchwort (*Stellaria fontinalis*) also occurs at this site in isolated seeps along the south-facing bluff.

Sowell Mill Glade (N35.5919, W86.8964)(Site Importance High - B3) is a 224 acre site located in Maury County. The area is on Sowell Mill Pike just northeast of the I-65 overpass.

The site includes gravelly cedar glades and barrens. Rare elements include: *Talinum calcaricum* (state status: special concern), *Schoenolirion croceum* (state threatened), *Astragalus tennesseensis* (state status: special concern), *Dalea foliosa* (state and federally endangered, *Leavenworthia exigua* var. *exigua* (state status: special concern), and a rare Limestone glade community complex- Nashville basin Type (global rank G3). The site should be included in a macrosite design with the Duck River Complex Designated SNA.

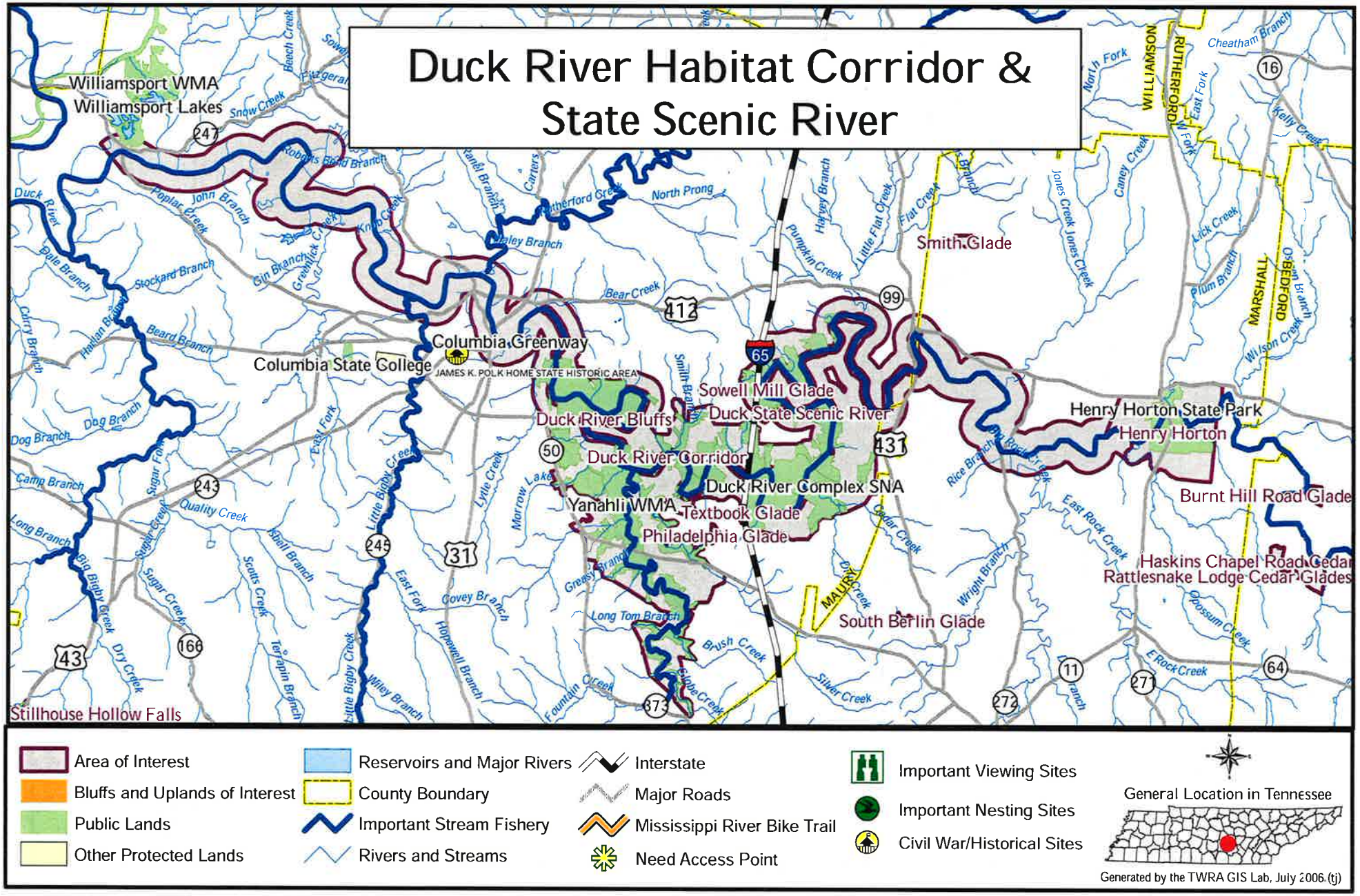
Yanahli WMA lies on both sides of the Duck River just east of the city of Columbia. Much of 12,800 acre area was originally purchased by TVA for the construction of a reservoir. However, various issues prevented the completion of the dam and the project was cancelled. The area is characterized as gently rolling farmland, upland oak/hickory forests and bottomland hardwoods, pasture and row crops. Bottomland forests cover 1,496 acres.

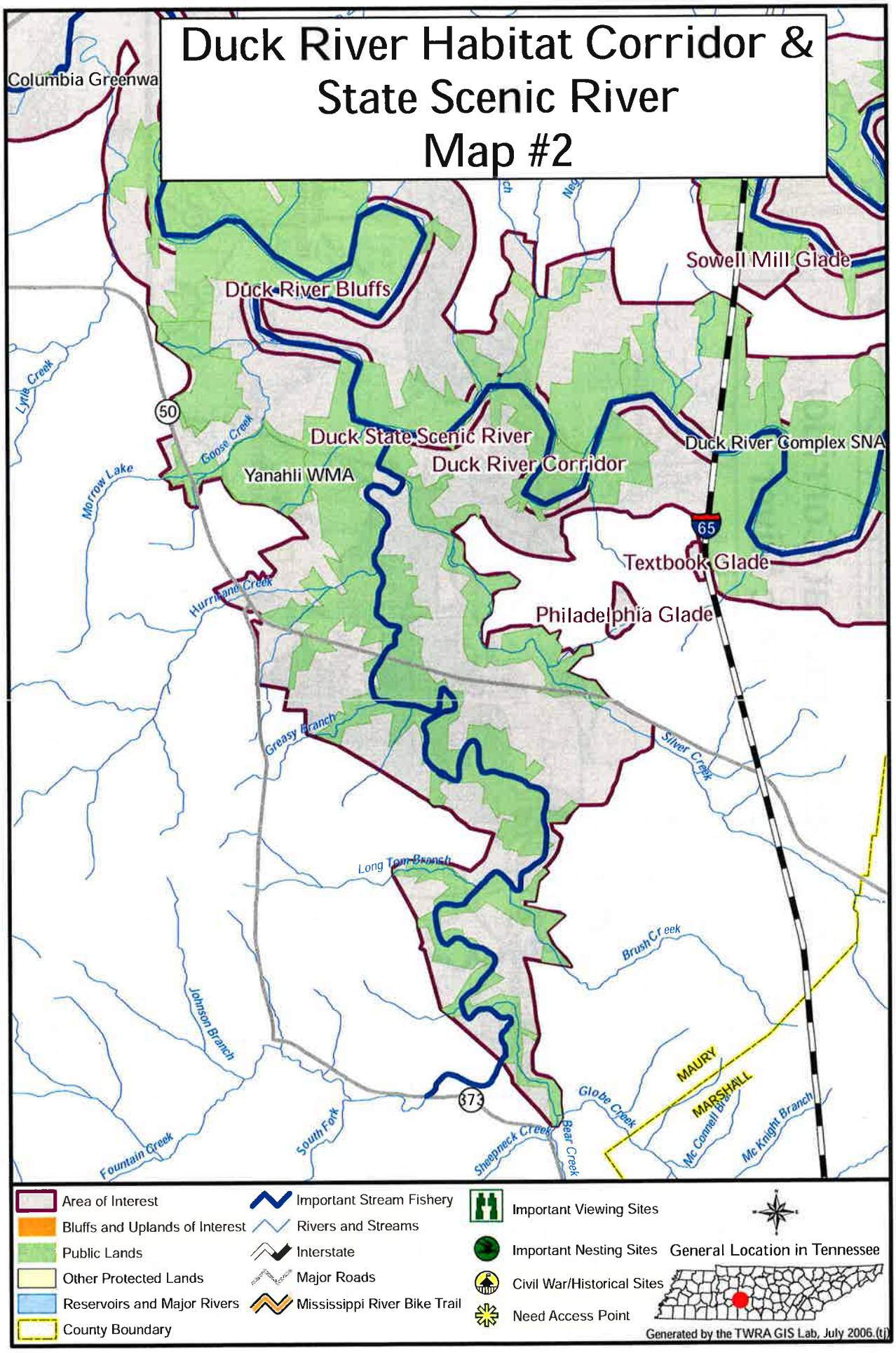
This area plays an important role in the protection of the watershed and riparian habitats along the river. This is critical to the preservation and enhancement of the habitats of this globally significant area. Additionally, it affords a tremendous amount of recreation including hunting, fishing, and wildlife watching.

Strategy - Connecting contiguous protected areas to state and other publicly owned lands along the river are a major approach to making the Duck River a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, landowner assistance programs, and conservation buyers. Public and private partnerships are key to protecting and maintaining this relative unspoiled and biologically significant river. However, public ownership of the entire corridor is probably not practical.

Land Protection Needs – Habitat Corridor and Yanahli - 14,600 acres at an estimated cost of $19,500,000; Sowell Mill Glade - 224 acres at an estimated cost of $223,600; Duck River Bluffs - 35 acres at an estimated cost of $35,000; and Duck State Scenic River – 500 acres at an estimated cost of $750,000

Potential Partners - TNC and other foundations, private corporations, TWRA, TDEC, USFWS, TVA, county governments, and individual donors.


Duck River Habitat Corridor &
State Scenic River
Williamsport WMA
Williamsport Lakes
Columbia Greenway
Columbia State College
JAMES K. POLK HOME STATE HISTORIC AREA
Sowell Mill Glade
Duck River Bluffs
Duck State Scenic River
Duck River Corridor
Duck River Complex SNA
Yanahli WMA
Textbook Glade
Philadelphia Glade
Smith Glade
Henry Horton State Park
Henry Horton
Burnt Hill Road Glade
Haskins Chapel Road Cedar
Rattlesnake Lodge Cedar Glades
South Berlin Glade
Stillhouse Hollow Falls
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)


Duck River Habitat Corridor &
State Scenic River
Map #2
Columbia Greenwa
Duck River Bluffs
Sowell Mill Glade
Lytle Creek
50
Goose Creek
Duck State Scenic River
Duck River Corridor
Duck River Complex SNA
Yanahli WMA
Morrow Lake
65
Textbook Glade
Hurricane Creek
Philadelphia Glade
Greasy Branch
Silver Creek
Long Tom Branch
Brush Creek
Johnson Branch
MAURY
MARSHALL
373
Globe Creek
South Fork
Sheepneck Creek
Bear Creek
Mc Connell Branch
Mc Knight Branch
Fountain Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DUKE, WITTY, AND MCMAHAN CREEKS

Location – (N35.7007, W86.0218) Duke,Witty, and McMahan Creeks are located in Cannon and Warren Counties. The center of the site is approximately 14.5 miles west of McMinnville. The site includes the creeks and their immediate environs on both sides of Hwy. 53.

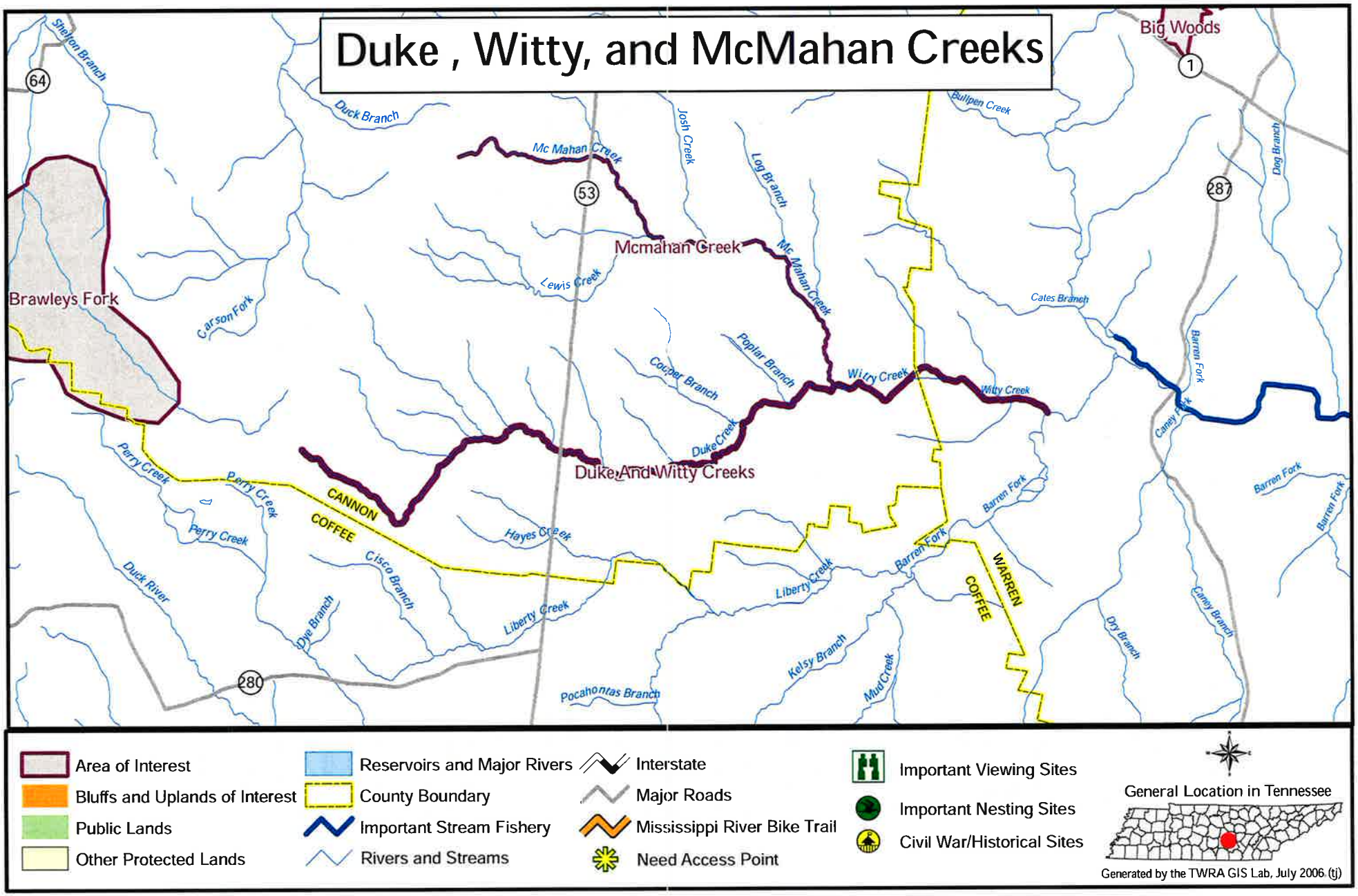
Description – Duke, Witty and McMahan Creeks are part of the Barren Fork of the Collins River watershed, and drain a portion of the barrens of the Eastern Highland Rim. Duke Creek begins approximately 10.8 miles south of Woodbury and flows east for approximately 7.7 miles, where it merges with McMahan Creek to form Witty Creek. Witty Creek flows east for another approximately two miles to its confluence with South Prong Barren Fork. The site is fed by two named tributaries and numerous unnamed streams and springs.

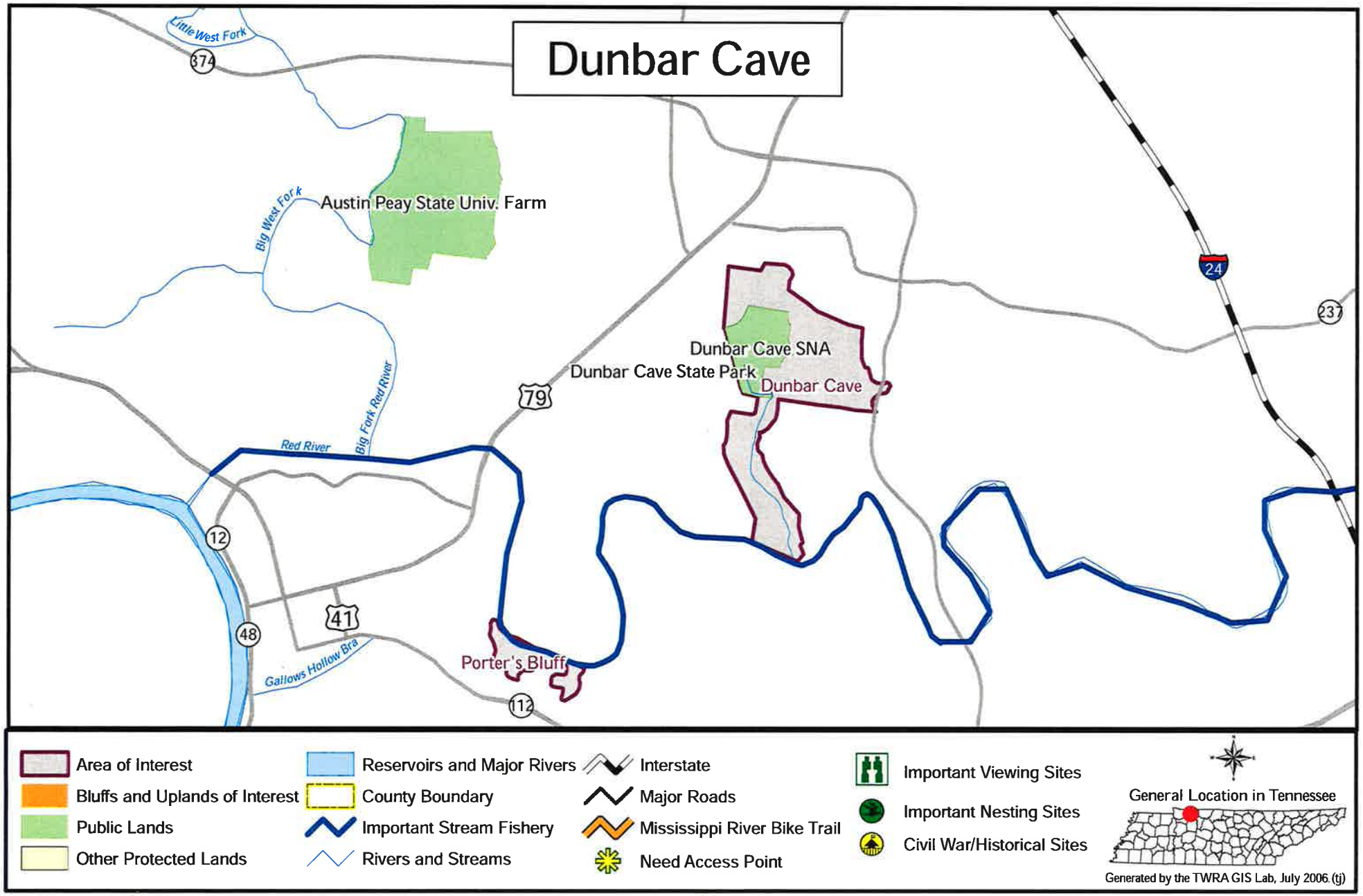
Significance – Site Importance Very High (B2) – These three creeks and their tributaries contain at least seven known populations of the Barrens topminnow (*Fundulus julisia*- state endangered), four populations of the Barrens darter (*Etheostoma forbesi*- state endangered), and four populations of the flame chub (*Hemitremia flammea*- in-need-of-management). It also includes at least one population of a rare plant, the wide-leaved yellow-eyed grass (*Xyris laxifolia* var *iridifolia*- state threatened).

Strategy – Habitat loss in the range of the Barrens topminnow is linked primarily to poor agricultural practices, alteration of natural water features, pesticide use, and diversion of flow for other purposes. Additionally, the topminnow is threatened by the introduction and spread of the western mosquitofish (*Gambusia affinis*). Protection of this and other barrens fishes requires restoration and maintenance of riparian buffers along streams, creation of alternate water sources for livestock, reduction or elimination of uncontrolled livestock stream crossings, and annual monitoring of core populations. Dye tracing should be used to determine water sources for spring resurgences, minimum flow requirements to support barrens fishes, and the extent of permissible maximum withdrawals from each aquifer. Recharge areas for spring sources must be protected to the maximum extent practicable.

Land Protection Needs – 2,024 acres at an estimated cost of $3,099,000. All streams in the area are potentially threatened by inappropriate livestock and agricultural practices. Protection of an estimated 1,174 acres will be required to provide a 50-meter buffer along these creeks and their tributaries. This may be accomplished through several measures, including livestock fencing, restoration of native trees along stream corridors, conservation easements, and fee simple acquisition of properties in the watershed.

Potential Partners – USFWS, TWRA, TNC, TDEC, and Conservation Fisheries, Inc.


Duke , Witty, and McMahan Creeks
Big Woods
Shelton Branch
Duck Branch
Mc Mahan Creek
Josh Creek
Log Branch
Bullpen Creek
Dog Branch
Mcmahan Creek
Mc Mahan Creek
Lewis Creek
Brawleys Fork
Carson Fork
Cates Branch
Barren Fork
Poplar Branch
Cooper Branch
Witty Creek
Witty Creek
Duke Creek
Duke And Witty Creeks
Perry Creek
Perry Creek
Perry Creek
CANNON
COFFEE
Hayes Creek
Barren Fork
Barren Fork
Barren Fork
Duck River
Cisco Branch
Dye Branch
Liberty Creek
Liberty Creek
WARREN
COFFEE
Dry Branch
Caney Branch
Kelsy Branch
Mud Creek
Pocahontas Branch
64
53
287
280
1
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)


Dunbar Cave
Little West Fork
374
Austin Peay State Univ. Farm
Big West Fork
Big Fork Red River
Red River
79
Dunbar Cave SNA
Dunbar Cave State Park
Dunbar Cave
24
237
12
41
48
Gallows Hollow Bra
Porter's Bluff
112
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DUNBAR CAVE SNA

Location – (N36.5532, W87.2987) Dunbar Cave SNA is located at 401 Old Dunbar Cave Road in the city of Clarksville in Montgomery County.

Description - Dunbar Cave SNA contains a 110 acre lake and Dunbar Cave. The park has a museum with picnicking and hiking trails and provides fishing opportunities. The park has an oak-hickory forest and the cave supports the unpigmented cave fish and crayfish, salamanders and bats. The cave has eight miles of mapped passageways and is the site of scientific investigation as well as guided tours.

Significance - The cave and its surroundings have considerable scenic, scientific and historical significance. The entrance offered shelter to prehistoric Native Americans as far back as 10,000 years. During the 19th and 20th centuries, Dunbar Cave was a popular mineral springs resort. In the 1930s it was associated with big band music and dances, with performances by such greats as Artie Shaw and Benny Goodman. In 1948, country music star Roy Acuff purchased the property and broadcasted a live country music show from the area. Dunbar Cave is one of the original designated SNAs.

Strategy - The strategy for future acquisitions for Dunbar SNA is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 117 acres at an estimated cost of $275,000.

Potential Partners – TDEC, TCF, and other land conservancy groups.

FLAT ROCK SNA

Location – (N35.8527, W86.2970) Flat Rock is located in Rutherford County on Factory Road approximately eight miles east of Murfreesboro.

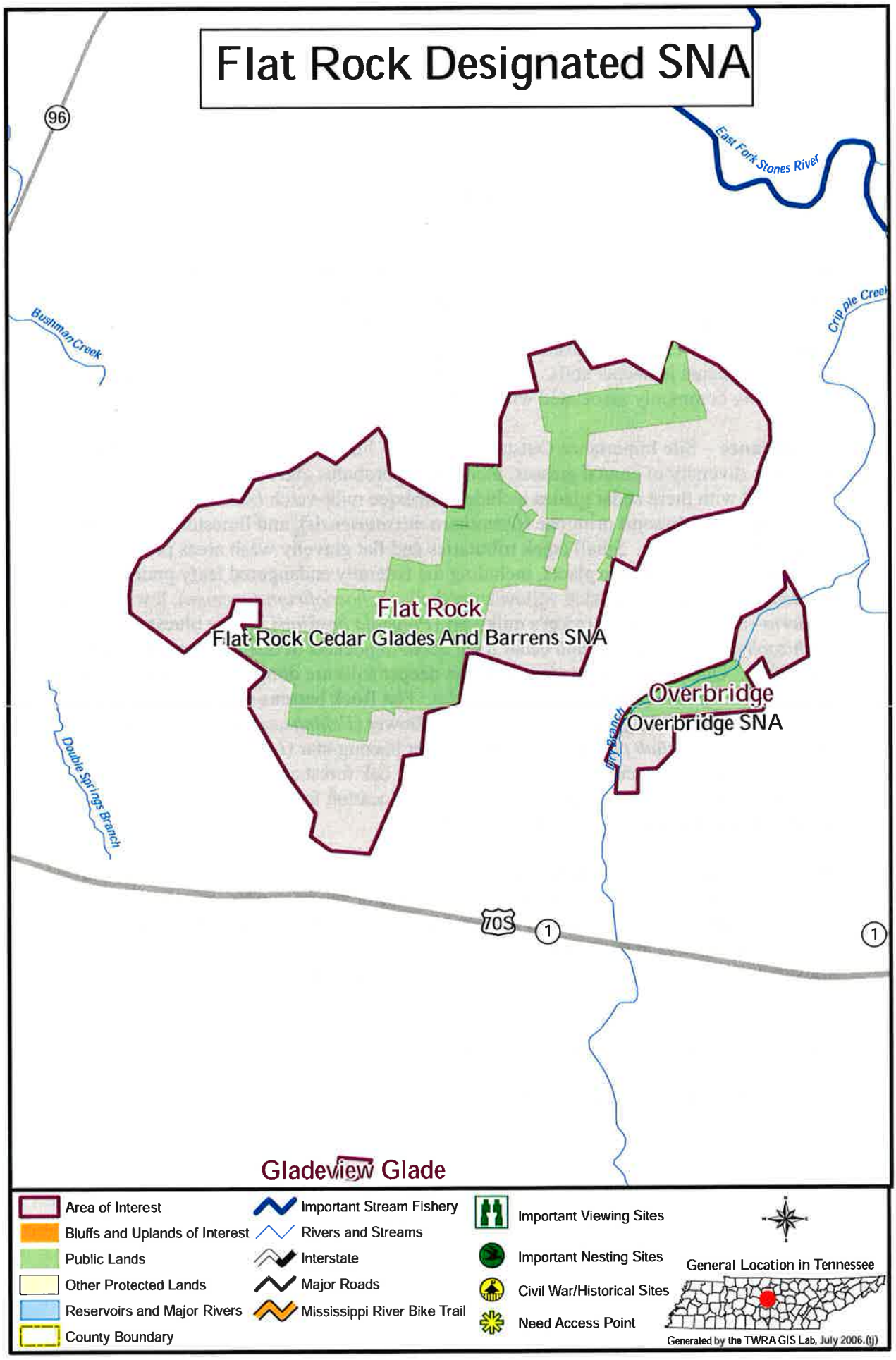
Description - Located in the Central Basin, Flat Rock Cedar Glade and Barrens supports a mosaic of forest types, oak barrens, open grassland barrens, and cedar glades, including federal and state listed plant species and glade plant endemic species. These glades are characterized by exposed limestone that is typically interspersed with cedar-oak-hickory forest that occurs in deeper soils. This limestone, with its many sinkholes, is a karst topography commonly associated with glades.

Significance – Site Importance Outstanding (B1) – Flat Rock Cedar Glades and Barrens support a diversity of annual grasses, including Sporobolus and Aristida. Rare plants associated with these cedar glades include Tennessee milk-vetch (*Astragalus tennesseensis*), Missouri primrose (*Oenothera missouriensis*), and limestone fame-flower (*Talinum calcaricum*). Small creek tributaries and flat gravelly wash areas provide specialized habitat for rare plants, including the federally endangered leafy prairie-clover (*Dalea foliosa*), the state listed yellow sunnybells (*Schoenolirion croceum*), low nutrush (*Scleria verticillata*), and Boykin's milkwort (*Polygala boykinii*). Little bluestem (*Schizachyrium scoparium*) and cedar trees occur in pockets of deep soil scattered across the glades. Open grassland barrens found in deeper soils are dominated by little bluestem and side-oats grama (*Bouteloua curtipendula*). Flat Rock barrens support numerous state listed species, including wavy-leaf purple coneflower (*Echinacea simulata*), southern prairie-dock (*Silphium pinnatifidum*) and slender blazing-star (*Liatris cylindracea*). These same species occur in the open canopy post oak forest areas referred to as an "oak barrens." Flat Rock is also significant as the type location for the federal listed Pyne's ground-plum (*Astragalus bibullatus*).

Strategy - The strategy for acquisition at Flat Rock is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 1,626 at an estimated cost of $3,502,000.

Potential Partners – TDEC, USFWS, and TNC


Flat Rock Designated SNA
96
East Fork Stones River
Bushman Creek
Crip ple Creek
Flat Rock
Flat Rock Cedar Glades And Barrens SNA
Overbridge
Overbridge SNA
Jeff Branch
Double Springs Branch
70S
1
1
Gladeview Glade
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

FLINT RIVER BOTTOM SNA

Location – (N35.0456, W86.4311) The site is located in Lincoln County approximately one mile southwest of Flintville.

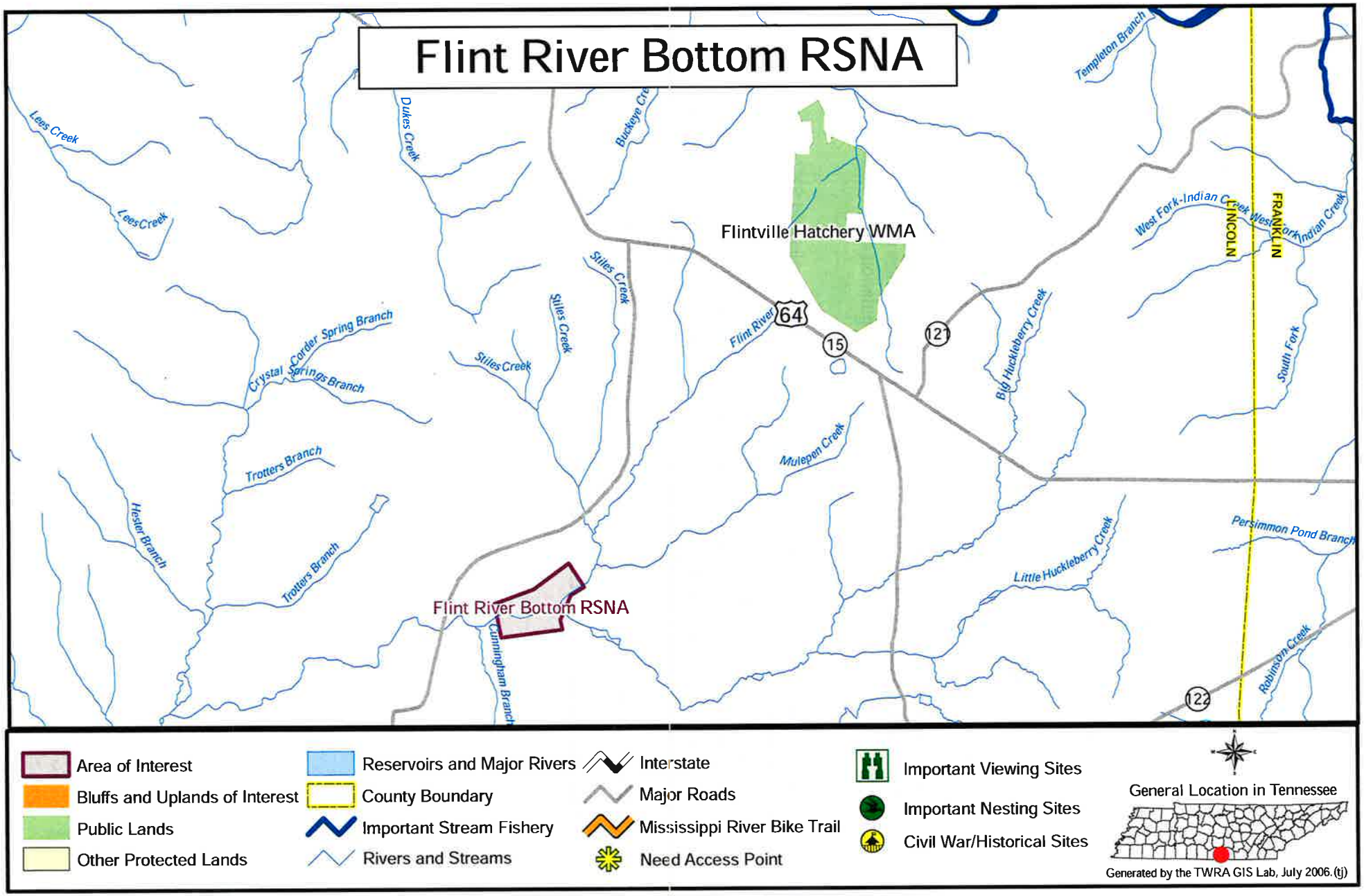
Description - Located on the Eastern Highland Rim, the site is about 179 acres of alluvial mixed bottomland hardwood forest.

Significance – Site Importance High (B3) - The site is a remnant of alluvial mixed bottomland hardwood forest. The Flint River is a small low gradient stream and the site contains a broad band of flat bottomland, which is subject to periodic flooding. The forests are mixed with at least 19 tree species present. Trees are mature and quite large. Understory is diverse and contains spicebush in a small tree form. Soils are well drained and well developed. There are some signs of selective timber harvests from the past. Herbaceous layer is thick and rich and contains a large population of the state endangered least trillium (*Trillium pusillum*).

Strategy - The strategy for acquisition at Flint River Bottom Registered SNA is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 179.5 acres at an estimated cost of $194,000.

Potential Partners – TDEC and TWRA.


Flint River Bottom RSNA
Flintville Hatchery WMA
Flint River Bottom RSNA
Lees Creek
Dukes Creek
Buckeye Creek
Templeton Branch
Stiles Creek
Crystal Spring Branch
Trotters Branch
Hester Branch
Mulepen Creek
Big Huckleberry Creek
West Fork-Indian Creek
South Fork
Persimmon Pond Branch
Little Huckleberry Creek
Robinson Creek
Cunningham Branch
64
15
121
122
LINCOLN
FRANKLIN
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

FOREST MILL POND

Location – Coffee County, Fredonia USGS quadrangle, 35.51990 N / 86.03290 W. The site is 3 miles from I-24 on both sides Highway 55 northeast of Manchester. (See Summitville Mountain Spring map)

Description of Property – This approximately 57 acre site is split on the south end by Highway 55 and is bounded on the north by additional forested lands. Agricultural lands are adjacent to the site on three sides. Sparse residential areas are scattered around the southern end. It is one of the few remaining examples of the oak barrens that once existed throughout the Eastern Highland Rim. The site is mostly flat and forested except for a small pond to the south. A small stream meanders through the northern portions and some small areas in the forest hold water long enough to exclude woody plant establishment. The forest is composed of willow oak, water oak, red maple, dogwood, black gum and sweet gum. The shrub layer in the forest consists mainly of buttonbush, elderberry, azalea and Virginia sweet spire. The pond edge supports a sphagnum moss and grass-sedge community which contains 3 rare plants. In 1985 Natural Heritage staff met with Department of Transportation staff and the result of the meeting was protection of this site from the widening of Highway 55. The commissioner of TDEC sent a letter to the commissioner of TDOT to commend them for their actions in protecting this site. Aerial photos from March of 1997 show that the site was still intact at that time and the forest is known to be intact at the present time.

Significance – At least 6 state listed plants occur here. The 6 plants known to occur here are Canby's lobelia (*Lobelia canbyi*), foxtail clubmoss (*Lycopodiella alopecuroides*), rose pogonia (*Pogonia ophioglossoides*), narrowleaf bushclover (*Lespedeza angustifolia*), yellow fringeless orchid (*Platanthera integra*) and blackfoot quillwort (*Isoetes melanopoda*). Historical records from the site indicate the presence of 3 additional state listed plants and they are Barratt's sedge (*Carex barrattii*), obscure beak-rush (*Rhynchospora perplexa*) and dwarf huckleberry (*Gaylusaccia dumosa*). One plant, yellow fringeless orchid, is extremely rare and critically imperiled in the state (S1) and is very rare and local throughout its range in the United States (G3). Six of these plant species are considered very rare and imperiled in the state (S2) but are more common in coastal plain states. The remaining 2 are rare and uncommon in the state (S3). A complete survey of this site would likely reveal other rare plants and at least 2 have been mentioned in reports. The surveyors could not positively identify the suspect plants at the time of their reports.

Strategy/Criteria - TWRA wetland acquisition funds could be applied. This site will need management to prevent succession around the pond to woody plants that would shade out the herbaceous plants.

Land protection needs – 57 acres at an estimated cost of $125,000.

Potential Partners – TWRA and TDEC.

GATTINGER'S GLADE AND BARRENS SNA

Location – (N36.0375, W86.3894) Gattinger's Glade and Barrens is located in Rutherford and Wilson Counties near Cedars of Lebanon State Forest. The property is privately owned and is not open to the public. Visitation is permitted by request only. (See Cedars of Lebanon map)

Description - Located on the Central Basin, Gattinger's Cedar Glade and Barrens is a 57-acre natural area that supports one of the largest and best-known populations of the federally endangered Tennessee purple coneflower (*Echinacea tennesseensis*). It was a property acquired as part of the Nashville Super Speedway development and its owners donated a conservation easement to the State for its protection. The State was able to secure funding through a grant from the USFWS to build a fence around its boundary for additional protection.

Significance – Site Importance Outstanding (B1) – Protecting this site through designation in 2003 was significant in the recovery and protection of this species. This was the largest colony of three colonies that comprise this major population. The State has successfully protected important colonies of four of five populations of all the known Tennessee coneflower populations. The fifth population occurs on private land and its seeds have been planted at suitable reintroduction sites in other SNAs where Tennessee coneflower populations do not occur.

This pristine glade and barrens complex also supports other state rare species that include cleft phlox (*Phlox bifida* ssp. *stellaria*), evovulus (*Evolvulus pilosus*), and Gattingers lobelia (*Lobelia appendiculata* var. *gattingeri*). It was named to honor Augustin Gattinger, who published the Flora of Tennessee in 1900, the only published flora to date. Gattinger described many cedar glades and barrens in the late 1800's that are presently protected as SNAs. He also was the first to describe Tennessee coneflower and provided location information for its occurrence.

Strategy - The strategy for acquisition at Gattinger's Glade and Barrens is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 325 acres at an estimated cost of $700,000.

Potential Partners – TDEC and USFWS.

GLADEVIEW BARRENS SNA AND GLADEVIEW GLADE

Location – (N35.8097, W86.3138) Gladeview Barrens and Gladeview Glade are 24 and 10 acres respectively and are located in Rutherford County approximately 12 miles west of Murfressboro south of Hwy 70. (See Manus Road Cedar Glade Designated SNA map)

Gladeview Barrens Registered SNA (Site Importance High - B3) is 24 acres of barrens/glades/and savanna – Rare elements include: *Helianthus occidentalis* (state status: special concern), *Astragalus tennesseensis* (state status: special concern), *Dalea purpurea* (state status: endangered), *Mirabilis albida* (state status: threatened), *Echinacea pallida* (state status: threatened), *Liatris cylindrica* (state status: threatened), *Dalea candida* (state status: special concern), *Solidago gattingeri* (state status: endangered), and *Evolvulus nuttallianus* (state status: special concern).

Gladeview Glade (Site Importance Moderate - B4) is 10 acres of open herbaceous dominated glade vegetation. This undeveloped cedar glade site is bordered by a junkyard. The site is noteworthy for numerous rare plant species. Rare elements include: *Anemone caroliniana* (state status: endangered), *Talinum calcaricum* (special concern), *Leavenworthii exigua* var. *exigua* (state status: special concern), *Evolvulus nuttallianus*, *Ammoselinum popei* (state status: threatened), and *Astragalus tennesseensis*.

Strategy – The strategy for acquisition at Gladeview sites is to acquire properties within and adjacent to the site design (site boundary and area between two sites) for access or access control, watershed protection, and preservation of rare species and representative communities of barrens/glade vegetation. Sites could be included in a macrosite design. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 34 acres at an estimated cost of $59,500.

Potential Partners - TDEC and USFWS.

GRASSY POND

Location – (N35.5232, W85.9886) Grassy Pond is located in Coffee County approximately 4 miles northeast of Manchester off Hwy 55. (See Summitville Mountain Spring map)

Description of the Property – This site is approximately 25 acres and is located on the Eastern Highland Rim. The pond is a maidencane-dominated marsh located in an upland depression on the Tennessee - Cumberland River divide, and is an open, shallow depression surrounded by mature second growth lowland forest consisting of red maple, blackgum, sweetgum and various oak species. The site was first documented in 1982 by Paul Somers, former DNA botanist.

Significance – (Site Importance High) The pond proper contains three state listed plant species: maidencane (*Panicum hemitomon*), obscure beak-rush (*Rhynchospora perplexa*), and wide-leaved yellow-eyed grass (*Xyris laxifolia* var. *iridifolia*). While these plants are more common along the Atlantic and Gulf Coastal Plains of the southeastern United States, all three of these plants are state listed and are considered very rare and imperiled (S2) in Tennessee and found in just a few counties in the southern portion of the Eastern Highland Rim.

Not only are some of the plant species rare, but the Interior Highland Rim Maidencane Pond plant community is considered extremely rare and critically imperiled globally (G1). This community is found in a restricted range and specific set of habitat conditions. Several other disjunct Coastal Plain species may occur in this plant community (see above). Without protection, this remaining example could be vulnerable to damage from off-road vehicles, local hydrologic changes, and land-use change (including housing development).

Additional rare and imperiled (S2) plant species occur outside of the pond proper: Virginia chainfern (*Woodwardia virginica*), foxtail clubmoss (*Lycopodium alopecuroides*), and blackfoot quillwort (*Isoetes melanopoda*). Foxtail clubmoss is only known from two counties in Tennessee. All six state-listed species, whether in the pond or in surrounding forest are classified as obligate wetland species.

Strategy – TWRA wetland acquisition funds could be applied. NRCS grassland reserve program may be a potential source of funding.

Land Protection Needs - 25.1 acres at an estimated cost of $35,000.

Potential Partners – TWRA, NRCS, TNC, and TDEC.

HARPETH STATE SCENIC RIVER AND CORRIDOR

Location – (N36.0767, W86.9809) The Harpeth State Scenic River begins near Highway 100 in southwest Davidson County and continues downstream to the Cheatham County Line, covering approximately 15 river miles. The watershed includes parts of Cheatham, Davidson, Dickson, Hickman, Rutherford and Williamson Counties and drains 872 square miles before flowing into the Cumberland River. Part of the Harpeth River is designated a State Scenic River because of its pastoral and developed river areas. Many other streams in the watershed are also popular for recreational boating because of their scenic qualities.

Description – The Harpeth Scenic River meanders though the central basin in southwest Davidson County. Exposed along parts of its course are 500 million year old limestone rocks of the Ordovician age. Its banks are surrounded by open fields, homes and some industrial development. The Bellevue Park, operated by Metro Parks, is on the floodplain of the river and provides recreational opportunities at the Red Caboose Playground, picnicking area, and a community center.

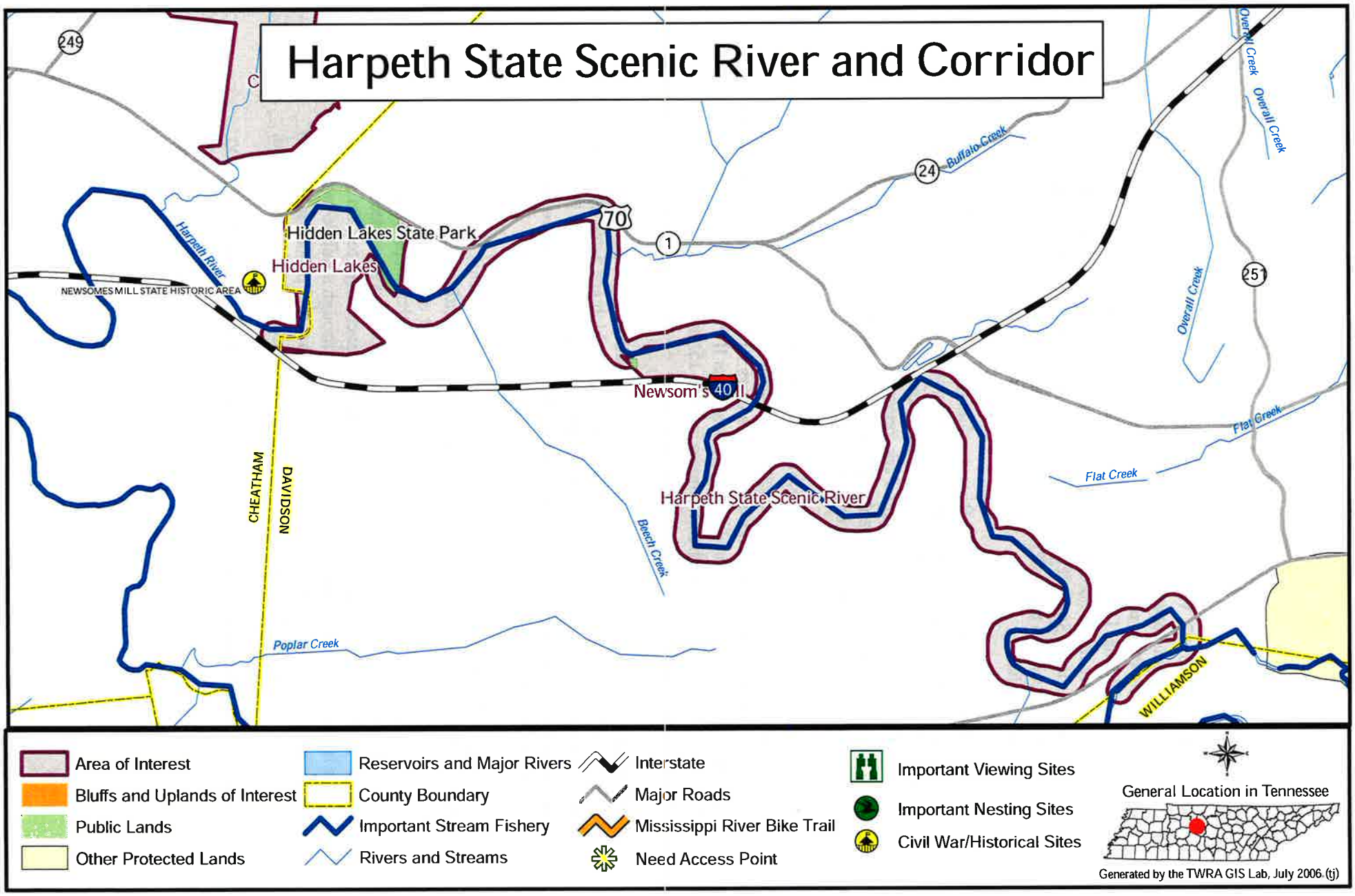
The Harpeth provides a pleasant canoeing experience when the water is up. Smallmouth and largemouth bass, as well as other game fish, can be found along this part of the river. The first segment of the river is designated as a class III Developed River Area. After passing under Interstate 40, it is designated as a Class II Pastoral River in Davidson County. The Scenic River portion is approximately 15 miles long with a drop in elevation of 40 feet.

Significance – Site Importance Very High (B2) – Within this section of the river are two fishes, the finescale darter and the slenderhead darter, which are listed as in-need-of-management. Also found in this section are the tan riffleshell which is listed as federally endangered, and the helmet rocksnail. Both of these mollusks were last observed here in the 1920s according to state records.

Strategy - The site conservation plan for the Harpeth State Scenic River identifies a corridor of no more than 450 feet from the usual banks on either side of the river. Additionally, located along the Harpeth State Scenic River are other conservation lands, public and private, that might include an area greater than that included within the Scenic River Boundary. These areas will be in addition to the conservation needs for the Scenic River. It may not be practical for the state or federal government to own and manage all of the lands within the scenic river corridor, however, through a public and private partnership involving innovative conservation approaches and private landowner incentives, it is hoped that the floodplain of the Harpeth River can be conserved.

Land Protection Needs – 500 acres (450 feet) at an estimated cost of $810,000.

Potential Partners – TDEC, TWRA, USFWS, TNC, Harpeth River Watershed Association, Tennessee Scenic Rivers Association, Land Trust for Tennessee, Davidson County Government.


Harpeth State Scenic River and Corridor
249
24
70
1
251
Buffalo Creek
Overall Creek
Overall Creek
Overall Creek
Hidden Lakes State Park
Hidden Lakes
Harpeth River
NEWSOMES MILL STATE HISTORIC AREA
Newsom's Mill
Flat Creek
Flat Creek
Harpeth State Scenic River
Beech Creek
CHEATHAM
DAVIDSON
Poplar Creek
WILLIAMSON
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HASKINS CHAPEL ROAD/RATTLESNAKE LODGE ROAD CEDAR GLADES

Location – (N35.5302, W86.6299) Haskins Chapel Road/Rattlesnake Lodge Road Cedar Glades site is located in Bedford County adjacent to the Duck River in the vicinity of the intersection of Haskins Chapel Road and Rattlesnake Lodge Road, about 5 miles SE of Henry Horton State Park. (See Duck River Habitat Corridor and State Scenic River map)

Description – The site encompasses approximately 600 acres. The area includes limestone gravel/bedrock glades with extensive exposed bedrock with large spaces in between giving a "checkerboard" appearance. There are several wet weather streams and barrens vegetation. There are some old fields and evidence of grazing in the past.

Significance – Biodiversity significance is High (B3) – There are five state listed species, *Arnoglossum plantagineum* (fen Indian plantain), *Schoenolirion croceum* (yellow sunnybells), *Talinum calcaricum* (Limestone fameflower), *Oenothera macrocarpa* (Missouri primrose), and *Astragalus tennesseensis* (Tennessee milk vetch). There are other glade species that are not state listed but are restricted to the cedar glade habitat, *Lobelia appendiculata* var. *gattingeri* (Gattinger's lobelia) *Leavenworthia stylosa* (glade-cress), *L. torulosa* (beaded glade-cress), and *Pediomelum subacaule* (Nashville breadroot). These species are globally ranked G3-G4. There is also the presence of a globally rare plant community type, a "wet calcareous meadow." Species associated with this community type include *Schoenolirion croceum*, *Eleocharis compressa*, *Nothoscordum bivalve*, *Carex craweii*, and *Scirpus cyperinus.*

Strategy – These two smaller sites have been combined into one large site design and the boundary needs to be delineated. There are numerous glades in the vicinity so the specific boundaries are precarious. Because of all the wet weather streams, there is potential habitat for leafy prairie clover (*Dalea foliosa*), a federally listed species, at this site; however, it has not been found.

The strategy for acquisition is to acquire properties within and adjacent to the site design (site boundary) for access or access control, for watershed protection, and for preservation of rare species and the rare plant community.

Land Protection Needs – 483 acres at an estimated cost of $810,000.

Potential Partners – TDEC, TNC, and TWRA.

HAWS SPRING FORK

Location – (N35.7598, W86.0821) Haws Spring Fork is located in Cannon County approximately 4 miles south of Woodbury.

Description - The main portion of the site is the Haws Spring Fork and surrounding stream banks. The stream is 7-10 feet wide and a bit wider downstream with most areas 4-6 inches deep. The water is cool and gently flowing with a gravel substrate. On the upstream portion of the site, the stream is spring fed. Upstream of the spring, the stream is ephemeral. Streamside habitats include pastures, roadsides with thickets and small forested tracts with black walnut, sycamore, and box elder. Near the spring and just beyond are two cave openings and the site also contains a small natural bridge.

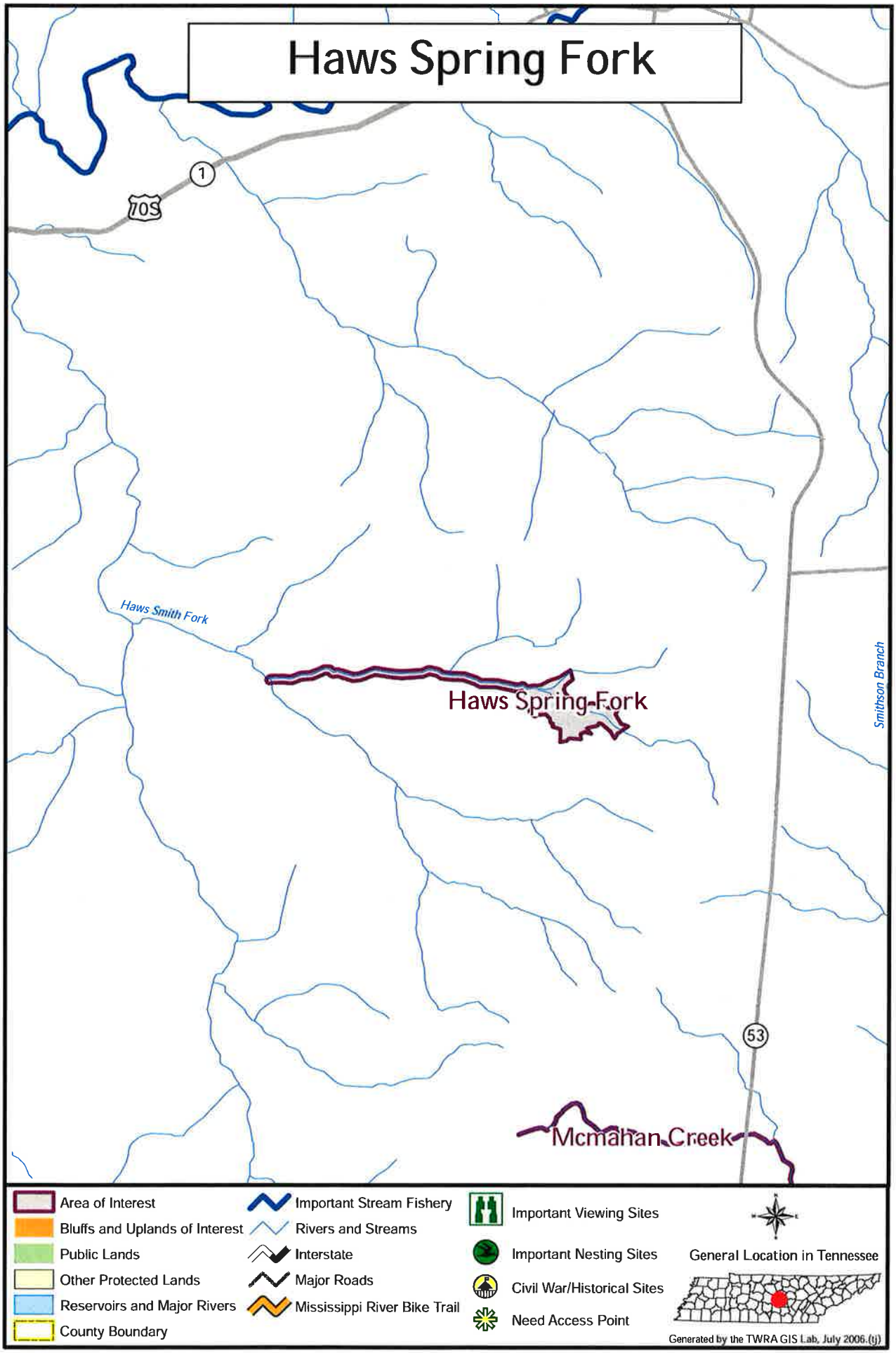
Significance –Site Importance High (B3) – The endemic *Cambarus williami* (Brawley's Fork crayfish) occurs in this spring fed stream. The species was first collected at Brawley's Fork in 1971. It wasn't until 1995 that this species was described as new to science. Until 2000, *Cambarus williami* was only known from the type locality of Brawley's Fork, but surveys conducted by DNA biologists have extended the known range of the species. In 2001, the species was listed as state endangered and it is currently considered very rare and imperiled (G2). Even with additional surveys *C. williami* is not known to occur outside of the headwaters of the Stones River watershed and is limited to only two hydrologic units (East Fork Stones River and Brawley's Fork). To date, it does not occur on protected land.

Juglans cinerea (butternut), a state-listed tree also occurs at the site. This species is declining range-wide due to a fungus which causes disease (*Sirococcus clavigignenti-juglandacearum*).

Strategy – Determine exact landowner(s) and see which tracts are available for purchase. If none are available, the DNA could pursue agreements with current landowners.

Land Protection Needs – 152 acres at an estimated cost of $166,000.

Potential Partners – TDEC and TWRA.


Haws Spring Fork
1
70S
Haws Smith Fork
Haws Spring Fork
Smithson Branch
53
Mcmahan Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HAY HOLLOW

Location – (N35.8009, W87.1486) The approximately 2.5 acre site is located in Maury County approximately 1 mile north of the community of Fly on Dutch Potts Hollow Road on the west side of the road and Hill Branch.

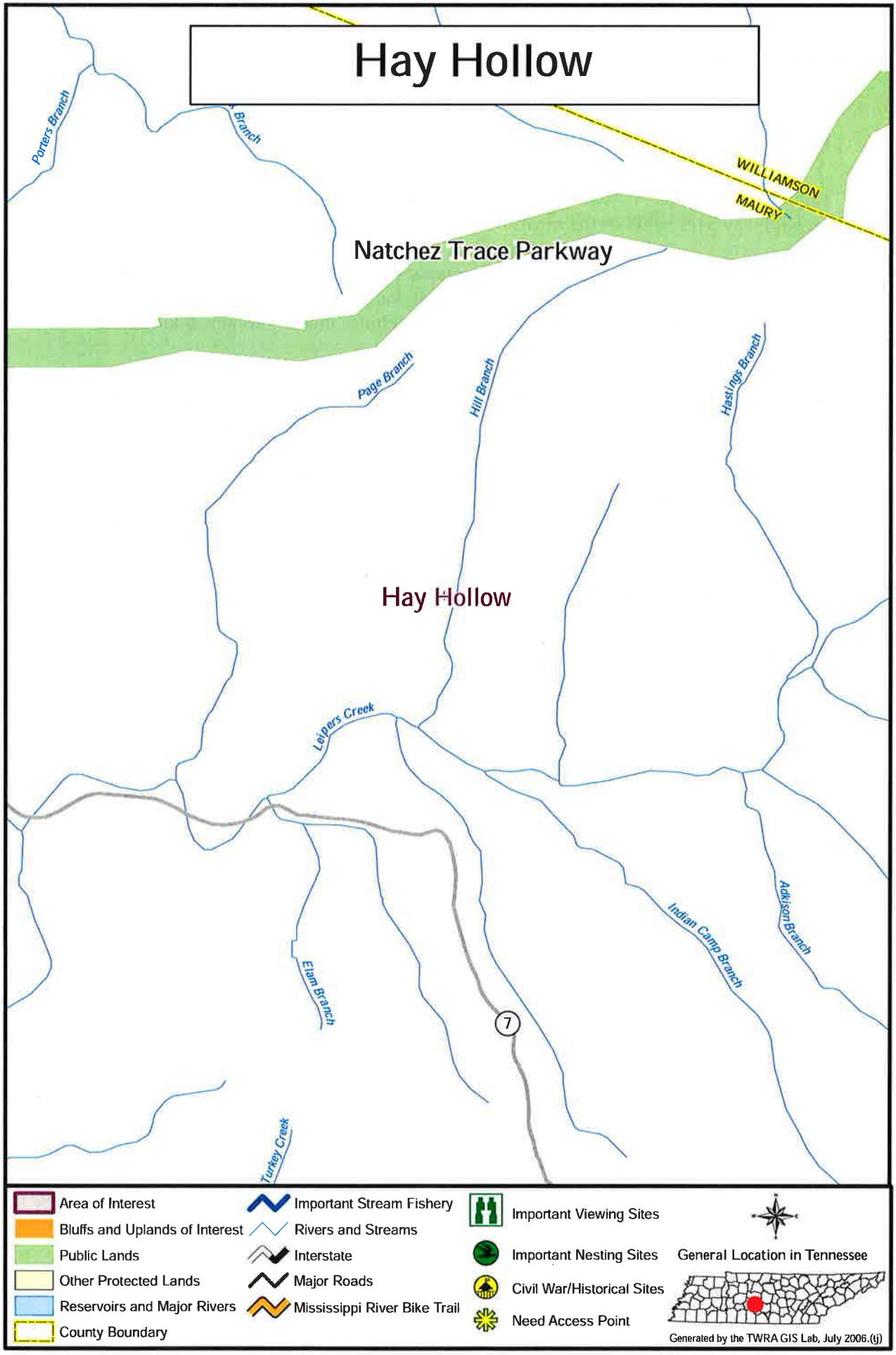
Description - This site is located in the Western Highland Rim, which is a part of the Interior Low Plateau. The site is about 2.5 acres containing an oak forest with beech, hickory, and elm trees approximately 60-80 years of age. There are numerous limestone outcrops on the steep slopes above the road and Hill Branch, a tributary to Leipers Creek. The site nucleus is a small landslide area on the lower east-southeast facing slope just above the road. The landslide and road opening provide plenty of sunlight and the area is generally moist due to aspect and proximity to the stream. The road is unpaved graded chert.

Significance – Site Importance Very High (B2) – *Apios priceana* (Price's potato-bean) is an herbaceous twining vine of the bean family. Price's potato-bean is listed as federally threatened and state endangered. The species is presently known from only 25 populations in four states: Alabama, Kentucky, Mississippi, and Tennessee. Price's potato-bean tends to occur on forested slopes and edges often with limestone outcrops adjacent to small streams and road right-of-ways. *A. priceana* plants of low to moderate vigor were observed in tree fall gaps and along a steep roadside bank on the west side of the creek about 150 yards south of the house. The plants appear to have the same distribution as 1999, and at least 12 vines were observed in 2004. *Lonicera japonica* and *Amphicarpea bracteata* were both common and could adversely affect the occurrence. It appeared that some downed trees had been cleared from the site in the recent past, resulting in some openings in the canopy. The plants were scattered along a 75 yard stretch of the roadside.

Strategy – DNA staff began contacting local county governments in 2004 informing each highway official about Price's potato-bean including the locations of each occurrence in the county. DNA staff then met with each county highway official at each respective county informing them further about the species, highlighting the importance of developing a cooperative management agreement, and taking each official to occurrences within the county. Visits emphasized the importance of appropriate management for the species. Where possible, roadside signs were placed on both ends of occurrences in 2005. The 6 in. x 8 in. metal signs read, "Do Not Mow or Spray." Plants that occur outside of the road right-of-way will require another form of protection such as acquisition or a conservation easement.

Land Protection Needs – 2.5 acre at an estimated cost of $9,000

Potential Partners – TDEC. Maury County government has agreed to voluntarily assist with management for the species along the right-of-way by limiting mowing and herbicide use during the growing season.


Hay Hollow
Porters Branch
WILLIAMSON
MAURY
Natchez Trace Parkway
Page Branch
Hill Branch
Hastings Branch
Hay Hollow
Leipers Creek
Indian Camp Branch
Adkison Branch
Elam Branch
7
Turkey Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HENRY HORTON STATE PARK

Location – (N35.5877, W86.8000) Henry Horton is located 40 miles south of Nashville on Highway 31A between the towns of Chapel Hill and Lewisburg.

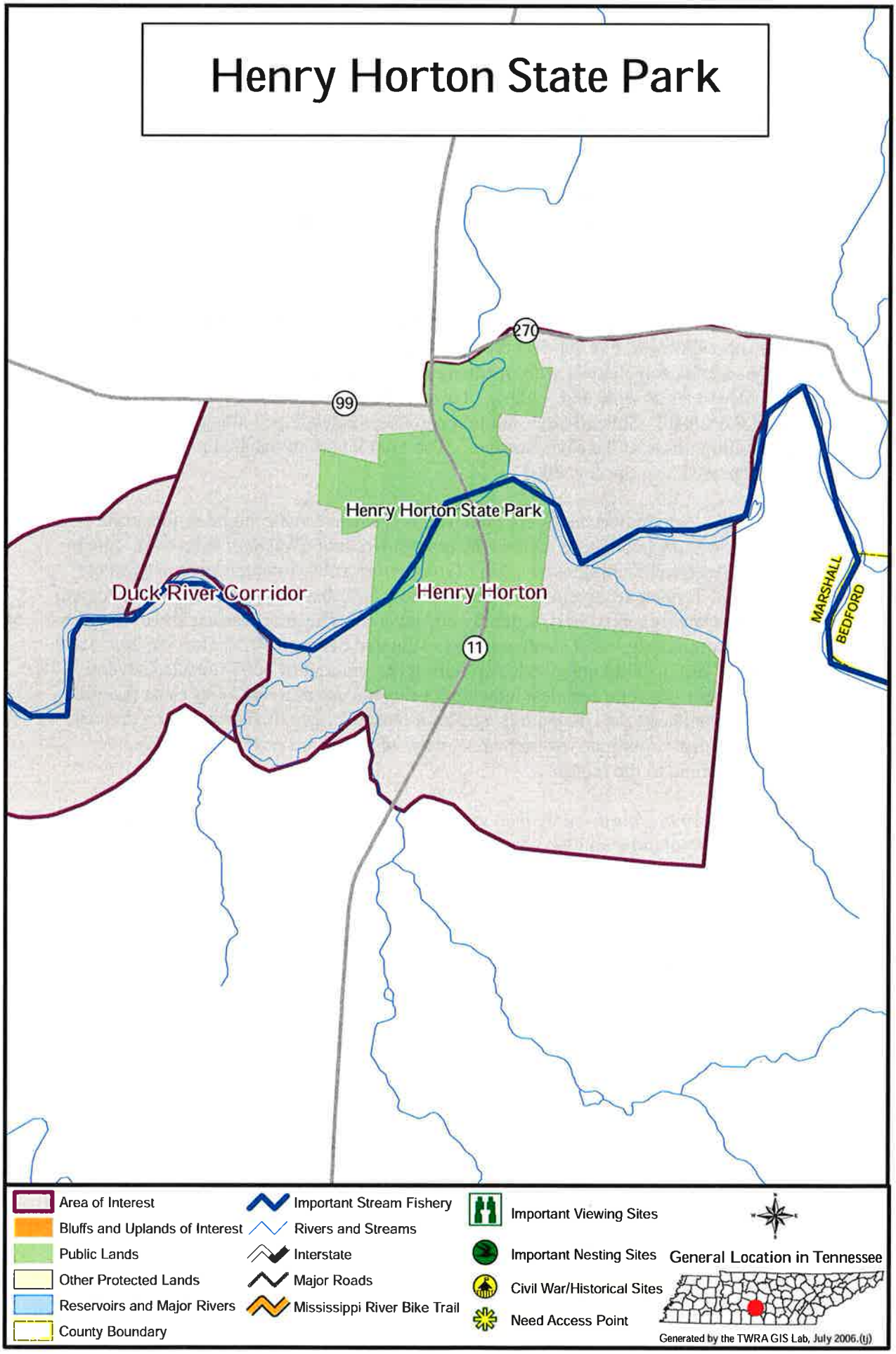
Description - Henry Horton State Park contains 1,140 acres and is situated on the banks of the Duck River. The park has an 18-hole golf course, inn and cabins with campground, swimming pool and picnic areas. The park also includes meeting rooms, hiking trails and a skeet and trap range.

Significance - Henry Horton is well known for its championship 18 hole golf course and related facilities. The park has four hiking trails and a variety of wildlife and flora.

Strategy - The strategy for future acquisitions for Henry Horton State Park is to acquire properties surrounding the park that contain representative forest cover types of the Nashville basin and those lands that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 1,677 acres at an estimated cost of $4,400,000.

Potential Partners – TDEC, TCF and other land conservancy groups.


Henry Horton State Park
270
99
Henry Horton State Park
Duck River Corridor
Henry Horton
11
MARSHALL
BEDFORD
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
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HERRON (HERRING) CAVE

Location – (N35.9453, W86.3049) Herron Cave is located in Rutherford County approximately one mile northwest of Lascassas, at the base of the south spur of Rucker Knob, just below the Valleyview Road, at an elevation of 600 feet." (Barr, 1961). (See Collins Trifolium Glade map)

Description – This cave occurs in Ridley limestone. According to Barr (1961): "Herring Cave is a rather long stream cave which trends north and west for 2,000 feet. The mouth opens in a breakdown. For 400 feet the stream flows over a bare rock floor, but beyond it is contained in a deep channel with overhanging ledges on either side. Beyond the deep channel the stream is wide and shallow. Toward the end of the cave it meanders in a trench in the silt fill. Several large solution cavities are developed along joints normal to the controlling joints of the cave passage." The total length of mapped passages is 4692 feet (Tennessee Cave Survey, 2003).

Significance – Site Importance Very High (B2) – Herron Cave is home to four state or federally listed species. These include the eastern woodrat (*Neotoma magister*), state in-need-of-management; southern cavefish (*Typhlichthys subterraneus*), state in-need of-management; Tennessee cave salamander (*Gyrinophilus palleucus*), state threatened; and the gray bat (*Myotis grisescens*), federally endangered. The gray bats use the cave either as summer or maternity roost, with numbers estimated between 1020 (Harvey, 2002) and 2763 (DNA, 1997). Trapping conducted during the summer of 2005 revealed several lactating or post-lactating females, indicating probable use as a maternity roost (Lamb, 2005). With the presence of woodrats and gray bats, the cave likely supports a diverse assemblage of cave-obligate invertebrates, many of which are extremely rare and narrowly endemic to the region.

Strategy – In 1995 a bat-friendly gate was installed inside the mouth of Herron Cave to limit access by potential vandals. Use of the cave as a maternity roost by gray bats requires that this gate be open during the spring and summer, as pregnant females will not normally pass through a closed gate of this design. To promote appropriate management and conservation of this cave, in 1995 a Memorandum of Understanding was enacted between the landowner, TNC, TWRA, USFWS, TDEC, and Lincoln Memorial University. The DNA and TNC have jointly ensured that the cave gate is open for bat passage during the proper time of year.

The current landowner is conservation-minded and is aware of the needs of the listed species using Herron Cave. Access to the cave is by permission only, and is restricted to times that the cave is not in use by gray bats. However, the current landowner does not control the recharge area of the cave, and that needs to be addressed by protection of the core acreage draining to the cave and an appropriate buffer around the mouth.

Land Protection Needs – 300 acres at an estimated cost of $490,000.

Potential Partners – TNC, TDEC, and TWRA

HILL CREEK AND CAVE

Location – (N35.8009, W86.0344) Hill Creek and Cave is located in Cannon County west of Woodbury off Hwy 70 (See Short Mountain Designated SNA and Short Mountain Sanctuary RSNA map)

Description - The stream is cave spring fed, cool, and gravel-bottomed with low to moderate amounts of silt which is visible when the rocks are moved. The stream is 15-20 feet wide and 3-10 inches deep with some pools over 36 inches. The site design includes the small watershed around the cave and approximately 130 foot buffer of the stream. Away from the cave, the stream banks are surrounded by hayfields, but the banks are forested and the stream is shaded by such trees as sycamore and box elder. The area around the cave is most scenic and contains a large concentration of large musclewood trees and the forested slopes contain beech trees. The cave has water at the mouth and the stream is then dry for approximately 60 feet. Water again appears and forms a deep pool with continuous flow downstream. The entrance to Hill Creek Cave proper is 8 feet wide and 3 feet high.

Significance – Site Importance High (B3) – The endemic *Cambarus williami* (Brawley's Fork crayfish) occurs in this spring fed stream. The species was first collected at Brawley's Fork in 1971. It wasn't until 1995 that species was described as new to science. Until 2000, *C. williami* was only known from the type locality of Brawley's Fork, but surveys conducted by DNA biologists have extended the known range of the species. In 2001, the species was listed as state endangered and it is currently considered very rare and imperiled (G2). Even with additional surveys *C. williami* is not known to occur outside of the headwaters of the Stones River watershed and is limited to only two 14-digit hydrologic units (East Fork Stones River and Brawley's Fork). To date, it does not occur on protected land.

Strategy – Determine exact landowner(s) and see which tracts are available for purchase. If no lands are for sale, the DNA could pursue agreements with current landowners.

Land Protection Needs – 21 acres at an estimated cost of $25,000.

Potential Partners – TDEC and TWRA.

LANE FARM

Location – (N36.0317, W86.3714) The Lane Farm site is located in Wilson County within the Central Basin Physiographic Province. The Lane Farm is near the Vine community and is located just west of Highway 231 approximately 13 miles from the cities of Murfreesboro and Lebanon, and just north of Hwy 452. (See Cedars of Lebanon map)

Description - The Lane Farm site consists of a privately owned farm and surrounding adjacent tracts in Wilson County, Tennessee. There is a house and barn located on the Lane Farm property north of the glades and barrens near Fall Creek Road. The site consists of extensive gravel glades and barrens intermixed with cedar-hardwood forest, old-field communities and pastures. A dry wash runs through the center of the site. The farm was previously used for cattle production, and had been mowed/bush-hogged in the past, a practice that may have benefited the rare plant species. This site has been a privately held Registered SNA since 1993.

Significance – Site Importance Very High (B1) – This site contains significant populations of two federally listed plant species, leafy prairie clover (*Dalea foliosa*)(G2/G3) and Tennessee coneflower (*Echinacea tennesseensis*)(G2), as well as numerous other state listed species and high quality rare communities. At least seven other state listed plant species are present, including: evolvulus (*Evolvulus nuttallianus)*, Tennessee milk-vetch (*Astragalus tennesseensis)*, Pope's sand parsley (*Ammoselinum popei)*, pale umbrella-wort (*Mirabilis albida)*, Missouri primrose (*Oenothera macrocarpa)*, glade cleft phlox (*Phlox bifida* ssp. *Stellaria)*, and limestone fame-flower (*Talinum calcaricum).*

The leafy prairie-clover is located along the dry wash and barrens that runs through the center of the site, and at the time of this report is the highest ranked privately owned population of this species in the state. Tennessee coneflower is extremely abundant on the property on the slightly higher gravel glades on each side of the wash. The coneflower population has been given a rank of B and is the last remaining large population (colony) on privately owned land in the state. It is also one of the three largest known populations, and the only one of those three populations that is not protected. Protection of this colony is critical to meet recovery goals.

Strategy – Acquisition of habitat to perpetually protect and conserve one population of Tennessee coneflower and one population of leafy prairie-clover for the purposes of recovery. Funds are needed for costs associated with the acquisition of private property by the State to assure the protection of these significant populations. Once acquired, the property will be proposed for designation as a SNA, thereby further ensuring its long-term protection and stewardship

Land Protection Needs – 715 acres at an estimated cost of $1,890,500.

Potential Partners – TDEC, USFWS, and TWRA.

LEWIS STATE FOREST

Location – (N35.5001, W87.5946) Lewis State Forest is located on Hwy 48 just southwest of Hohenwald on the Western Highland Rim.

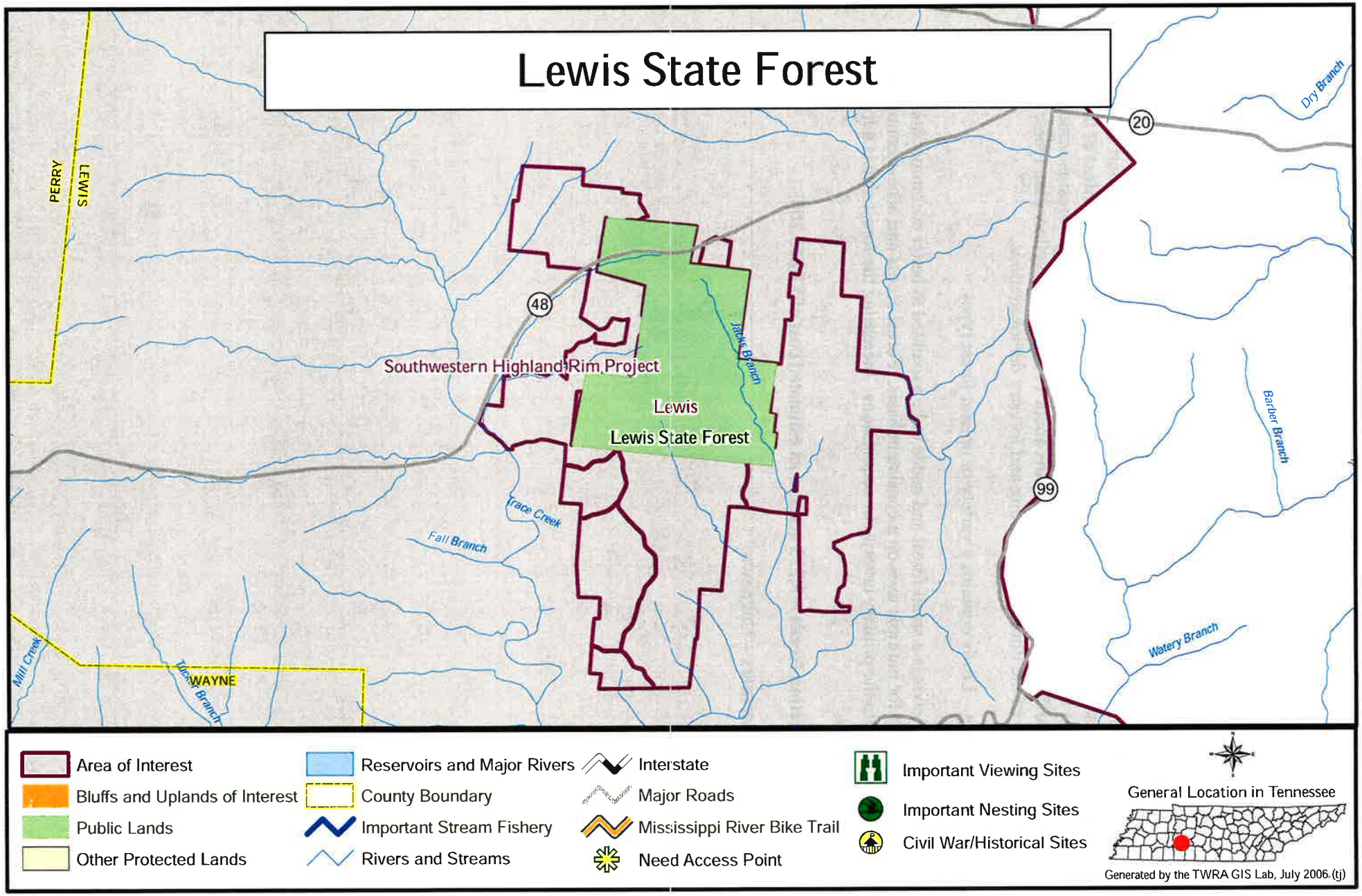
Description - (1,257 acres) This area was purchased from the Chancery Court of Lewis County for delinquent taxes in 1933 and became a State Forest in 1936. Most of the land (1,215 acres) is in forest cover and the remainder is open land. This Forest is somewhat unique in the TSF system in that it contains about 17% southern yellow pine types. Primary use of the Forest is for hunting and forestry demonstrations.

Significance – Lewis contains a variety of upland forest types.

Strategy - Lewis is a small forest and needs to be expanded to better accommodate management for multiple uses on a consistent basis. Forest access and access control and inholdings are the primary criteria for acquisitions. Increasing the forest size is a long-term goal.

Land Protection Needs – 3,233 acres at an estimated cost of $1,845,200.

Potential Partners – Unknown.


Lewis State Forest
PERRY
LEWIS
WAYNE
20
48
99
Dry Branch
Jacks Branch
Barber Branch
Watery Branch
Trace Creek
Fall Branch
Mill Creek
Tinsley Branch
Southwestern Highland Rim Project
Lewis
Lewis State Forest
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LINCOLN COUNTY BAT CAVE

Location – (N35.1309, W86.5074) Lincoln County Bat Cave is located in Lincoln County on the south bank of the Elk River, at mile 95.5, on Lucinda Bend. The mouth of the cave is 100 yards upstream from an island, 20 feet above the river, near the base of a 100-foot bluff, at an elevation of 670 feet (Barr, 1961).

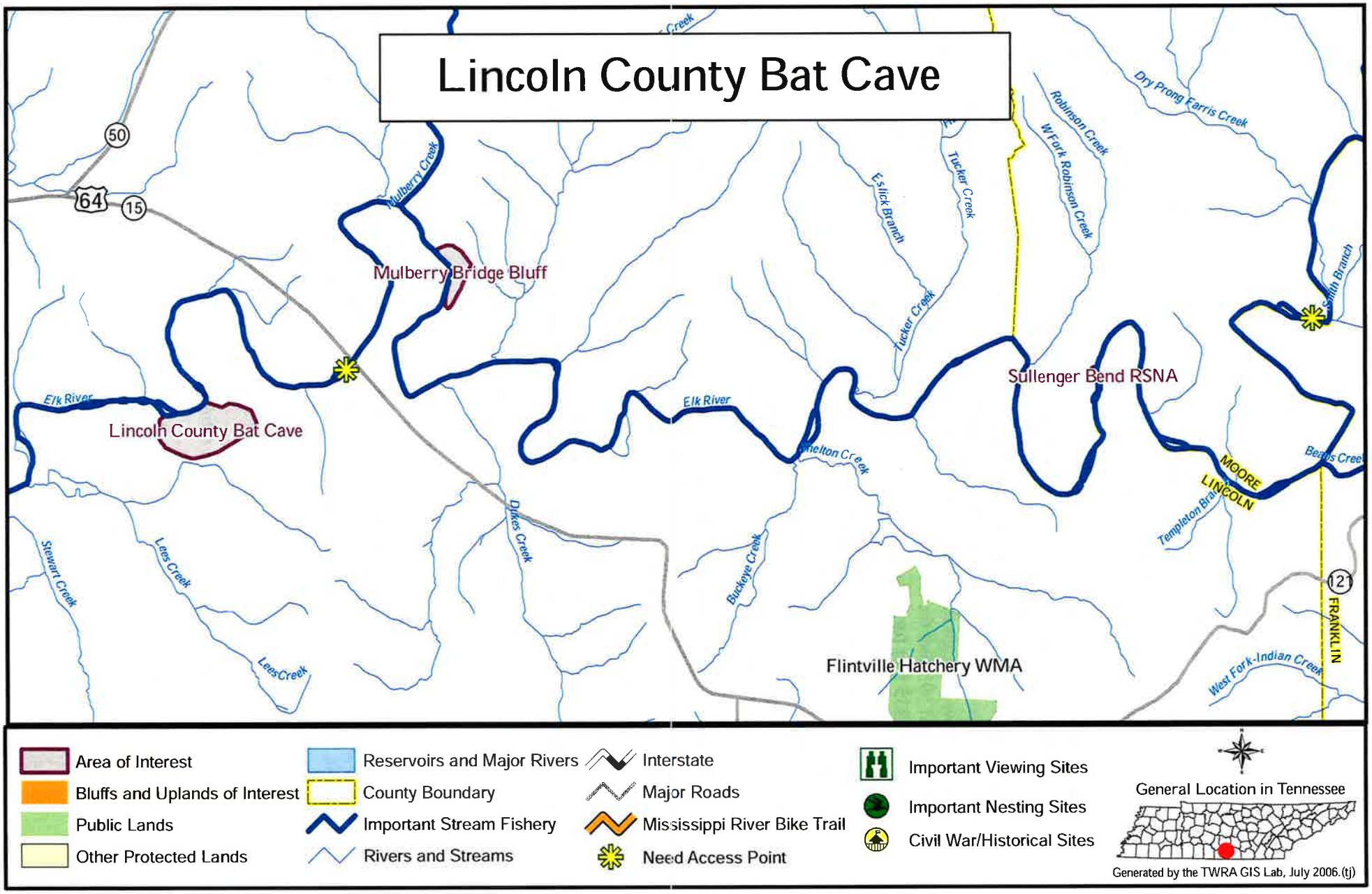
Description – This cave occurs in Bigby-Cannon limestone. According to Barr (1961): "Bat Cave, the largest and longest known cave in Lincoln County, is so named because a large colony of bats (mostly *Myotis sodalis)* inhabits the cave in the summer months. The entrance is 6 feet high and 20 feet wide and is located 50 feet south of Elk River. The cave extends S. 60° W. for 175 feet, then S. 10°-15° W. for 420 feet. A sizable stream flows through this part of the cave; the depth of the water varies from 6 inches to 4.5 feet. At 595 feet the stream flows from a narrow slot into a large pool. The side passage is 335 feet (or more) long and extends southwestward. The last 145 feet of the cave explored by the writer is a low water passage, apparently of phreatic origin. It is half filled with water. The main stream passage averages 15 feet wide and 6 feet high. For part of its length there is a narrow slot in the roof, formed by solution along a joint. The side passage averages 6 feet wide and 10 feet high in the pothole area but gradually becomes smaller upstream. Very few formations are developed in the cave." The total length of mapped passages is 1,010 feet (Tennessee Cave Survey, 2003).

Significance – Site Importance High (B3) – Lincoln County Bat Cave is home to a large summer roost of the state and federally endangered gray bat (*Myotis grisescens*). This species is considered imperiled by the DNA (G3S2). A population of 17,340 gray bats was reported at this location in the summer of 2002 (Harvey, 2002), and is believed to represent a bachelor colony. The summertime report of the Indiana bat (*Myotis sodalis*) is believed to be erroneous. Because of the presence of the large gray bat colony, the cave likely supports a diverse assemblage of cave-obligate invertebrates, many of which are extremely rare and narrowly endemic to the region. Additionally, a small population of the state threatened Alabama snow-wreath (*Neviusia alabamensis*) occurs approximately 0.15 miles east of the cave, and is included in the site design.

Strategy – The primary concern for the conservation of the gray bat is uncontrolled access. Disturbance of gray bats during roosting periods can significantly reduce colony size, and ultimately drive them away. In addition to protecting an initial one acre around the entrance of the cave, the cave may need to be posted to discourage inappropriate access. Other exclusion measures may be necessary. Acquisition of additional acreage will provide for establishment of a forested corridor from the entrance along the Elk River, over which the bats may be expected to feed. Ideally, the entire recharge area of the cave will be acquired to protect it from incompatible land uses.

Land Protection Needs – 221 acres at an estimated cost of $239,000.

Potential Partners – TNC, TWRA, USFWS, and TDEC.


Lincoln County Bat Cave
50
64
15
Mulberry Creek
Mulberry Bridge Bluff
Elk River
Lincoln County Bat Cave
Elk River
Tucker Creek
Eslick Branch
Tucker Creek
Robinson Creek
W Fork Robinson Creek
Dry Prong Farris Creek
Smith Branch
Sullenger Bend RSNA
Shelton Creek
Dykes Creek
Buckeye Creek
Templeton Branch
MOORE
LINCOLN
Beans Creek
121
FRANKLIN
West Fork-Indian Creek
Stewart Creek
Lees Creek
Lees Creek
Flintville Hatchery WMA
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LITTLE GRINDERS CREEK (HICK HILL WMA) & AUNTNEY HOLLOW SNA

Location – (N35.5376, W87.4095 and N35.5198, W87.4294, respectively) Little Grinders Creek is located in Lewis County within the Western Highland Rim Physiographic Province. It is located south of Hwy 412, and east of the Natchez Trace Parkway. Auntney Hollow is located to the south of Little Grinders Creek. At the time of this report, approximately 2,100 acres of Dry Branch had been acquired for transfer to TDEC for management as a SNA.

Little Grinders Creek – Site Importance Outstanding (B1) – This site is in an area of steep dissected hills and is predominantly forested. The site consists of seeps along the headwaters of Little Grinders Creek and its tributaries. At the time of this report, this site was owned and managed by an industrial forestland company. The seeps and other Tennessee yellow-eyed grass (*Xyris tennesseensis)* locations within the Little Grinders Creek watershed are located within SMZs and have not been significantly altered or impacted and retain their natural forest composition, however, much of the ridges and slopes have been converted to pine plantations by the previous owners. The site is located at the confluence of Mail Hollow, Tanyard Hollow, and Little Grinders Creek at the 900 ft. elevation contour.

The focus of the site conservation plan for Little Grinders Creek will be protection and management of populations of Tennessee yellow-eyed grass (*X. tennesseensis)* (G2) and associated rare seep communities. This site has one of the largest and best populations of the federally and state endangered *X. tennesseensis* in the state. The state threatened Eggert's sunflower (*Helianthus eggertii*) also occurs in several places within the site. *X. tennesseensis* is a small herbaceous perennial known from only 15 sites in Tennessee, Georgia, and Alabama. Six sites in Lewis County represent the only extant occurrences of the plant in Tennessee. *X. tennesseensis* is rare throughout the U.S. with a federal status of endangered. Protection and conservation of this plant's very unique habitat is critical for its continued survival.

X. tennesseensis generally inhabits seep slopes, spring meadows, or the banks of small streams in open or thinly wooded, wet habitats with calcareous rocks often at or near the surface. At this site the plant was found growing in association most commonly with *Parnassia grandifolia.* The surrounding tree canopy was dominated by various species of oak, maple, and hickory, particularly red maple and white oak. Common associated herbs included *Amphicarpea bracteata, Juncus effusus*, *Parnassia grandifolia*, and *Rudbeckia fuligida.* Other less common associated herbs include *Carex spp*, *Cyperus spp, Impatiens sp*, *Juncus effusus, Oxypolis rigidior*, and *Phlox glaberrina. P. grandifolia* is listed as a species of concern in Tennessee.

Auntney Hollow Designated SNA. (Site Importance High - B3) contains a Xyris seep. The Xyris seep occurs in a semi-open condition with willow, swamp dogwood (*Cornus amomum*) and alder growing along the seep's margin. The surrounding area is a closed

canopy oak-hickory forest. This seep plant community also includes black-eyed Susan, cowbane, marsh fern, bull-rush, goldenrod, phlox, rattlebox, flat sedge, beak rush, and short-headed rush.

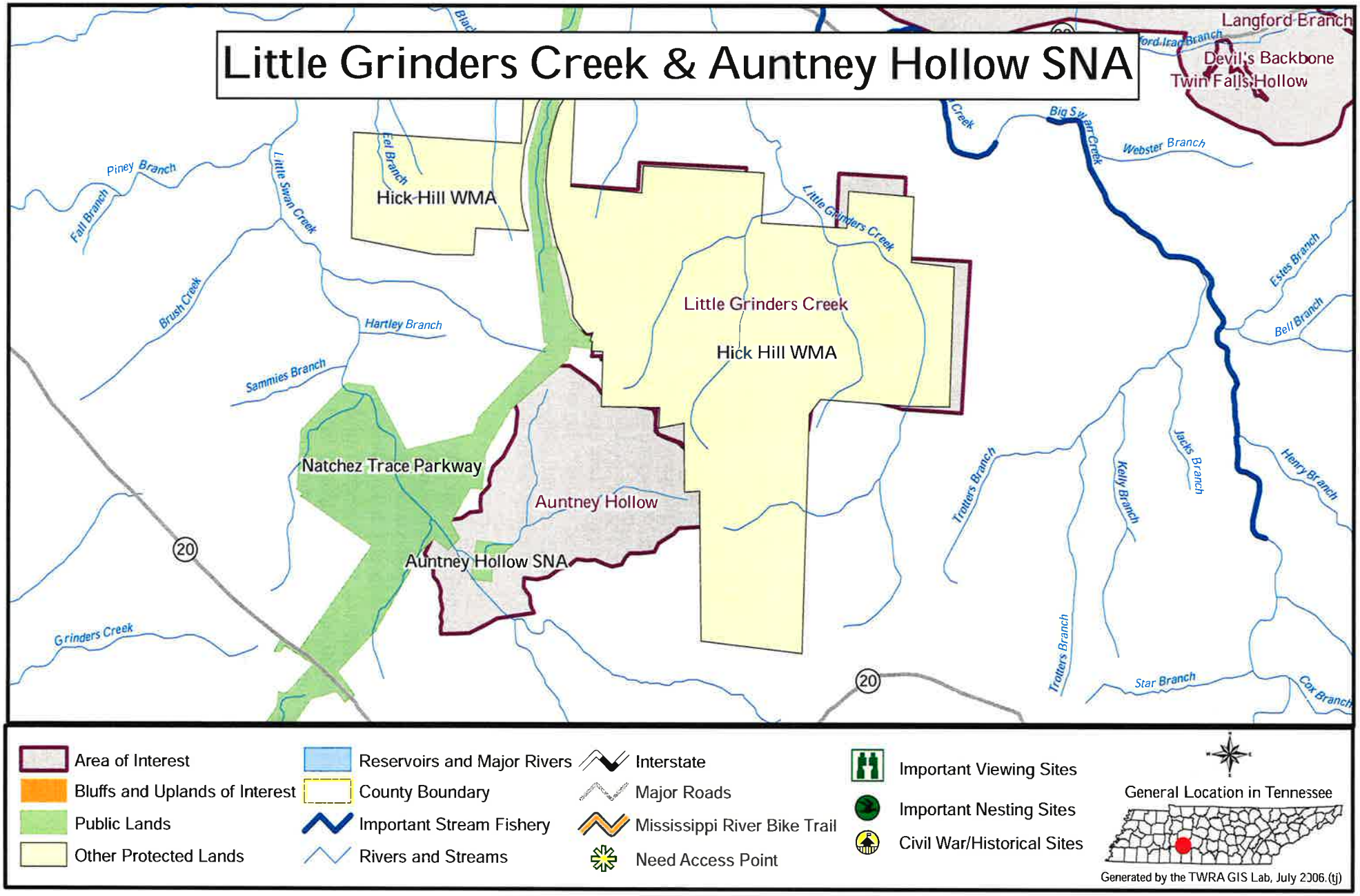
Auntney Hollow is significant because it also supports a rare *X. tennesseensis* seep community. This small seep is less than one tenth of acre and is located at the base of a west-facing slope near a tributary of Little Swan Creek. The size and shape of the natural area was established based on drainage patterns to eliminate potential damage that could be caused by possible future logging activities. The State was able to protect this natural area by receiving a donated conservation easement from the former property owner, Weyerhaeuser, Inc. in 2002.

Auntney Hollow is one of the largest populations of Tennessee yellow-eyed grass known with dozens of clumps of varying size and age classes. The state listed Grass of Parnassus (*Parnassia grandiflora*) is also a co-dominant species in this seep and is a prominent plant and easy to identify because of its large round conspicuous leaves.

Strategy - The strategy for these areas includes acquisition of properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – Little Grinders Creek - 2,451 acres at an estimated cost of $2,651,000; Auntney Hollow - 1,078 acres at an estimated cost of $1,757,000.

Potential Partners – TDEC, USFWS, and private landowners.


Little Grinders Creek & Auntney Hollow SNA
Langford Branch
Devil's Backbone
Twin Falls Hollow
Big Swan Creek
Webster Branch
Piney Branch
Fall Branch
Little Swan Creek
Eel Branch
Hick-Hill WMA
Little Grinders Creek
Estes Branch
Bell Branch
Brush Creek
Hartley Branch
Sammies Branch
Little Grinders Creek
Hick Hill WMA
Natchez Trace Parkway
Auntney Hollow
Auntney Hollow SNA
Trotters Branch
Kelly Branch
Jacks Branch
Henry Branch
20
Grinders Creek
Trotters Branch
Star Branch
Cox Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LONG HUNTER STATE PARK AND COUCHVILLE CEDAR GLADE SNA

Location – (N36.0748, W86.5203) Long Hunter State Park is located approximately 20 miles southeast of Nashville between I-40 and I-24 in Davidson and Rutherford Counties. Couchville Cedar Glade adjoins the eastern boundary of Long Hunter State Park.

Long Hunter State Park contains 2600 acres along the shores of J. Percy Priest Lake. It has five units: Couchville, Baker's Grove, Bryant Grove, and Sellar's Farm. The park provides boating, fishing, biking, hiking, swimming and picnicking as well as nature study areas.

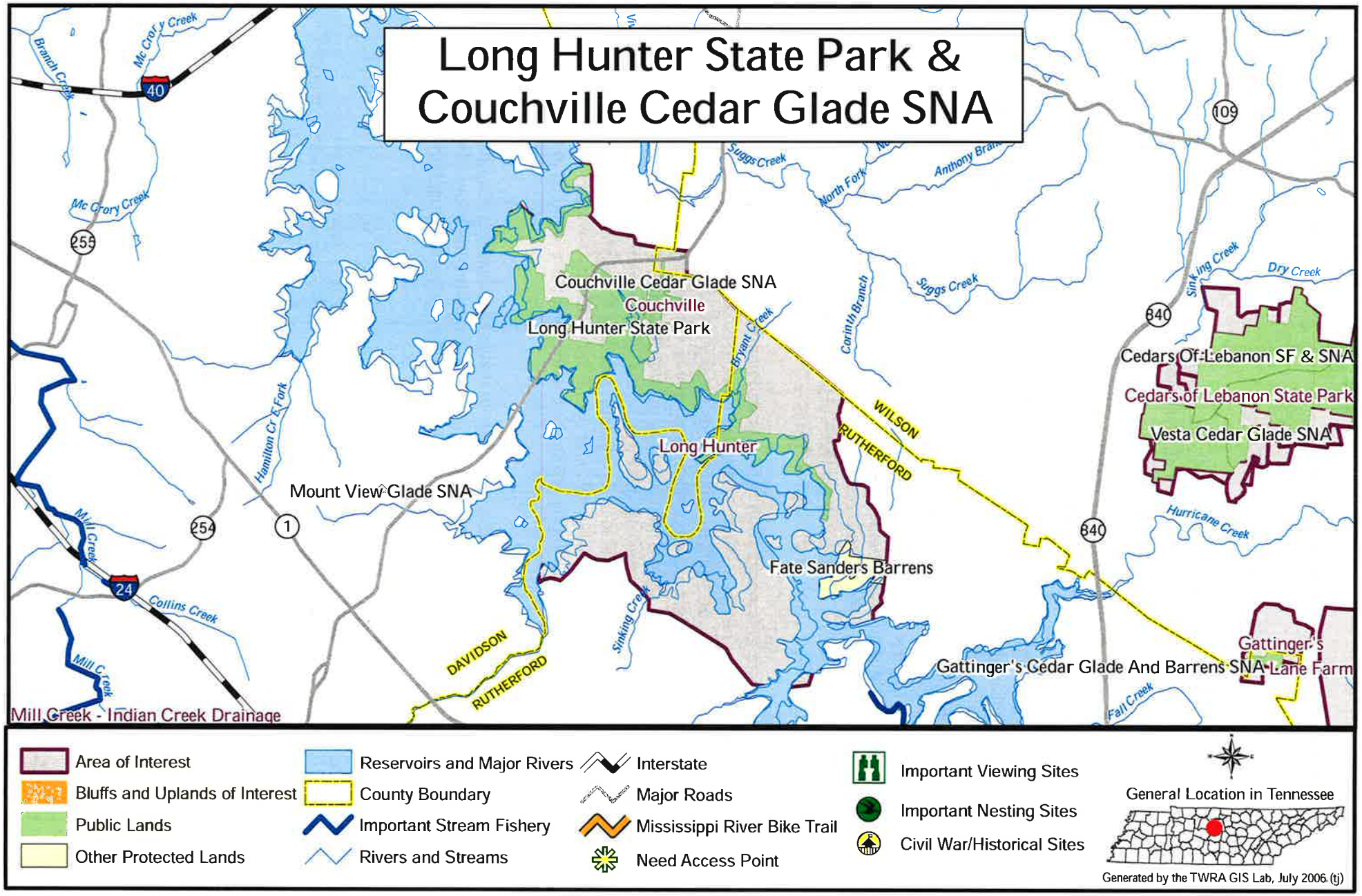
Long Hunter State Park provides miles of hiking trails traversing unique cedar glades, and a Mississippian Native American village. The endangered Tennessee coneflower is found here along with a rich population of fauna and flora typical of Middle Tennessee.

Couchville Cedar Glade is a 122-acre natural area contiguous with the east boundary of Long Hunter State Park. Site Importance Very High (B2) – Couchville supports one of the largest known and best quality populations of the federally endangered Tennessee coneflower (*Echinacea tennesseensis*). Couchville also provides one of the finest examples of a glade-barrens complex and protects many rare plant species. The glades are distributed where limestone outcropping and shallow soils limit growth of perennial plants and support annual species like leavenworthia, sporobolus, and sedum. The barrens species, that also includes Tennessee coneflower, occur where soils increase and grasses like little bluestem and side oats grama become dominant. The glades and barrens interface forming a complex. There are small woodland patches surrounding the glade-barrens complex with some shrubby vegetation present in the barrens. There are also some seasonal wet areas where small sedge openings occur and where an ephemeral stream habitat supports a small colony of the federally listed endangered leafy prairie clover (*Dalea foliosa*).

Strategy - The strategy for acquisition at Couchville Cedar Glade is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage. The strategy for future acquisitions for Long Hunter State Park is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs –4,725 acres at an estimated cost of $14,436,000.

Potential Partners - TDEC, USFWS, TCF and other land conservancy groups.


Long Hunter State Park &
Couchville Cedar Glade SNA
Couchville Cedar Glade SNA
Couchville
Long Hunter State Park
Long Hunter
Mount View Glade SNA
Fate Sanders Barrens
Cedars Of Lebanon SF & SNA
Cedars of Lebanon State Park
Vesta Cedar Glade SNA
Gattinger's Cedar Glade And Barrens SNA
Gattinger's Lane Farm
WILSON
RUTHERFORD
DAVIDSON
RUTHERFORD
Mill Creek - Indian Creek Drainage
Mc Crory Creek
Suggs Creek
North Fork
Anthony Branch
Corinth Branch
Bryant Creek
Sinking Creek
Dry Creek
Hamilton Cr. Fork
Mill Creek
Collins Creek
Hurricane Creek
Fall Creek
40
109
259
840
254
1
24
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

LONG POND SLOUGH

Location – (N36.5025, W87.4231) Long Pond Slough is located in Montgomery County at mile 121 of the Cumberland River in Lake Barkley. The site is approximately 4.3 miles southwest of Clarksville.

Description – Long Pond Slough is a natural swamp located on an alluvial terrace of the Cumberland River. The site receives runoff water from adjacent bottomlands and also is spring-fed. Habitat diversity results from the presence of an open water zone surrounded by subsequent shallow water, swamp forest, and bottomland forest communities. According to Dodson (1977): "Long Pond Slough…is floristically significant because: (1) it is one of the few remaining lowland swamps on the Northwestern Highland Rim, and (2) the area is rapidly being encroached upon and filled in for agricultural purposes. The area comprises approximately 23.9 acres, 15 of which are permanently inundated. The slough is located on a natural levee approximately 1850 feet from the Cumberland River." In 1977 the site was nominated to the National Park Service as Registered Natural Landmark. In 1984 it was considered by the TWRA for inclusion as a wildlife observation area (WOA) and in 1985 the DNA petitioned the landowner to add the property to the TDEC Register of Natural Areas.

Significance – Site Importance High (B3) – Long Pond Slough is significant because the site provides habitat for the northern copperbelly watersnake (*Nerodia erythrogaster neglecta*), a species on the southern fringe of its range in northern middle Tennessee. It also provides habitat for at least four state-listed plants, including yellow water-crowfoot (*Ranunculus flabellaris*), featherfoil (*Hottonia inflata*cern), short-beaked arrowhead (*Sagittaria brevirostra*), and blue scorpionweed (*Phacelia ranunculacea*). Numerous amphibians have been documented at the slough, including the bird-voiced treefrog (*Hyla avivoca*) and mole salamander (*Ambystoma talpoideum*). Bewick's wren (*Thyromanes bewickii*- state endangered) is reported from the Cumberland River bottoms in the immediate vicinity.

Strategy – Potential threats to integrity include drainage and clearing for agricultural purposes. To protect the site, portions of the nearest surrounding fields must be returned to an uncultivated state to provide an effective sediment and chemical trap between actively tilled fields and the slough.

Land Protection Needs – Currently the TWRA owns and manages 80 acres, a portion of which includes the slough property. The remaining property is privately owned, and much of this is surrounded by soybean fields. An estimated 920 acres of privately owned slough and agricultural fields should be acquired to protect the integrity of the slough at an estimated cost of $1,870,000.

Potential Partners – TWRA, Austin Peay State University, USACE, and TDEC.

MANUS ROAD CEDAR GLADE SNA

Location – (N35.7842, W86.2736) Manus Road Cedar Glade is located in Rutherford County approximately 10 miles east of Murfreesboro.

Description - Located on the Central Basin, Manus Road supports a high quality limestone cedar glade with rare and endemic plants.

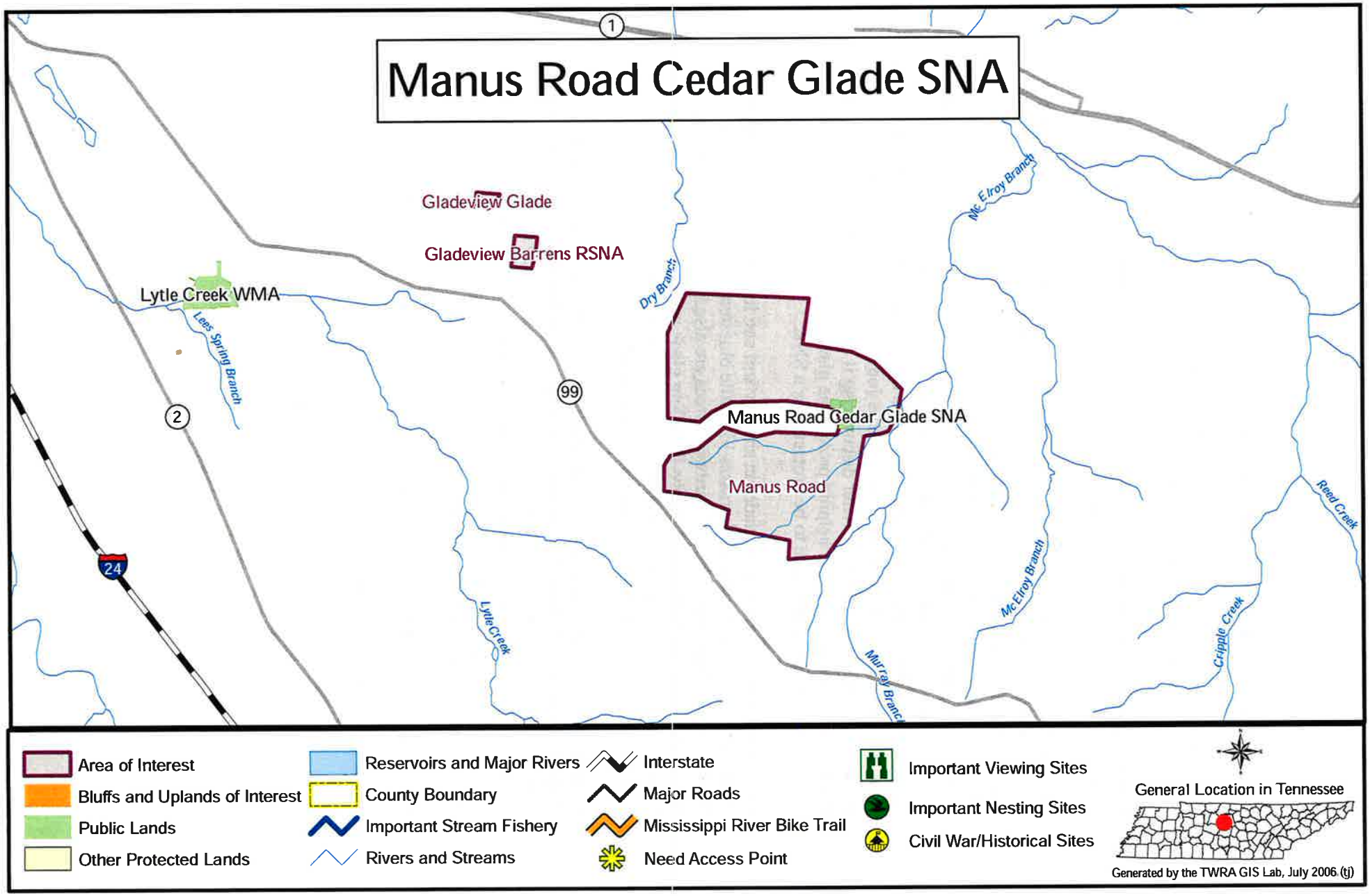
Significance – Site Importance Very High (B2) – Manus Road Cedar Glade supports rare and endemic plants that include the federally endangered Pyne's ground-plum, (*Astragalus bibullatus*), evolvulus (*Evolvulus nuttallianus*), and Tennessee milk-vetch (*Astragalus tennesseensis*). This Manus Road population of Pyne's ground-plum is one of only three populations that are known to occur. All three populations are located within a twelve-mile radius of Murfreesboro. The population is comprised of colonies scattered throughout this area. It was discovered by a private landowner who had read a featured article in the Murfreesboro Daily News Journal about the protection of Pyne's ground-plum at Flat Rock SNA. After discovering it on his property, he contacted the DNA and expressed interest in helping protect the plant. He subsequently sold the land to the State at fair market value to be protected as a SNA.

The natural area is largely open glades in shallow soil and limestone outcropping. Some small barrens areas with perennial grasses like little bluestem and forbs are scattered. Small areas of shrub and cedar and hardwood trees are also interspersed across the natural area. The usual species of shrubs including glade privet, coralberry, St. Johnswort, and winged sumac occur here along with cedars, winged elm, ash, hackberries, southern shagbark hickory and various oaks.

Strategy - The strategy for acquisition at Manus Road Cedar Glade is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 1,279 acres at an estimated cost of $2,058,500.

Potential Partners – TDEC and USFWS.


Manus Road Cedar Glade SNA
Gladeview Glade
Gladeview Barrens RSNA
Lytle Creek WMA
Lees Spring Branch
Dry Branch
Mc Elroy Branch
Manus Road Cedar Glade SNA
Manus Road
Lytle Creek
Mc Elroy Branch
Reed Creek
Cripple Creek
Murray Branch
1
2
24
99
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MAY PRAIRIE SNA/HICKORY FLATS WMA

Location – (N35.4633, W86.0243) May Prairie SNA and Hickory Flats WMA are located on the Eastern Highland Rim in Coffee County approximately one mile south of Manchester off U.S Hwy. 41.

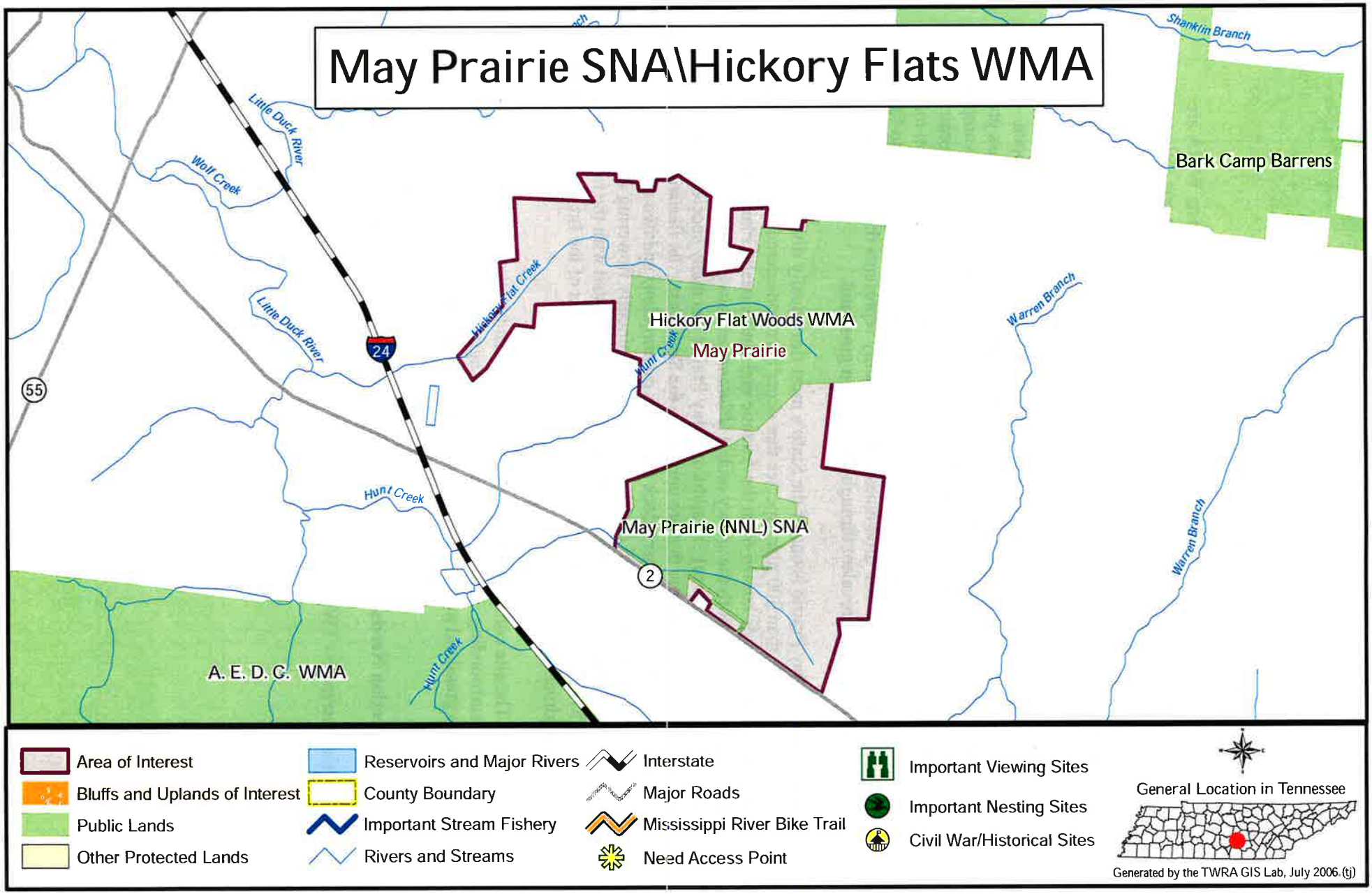
Description - May Prairie is a 250-acre natural area in Coffee County that adjoins the Hickory Flats WMA, which combined provides more than 1,000-acres of public land. The most impressive feature at May Prairie is the open grassland community that protrudes into the surrounding oak forest where the oak barrens begin. The open grassland is primarily comprised of a little bluestem community and a tall grass prairie community with an occasional sedge meadow found in wet depressions. A swamp forest forms the headwaters of what once was the "prairie tributary." The tall grass prairie component with big bluestem (*Andropogon gerardii*), Indian grass (*Sorgastrum nutans*), switchgrass (*Panicum virgatum*) and plume grass (*Erianthus giganiteus*) tend to follow the old prairie tributary. The little bluestem community represents the drier end of the prairie gradient and is prevalent throughout the open grassland.

Significance - May Prairie is one of the State's most floristically diverse natural areas with 25 of its more than 300 plant species that occur here considered rare in Tennessee. It supports disjunct plants known from the Atlantic and Gulf Coastal Plains including the only state location for both the snowy orchid (*Platanthera nivea*) and the coastal false-asphodel (*Tofieldia racemosa*). In addition, May Prairie has many species common to the Midwest tall grass prairie that are unusual in the Southeast. Its floristic display is noteworthy with the rare southern dock (*Silphium pinnatifdum)* and two species of blazing star (*Liatris spicata* and *L. microcephala*) prominently flowering in late summer. There are hundreds of acres of restorable oak barrens associated with the natural area and the WMA. May Prairie is also recognized by the Department of the Interior as a National Natural Landmark.

Strategy: - The site conservation plan for May Prairie and Hickory Flats WMA is to acquire the surrounding intact woodland and a large agricultural field that is potentially restorable to grassland prairie. The project would increase the area to 2,009 acres of public land.

Land Protection Needs – 1,048 acres at an estimated cost of $1,700,000.

Potential Partner – TWRA and TDEC.


May Prairie SNA\Hickory Flats WMA
Shanklin Branch
Bark Camp Barrens
Little Duck River
Wolf Creek
Little Duck River
Hickory Flat Creek
Hickory Flat Woods WMA
May Prairie
Hunt Creek
Warren Branch
24
55
Hunt Creek
May Prairie (NNL) SNA
2
Warren Branch
A. E. D. C. WMA
Hunt Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MCMINNS BLUFF AND RISING SUN BLUFF

Location – (N33.2098, W86.9645) McMinns Bluff is located in Davidson County on Old State Route 12, beginning at Back Creek Bluffs on the east side (about 3 miles west of Scottsboro) and extends west for 2 miles along a limestone bluff line and railroad corridor along the north bank of the Cumberland River and ends at Bull Run Road. Rising Sun Bluff is located about one-half mile east of McMinns Bluff and is separated by Sulphur Creek at its confluence with the Cumberland River. Although it is a separate bluff line, it falls within the boundary of a potential site design for McMinns Bluff.

Description – McMinns Bluff site consists of 100 acres of limestone talus bluff line and hilltops (knobs). The bluff faces are xeric and unstable due to the loose, limestone talus slopes that have eroded naturally and from road building. The bluff height ranges from 240 – 340 feet above the river level. The trees and shrubs exhibit stunted growth on the talus slopes and bluff tops; however, the knobs support a Virginia pine, mountain laurel and chestnut-post oak community. At this location the Cumberland River flows from the Central Basin into the Highland Rim and the sites are within the Highland Rim Escarpment, but are mostly below the cap rock of the Fort Payne Formation and are considered to be within a reentrant valley of the Central Basin. Rising Sun Bluff consists of 50 acres and is a southwest facing bluff with talus slopes and rock ledges.

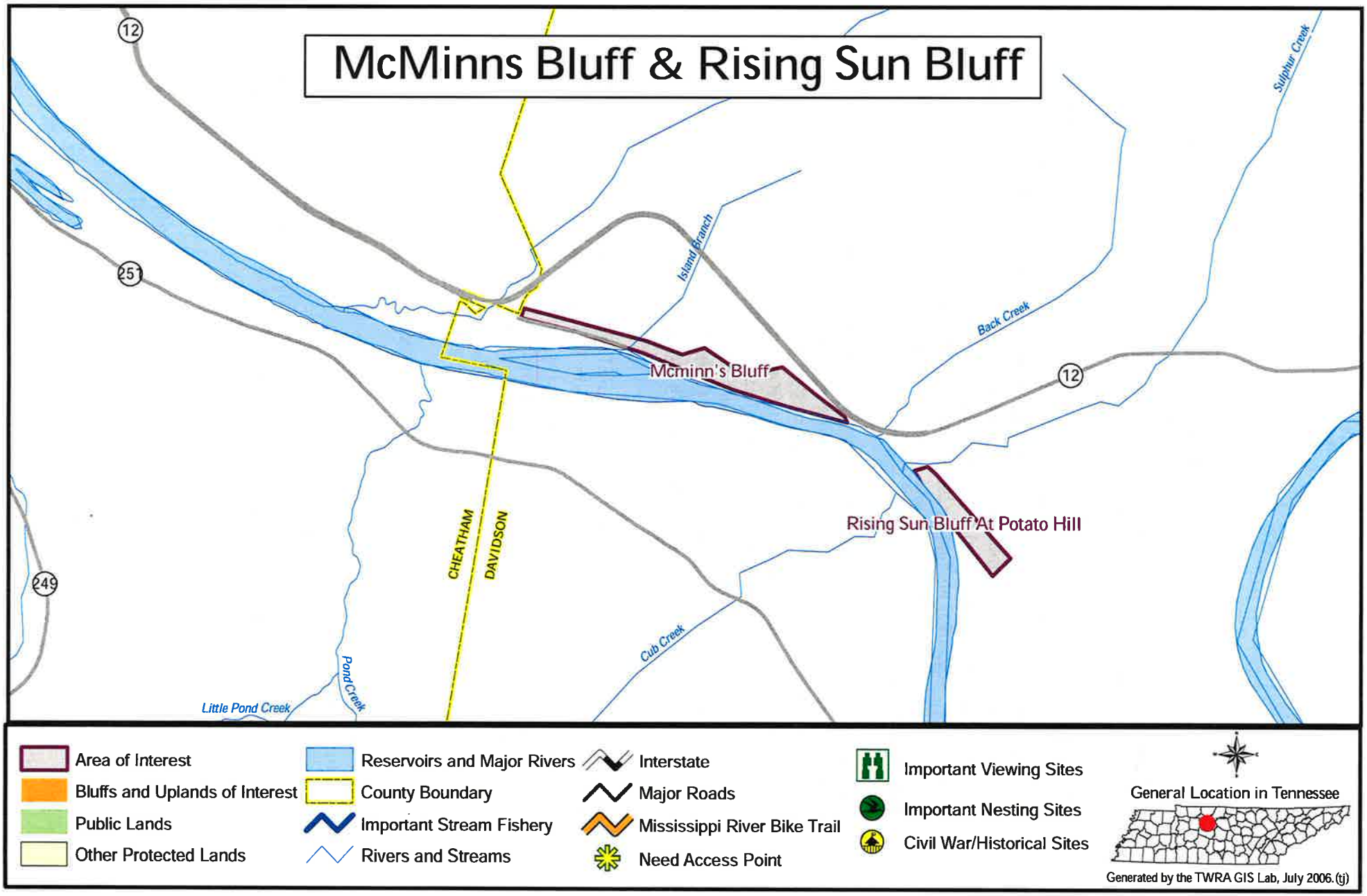
At McMinns Bluff, the Short's bladderpod (*Lesquerella globosa*) is are scattered throughout but are concentrated along the roadside, on top of the bluff, along the railroad corridor, and on the talus slopes. The railroad along this stretch has not been operational for many years; however, maintenance is still done with clearing and herbicide spraying. These are a definite threat to the bladderpod population. At Rising Sun Bluff, the *L. globosa* plants are located along the ledges for about a distance of 2,000 feet about 10 feet above the water. This part of the Cumberland River is in the Cheatham Lake Reservoir Area and managed by the USACE. The water levels are controlled and probably fluctuate seasonally.

Significance – Site Importance High (B2). These sites contain a large population of Short's bladderpod (*Lesquerella globosa*) a globally rare (G2) species, which is state listed as endangered. It is also listed as a "Candidate" for federal status by the US Fish and Wildlife Service. The highest bluff (about 340 feet) on McMinns Bluff Site is at Bull Run Road and provides an incredible view of the Cumberland River Valley. There are bladderpod plants on the top of this bluff face. The site is geologically unique also; the bluffs are composed of Mississippian, Devonian, Silurian and Ordovician strata. The plant is a biennial and probably requires the loose soil and rock base that the talus slopes provide. Similar to the other species of *Lesquerella*, *L. globosa* grows best with some disturbance. The pine-oak-heath forest type is unique and is believed to be a disjunct of the Cumberland Plateau. This is the best existing example of this forest type according to Elsie Quarterman who nominated this site for designation as a National Natural Landmark in 1978.

Strategy – State Route 12 was rerouted and the old highway (Old State Route 12) is now a county road, used primarily for access to local homes and farms. There could be an opportunity to enter into an agreement with Davison County for protection of this site. The strategy for acquisition is to acquire properties that include both of these sites in a site design for access control, watershed protection, and preservation of rare species and this exemplary plant community, the pine-oak-heath forest type. This is the second largest site for *L. globosa* in Tennessee, and at present, there are no protected sites for this species in Tennessee. Most of the sites are on the bluffs of the Cumberland River.

Land Protection Needs – 150 acres at an estimated cost of $245,000.

Potential Partners – TDEC, USFWS, and USACE.


McMinns Bluff & Rising Sun Bluff
12
25
249
Island Branch
Back Creek
Sulphur Creek
Mcminn's Bluff
Rising Sun Bluff At Potato Hill
CHEATHAM
DAVIDSON
Cub Creek
Pond Creek
Little Pond Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MILL CREEK

Location – (N35.9763, W86.6787) Mill Creek is located in Williamson and Davidson Counties. The stream has its origins in the headwater tributaries south of Nolensville (Williamson County) and drains north through the Central Basin approximately 15 air miles to its confluence with the Cumberland River (Davidson County).

Description – This project focuses on the more ecologically intact headwater portions of the Mill Creek watershed, primarily in the greater Nolensville area and southernmost Davidson County. The stream segments in question include Indian Creek, Owl Creek, Mill Creek proper, and numerous unnamed tributaries. These constitute three distinct portions of the watershed: 1) Indian Creek, 2) upper Owl Creek, and 3) greater Nolensville. These areas are rapidly being urbanized, and barring conservation planning will predictably come to resemble more densely populated, degraded areas in the downstream portions of the watershed.

Significance – Site Importance Outstanding (B1) – Mill Creek is the only known location for the endemic, federally endangered Nashville crayfish (*Orconectes shoupi*). The crayfish may be found from main stem Mill Creek near its confluence with the Cumberland River, upstream into even certain first-order tributaries in the Nolensville area. The Mill Creek watershed also is home to several other rare species, including the redband darter (*Etheostoma luteovinctum*- state in-need-of-management), water stitchwort (*Stellaria fontinalis*- state threatened), Duck River bladderpod (*Lesquerella densipila*- state threatened), and limestone fame-flower (*Talinum calcaricum*- state special concern.

Strategy – Most of Mill Creek and its tributaries are listed as impaired by TDEC-WPC due to siltation. The Nashville crayfish, though more tolerant to habitat degradation than some other invertebrates, remains very susceptible to permanent stream alterations, sedimentation, excessive water withdrawals, point and nonpoint discharges, poor agricultural practices, pesticides, and loss of riparian buffers. Stabilization and enhancement of the water quality in Mill Creek and its tributaries is key to the survival of the species.

Land Protection Needs – 1,520 acres at an estimated cost of $3,290,000

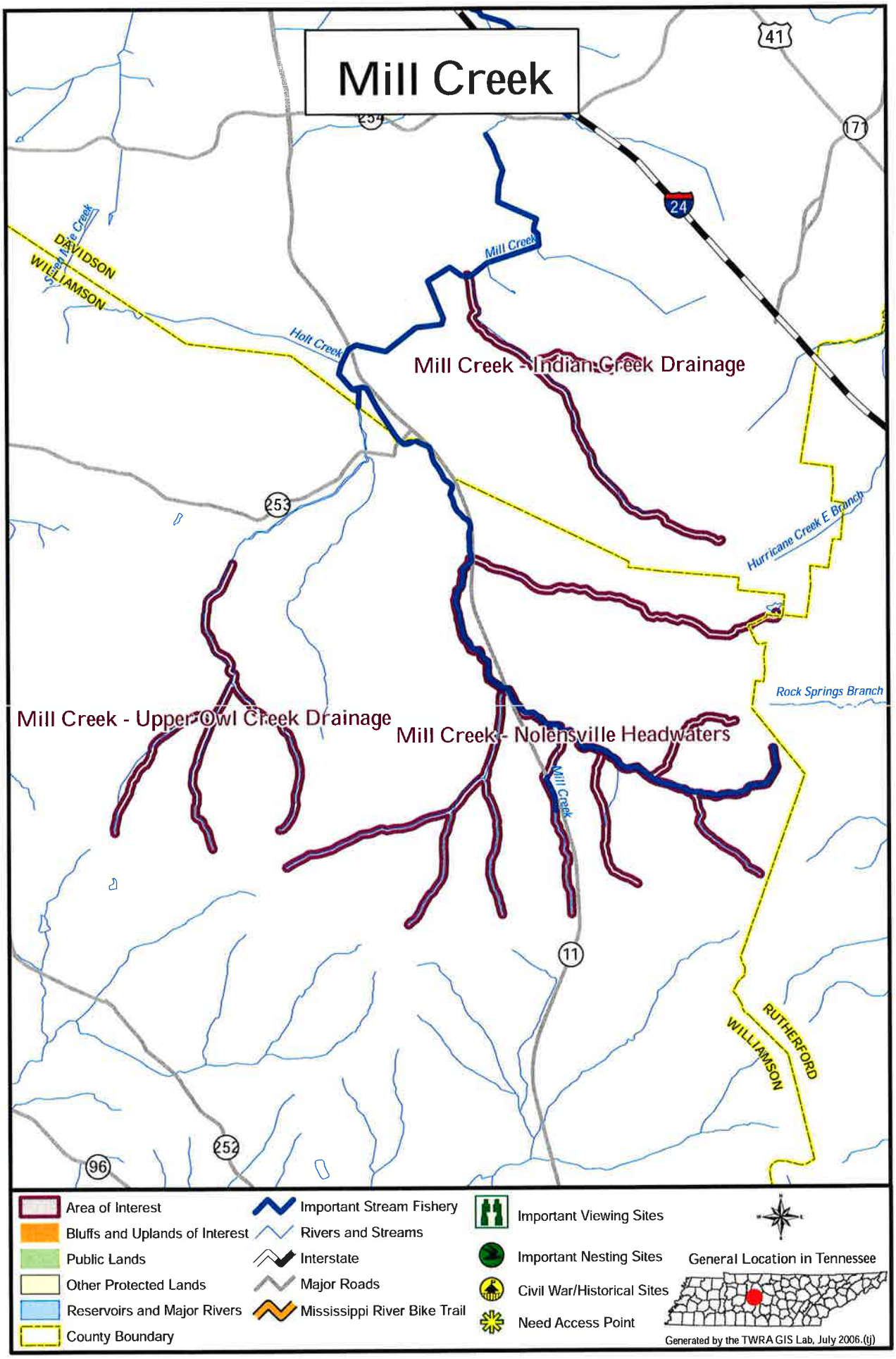
All streams in the area are potentially threatened in the near term by incompatible livestock and agricultural practices and in the long term by urbanization and infrastructure development. Conservation needs for the three targeted portions of the drainage are determined by creating a 50-meter buffer for each of the priority segments: 1) Indian Creek (50 m buffer: 227 acres), 2) upper Owl Creek (50 m buffer: 431 acres), and 3) Nolensville headwaters (50 m buffer: 862 acres). Ideally, large tracts surrounding those segments would be conservation targets as well.

Each site contains a robust population of the Nashville crayfish in certain segments, but also includes more headwater portions that are key to downstream water quality, even if

they do not support crayfish populations themselves. As a practical matter not all of these segments will be conserved. However, it is imperative that some proportion is protected, as no public lands in the Mill Creek watershed adequately protect the species. Having an upstream reservoir of *O. shoupi* populations from which to draw will be key to resurrecting downstream numbers following periodic kills.

This may be accomplished through several measures, including livestock fencing, restoration of native trees along stream corridors, conservation easements, and fee simple acquisition of properties in the Mill Creek watershed. Key also is rigid enforcement of current federal, state, and local water quality regulations.

Potential Partners – USFWS, TWRA, TNC, Williamson and Davidson County governments, Town of Nolensville, TDEC, and NRCS.


Mill Creek
41
254
171
24
Mill Creek
DAVIDSON
WILLIAMSON
Holt Creek
Mill Creek - Indian Creek Drainage
253
Hurricane Creek E Branch
Rock Springs Branch
Mill Creek - Upper Owl Creek Drainage
Mill Creek - Nolensville Headwaters
Mill Creek
11
RUTHERFORD
WILLIAMSON
252
96
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MONTGOMERY BELL STATE PARK

Location – (N36.1049, W87.2918) Montgomery Bell State Park is located approximately 40 miles west of Nashville on Highway 70 east of Dickson in Dickson County.

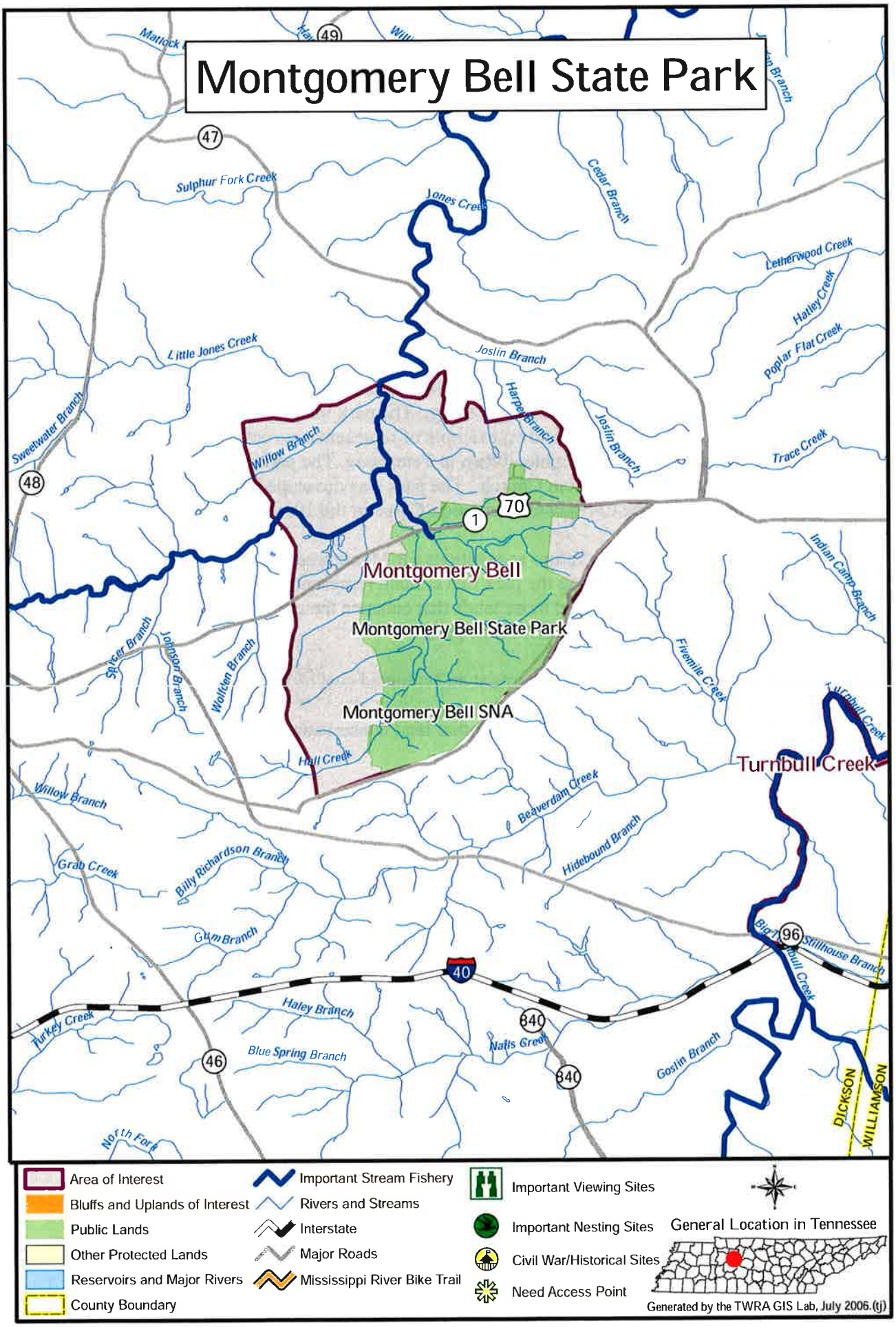
Description - Montgomery Bell is a 3850 acre park offering camping, fishing, boating, hiking, picnicking, mountain biking, swimming and many other outdoor activities. The park also provides a modern inn and conference center as well as an 18 hole golf course, cabins and group camp.

Significance - Montgomery Bell State Park has an abundance of historical, natural and cultural resources for the park visitor to enjoy. The park includes a 600 acre oak-hickory forest and it provides the best-known example of representative oak-hickory forest ecosystems on the Western Highland Rim in Tennessee. The park is also the "birthplace" of the Cumberland Presbyterian Church. The park was developed by the Works Progress Administration and the Civilian Conservation Corps in the 1930's.

Strategy - The strategy for future acquisitions for Montgomery Bell State Park is to acquire properties surrounding the park that contain representative forest cover types of the Western Highland Rim and those lands that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 2,295 acres at an estimated cost of $7,700,000.

Potential Partners – TDEC, TCF, and other land conservancy groups.


Montgomery Bell State Park
Montgomery Bell
Montgomery Bell State Park
Montgomery Bell SNA
Turnbull Creek
Sulphur Fork Creek
Jones Creek
Cedar Branch
Letherwood Creek
Hatley Creek
Poplar Flat Creek
Little Jones Creek
Joslin Branch
Harper Branch
Trace Creek
Sweetwater Branch
Willow Branch
Indian Camp Branch
Spicer Branch
Johnson Branch
Wolften Branch
Fivemile Creek
Hall Creek
Beaverdam Creek
Hidebound Branch
Billy Richardson Branch
Grab Creek
Gum Branch
Stillhouse Branch
Haley Branch
Turkey Creek
Blue Spring Branch
Nails Creek
Goslin Branch
North Fork
DICKSON
WILLIAMSON
47
49
48
70
1
40
96
46
840
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MULBERRY BRIDGE BLUFF

Location – (N35.1544, W86.4645) Mulberry Bridge Bluff site is located in Lincoln County on the Elk River adjacent to the Mulberry Bridge crossing, approximately 1 mile upstream of the confluence of Mulberry Creek, about 15 miles southwest of Lynchburg. (Lincoln County Bat Cave map)

Description – The site encompasses approximately 25 acres along a moderately steep limestone bluff on the Elk River. The west to southwest facing bluff and slope are forested and the Alabama snow wreath shrubs are located on the upper two-thirds of the slope. The plants also form a band on the upper and mid-slope about 12-100 feet wide for a length of 700 feet and then broaden and extend to the lower slope toward the south part of the bluff. The forested slope is open with the snow wreath dominant in the understory. Associated dominant understory and overstory species are redbud, white ash, hop hornbeam, Shumard oak, chinquapin oak, mock orange, basswood, St. John's wort, poison ivy, red cedar, buckeye, and Carolina buckthorn. Invasive Japanese honeysuckle is a problem at the site.

Significance – Site Significance is Very High (B2) – *Neviusia alabamensis*, Alabama snow wreath, is listed as state threatened and is globally rare and imperiled (G2). This is the second largest of only four known sites in Tennessee. At this site there is also a 1980 record of a rare mussel, rabbitsfoot (*Quadrula cylindrica cylindrica*), found in the Elk River. This species has a global rank of G3.

Strategy - The first strategy would be to survey and delineate the population extent of the Alabama snow wreath at this site. Properties should be acquired within and adjacent to the site boundary for access or access control, watershed protection, and preservation of rare species.

Land Protection Needs – Maximum of 29 acres at an estimated cost of $34,000.

Potential Partners – TDEC.

OLD STONE FORT STATE ARCHAEOLOGICAL PARK.

Location – (N35.4843, W86.1074) Old Stone Fort is on Hwy 41 immediately north of Manchester in Coffee County.

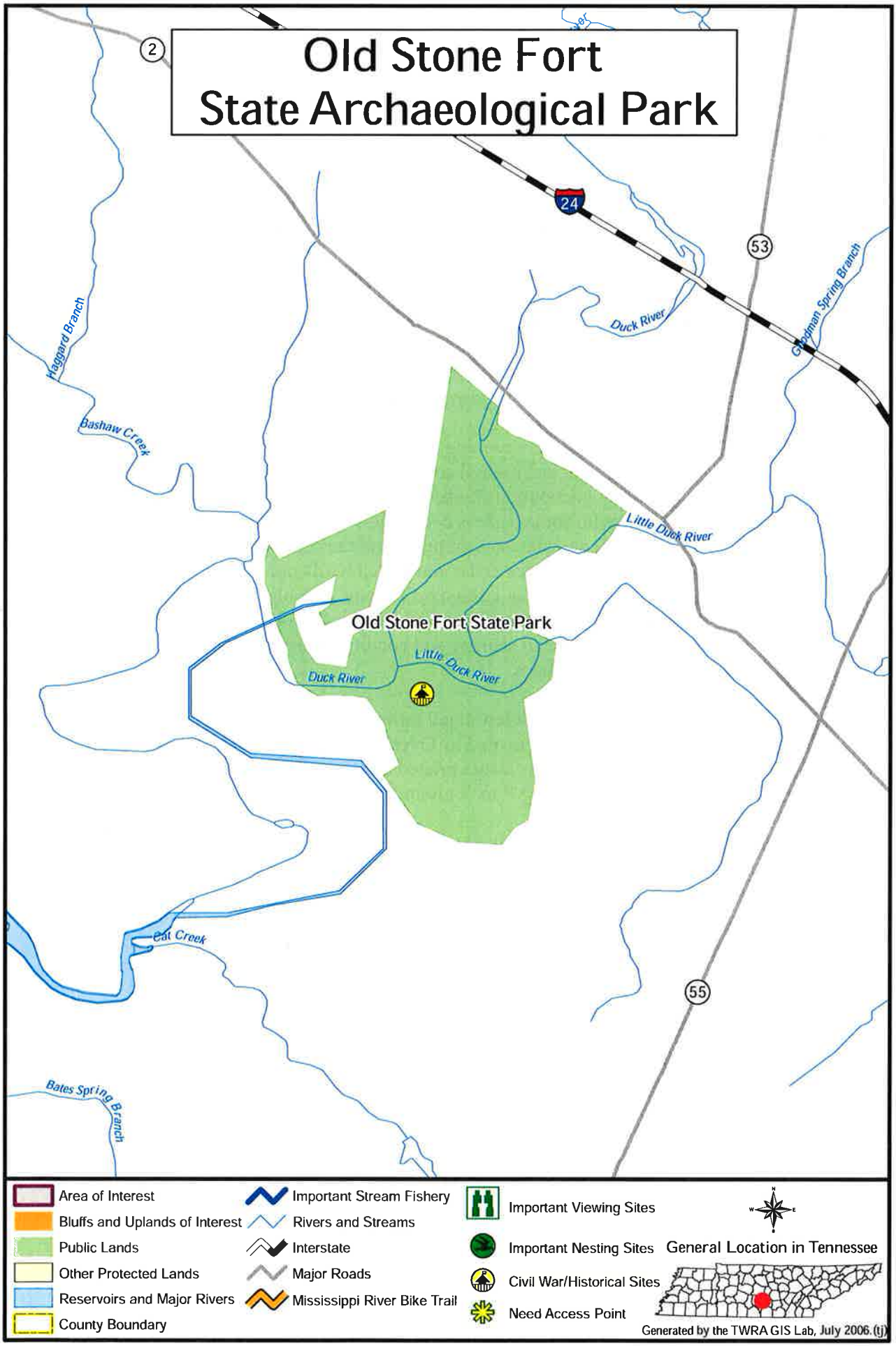
Description - Old Stone Fort is a world class Native American archaeological site. The park is home to a special type of Native American ceremonial mound. The park also consists of a museum, nine hole golf course, campground, picnic areas and hiking trails.

Significance - Old Stone Fort is the name given to a special type of Native American mound site. It is a hilltop ceremonial enclosure begun 2000 years ago and used at least through the fifth century.

Strategy - The strategy for future acquisitions for Old Stone Fort Archaeological Park is to acquire properties surrounding the park that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 158 acres at an estimated cost of $330,000.

Potential Partners – TDEC, TCF and other land conservancy groups.


Old Stone Fort
State Archaeological Park
2
24
53
55
Haggard Branch
Bashaw Creek
Duck River
Gladman Spring Branch
Little Duck River
Old Stone Fort State Park
Duck River
Little Duck River
Bates Spring Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

OVERBRIDGE SNA

Location – (N35.8461, W86.2087) Overbridge SNA is located in Rutherford County approximately eight miles east of Murfreesboro. (See Flat Rock Designated SNA map)

Description - Located on the Central Basin, Overbridge is a 70-acre natural area.

Significance – Site Importance Outstanding (B1) – It supports a globally rare Middle Tennessee cedar glade ecosystem that provides habitat for six state listed plant species, as well as leafy prairie clover (Dalea foliosa) and Pyne's ground plum (*Astragalus bibullatus*), which are both federally endangered plant species.

The natural area has a small stream running through it called Dry Creek. It provides habitat for leafy prairie clover and a small colony of yellowroot (*Zanthoxylum americanum*), which is an uncommon shrub. The east section of the property contains most of the cedar glade with some barrens occurring where deeper soils support perennial grasses like little bluestem and side oats grama. Both the cedar glades and the barrens are surrounded by patches of eastern red cedar and mixed hardwoods which include several oak species like chinquapin, post, and Shumard's along with blue ash, winged elm, and southern shagbark hickory. These are typical tree species associated with cedar glades, and they are usually stunted due to shallow soil conditions and drought conditions that maintain the openness of the glades.

The natural area is surrounded by a few small farms and single-family residences. It had once been part of a 260-acre farm owned by Overbridge Cattle Company and it was purchased by the State during foreclosure procedures in 1993. TNC has also been active here, and has assisted in protecting Pyne's ground plum by fencing the area.

Strategy - The strategy for acquisition at Overbridge is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 150 acres at an estimated cost of $243,000

Potential Partners – TDEC and USFWS.

PARKS CREEK SWAMP AND HIGHWAY 53 ROADSIDE BARRENS

Location – (N35.5835, W86.0669) The 108-acre Parks Creek and 41-acre Highway 53 Roadside Barrens are located in Coffee County. Parks Creek Swamp is located about 7 miles north of Manchester off Hwy 53. Highway 53 Roadside Barrens is located about 8 miles north of Manchester.

Description - Located on the Eastern Highland Rim, both of these projects are open herbaceous dominated Barrens vegetation.

Significance – **Parks Creek Swamp** (Site Importance Moderate - B4) is an extensive swamp forest system. It was examined as part of a survey for natural areas performed in 1982-1983 by the DNA. Before the inventory was complete and before landowner contact could be initiated, extensive logging and timber removal took place on at least some of the tracts. Outside of the wetlands on the north portion of Arnold Air Force Base, Parks Creek Swamp is the largest forested wetland tract remaining in the Barrens. Rare plant records are limited, and most of the swamp has had significant logging impacts in about 1983-1984. While some areas of older timber could exist on an unlogged tract, the principal known value of the site is for wetland values and general biodiversity. Rare plant elements include: *Lobelia canbyi* (state threatened), *Lilium michiganensis* (state threatened), and *Campanula aparinoides* (state special concern) (identified by D. Horn in 1985). *Ambystoma talpoideum* – the mole salamander is also present on the site.

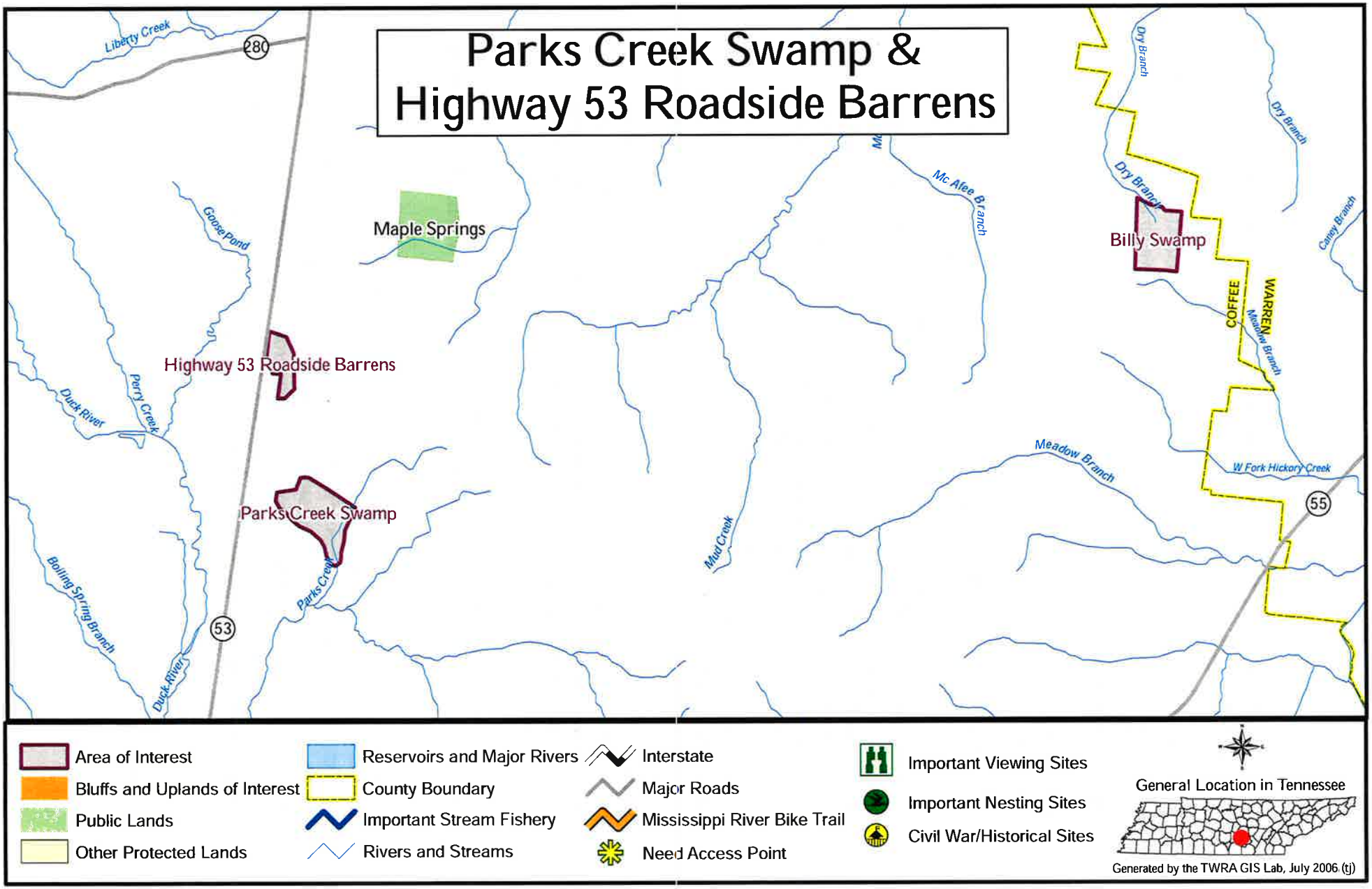
Highway 53 Roadside Barrens (Site Importance Moderate - B4) is an extensive herbaceous dominated Barrens community near Parks Creek Swamp and could be included in a macrosite design. Rare plant elements include *Lespedeza angustifolia, Lobelia canbyi, Lycopodiella alopecuroides, Drosera brevifolia,* and *Iris Prismatica*, all of which are state threatened..

Other rare elements in the area include: *Panicum acuminatum* var. *leucothrix* and the endemic Hemitremia flammea. Site management should include watershed protection for the flame chub.

Strategy – The strategy for acquisition at Parks Creek Swamp and Highway 53 Roadside Barrens is to acquire properties within and adjacent to the site design (site boundary and area between two sites) for access or access control, watershed protection, and preservation of rare species and representative communities of Barrens vegetation and imbedded wetlands. Sites could be included in a macrosite design. Preservation of these rare species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 149 acres at an estimated cost of $162,000.

Potential Partners – TWRA and TDEC.


Parks Creek Swamp &
Highway 53 Roadside Barrens
Liberty Creek
280
Goose Pond
Maple Springs
Highway 53 Roadside Barrens
Duck River
Perry Creek
Parks Creek Swamp
Parks Creek
Bolling Spring Branch
Duck River
53
Mc Afee Branch
Mud Creek
Meadow Branch
W Fork Hickory Creek
55
Dry Branch
Billy Swamp
Casey Branch
COFFEE
WARREN
Meadow Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

PHILADELPHIA AND TEXTBOOK GLADES

Location – (N 35.5411, W86.9217) In close proximity to each other, Philadelphia and Textbook Glades are located in Maury County. Both sites are located along Newcut Road, just west of Interstate 65. Philadelphia Glade is located near the intersection of Newcut and Fred White Roads. (See Duck River Habitat Corridor and State Scenic Area map)

Description –The habitat consists of Central Basin limestone cedar glades and barrens and dry limestone cedar/hardwood forests. The area is a mosaic of glades, barrens and dry woods. Cedar glades are easily recognizable habitats which lack tree canopy, often have exposed limestone at the surface, and the few woody plants (e.g. mainly eastern red cedar, and glade privet) which do occur are often stunted. Even in these harsh conditions the area contains some showy plants such as Nashville breadroot (*Pediomelum subacaule*), Gattinger's prairie clover (*Dalea gattingeri*), Gattinger's lobelia (*Lobelia appendiculata* var. *gattingeri*), Eggleston's violet (*Viola egglestonii*), etc. Textbook Glade has a high species diversity due to the various glade habitats including bare rock, gravel, grassland, and gladey woods and each of these habitats contain intermittent streams and seasonal washes.

Significance – Site Importance High (B3) – Leafy prairie clover (*Dalea foliosa*), a federally endangered plant, which is rare and uncommon globally occurs at Philadelphia Glade. Both sites posses additional state-listed plants including glade cress (*Leavenworthia exigua* var. *exigua*), Tennessee milk-vetch (*Astragalus tennesseensis*), sunnybells (*Schoenolirion croceum*) a striking spring-flowering plant of the lily family which occurs in the wet-weather washes of the glades, and limestone fame flower (*Talinum calcaricum*) which grows on open pavement-like limestone glades.

Strategy - The strategy for conservation of these two sites would be to conduct additional inventories and delineate further their ecological boundaries.

Land Protection Needs –92 acres at an estimated cost of $110,000.

Potential Partners – TDEC, TNC , and USFWS.

PICKADILLY PRAIRIE

Location – (N36.0890, W87.4781) Pickadilly Prairie is located in Dickson County approximately 4.5 miles west of the city of Dickson. It is primarily on the north side of Hwy. 70, with a small portion on the south side.

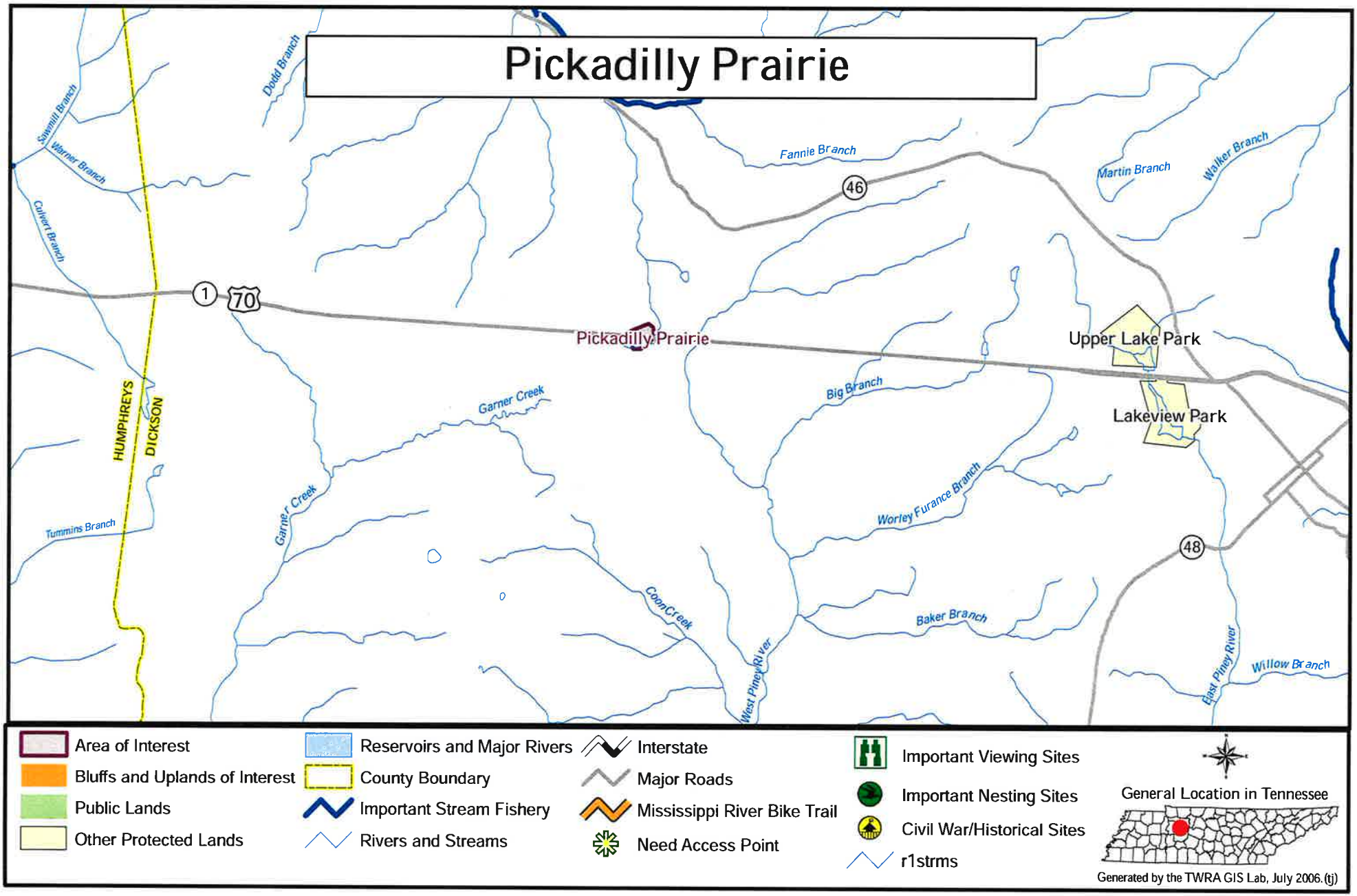
Description – This site is a small grassland-prairie remnant with a sparse overstory. The herbaceous species have a more mesic affiliation while the woody species are more xericly affiliated.

Significance – Site Importance High (B3) – Pickadilly Prairie is a small remnant of one of the most endangered ecosystems in Tennessee, the native grassland community. Few significant native grasslands remain in Tennessee, making the conservation of any significant remaining sites critically important. This site is a dry barrens with an extensive stand of native grasses, with typical native forbs. Dominant grass species include *Schizachyrium scoparium* and *Andropogon gyrans*. Rare species documented from very nearby and that could occur on the site include large-toothed aspen (*Populus grandidentata*) and yellow nodding ladies-tresses (*Spiranthes ochroleuca*).

Strategy - The strategy for acquisition at Pickadilly Prairie is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of this rare community will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 16 acres at a cost of $25,500.

Potential Partners – TDEC, NRCS, and TWRAP


Pickadilly Prairie
Dodd Branch
Sawmill Branch
Warner Branch
Culvert Branch
Fannie Branch
Martin Branch
Walker Branch
46
1
70
Pickadilly Prairie
Upper Lake Park
Lakeview Park
HUMPHREYS
DICKSON
Garner Creek
Big Branch
Garner Creek
Tummins Branch
Worley Furance Branch
48
Coon Creek
Baker Branch
West Piney River
East Piney River
Willow Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
r1strms
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

PIPER CAVES

Location – (N36.3014, W85.9923) The Piper Caves are located in Smith County. The caves are found "0.9 mile west and slightly south of Monoville, 1,100 yards south of State Hwy. 25, at the head of a hollow in the ridge between Peyton Creek and Cumberland River, at an elevation of 620 feet." (Barr, 1961). (See Bridgewater Cave map)

Description – These caves occur in Bigby-Cannon limestone. According to Barr (1961): "Piper Cave, well-known to residents of Smith County, received its name from Joseph Piper, who in years past owned the property on which the cave is located and mined saltpeter in the cave. It is a typical Allegheny-pattern cave of rather large dimensions. Many remains of saltpeter hoppers are to be seen in the cave. They are poorly preserved, most of the wood having rotted away because of the high humidity. Most of the vats are V-shaped troughs, although some were apparently barrel-shaped. Speleothems are few, although a beautiful flowstone is developed on the west wall of the north branch, and an interesting series of rimstone pools may be seen at the end of the south branch. These rimstone formations are dry in summer but fill with water during the winter and spring. The cave is notable for the relative ease with which it is possible to negotiate its 2,600 feet of large passages, and there is a well-trodden path throughout.

The entrance, in a collapse sink 100 feet in diameter, is 6 feet high and 12 feet wide. Across the sink, in the south wall, is the mouth of an extension of the cave, described below. Piper Cave averages 25 feet wide and 12 feet high. From the entrance it trends westward for 400 feet to a fork; on the right is a short, muddy crawlway into which surface water pours when it enters the mouth of the cave in wet weather. The main cave makes a sharp bend to the left and continues S. 55° W. for 220 feet to a second fork. The right branch extends northward for 700 feet to a ceiling collapse; a small hole over the breakdown leads into a room 120 feet long. The left branch is 1,200 feet in length, and its direction varies from S. 25° W. to S. 40° W., with a mean azimuth of about S. 25° W. The ceiling of this branch is remarkably smooth and level, and the floor varies in height according to the amount of broken rock and dirt which covers it.

Piper Cave is inhabited by a variety of animal life. A large colony of bats, predominantly *Myotis grisescens*, inhabits the cave during the summer months. The cave is the type locality for a species of blind beetle, *Pseudanophthalmus cumberlandus* Valentine. Isopods, amphipods, spiders, springtails, and millipeds are abundant and derive most of their nourishment from the extensive deposits of bat guano.

Across the sink from the main entrance is an extension of the cave (New Piper Cave). The mouth of this section is 4 feet high and 15 feet wide and opens into the side of a large passage which extends east for 300 feet and west for 220 feet. The west branch is comparatively dry, but the east branch contains a wet-weather stream which flows into the mouth of the cave in winter and spring. This stream has trenched a small canyon into the thick silt and gravel fill of the east branch. The cave has rather large cross-sectional dimensions and in places is 35 feet wide and 10 feet high." The total length of mapped

passages is 2600 and 520 feet for Piper and New Piper Caves, respectively (Tennessee Cave Survey, 2003).

Significance – Site Importance High (B3) – The Piper Caves are home to a large summer roost of the state and federally endangered gray bat (*Myotis grisescens*). This species is considered vulnerable and imperiled by the DNA (G3S2). A population of 2,140 gray bats was reported in the summer of 2002 (Harvey, 2002). Previous observations recorded in the DNA Biotics database indicate that this may be a maternity roost once containing as many as 13,100 gray bats. The cave also supports a population of the eastern woodrat (*Neotoma magister*), deemed in-need-of-management. With the presence of woodrats and gray bats, the cave likely supports a diverse assemblage of cave-obligate invertebrates, many of which are extremely rare and narrowly endemic to the region. The cave beetle reported by Barr (1961), *Pseudanophthalmus cumberlandus*, is one such example. This beetle is considered imperiled (G1G2) by NatureServe.

Strategy – The primary concern for the conservation of the gray bat is uncontrolled access. Disturbance of gray bats during roosting periods can significantly reduce colony size, and ultimately drive them away. In addition to protecting an initial five acres around the two cave entrances, the caves may need to be posted to discourage inappropriate access. Other exclusion measures may be necessary. Acquisition of additional acreage will provide for establishment and maintenance of a forested corridor from the entrances towards Peyton Creek, over which the bats may be expected to feed. Ideally, the entire recharge area of the cave will be acquired to protect it from incompatible land uses.

Land Protection Needs – 115 acres at an estimated cost of $125,000.

Potential Partners – TNC, TWRA, USFWS, and TDEC.

PORTER'S BLUFF

Location – (N36.5240, W87.3315) Porter's Buff site is located in Montgomery County east of Clarksville, within the city limits, between Porter's Bluff Lane and the Red River. (See Dunbar Cave SNA map)

Description - Located on the Western Highland Rim, this 76 acre site is a north to northeast-facing bluff and slope rising to approximately 100 feet above the Red River. On the slopes are several rock outcrops, seeps, springs and the rather large Porter's Cave. The slope terminates in a narrow floodplain of recent alluvium along the Red River. The slope and bluff are dominated by various species of oaks, while the floodplain is dominated by boxelder, silver maple, and other typical floodplain species.

Significance – Site Importance Moderate (B4) – This is a small but floristically rich area, especially in diversity of spring wildflowers. The site historically harbored several rare plant species including Appalachian bugbane (*Cimicifuga rubifolia*), spreading false-foxglove (*Aureolaria patula*), Short's rock-cress (*Arabis shortii*), and Clebsch's pocket moss (*Fissidens clebschii*).

In addition to the rich flora at this site, a rare bird has also been documented from Porter's Bluff. Bewick's wren (*Thryomanes bewickii*), was historically observed near Porter's Cave.

Strategy - The strategy for acquisition at Porter's Bluff is to acquire properties within and adjacent to the site design (site boundary) for access or access control, and preservation of rare species and representative communities. Preservation of rare species, communities and wildlife, will provide educational opportunities for the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 67 acres at an estimated cost of $110,500.

Potential Partners – TDEC.

RADNOR LAKE SNA

Location - (N36.0587, W86.8015) Radnor Lake SNA is located on Otter Creek Road in Davidson County

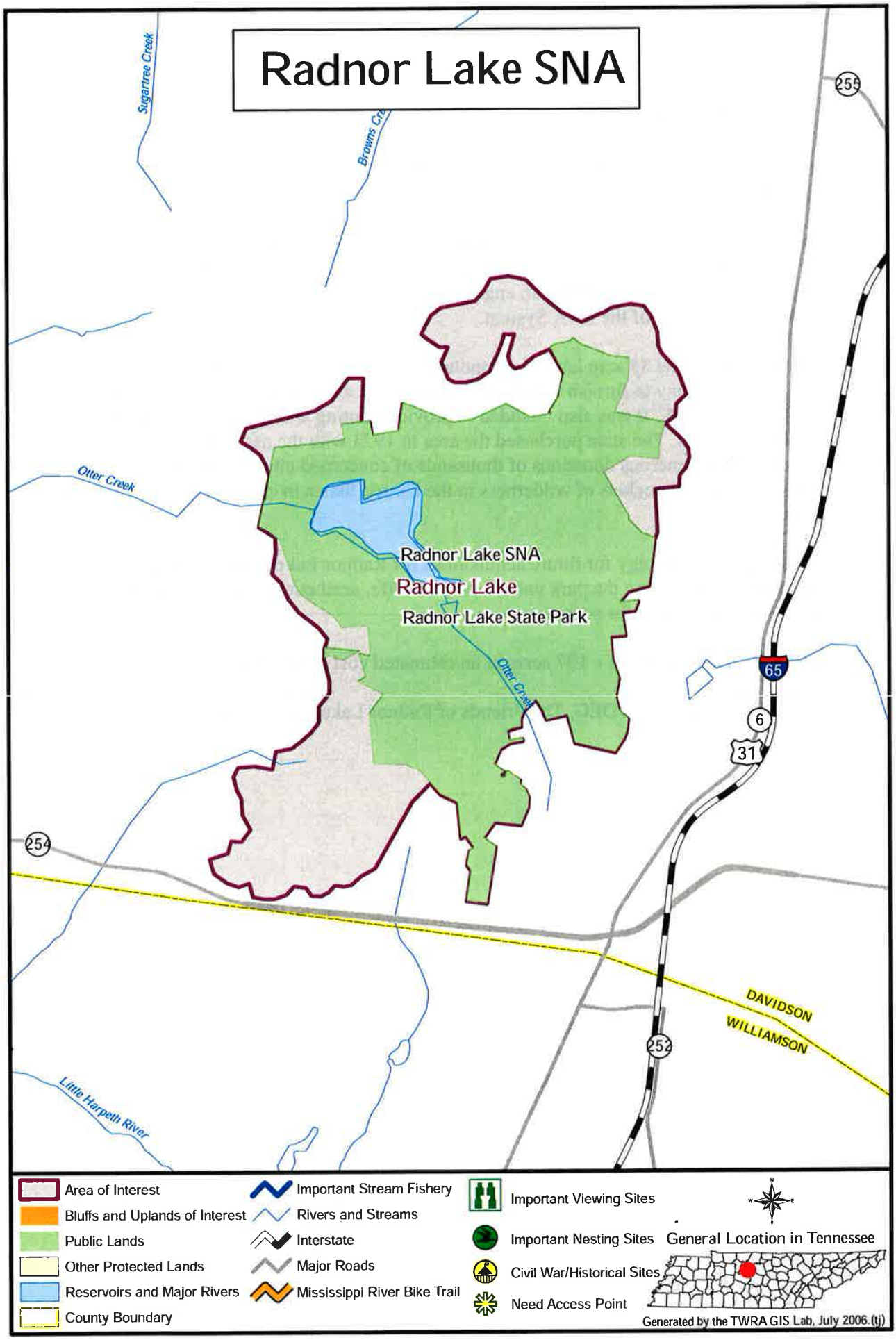
Description - Radnor Lake is a 1,200 acre SNA which preserves beautiful scenery and a diversity of natural habitats. The area was originally developed as a source of water for the Louisville and Nashville steam engines at nearby Radnor Yards. The park is the first official component of the SNA System.

Significance - The 85 acre lake was impounded in 1914 by the Louisville and Nashville Railroad Company to furnish water for steam engines and the livestock at the nearby Radnor Rail Yard. It was also intended to provide hunting and fishing opportunities for L&N employees. The state purchased the area in 1973 with the assistance of federal funds and the generous donations of thousands of concerned citizens. Radnor Lake is one of the largest pockets of wilderness in the United States in close proximity to a major city.

Strategy - The strategy for future acquisitions for Radnor Lake SNA is to acquire properties surrounding the park enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 107 acres at an estimated cost of $2,590,500.

Potential Partners – TDEC, The Friends of Radnor Lake and other land conservancy groups.


Radnor Lake SNA
Sugartree Creek
Browns Cr
Otter Creek
Radnor Lake SNA
Radnor Lake
Radnor Lake State Park
Otter Creek
65
6
31
254
252
259
DAVIDSON
WILLIAMSON
Little Harpeth River
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

RIDGETOP BARRENS

Location – (N36.3922, W86.7711) This approximately 86-acre site is located in Robertson and Davidson Counties off Plemel Lane. (See Tyree Springs map)

Description - Located in the Outer Central Basin and Western Highland Rim, the site is approximately 86 acres that includes barrens vegetation.

Significance – Site Importance High (B3) – The site includes a barrens community lying on an outcropping of shale of Fort Payne Formation at approximately 265-meter contour near the top of the ridge that forms the east side of a hollow through which passes an L& N Railroad Line. The site also includes an extensive open area with scattered trees and shrubs. Rare elements include *Polytaenia nuttallii* and *Populus grandidentata.*

Strategy - The strategy for acquisition at Ridgetop Barrens is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs –9.6 acres at an estimated cost of $18,000.

Potential Partners – TDEC.

RUTLEDGE FALLS

Location – (N35.4229, W86.1398) This approximately 1.5 acre site in Coffee County is located on Crumpton Creek between Tullahoma and Manchester on Rutledge Falls Road. (See Short Springs Class I Scenic-Recreation SNA map)

Description - Located on the Eastern Highland Rim, the site is about 1.5 acres containing a 30-foot waterfall with exposed limestone, forming a moist/humid microclimate.

Significance – Site Importance Very High (B2) – Rutledge Falls is one of the more beautiful waterfalls in Coffee County, forming as water descends from the Highland Rim into the Central Basin. Its waters originate from Crumpton Creek, which is a tributary of the Duck River (one of the most biologically diverse freshwater ecosystems in the world). Rare elements include: *Marshallia trinervia* (state status: threatened), *Carex hirtifolia* (state status: special concern), *Radula volute* (a liverwort; state status: special concern), *Lejeunea sharpii* (a lichen; state status: endangered), *Parnassia grandifolia* (state status: special concern), *Panax quinquefolius* (special concern, commercially exploited), A rare community: *Quercus rubra – Carya ovata / Acer saccharum – Tilia americana* var. *heterophylla* – (*Cladrastis kentukea*) Forest (global rank: G3), and a rare fish: *Hemitremia flammea* (state status: deemed in-need-of-management).

Strategy - The strategy for acquisition at Rutledge Falls is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs –16.7 acres at an estimated cost of $38,000.

Potential Partners – TDEC.

SALT LICK CREEK FOREST

Location – (N36.4848, W85.8516) Salt Lick Creek forest is located in Macon County between the communities of Prosperity and Red Boiling Springs on Salt Lick Creek Road.

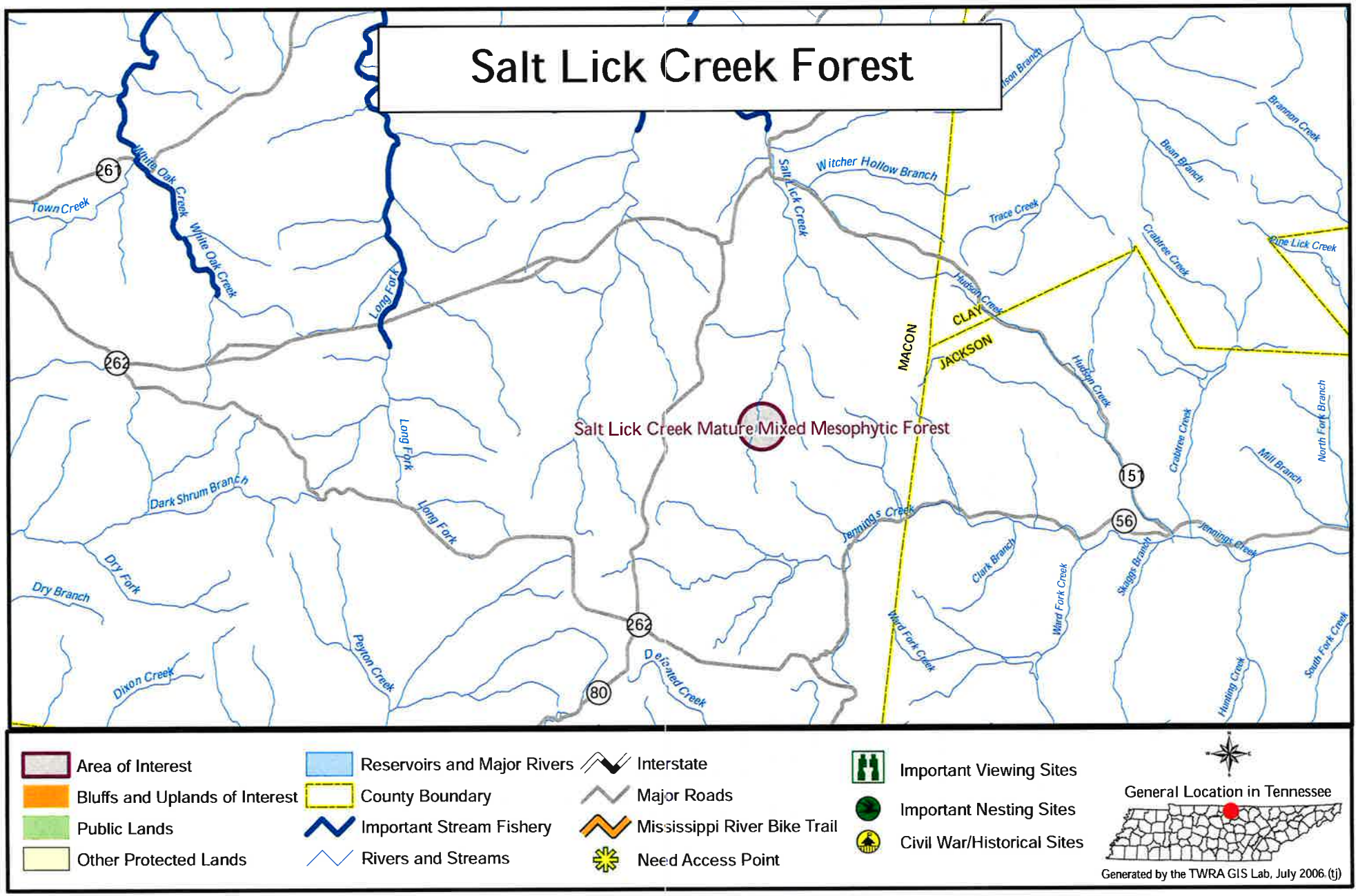
Description - Salt Lick Creek Forest is within the Eastern Highland Rim and the Barren River Watershed. The forest is mature with a diverse mix of mesophytic trees along with bottomland hardwoods along the stream channel. Although no precise species lists are known from the site, one report indicates a rich spring herbaceous flora including trilliums, mayapple, toothworts, and Solomon's seal. The upland slopes above the creek consist of oak-hickory forests. The area provides a fine example of mesic forest and stream bottoms in the Barren River drainage in an area which is comprised of a large quantity of agricultural lands.

Significance – Site Importance Moderate (B4) – Although no rare, threatened, or endangered species are currently known from Salt Lick Creek Forest, protection of the site would provide needed conservation lands in the area. Aside from a few municipal parks and the fairgrounds, there are no public lands known from either Macon County or the Barren River Watershed. The closest public lands to Salt Lick Creek Forest are the USACE lands in Smith County. The protection of Salt Lick Creek Forest would protect the headwaters of Salt Lick Creek, a stream from where the state-listed *Ethostoma barrenense* (splendid darter) is documented.

Strategy – TDEC should conduct a site assessment to further determine this sites features and attributes.

Land Protection Needs – 172 acres at an estimated cost of $187,000.

Potential Partners – TDEC and possibly Macon County and the town of Red Boiling Springs.


Salt Lick Creek Forest
Salt Lick Creek Mature Mixed Mesophytic Forest
261
262
80
151
56
MACON
CLAY
JACKSON
Town Creek
White Oak Creek
Long Fork
Witcher Hollow Branch
Salt Lick Creek
Trace Creek
Hudson Creek
Crabtree Creek
Pine Lick Creek
Brannon Creek
Bean Branch
Dark Shrum Branch
Dry Fork
Dry Branch
Dixon Creek
Peyton Creek
Defeated Creek
Jennings Creek
Clark Branch
Ward Fork Creek
Skaggs Branch
Mill Branch
North Fork Branch
South Fork Creek
Hunting Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

SCALES MOUNTAIN KNOBS SNA

Location – (N35.8369, W86.5708) This approximately 88-acre site is located in Rutherford County off Hwy 96 approximately 11 miles west of Murfreesboro.

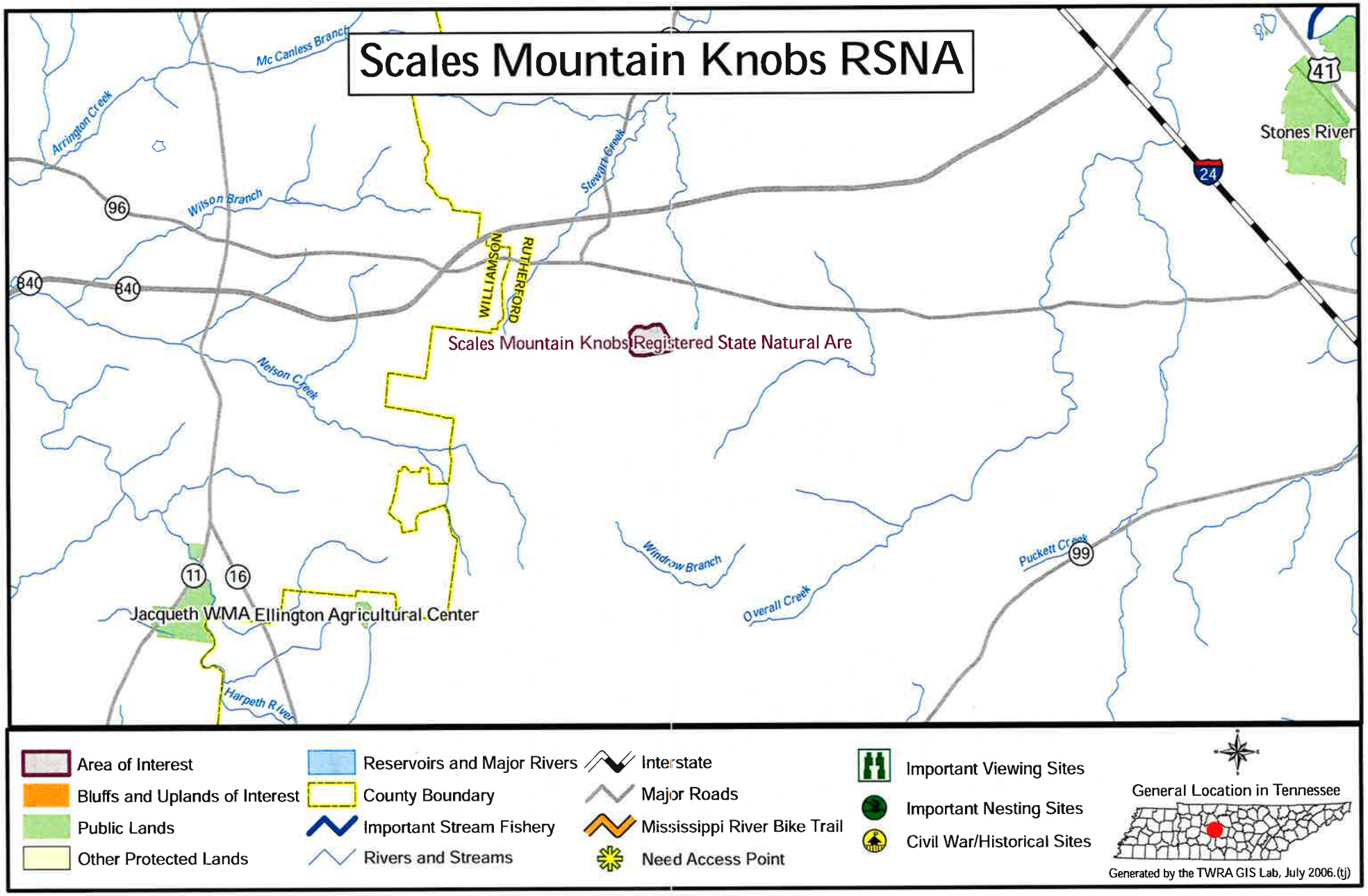
Description - Located on the Central Basin, Scales Mountain. Knobs are a series of three knobs located west of Murfreesboro in western Rutherford County. The knobs range from roughly 850 feet at their base to more than 1190 feet at the top of Scales Mountain, the highest of the three knobs. The knobs are capped by Ordovician limestone belonging to the Leipers and Cathy's Formation. The knobs are almost entirely forested with second growth woods of medium (30-40 years) age. Some light grazing has occurred on small portions of the knobs.

Significance – Site Importance High (B3) – On the southwestern portion of the middle knob, from the ridge at 1,110 feet and extending to the lower slope at 980 feet elevation, occurs a dense, extensive population of Alabama snow-wreath (*Neviusia alabamensis*), a shrub listed as threatened in Tennessee and previously under federal review for listing. This site, along with another recently discovered but much smaller population, represents the first discovery of *Neviusia* in the Central Basin. Two other Tennessee populations for this shrub are known, each on the eastern Highland Rim. The Scales Mountain population represents the largest known Tennessee population and occurs in a patch estimated to measure 200 feet by 700 feet. There are very few associates growing with the *Neviusia* other than a yet undetermined spiderwort (*Tradescantia* sp.) and buckrush (*Symphoricarpos orbiculatus*). The *Neviusia* is growing under an open canopy of hackberry, chinkapin oak, white ash, black locust, sugar maple, and American basswood. Other rare elements include: *Arabis perstellata* (federally endangered) and the rare community: *Quercus muehlenbergii – Q. shumardii – Carya ovata* Forest (G3).

Strategy - The strategy for acquisition at Scales Mountain Knobs Registered SNA is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 87.8 acres at an estimated cost of $142,000

Potential Partners – TDEC and USFWS.


Scales Mountain Knobs RSNA
Mc Canless Branch
Arrington Creek
Wilson Branch
Stewart Creek
WILLIAMSON
RUTHERFORD
Scales Mountain Knobs Registered State Natural Are
Nelson Creek
Windrow Branch
Overall Creek
Puckett Creek
Jacqueth WMA Ellington Agricultural Center
Harpeth River
Stones River
96
840
840
11
16
41
24
99
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SHORT MOUNTAIN SNA AND SHORT MOUNTAIN SANCTUARY SNA

Location – (N35.8674, W85.9741) Short Mountain is located in Cannon County approximately 10 miles northeast of Woodbury. The SNA is privately owned.

Description - Short Mountain-Jim Cummings Designated SNA is a 500-acre privately owned natural area at the top of Short Mountain in Cannon County. Short Mountain is located on the western margin of the Eastern Highland Rim but is a remnant or outlier of the Cumberland Plateau. It provides a commanding view to the west of the highly dissected edge of the Highland Rim and features of the Central Basin. Its highest point is 2,074 feet above sea level and is underlain on top with Pennsylvania sandstone, the same substrate that caps the Cumberland Plateau. It is a prominent geological feature, regional landmark, and stands about 800 feet above the plain. It is said that on an exceptionally clear day, you can see Nashville some 55 miles to the northwest.

The occurrence of the thick strata of Pennsylvanian rock is evidence that this age rock once extended across the Highland Rim and Central Basin. At lower elevations beneath the capped rock on Short Mountain are limestone formations that create limestone pits, caverns, and sinkholes. Ephemeral upland wetlands provide prime amphibian breeding habitat in the spring. The north and south slopes are richly diverse forests with buckeye, sugar maple, tulip poplar, walnut, beech, and black gum trees. These forests also support many species of hickories and oaks with redbud, southern black haw, and flowering dogwood trees in the understory. In less rich soils, chestnut oak is dominant with blueberries (*Vaccinium* spp.) in the shrub layer.

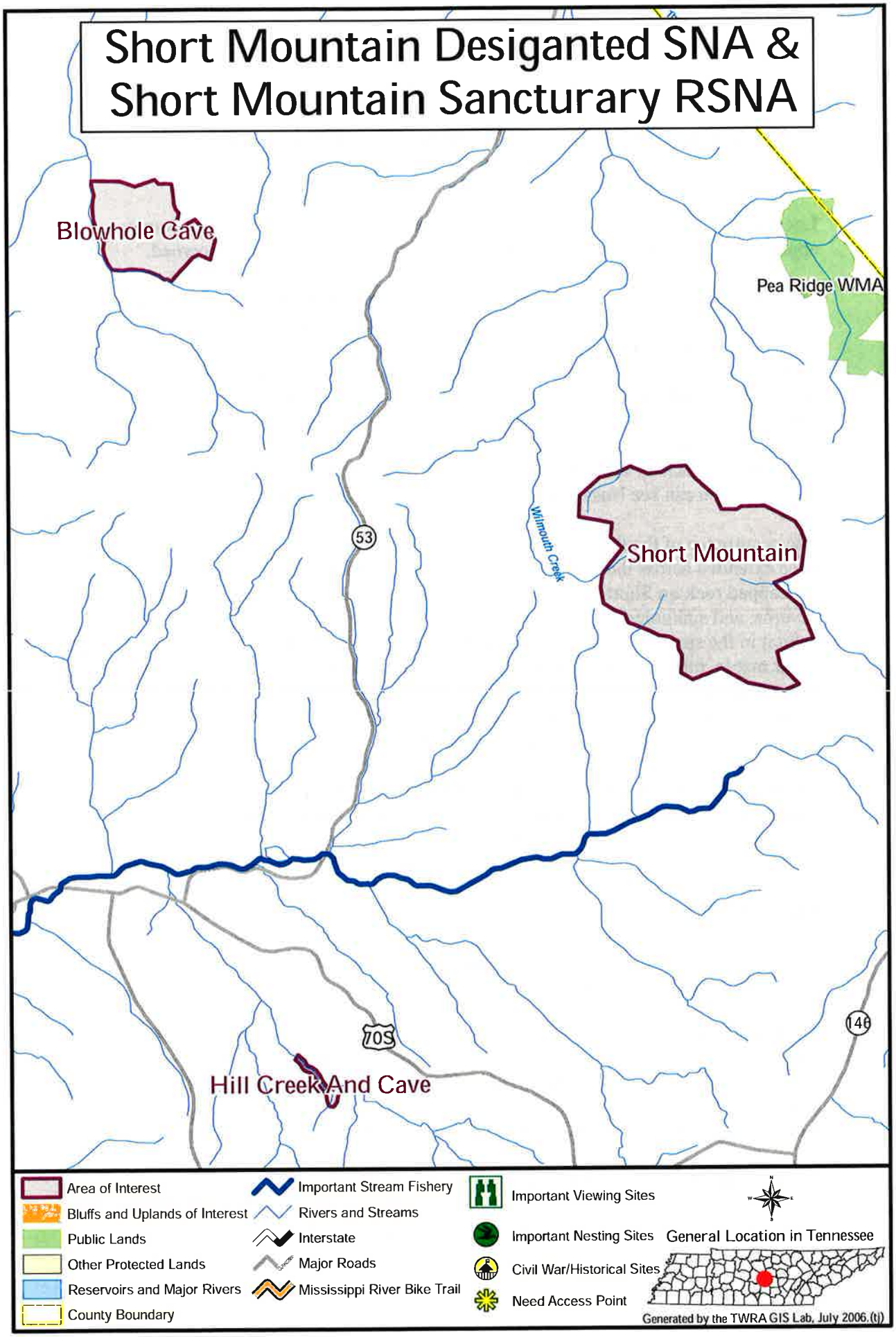
Significance – Site Importance Moderate (B4) – Rare elements include animals such as *Sorex hoyi*, *S. longirostris*, and *Zapus hudsonius*. Rare plants include *Panax quinquefolius*, *Lilium canadensis*, and one rare community: *Quercus prinus – Quercus alba* (*alba, coccinea, velutina*) / *Viburnum acerifolium* – (*Kalmia latifolia*) Forest (G4?)

Rare elements specific to Short Mountain Sanctuary Registered SNA include *Caulophyllum giganteum*, *Panax quinquefolius*, *Juglans cinerea*, and one rare community: *Quercus rubra – Carya ovata / Acer saccharum – Tilia americana* var. *heterophylla* – (*Cladrastis kentukea*) Forest (G3)

Strategy - The strategy for acquisition at Short Mountain is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 1,643 acres at an estimated cost of $1,768,000.

Potential Partners – TDEC, Short Mtn. Sanctuary, Inc., and Short Mtn. Bible Camp.


Short Mountain Desiganted SNA &
Short Mountain Sancturary RSNA
Blowhole Cave
Pea Ridge WMA
Wilmouth Creek
Short Mountain
53
70S
146
Hill Creek And Cave
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SHORT SPRINGS SNA

Location – (N35.4100, W86.1804) Short Springs is located on the Eastern Highland Rim in Coffee County about 3.5 miles northeast of Tullahoma.

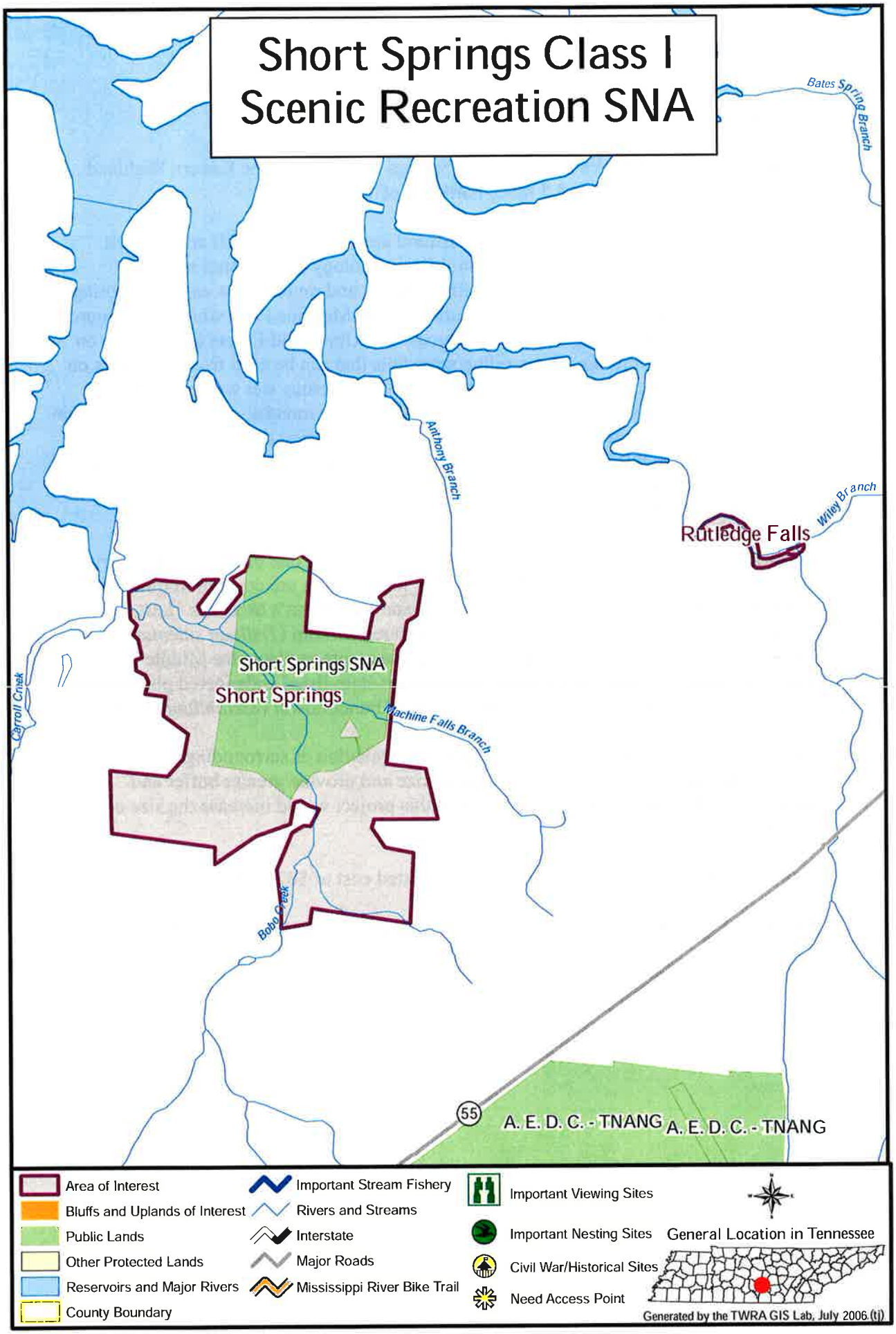
Description - Short Springs is a 420-acre natural area, which provides an excellent contrast between Highland Rim and Central Basin geology and vegetation. This biological diversity is related to the rich forest slopes and ravines, low cascades, springs and waterfalls that support it. Scenic features include Machine Falls which drops more than 60 feet and is nearly equal in length across. The Upper and Lower Busby Falls on Bobo Creek are two prominent cascading waterfalls that can be seen from overlooks on the Bobo Creek trail. The steep escarpment with its numerous wet weather seeps is particularly impressive during the moist winter and spring months. Thickets of mountain laurel grow on the upper slopes under a dry oak–hickory forest canopy that is characteristic of Highland Rim vegetation. The lower slopes and riparian areas along Bobo Creek support towering sycamore, buckeye, magnolia, beech, and tulip poplar trees with a rich shrub layer and herbaceous cover.

Significance: - Site Importance High (B3): Short Springs is one of the very best spring wildflower locations in the state. In the spring, moist slopes are covered in trout lilies, Virginia bluebells, jack-in-the-pulpit, larkspur, and Dutchman's breeches. Large flowered trillium (*Trillium grandiflora*), southern red trillium (*Trillium sulcatum*), and barren strawberry (*Waldsteinia fragarioides*) are uncommon plants for Middle Tennessee that occur here. The natural area also supports two state-listed endangered plant species, Nestronia (*Nestronia umbellula*) and broad-leaved bunchflower (*Melanthium latifolium*).

Strategy - The site conservation plan proposes acquisition of surrounding forest that is contiguous with Short Springs to increase its size and provide greater buffer and protection of the natural area. Completion of this project would increase the size of the area to 1,115 acres.

Land Protection Needs - 695 acres at an estimated cost of $825,000

Potential Partners - TVA, Friends of Short Springs, and the City of Tullahoma, and TDEC.


Short Springs Class I
Scenic Recreation SNA
Bates Spring Branch
Anthony Branch
Wiley Branch
Rutledge Falls
Short Springs SNA
Short Springs
Machine Falls Branch
Carroll Creek
Bobo Creek
55
A. E. D. C. - TNANG
A. E. D. C. - TNANG
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SMITH GLADE

Location – (N35.6617, W86.7983) Smith Glade is located in the northeastern section of Marshall County approximately 2 miles east of Rally Hill and is just southwest of the intersection of Moses and Wilson School Roads. (See Duck River Habitat Corridor and State Scenic River map)

Description – Smith Glade consists of limestone cedar glades, with a wet weather conveyance, and dry woodlands forested in part by small, perhaps stunted, red cedar-blue ash trees (NatureServe Classification of *Fraxinus quadrangulata- Juniperus virginiana* woodland alliance). Additional woody plants include winged elm, glade privet, and aromatic sumac. The surface of the glade is open limestone with small pockets of herbaceous vegetation while the cedar-blue ash woodland has a thick moss cover and a rich, yet thin soil layer. Some plants observed during a spring visit include cedar glade St. Johnswort, twoflower melic grass, rue anemone, columbine, and trillium.

Significance – Site Importance Very High (B2) – There are three rare plants known from Smith Glade including running glade clover (*Trifolium calcaricum*), Carolina anemone (*Anemone caroliniana*), and glade cress (*Leavenworthia exigua* var. *exigua*). Running glade clover was first discovered by Leo Collins, botanist with TVA in 1979. A few years later he and another botanist from Virginia, Tom Wieboldt, found the species in Virginia and then described it as new to science. World-wide there are only seven known occurrences of this species, and although two occurrences are within a Virginia SNA, no Tennessee populations are protected. Running glade clover is truly a rare species and has been searched for at length by DNA botanists. The species is considered globally imperiled (G1) and is listed state endangered. Although common globally, Carolina anemone is considered imperiled in Tennessee (S1) and is listed state endangered. Currently there are only eight extant occurrences of Carolina anemone, all within just a few Tennessee counties within the Central Basin Physiographic Province. The particular variety of glade cress at Smith Glade is considered rare throughout its range.

Strategy - The strategy for acquisition at Smith Glade is to preserve enough of the site to at least protect running glade clover, a species which could easily be extirpated from Tennessee. The full range of the species in and around Smith Glade needs to be delineated.

Land Protection Needs – 130 acres at an estimated cost of $209,000.

Potential Partners – TDEC and USFWS.

SOUTH BERLIN GLADE

Location – (N35.5081, W86.8233) South Berlin Glade is approximately 46 acres located in Marshall County 0.6 miles northeast of the community of South Berlin. (See Duck River Habitat Corridor and State Scenic River map)

Description - Located in the Central Basin, South Berlin glade is a long, thin stretch of dry wash that supports a healthy leafy prairie-clover (*Dalea foliosa*) population. Intermediate woods and small gladey patches surround the wash, scattered among clumps of cedar, white ash, upland swamp privet, and fragrant sumac. The site is intersected by a north-south powerline right-of-way. A fence runs along part of the site's north side, but other than this structure, the site is fairly pristine.

Significance – Site Importance Moderate (B3) – South Berlin Glade supports a healthy population of leafy prairie-clover, which is federally endangered and carries a Global Rank of G2G3 and a State Rank of S2S3, meaning that it is very rare and imperiled globally as well as in of Tennessee. At last visit (1993), over 100 plants were thriving on site. The site also provides habitat for limestone fame-flower (*Talinum calcaricum*), which is listed as state special concern.

In 1993, TDEC contracted with TNC to develop a preserve design for South Berlin Glade and to initiate landowner contact to ascertain landowner attitude about and potential involvement in future conservation efforts of this site. At that time, one landowner expressed interest in selling his tract of land if the price was right, while the primary landowner expressed no interest in conservation of the *Dalea* population or in selling his property.

Strategy - The strategy for acquisition at South Berlin Glade is to acquire properties within and adjacent to the site design (site boundary) for access or access control, and preservation of rare species and communities. Preservation of these rare species and communities will provide educational opportunities for the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 46 acres at an estimated cost of $52,000.

Potential Partners – TDEC and TNC

SOUTHWESTERN HIGHLAND RIM PROJECT

Location – The Southwestern Highland Rim Project area is located on the Western Highland Rim in Perry, Wayne, Hickman, and Lewis counties, approximately sixty to eighty miles southwest of Nashville.

Description – This project area is predominantly hardwood forest interspersed with stands of southern yellow pine and habitats ranging from early successional to mature timber. The topography is characteristic of the Western Highland Rim with rolling uplands to narrow bottomlands bisected by numerous small streams. Past and current use is forested land managed for forest products.

Significance - These lands currently support a diverse avian community with varying ecological needs. Ten of the twenty highest priority bird species of the Interior Low Plateau Physiographic Region as ranked by Partners in Flight are found within this project area, including the yellow-billed cuckoo, wood thrush, prairie warbler, field sparrow, eastern wood-pewee, red-headed woodpecker, blue-winged warbler, worm-eating warbler, Louisiana waterthrush, and Kentucky warbler.

Two reptile species listed as threatened by the State are found in this area, the northern pine snake and the western pigmy rattlesnake.

Many of the blocks of the Southwestern Highland Rim Project land in Perry, Wayne, and Lewis counties fall within the focus areas of the Central Hardwoods Joint Venture. This designation is designed to focus national and regional attention and resources on these critical habitats to protect existing bird habitats and enhance other habitats, where possible, to improve the status of bird populations.

The Southwestern Highland Rim Project provides excellent habitat for a wide variety of wildlife, producing thriving populations of hunted and non-hunted animals. Hunting opportunities on Southwestern Highland Rim Project attract thousands of people each year producing significant harvests of white-tailed deer and wild turkey. Small game species also attract significant numbers of hunters.

The Southwestern Highland Rim Project in Lewis and Maury County have rare plant species such as the federally threatened Eggert's sunflower and state-listed Michigan lily, large-leaved grass-of-Parnassus, broad-leaved Barbara's buttons, beaked trout lily, butternut, and American ginseng. The area has critical habitat (calcareous seeps) for possible restoration of federally endangered Tennessee yellow-eyed grass.

Aquatic resources on and adjacent to the Southwestern Highland Rim Project are diverse and significant. There are scenic waterfalls, streams, springs and seeps. They include the headwaters of Big Swan Creek and Big Bigby Creek, which are the sources of water supply for Centerville and Mt. Pleasant, respectively, and provide clean groundwater recharge for public and private well water in the Summertown region. Most of these

properties are in the watersheds of the Buffalo River and lower Duck River and contribute to the water quality of these watersheds.

The Duck River is the most biologically diverse river in the US. It supports a significant sport fishery and is excellent habitat for smallmouth bass, rock bass, largemouth bass, and various species of catfish. The Duck also supports the greatest diversification of freshwater mussels (55 taxa) in Tennessee.

The Buffalo River is listed as one of Tennessee's Wild and Scenic Rivers, and it has become a highly utilized resource for water-borne recreation. Canoe liveries, campgrounds, and outfitters have sprung up along its length in recent years; and hundreds of people from that region float, fish, and recreate on the river weekly. The Buffalo is a major smallmouth bass, rock bass, and spotted bass fishery.

Although the Southwestern Highland Rim Project is very ecologically diverse, this area is also critical for public recreation. Middle Tennessee has the smallest public land base for recreation of any region in Tennessee even though Nashville has one of the largest human populations in the state. TWRA has identified in its Strategic Plan a number of outdoor recreational issues. Maintaining the Southwestern Highland Rim Project for public use will assist in resolving some of the following problems, issues and strategies:

Streams – There are approximately 250,000 stream and river anglers in Tennessee and Middle Tennessee provides a lot of fishing opportunity for these anglers.

- Problem – Many anglers are not fishing streams and rivers because there is not enough access.
- Strategy - Improve fishing access to streams and river by providing 80 new sites by 2006.

Deer – There are approximately 225,000 deer hunters in Tennessee who harvest over 160,000 deer. Middle Tennessee contributes significantly to the total deer harvest in Tennessee.

- Problem – There is a potential for reduced growth in number of hunters brought about by lack of access, urbanization, average property size getting smaller, increasing land prices, and the increasing costs of hunting.
- Problem – There are fewer places to hunt and it is becoming more difficult to gain access to hunting lands.
- Strategy – Open additional lands for public hunting through acquisition, leases and other means.

Wild Turkey – There are approximately 65,000 turkey hunters in Tennessee who harvest over 32,000 turkeys. The majority of that harvest occurs in Middle Tennessee.

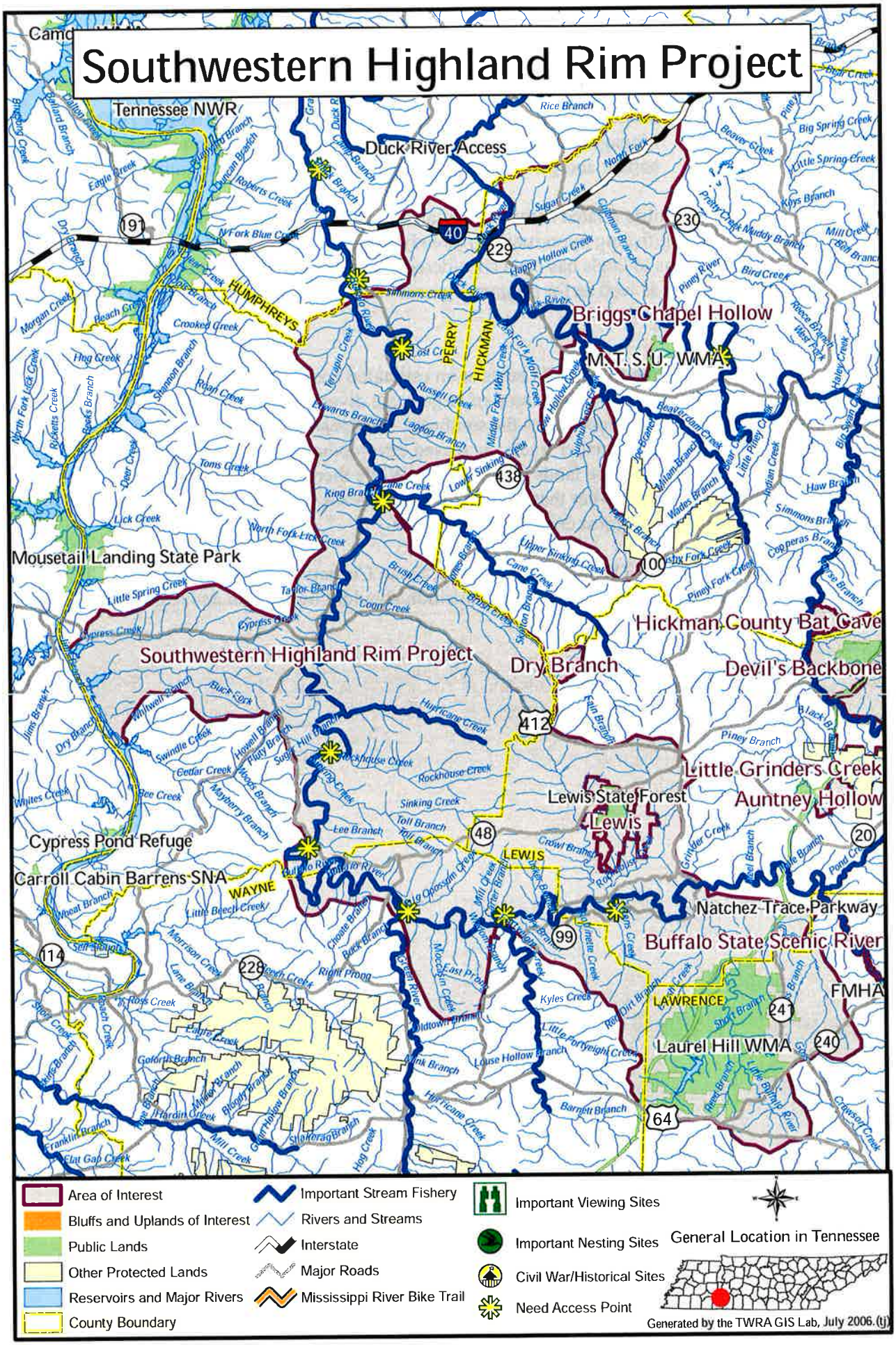
- Problem – Some hunters have difficulty gaining access to private land and do not have a place to turkey hunt.

- Strategy – Acquire additional areas with wild turkey habitat (Wildlife Management Areas, Public Hunting Areas, etc) to protect turkey habitat and give hunters a place to hunt turkeys in the future.

The preceding wildlife related activities contain strategies (providing, maintaining, expanding hunting/fishing opportunities) already listed within the TWRA Strategic Plan. Maintaining access to lands has been considered a key strategy for other similar sport oriented programs as well as for programs geared more towards individuals who engage in wildlife viewing.

Land Protection Needs – 86,375 acres at an estimated cost of $58,797,400. The sale of this land is indicative of a recent trend of large-scale divestiture of lands by large industrial forest landowners across the southeast. It appears that this divestiture trend will result in more, but smaller tracts, increased development, and a general loss of opportunity to protect these lands in the future. While there are more than 170,000 acres owned by a single landowner that may be for sale, TWRA has identified 86,375 acres in four tracts as being the most critical for protection

Potential Partners – TWRA. Forest Legacy, Swan Conservation Trust, and TNC. TCF may initiate activities to assist in this acquisition should it become an active project.


Southwestern Highland Rim Project
Tennessee NWR
Duck River Access
Briggs Chapel Hollow
M.T.S.U. WMA
Mousetail Landing State Park
Hickman County Bat Cave
Devil's Backbone
Dry Branch
Little Grinders Creek
Auntney Hollow
Lewis State Forest
Lewis
Cypress Pond Refuge
Carroll Cabin Barrens SNA
Natchez Trace Parkway
Buffalo State Scenic River
FMHA
Laurel Hill WMA
HUMPHREYS
PERRY
HICKMAN
WAYNE
LEWIS
LAWRENCE
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SPRING CREEK BOTTOMS AND GLADES

Location – (N36.2760, W86.2724) Spring Creek Bottoms and Glades is located in Wilson County approximately 5 miles north of Lebanon on Hwy 141 and Hwy 231.

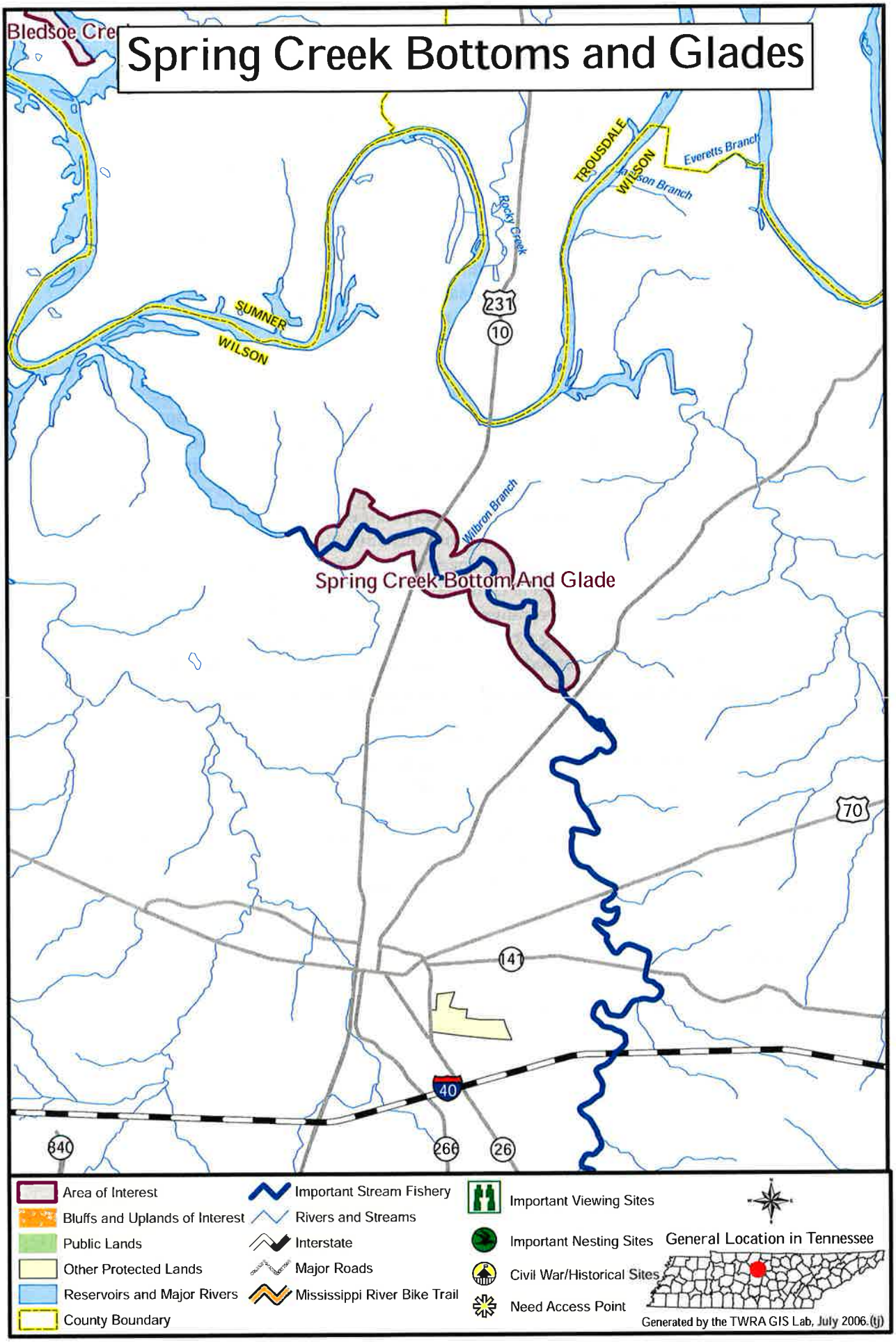
Description – The site encompasses approximately 1500 acres along Spring Creek. Exact delineation of high quality occurrences of rare plants would reduce the size of the conservation target. The area includes riparian forested areas, agricultural fields, pastures, and small limestone outcropping or glades which form shelves or small cliffs above Spring Creek.

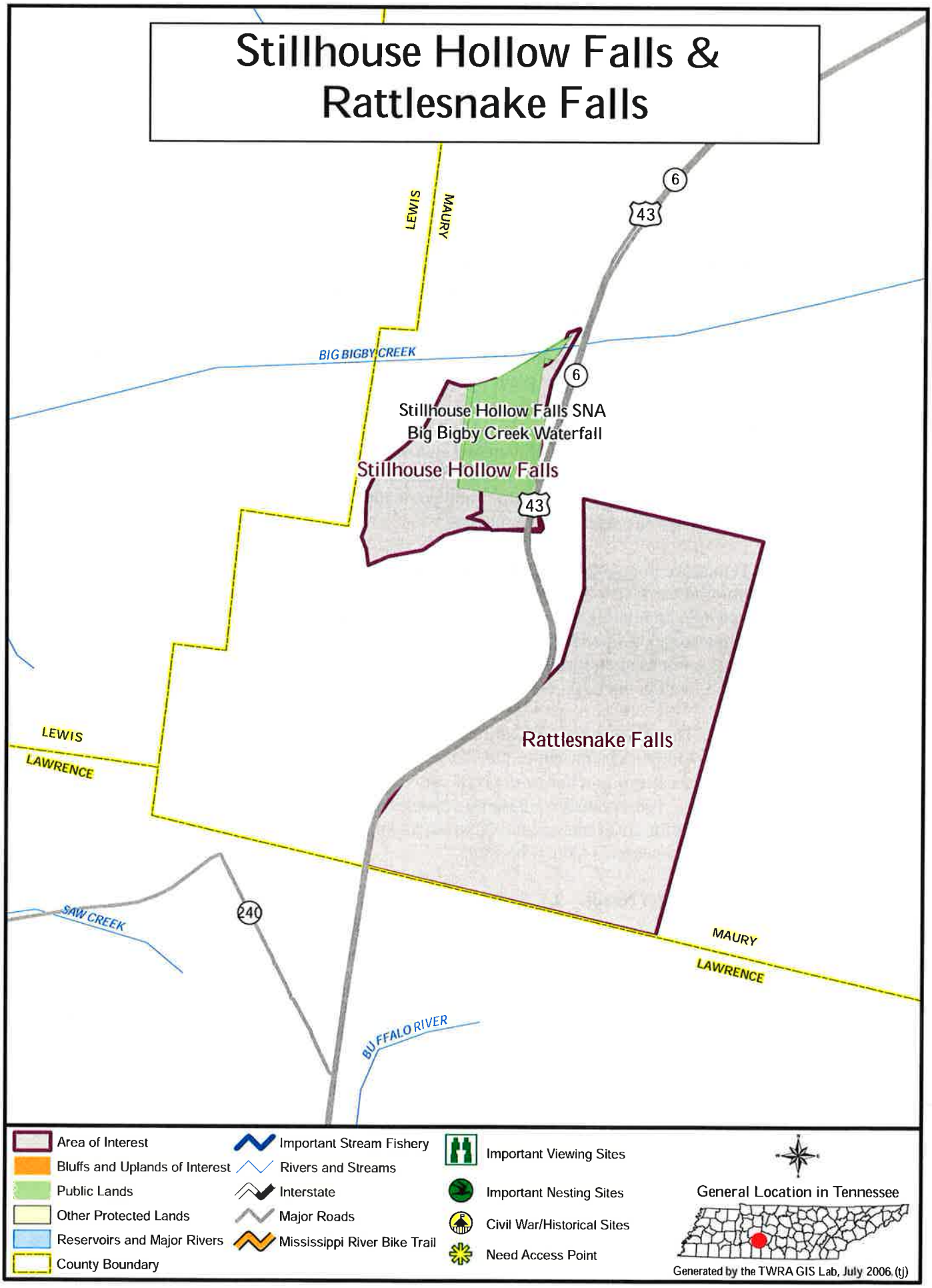
Significance – Site Importance Outstanding (B1) – In the early 1950s, Vanderbilt professor Dr. Elsie Quarterman sent some interesting specimens of the genus *Lesquerella* (bladderpod) to Dr. Reed Rollins, director of the Gray Herbarium, Harvard and an expert in the Brassicaceae (mustard family). These specimens caught Dr. Rollins' attention and he and his wife made a collecting trip along Spring Creek in 1955 which resulted in Dr. Rollins describing a new species of bladderpod, *Lesquerella perforata*. *L. perforata* (Spring Creek bladderpod) occurs throughout this stretch of Spring Creek. The significance of this site based upon this species cannot be overstated. *L. perforata* is a federally endangered plant which is considered extremely rare and critically imperiled globally (G1). The entire known-range of this species has a radius of less than 5 miles and it is known only near Spring Creek, Barton's Creek, and Cedar Creek, Wilson County. Spring Creek bladderpod is an annual plant with water distributed seeds which requires soil disturbance in order to grow. The plant does best when the area is cultivated at the proper time of year, while conversion of lands to pasture reduces the number of plants. Since the plant is an annual, the exact locations of occurrences can change from year to year. For other locations of Spring Creek bladderpod, botanists with DNA have witnessed degradation due to development and top soil removal.

Strategy - The first strategy would be to survey and delineate the range of Spring Creek bladderpod and develop a more specific site design which not only includes the current range of the species along Spring Creek but adjacent habitats which could support the plants.

Land Protection Needs – 1,500 acres (perhaps less) at an estimated cost of $1,625,000.

Potential Partners – TDEC and USFWS.


Bledsoe Cre
Spring Creek Bottoms and Glades
TROUSDALE
WILSON
Everetts Branch
Wilson Branch
Rocky Creek
SUMNER
WILSON
231
10
Wilbron Branch
Spring Creek Bottom And Glade
70
141
40
840
266
26
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)


Stillhouse Hollow Falls &
Rattlesnake Falls
LEWIS
MAURY
6
43
BIG BIGBY CREEK
6
Stillhouse Hollow Falls SNA
Big Bigby Creek Waterfall
Stillhouse Hollow Falls
43
LEWIS
LAWRENCE
Rattlesnake Falls
SAW CREEK
240
MAURY
LAWRENCE
BUFFALO RIVER
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

SULLENGER BEND SNA

Location – (N35.1389, W86.3567) This approximately 3-acre site is located in Moore County about five miles southeast of Lynchburg. (See Lincoln County Bat Cave map)

Description - Located on the Outer Nashville Basin, the steep, east-facing slope of Sullenger Bend along the Elk River is the site of the recent discovery of *Neviusia alabamensis* (snow wreath) in Tennessee. This large population of *Neviusia*, a rare shrub in the rose family, was originally sited by Mr. Dennis Horn while floating the Elk River in 1972. The identity of this showy shrub was not known until 1979, when Dennis Horn ran across a photograph of the plant in an Alabama wildflower guide.

Significance – Site Importance Very High (B2) –: Snow wreath (state threatened), formally proposed for federal threatened status, was originally discovered along the Black Warrior River in Alabama in 1857 and for many years was thought to be endemic to Alabama. However, several additional populations have since been reported from Missouri, Arkansas, and from Tennessee.

The Tennessee population is a large one consisting of a dense thicket of plants extending one hundred yards in a band 40-90 feet above the river. Local soil scientists indicate that this *Neviusia* population is growing on Dellrose soil, a deep, cherty silt loam over St. Louis limestone. Soil analysis indicates that this soil has a pH of around 7.6. The forest canopy is composed almost entirely of hardwoods with some of the species being basswood, yellow buckeye, black walnut, box elder, ash and eastern red-cedar.

Strategy - The strategy for acquisition at Sullenger Bend Registered SNA is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 2.7 acres at an estimated cost of $20,000

Potential Partners – TDEC.

STILLHOUSE HOLLOW FALLS SNA AND RATTLESNAKE FALLS

Location – (N35.4616, W87.2736 and N35.4485, W87.2601, respectively) Stillhouse Hollow Falls and Rattlesnake Falls are located in southwestern Maury County just northeast of Summertown on a tributary to Big Bigby Creek.

Stillhouse Hollow Falls (Site Importance Moderate - B4) is an approximately 75-foot high waterfall on an unnamed tributary to Big Bigby Creek. Big Bigby Creek is a major tributary to the Duck River, a designated State Scenic River and one of the most biologically rich rivers in North America. The falls are an unusually attractive semi-cascading waterfall with both a cascade and sheer drop into a plunge pool at its base. The wet walls of the bowl-like formation at the base of the falls are covered with mosses and ferns, while wildflowers adorn the slopes in spring, summer, and fall. Preliminary botanical surveys reveal a rich and diverse area. The spectacular bluff over which the falls plunge is undercut, making it possible to walk through a fern garden to stand behind the falls. Stillhouse Hollow Falls is often called the twin to nearby Rattlesnake Falls, and is one of the largest waterfalls west of Fall Creek Falls. It is remote and secluded from view, and is only accessible by trails. Most of the area is deciduous hardwood forest. In 2006 approximately 90 acres were acquired by the State and designated as a SNA.

Stillhouse Hollow Falls is just east of several large private conservation managed tracts owned by The Farm, the Swan Conservation Trust, and Weyerhaeuser. The site provides habitat for at least one state listed plant species, the large-leaved grass-of-Parnassus (*Parnassia grandifolia).* It is also significant for an unusual occurrence of oak leaf hydrangea dominating the understory on some of the slopes. This area was identified in the 1930s by TVA and proposed for acquisition as part of Maury State Forest. It was described in *Scenic Resources of the Tennessee Valley* as "a project essential to protect the watershed of the Mount Pleasant municipal water supply. The forest has distinct and useful recreational possibilities, for it might supply needed camp and picnic facilities for several nearby towns. As a game refuge it would serve to replenish the wildlife on adjacent property".

The falls is less than one-half mile away from Rattlesnake Falls. At 75 feet in height, the falls combine the character of cascade and sheer drop, and have a pleasant setting on a rocky hillside covered with profuse growth. In contrast to the rich and moist habitats along the creek above and below the falls, the site also contains very dry and steep ridges running parallel to the creek. These xyric ridges provide additional habitat types and afford scenic vistas over the Big Bigby Valley below.

Rattlesnake Falls (Site Importance Very High - B1) is approximately 350 acres and includes a 60-foot waterfall with exposed limestone on an unnamed tributary to Falls Creek, where it cascades into a plunge pool forming a moist/humid microclimate at its base. The site includes relatively undisturbed upland and ravine forests.

Rattlesnake Falls is a biologically rich area from which over 605 taxa of plants have been documented, including the state listed Eggert's sunflower (*Helianthus eggertii*)(G3) and

the federally listed Price's potato bean (*Apios priceana*)(G2). Other state listed plants include: Michigan lily (*Lilium michiganense*), butternut (*Juglans cinerea*), sky-blue aster (*Aster oolentangiensis*), American chestnut (*Castanea dentata*), Ozark downy phlox (*Phlox philosa spp. Ozarkana*), and large-leaved grass-of Parnassus (*Parnassia grandiflora*). In 1991 the Tennessee Senate passed a Joint Resolution calling on the Commissioner of TDEC to initiate a study into the feasibility of purchasing Rattlesnake Falls and designating it as a SNA. The site includes two narrow gorges each drained by an unnamed creek, three small creeks that merge into one just above the falls, steep slopes with rock outcrops and small bluffs, and two small caves.

Strategy - The strategy for acquisition at these areas is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation rare species and representative communities.

Land Protection Needs – Stillhouse Hollow Falls - 897 acres at a cost of $1,345,500: Rattlesnake Falls - 238 acres at an estimated cost of $357,000.

Potential Partners – TDEC-DNA, TPGF, USFWS, and Maury County Parks and Recreation

SUMMITVILLE MOUNTAIN SPRING

Location – (N35.5539, W85.9849) Summitville Mountain Spring is located in Coffee County approximately one mile southeast of Summitville on the north side of Hwy 55.

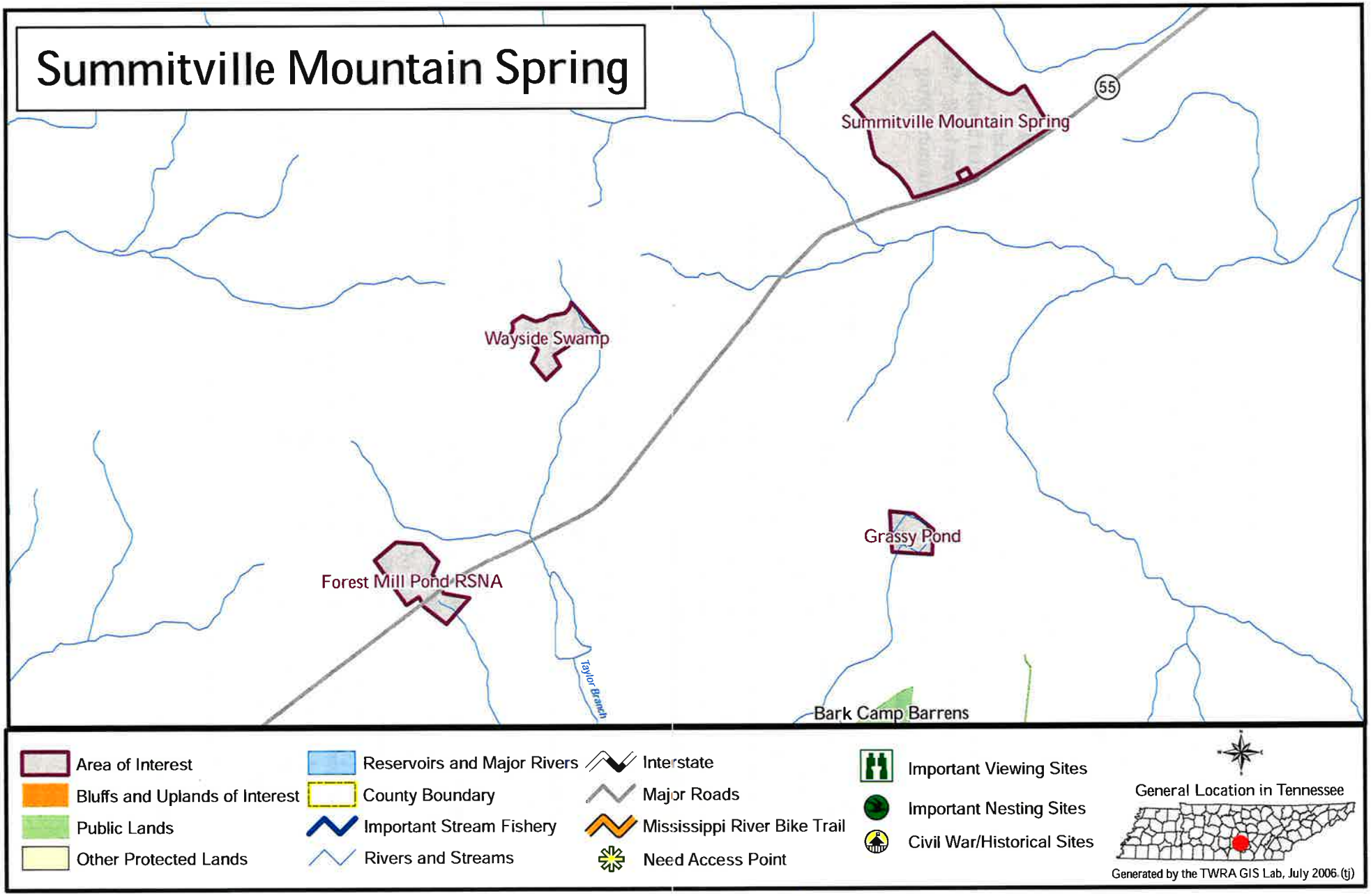
Description – According to Keefer (1994): "The spring pond is slightly oval in shape and occupies less than a quarter-acre of the front yard. The house sits uphill from the water and is well screened from the pond by trees and bushes. A spring coming out of Summitville Mountain Cave (the cave mouth is also in the front yard) forms the pond. At the south end of the pond there is a spillway that dumps excess water underneath Hwy 55. The water level can range from just inches to 3 feet or so at the pond's middle, depending upon the season. Decorative trees, flowering plants and ornamental benches surround the pond, the biggest tree being a weeping willow on the pond's west bank. The pond's banks are stabilized with rocks." The area around Summitville Mountain Spring is mostly residential with a few larger agricultural tracts.

Significance – Site Importance Very High (B2) - Rare species on site include the barrens topminnow (*Fundulus julisia*), redband darter (*Etheostoma luteovinctum*), barrens darter (*E. forbesi*), and flame chub (*Hemitremia flammea*). This site is the type locality and was once believed to be the last remaining habitat for the barrens topminnow (G1S1). This fish has since been found in several other Tennessee locations, but it is still considered extremely rare and sensitive. During a drought in 1999 all topminnows were rescued prior to drying of the pond, and were subsequently returned after water levels had stabilized (Biotics database, 2006).

Strategy - Although TNC, TWRA, USFWS, and Conservation Fisheries maintain regular contact with landowners, Summitville Mountain Spring could be impacted by activities off-property. These include alterations to adjacent Hwy 55, poor land use practices in the immediate vicinity, and direct impacts to the recharge area of the spring. An abandoned quarry on the west side of Summitville Mountain drains directly to the spring, and at least one passageway may be traversed from the quarry to the mouth of Summitville Mountain Cave. In 1994 TNC, TWRA, and the landowner entered into a non-binding CMA, but this provides no protection for offsite land use. In order to better safeguard the site, the entire recharge area for the spring must be evaluated for conservation action, including livestock fencing, restoration of native trees along stream corridors and sinkholes, conservation easements, and fee simple acquisition of properties in the watershed. Special attention must be paid to the abandoned quarry. Dye tracing should be used to determine water sources for the spring resurgence, minimum flow requirements to support its fishes, and the extent of permissible maximum withdrawals from its aquifer. The TDOT should evaluate storm water controls for that portion of Hwy 55 that drains to the spring and associated creek,

Land Protection Needs – 291 acres at an estimated cost of $315,000.

Potential Partners – TNC, USFWS, TWRA, TDOT, TDEC, and Conservation Fisheries.


Summitville Mountain Spring
Summitville Mountain Spring
55
Wayside Swamp
Grassy Pond
Forest Mill Pond RSNA
Taylor Branch
Bark Camp Barrens
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

SUNNYBELL GLADE SNA

Location – (N35.9607, W86.4365) Sunnybell Glade is located in Rutherford County 12 miles north of Murfreesboro. The site is privately owned; access by the public is not permitted.

Description - Located on the Central Basin, Sunnybell Cedar Glade is a 36-acre natural area located in the Central Basin. This site supports a rare assemblage of glade endemic plant species found only at a small number of other locations in Middle Tennessee.

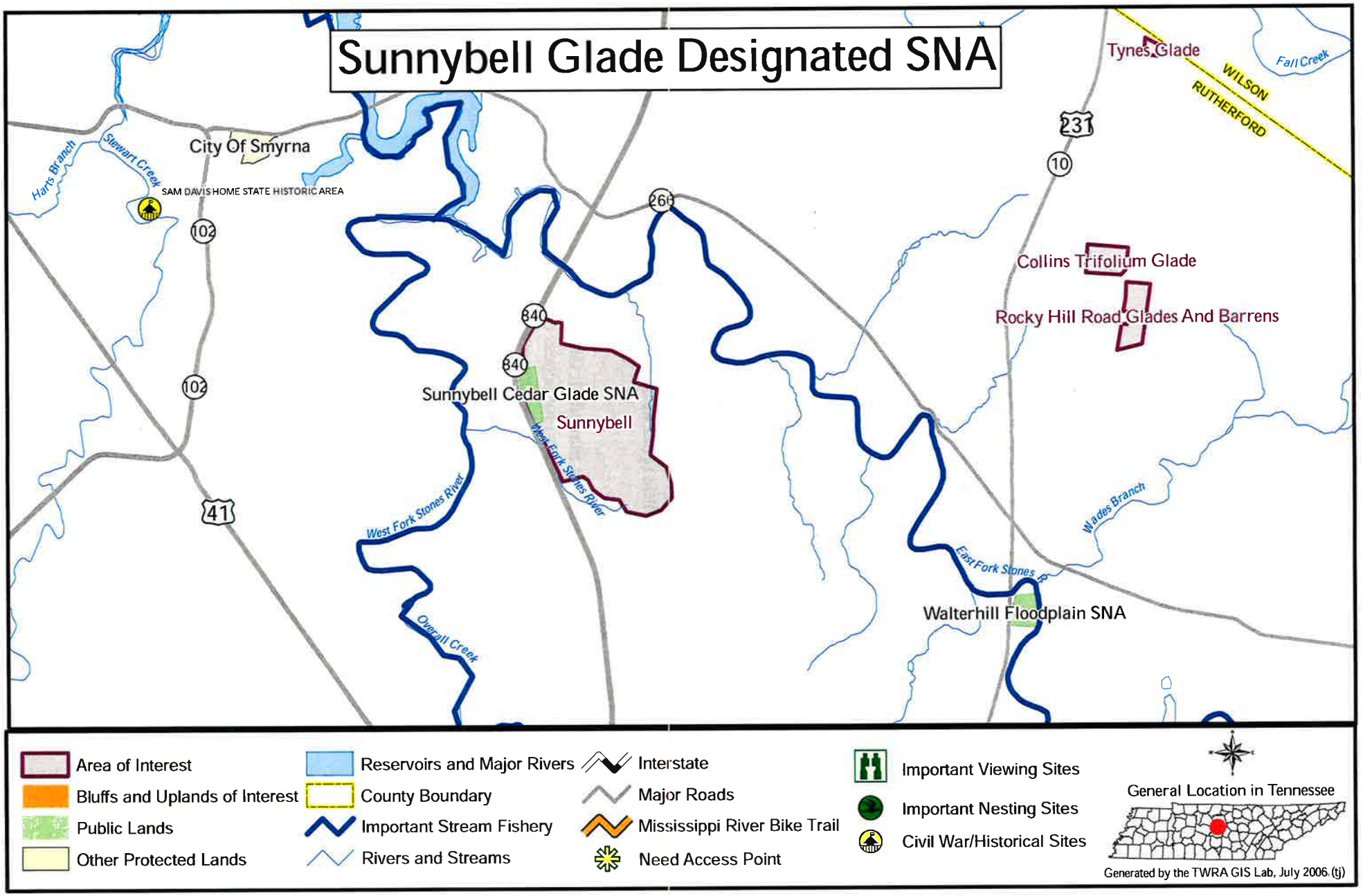
Significance – Site Importance Very High (B2) – The natural area is named for the sunnybells (*Schoenolirion croceum*) that are prominent in wet calcareous limestone washes of cedar glades. In springtime the sunnybells flower profusely and create a remarkable sight. Other rare plants that have been identified from this site include glade cleft phlox (*Phlox bifida* ssp *stellaria*), Tennessee milk-vetch (*Astragalus tennesseensis*), evolvulus (*Evolvulus nuttallianus*), and pale umbrella-wort (*Mirabilis albida*).

Cedar glades are characterized by openings in cedar-oak-hickory forest where the soil is very shallow, and often associated with karst topography. Growing conditions in these glades are very harsh, and only a few highly specialized plants adapt to these conditions. Even the more common tree species that occur in glade ecosystems like red cedar, hackberry, southern shagbark hickory and the various oaks are stunted. Like many other cedar glades of Middle Tennessee, Sunnybell Cedar Glade is underlain by Lebanon limestone formations deposited during the Ordovician Period about 500 million years ago. This is karst topography with little relief as characterized by exposed limestone outcroppings.

Strategy - The strategy for acquisition at Sunnybell Glade is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 705 acres at an estimated cost of $1,137,000.

Potential Partners – TDEC and TNC


Sunnybell Glade Designated SNA
Tynes Glade
Fall Creek
WILSON
RUTHERFORD
City Of Smyrna
Harts Branch
Stewart Creek
SAM DAVIS HOME STATE HISTORIC AREA
231
10
26
102
840
840
102
Collins Trifolium Glade
Rocky Hill Road Glades And Barrens
Sunnybell Cedar Glade SNA
Sunnybell
West Fork Stones River
41
Wades Branch
East Fork Stones R
Walterhill Floodplain SNA
Overall Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

TAYLOR HOLLOW SNA

Location – (N36.5269, W86.2236) Taylor Hollow is located in Sumner County approximately 10 miles north of Gallatin.

Description - Taylor Hollow is a 173-acre natural area located on the Western Highland Rim and is owned by TNC. It is a botanically rich and a biologically diverse area that is one of only a very few areas remaining like this in Middle Tennessee that has been minimally impacted by human activity.

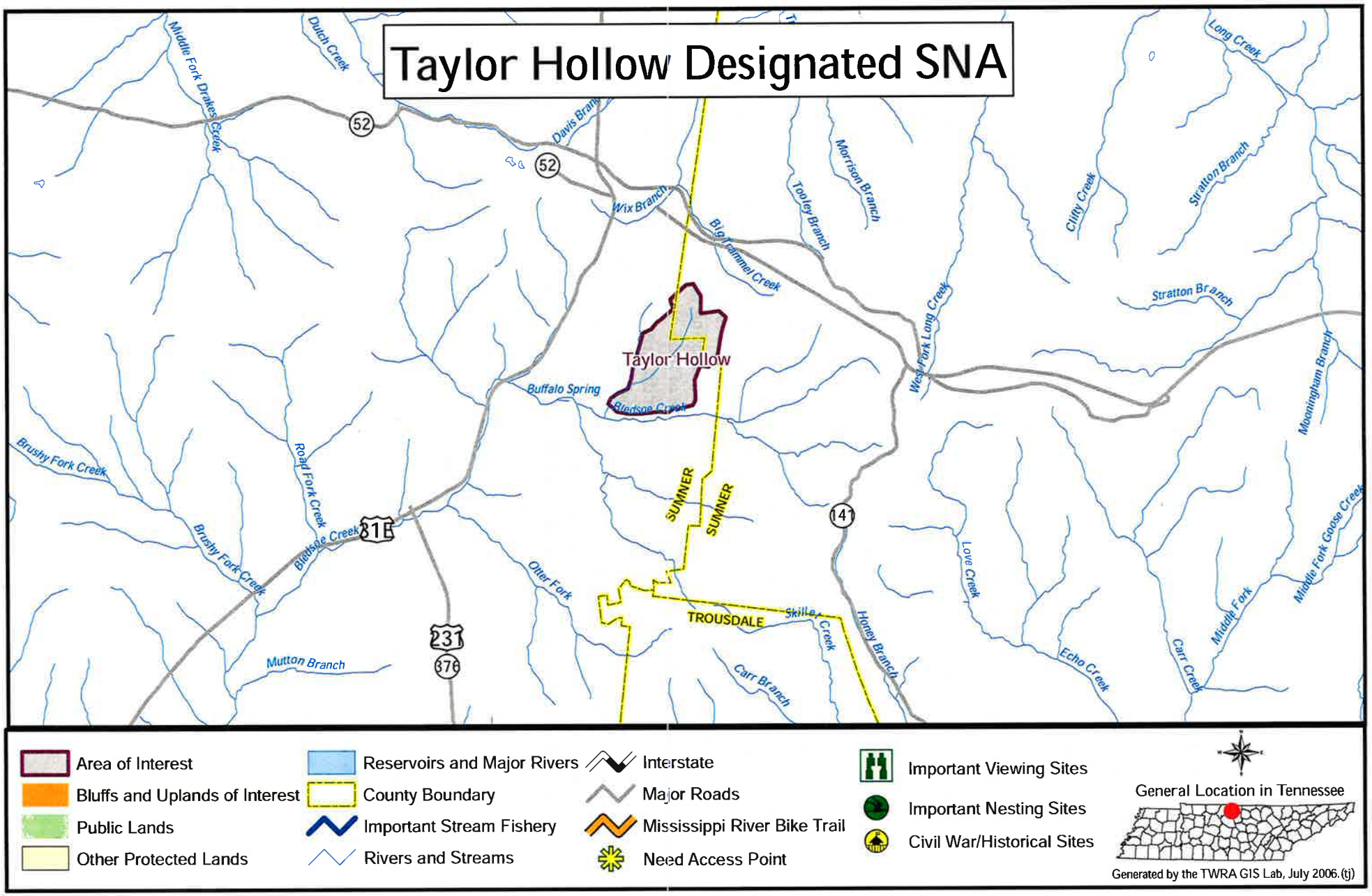
Significance – Site Importance Very High (B2) – The natural area is characterized by narrow winding ridges and separated by steep V-shaped valleys that drop 200-300 feet from the ridge. Its rich hollows provide habitat for a spectacular display of spring wildflowers and is highlighted by a carpet of blue-eyed Mary (*Collinsia verna*). The rare Ozark least trillium (*Trillium pusillum* var. *ozarkanum*) is another noteworthy species that occurs here. It is an evolutionary intermediate between sessile and stalked forms of trillium.

Taylor Hollow's forest community is generally considered old growth though some very selective cutting for commercially important species may have occurred here. The mixed mesophytic forest is particularly interesting because its species composition is very similar to an East Tennessee forest. The forest structure is indicative of old growth with snags and large standing live trees along with decomposing logs and organic forest matter in decay on the forest floor. The vast occurrence of blue-eyed Mary is also indicative of old growth. Blue-eyed Mary is sensitive to forest disturbance like logging and probably was once much more abundant in moist rich Middle Tennessee forests before logging occurred. The mixed mesophytic forest includes sugar maple, tulip poplar, numerous oak and hickory species, ash species, buckeye, basswood, yellow wood, and beech, only to name but a few species. The mixed mesophytic forest is considered the most biologically diverse forest community in the eastern deciduous forest.

Strategy - The strategy for acquisition at Taylor Hollow is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 497 acres at an estimated cost of $810,000

Potential Partners – TDEC and TNC


Taylor Hollow Designated SNA
Taylor Hollow
Middle Fork Drakes Creek
Dutch Creek
Davis Branch
Wix Branch
Big Trammel Creek
Tooley Branch
Morrison Branch
Cliffy Creek
Long Creek
Stratton Branch
Stratton Branch
West Fork Long Creek
Mooningham Branch
Middle Fork Goose Creek
Buffalo Spring
Birdsong Creek
Brushy Fork Creek
Road Fork Creek
Birdsong Creek
Brushy Fork Creek
SUMNER
SUMNER
Otter Fork
TROUSDALE
Skiller Creek
Honey Branch
Love Creek
Echo Creek
Carr Creek
Middle Fork
Carr Branch
Mutton Branch
52
52
31E
231
376
14
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

THE SWAMPS

Location – (N36.5507, W86.8485) The Swamps is located in Robertson County between North Robertson School and Dozier Church, just north of Springfield.

Description - The site is a wetland located on the Western Highland Rim.

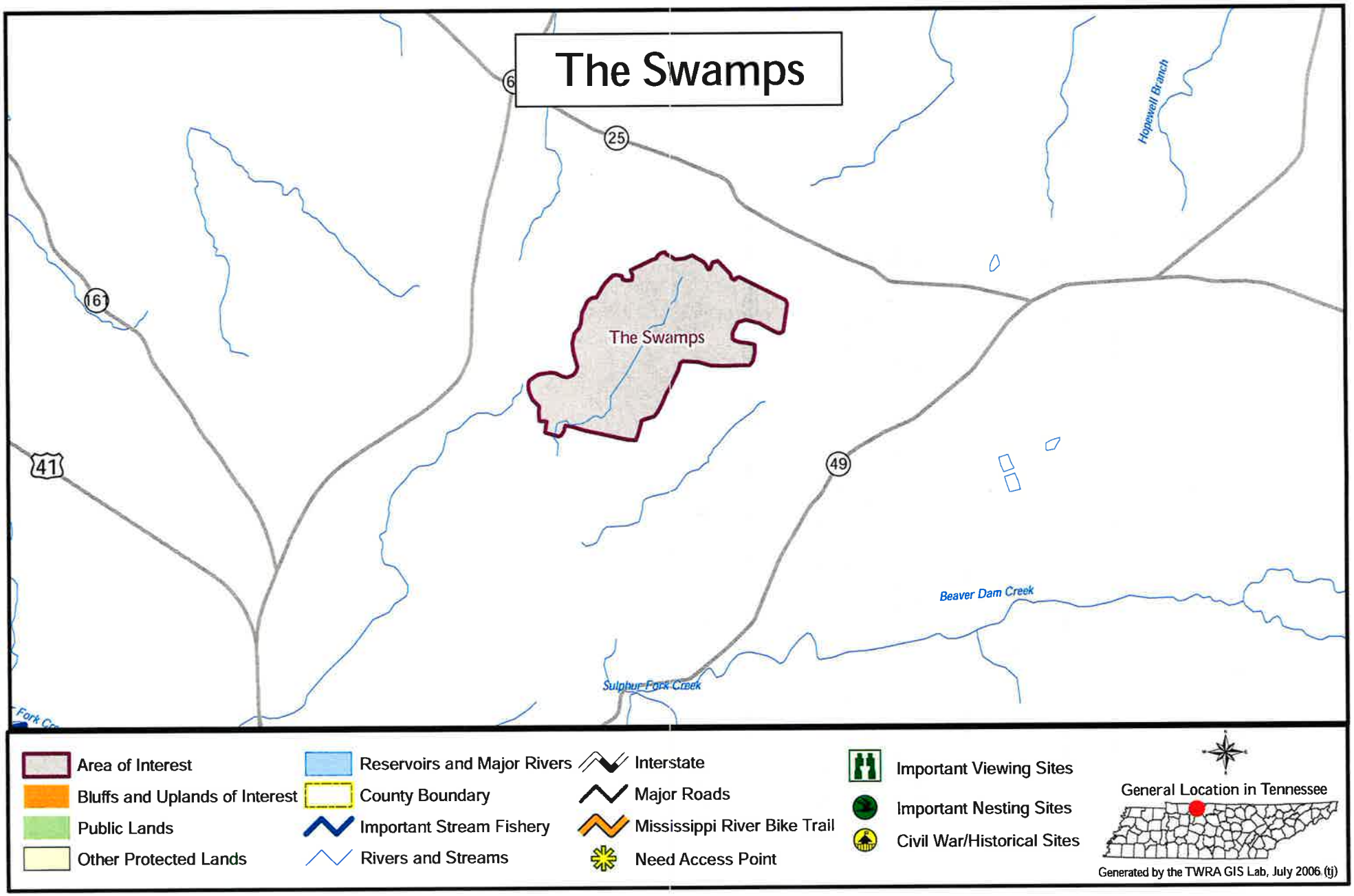
Significance – Site Importance Moderate (B4) – The Swamps is a wet flatwoods that is underlain by poorly drained Guthrie soil series. The area is mostly dry in summer and fall. This is an excellent example of willow oak, red maple & black gum swamp.

Rare elements include *Leucothoe racemosa* and *Ambystoma talpoideum*.

Strategy - The strategy for acquisition at The Swamps is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 433 acres at an estimated cost of $695,000.

Potential Partners – TDEC and TWRA


The Swamps
6
25
161
41
49
The Swamps
Hopewell Branch
Beaver Dam Creek
Sulphur Fork Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

TURNBULL CREEK, TURNBULL CREEK BLUFF, AND SVENSON'S BLUFF

Location – (N36.0796, W87.1699) Turnbull Creek is located in Dickson and Cheatham Counties The design includes 13 stream miles of Turnbull Creek and adjacent habitat from I-40 to the confluence with the Harpeth River in Kingston Springs. This project also includes Turbull Creek Bluff and Svenson's Bluff.

Turnbull Creek – Site Importance High (B3) - Interstate 40 and State Route 96 bridges are close to each other at the most upstream portion of the site. The next bridge crossing is at the confluence of the Harpeth River, thus the stream flows for nearly 13 un-interrupted miles. Soils along the stream are alluvial with sandy silt and some clay, and often have stream-washed gravel. Development along the stream is minimal-but vacation homes have been constructed in the last few years- and much of the landuse is forest or agriculture. The stream is cool, clear, and gently flowing with a gravel substrate typical of pristine streams of Tennessee's Western Highland Rim. Depending upon the amount of stream-scour the adjacent banks contain herbaceous vegetation, floodplain forest, or gravel. Streamside habitat includes floodplain forests of sycamore, with slopes supporting mesic forests of tulip poplar, beech, maples, oaks and hickories. The steep, sheltered cliffs and slopes often contain seeps which support a diversity of herbaceous flora. Robert Kral, retired Vanderbilt University botanist, noted that the spring flora "is showy and involves many ecological types." High-towering bluffs support eastern white pine (*Pinus strobus*).

Turnbull Creek is a relatively pristine aquatic habitat with high species diversity. Even without intensive surveys, three rare species are known from in and along the stream. Finescale darter (*Etheostoma microlepidum*) is ranked as very rare and imperiled globally (G2G3), and occurs only in Tennessee and Kentucky. The species is listed as in-need-of-management. Finescale darter requires swift riffles of gravel-bottomed streams, and Turnbull Creek is one of only nine Tennessee streams known to support this species. Sweet-scented Indian-plantain (*Synosma suaveolens*) grows in the floodplain forests along the stream, is globally rare (G3), and very rare in Tennessee (S2) where it is listed as threatened. Michigan lily (*Lilium michiganense*) is rare in Tennessee (S3) and is listed state threatened. Additional surveys of the less-accessible areas would not only extend the current known range these species, but would likely yield addition rare species.

Svenson's Bluff (Site Importance Moderate - B4) is a remote and rugged bluff which rises approximately 180 feet above the creek. The geological features here are of the Fort Payne Formation and consist of siltstone and shale of Lower Mississippian Age. The bluff face is permeated with seeps and the crest supports a rather mesic but low-growth and scattered forest of beech, eastern red cedar, mountain laurel, tulip poplar, white pine, and oaks.

This area contains one of only two Middle Tennessee populations of white pine. White pine was first reported from this site in 1925. Many of the mature white pines observed at that time are now dead and have deteriorated, but some fertile specimens were found at

last visit (1979) with diameters up to 14.7 inches. Heights of these trees were estimated to be between 20 and 40 feet. Of particular interest was the amount of reproduction occurring at the site. Dozens of seedlings from 3 inches to 3 feet in height, as well as several saplings ranging from 10 to 15 feet high were observed. With only one exception, all individuals were growing on the bluff face, summit, or within 10 feet of the summit.

Turnbull Creek Bluff (Site Importance Moderate - B4) is similar in many respects to Svenson's Bluff, and is located 2.7 miles to the northeast. Turnbull Creek Bluff supports a stand of white pine (*Pinus strobus*). At this point Turnbull Creek flows southeast and makes a sharp turn to the northeast forming this precipitous north-facing bluff. The height of the bluff is about 140 feet (680 ft. elevation) above the creek and the narrow crest slopes into a parallel ravine which drains directly into Gin Creek. In an area consisting of the bluff face, crest, and slopes of the adjacent ravine, white pine occurs as a conspicuous member of the forest community. The largest measured individual was 22.7 inches dbh, but other inaccessible specimens may be larger. At least 20 trees with a minimum dbh of 16 inches and all states of reproduction were observed. Other conspicuous members of the forest overstory and understory include white oak, chinquapin oak, beech, blackgum, mountain laurel, and ironwood.

While investigating the bluffs along Turnbull Creek in the early 1920s, H.K. Svenson was the first botanist to document naturally occurring white pine stands from Tennessee's Western Highland Rim. While revisiting this site in 1979, Drs. Chester and Scott[1] of Austin Peay State University discovered another natural white pine community, now known as Turnbull Creek Bluffs.

Turnbull Creek Bluff and Svenson's bluff contain the few Middle Tennessee populations of white pine, a species more common on the Cumberland Plateau and points east. The sheer bluff and steep gorges allow for dramatic views, and in the words of Svenson the area "has the appearance of a fragment of the northern Alleghenian forest, isolated in Middle Tennessee."

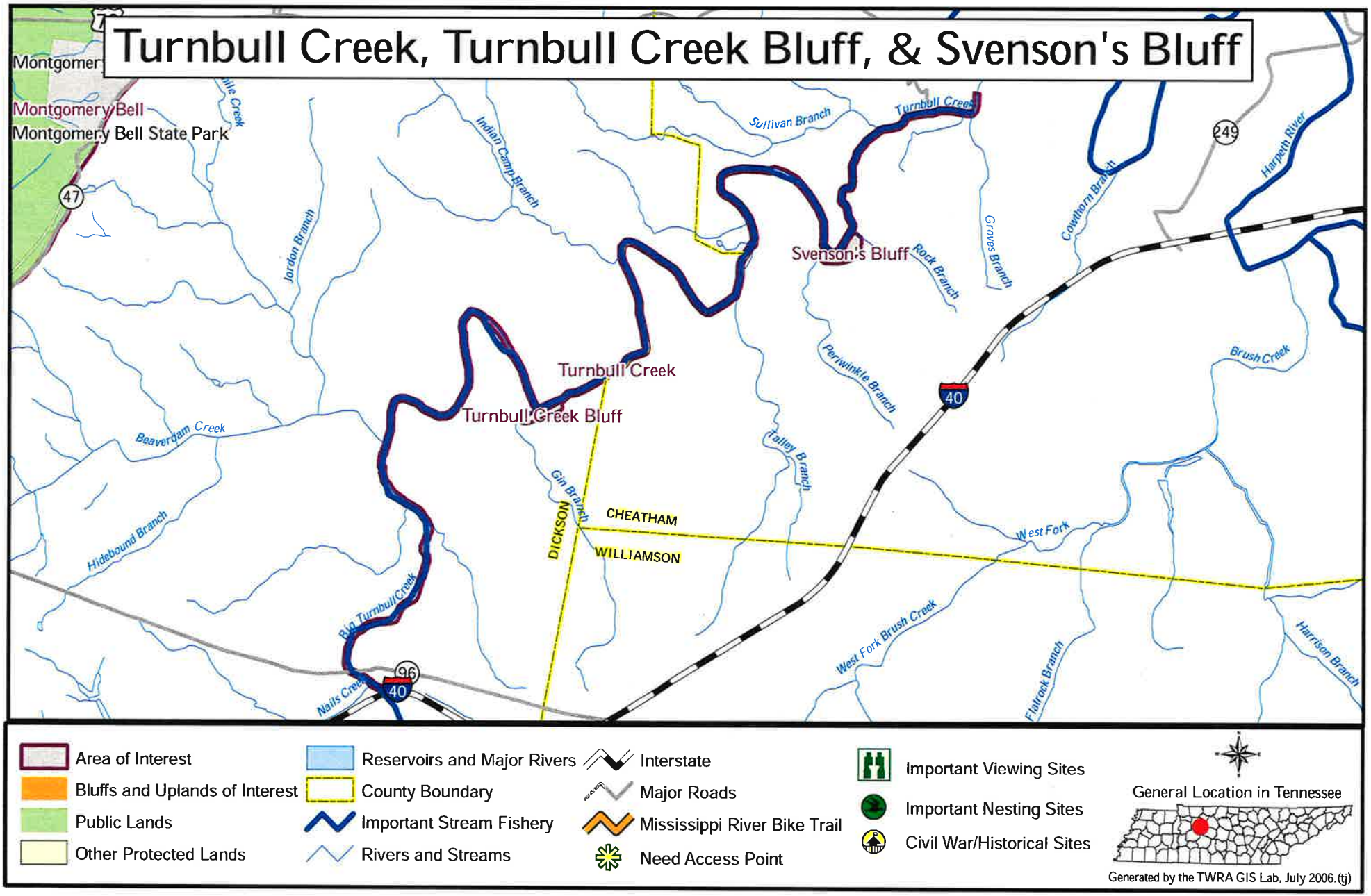
Strategy – For tracts unavailable, perhaps owners can be encouraged to maintain/restore riparian buffers. The strategy for acquisition is to acquire properties within and adjacent to the site boundary for preservation of the plant community. Svenson's Bluff and the similar Turnbull Creek Bluff are both above Turnbull Creek and all three are conservation targets and should be considered together for planning purposes.

Land Protection Needs – 400 acres at an estimated cost of $695,500.

Potential Partners – TDEC and TWRA.

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[1] Chester, E.W. and A.F. Scott. 1980. *Pinus strobus* in Middle Tennessee: fifty-four years after discovery. Journal of the Tennessee Academy of Sciences. Vol 55:3 pp. 85-86.


Turnbull Creek, Turnbull Creek Bluff, & Svenson's Bluff
Montgomery
Montgomery Bell
Montgomery Bell State Park
47
Jordan Branch
Indian Camp Branch
Sullivan Branch
Turnbull Creek
249
Harpeth River
Cowhorn Branch
Groves Branch
Rock Branch
Svenson's Bluff
Turnbull Creek
Turnbull Creek Bluff
Periwinkle Branch
Brush Creek
40
Beaverdam Creek
Talley Branch
Gin Branch
DICKSON
CHEATHAM
WILLIAMSON
West Fork
Hidebound Branch
Big Turnbull Creek
96
40
Nails Creek
West Fork Brush Creek
Flatrock Branch
Harrison Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

TYNES GLADE

Location – (N36.0047, W86.3575) Tynes Glade is located in Rutherford County on the north side of Alsup Mill Road (Hebron Road) adjacent to the roadway about 0.5 miles east of US 231, south of Lebanon. (See Collins Trifolium/Rocky Hill Road Glades map)

Description – The site encompasses approximately 30 acres adjacent to the road. There is a private home on the edge of the property. The area includes limestone glades with outcroppings, old pasture, and cedar thickets. A small drainage flows into a series of sinkholes in the middle of the site.

Significance – Site Importance is High (B3). An important population of the federally endangered Tennessee coneflower (*Echinacea tennesseensis*) occurs at this site. A total of 2,529 flowering stems were counted in 2005. Tennessee coneflower is globally rare and imperiled (G2) and only occurs in Middle Tennessee limestone cedar glade and barrens habitats. An important part of recovery for this endangered plant is protection through public ownership of all known Tennessee coneflower sites. There are currently only a few sites that have not been protected.

Strategy – The strategy for acquisition is to acquire properties within and adjacent to the site design (site boundary) for access or access control, and preservation and recovery of the federally endangered Tennessee coneflower.

Land Protection Needs – Maximum of 30 acres at an estimated cost of $50,000.

Potential Partners – TDEC and USFWS.

TYREE SPRINGS

Location – (N36.4331, W86.6556) Tyree Springs is approximately 35-acres located in Sumner County south of Whitehouse off Hwy 31.

Description - Located on the Western Highland Rim, this site is an undeveloped forested tract of land except for a rustic cabin on the Cato tract and concrete pumphouse at the spring on the Cain tract. Two small hollows with north-south running branches that flow into Drakes Creek comprise about half of this site. Each branch crosses under Tyree Springs Road near its junction with Drakes Creek. About 200 feet of relief on the shaley slopes of the two hollows provide habitat for a rich assemblage of plant species typical of the western mixed mesophytic forest found in other undisturbed hollows of the Highland Rim. Tree species observed in the hollows include beech, sugar maple, tulip poplar, sycamore, red oak, white oak, chinquapin oak, white ash, and hickories.

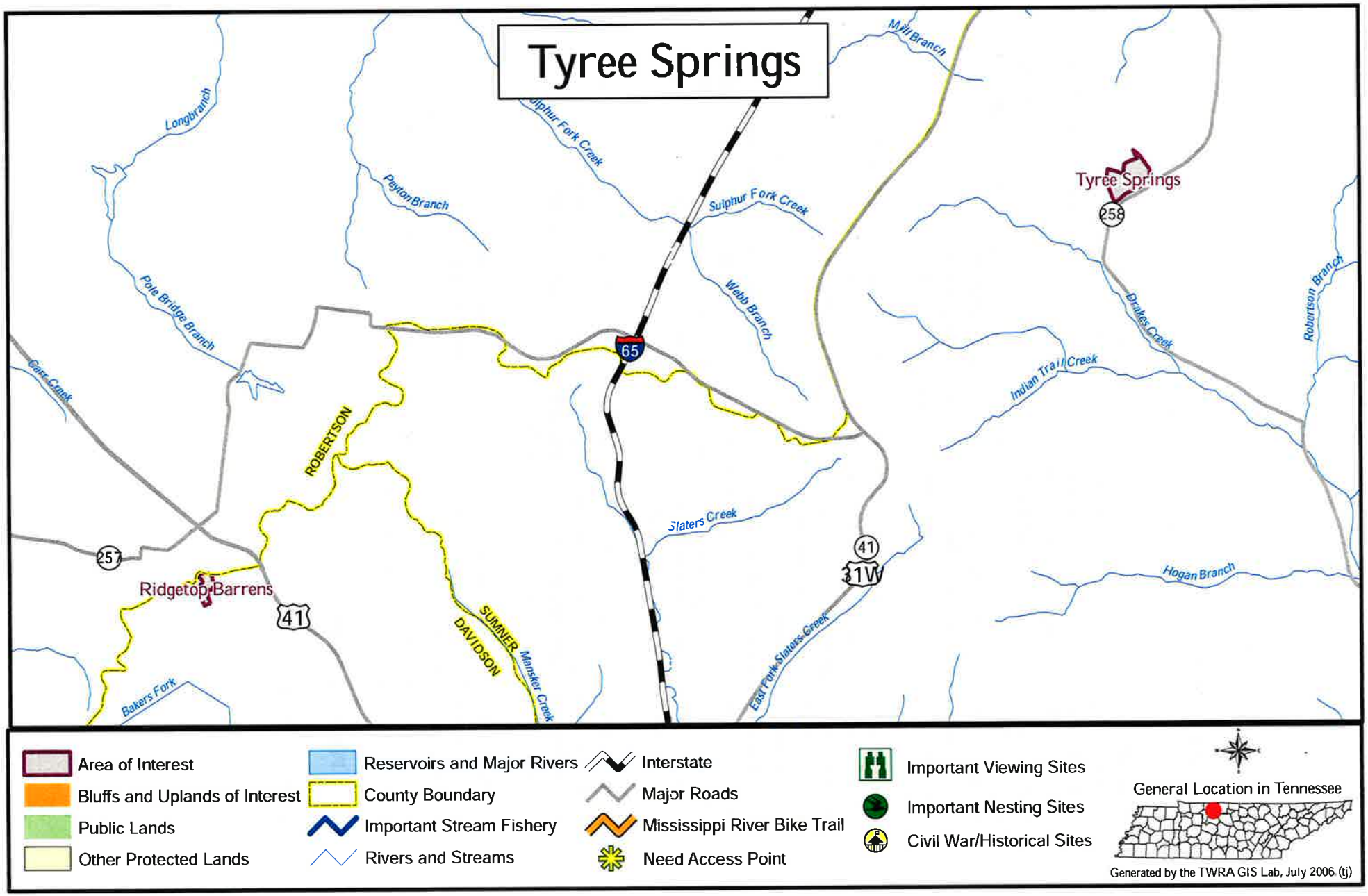
Significance – Site Importance Moderate (B4) – The hollows provide habitat for a rich assemblage of plant species including the state threatened Michigan lily (*Lilium michiganense*), goldenseal (*Hydrastis canadense*), and ginseng (*Panax quinquefolius*), which are both listed as state special concern – commercially exploited. A significant aspect of the westernmost hollow is the prevalence of large chinquapin oaks in its upper half. The easternmost hollow is notable as a site for a large population of Guyandotte beauty (*Synandra hispidula*). The population consists of 2-3 thousand plants in the upper end of the hollow. A large population of twinleaf (*Jeffersonia diphylla*), uncommon this far west in Tennessee, occurs in this hollow as well. Another feature of this hollow is its three small waterfalls with 8-12 foot drops.

In addition to the rich flora at this site, two notable rare animals have been documented from Tyree Springs. These are the northern pine snake (*Pituophis melanoleucus melanoleucus*), a state threatened species, and hellbender (*Cryptobranchus alleganiensis*), which is listed as in-need-of-management.

Strategy - The strategy for acquisition at Tyree Springs is to acquire properties within and adjacent to the site design (site boundary) for access or access control, and preservation of rare species and representative communities. Preservation of rare species, communities and wildlife will provide educational opportunities for the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 35 acres at an estimated cost of $52,500.

Potential Partners – TDEC.


Tyree Springs
Longbranch
Sulphur Fork Creek
Peyton Branch
Sulphur Fork Creek
Mill Branch
Tyree Springs
258
Pote Bridge Branch
Webb Branch
65
Drakes Creek
Robertson Branch
Indian Trail Creek
Cane Creek
ROBERTSON
Slaters Creek
41
31W
257
Ridgetop Barrens
41
SUMNER
DAVIDSON
Mansker Creek
Hogan Branch
East Fork Slaters Creek
Bakers Fork
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

WALTERHILL FLOODPLAIN SNA

Location – (N35.9397, W86.3762) Walterhill Floodplain is located in Rutherford County 2 miles north of the Veterans Administration Hospital on Highway 231.

Description - Located in the Central Basin, Walterhill Floodplain SNA is a 34-acre natural area located in Rutherford County. It is uniquely different from most natural areas in that it is primarily comprised of an agricultural field. The area lies south of the Stones River and east of Hwy 231.

Significance – Site Importance Very High (B2) – Walterhill Floodplain's main function as a natural area is to protect and maintain a healthy population of a rare plant species, the Stones River bladderpod (*Lesquerella stonensis*). This plant grows along the floodplains of Stones River from which it takes its name. A small winter annual in the mustard family, Stones River bladderpod produces a profusion of white flowers in early spring. After the plant flowers, it quickly dies leaving behind only its seeds which lie dormant on or near the surface of the soil throughout the summer months. In the early fall, those seeds that have found their way into the soil will germinate and grow a small rosette of leaves. The plant remains in this state throughout the cold winter months but will grow very slowly, particularly on warmer days. In late winter the plants react to the warming temperatures and lengthening days by entering a period of rapid growth. This late winter growth period gives the bladderpod a head start on most other plants, effectively avoiding competition for sunlight from other plants later in the spring.

Stones River bladderpod requires some level of soil disturbance in order for the seeds to be incorporated into the soil. Historically, seeds were distributed in the soil by scouring of floodwaters or by large grazing animals. Presently, the best soil disturbance results from row crop agricultural practices. In a unique partnership between Middle Tennessee State University's College of Agriculture (MTSU) and the Tennessee Natural Areas Program, MTSU cooperatively farms this land in a way that ensures the survival of this plant. After May 15th, the area is lightly plowed and then planted in a summer hay crop that is harvested in late summer. This agricultural activity takes place after the bladderpod completes its lifecycle in the spring, but before its seeds germinate in the fall. This unique partnership between agriculture and rare plant conservation is helping ensure the long-term survival of this unique plant.

Strategy - The strategy for Walterhill Floodplain is to acquire properties within and adjacent to the site design boundary for access or control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species will provide educational opportunities for area colleges, and the general public.

Land Protection Needs – None at this time.

Potential Partners – TDEC, USFWS and MTSU.

WAYSIDE SWAMP

Location – (N35.5375, W86.0205) Wayside Swamp is approximately 46 acres located in Coffee County five miles northeast of Manchester on Hwy. 55. (See Summitville Mountain Spring map)

Description - Located on the Eastern Highland Rim, this site consists primarily of flat poorly drained forestland dominated by willow oak, sweetgum and sugar maple.

Significance – Site Importance Moderate (B4) - This wetland was surveyed by Tom Patrick as part of a survey of potential natural areas in the Cumberland River Drainage (Patrick 1979). It is close to the settlement of Wayside, and is more or less contiguous to other natural vegetation stretching south along and on both sides of the railroad tracks, to Forest Mill Pond (discussed above). This area has probably not been visited by botanists of DNA since at least the mid-1980's. The present condition of the swamp forest (relative to timber or hydrology) is not known. Data on the communities at the site have not been obtained, except that it probably represents the typical wetland oak-dominated swamp of The Barrens.

Strategy - The strategy for acquisition at Wayside Swamp is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities of Barrens vegetation. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 47acres at an estimated cost of $65,000

Potential Partners – TWRA and TDEC.

WILLOUGHBY TRACT

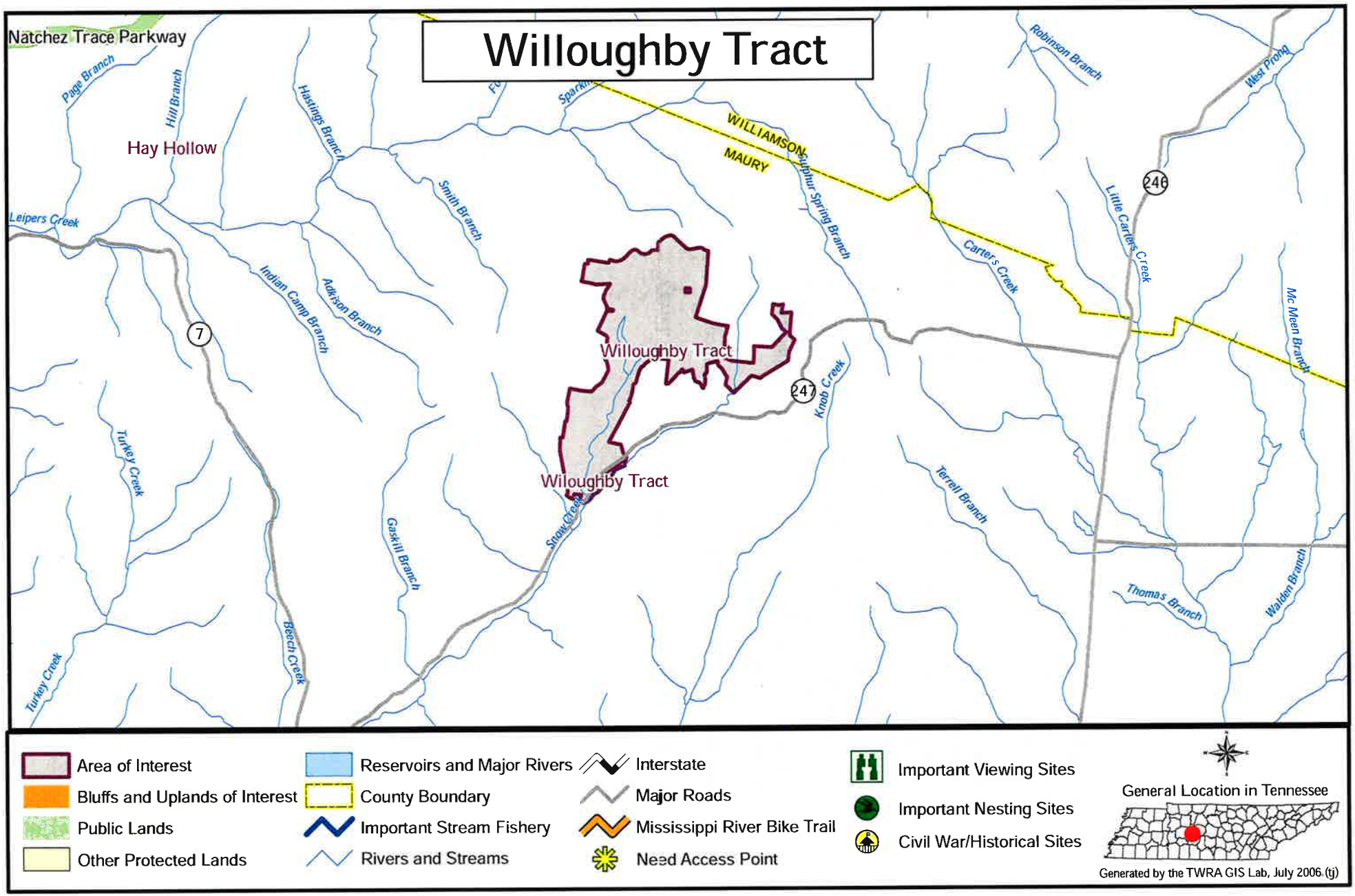
Location – (N35.7769, W87.0775) The 1,009 acres of the Willoughby Tract are located in Maury County. The property is on the Western Highland Rim along Chestnut Ridge Road near the community of Theta.

Description - Eighty-eight percent (890 acres) of this land is composed of mature oak forest. The remainder of the acreage is composed of pasture and rotation agricultural land. There is also a lake on the property.

Significance - Oak forests on the Western Highland Rim are a conservation priority because of their growing rarity. Extensive mature forests are a requirement for high priority bird species such as cerulean warbler (*Dendroica cerulea*). Cerulean warblers are listed as a species of Greatest Conservation Need (GCN) in TWRA's Comprehensive Wildlife Conservation Strategy. Cerulean warblers have been heard and seen in this area by Tommy Edwards, TWRA Wildlife Manager at Yanahli WMA, during Tennessee Ornithological Society Spring Bird Counts. This property is especially important to neotropical migrants. Blue-winged warbler, prairie warbler, prothonotary warbler, Kentucky warbler, and hooded warbler are all GCN species and have been recorded regularly at this site.

Lands Protection Needs – 1,009 acres at an estimated cost of $1,650,000.

Potential Partners - The Land Trust for Tennessee and TWRA.


Willoughby Tract
Natchez Trace Parkway
Page Branch
Hill Branch
Hay Hollow
Hastings Branch
Smith Branch
Leipers Creek
Indian Camp Branch
Adkison Branch
Turkey Creek
Gaskill Branch
Beech Creek
Turkey Creek
Snow Creek
Willoughby Tract
Wiloughby Tract
WILLIAMSON
MAURY
Sulphur Spring Branch
Carters Creek
Knob Creek
Terrell Branch
Robinson Branch
West Prong
Little Carters Creek
Mc Meen Branch
Thomas Branch
Walden Branch
7
246
247
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Mississippi River Bike Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

CUMBERLAND PLATEAU

CONTENTS PAGE

CUMBERLAND PLATEAU COUNTY AND PROJECT MAP 1

IMPORTANT AQUATIC HABITAT AREAS OF THE CUMBERLAND PLATEAU 2

ARCHAEOLOGICAL SITES – CUMBERLAND PLATEAU.....4

STREAM FISHING ACCESS – CUMBERLAND PLATEAU 9

ALPINE MOUNTAIN CONSERVATION AREA.....13

SGT. ALVIN C. YORK STATE HISTORIC PARK.....15

AETNA MOUNTAIN (See Cummings Cove)

AMENT CAVE 16

ANTIOCH BRIDGE–DADDY'S CREEK.....17

BERRY CAVE 18

BIG MOUTH CAVE 21

BIG WOODS 22

BLACKBURN FORK (See Roaring River State Scenic River)

BLEDSOE STATE FOREST 24

BLOOIN HOLLOW 25

BOOKER T. WASHINGTON STATE PARK 26

BOYD BARRENS.....28

BRADY MOUNTAIN.....29

BUCK CREEK COVE 31

CANEY HOLLOW CAVE.....32

CARTER SNA....34
CARTER MOUNTAIN....35
CATOOSA WMA....37
CAVE COVE (See Wolf, Farmer & Cave Coves)
CEDAR CREEK SULLIVANTIA SITE....39
CHIMNEY ROCK....40
CHIMNEYS SNA....42
CLIFTY CREEK GORGE....44
COLDITZ COVE SNA....46
COLLINS STATE SCENIC RIVER (See Savage Gulf SNA)
COONSIES CREEK CAVE (See White Buis Cave)
CORDELL HULL STATE HISTORIC PARK....48
COVE LAKE STATE PARK....50
COWAN TUNNEL....51
CUMBERLAND MOUNTAIN STATE PARK....52
CUMBERLAND STATE SCENIC TRAIL STATE PARK....54
CUMMINGS COVE AND AETNA MOUNTAIN (RACCOON MOUNTAIN)....58
CUMMINGS LAKE....60
DADDY'S CREEK (See Antioch Bridge)
DRY CREEK RAVINE....61
EDWARDS POINT SANDSTONE OUTCROPS....62
ENGLISH CAVE....64
FALL CREEK FALLS STATE PARK AND SNA....65

FRANKLIN STATE FOREST 66

FALLING WATER FALLS (See North Chickamauga Creek)

FARMER COVE (See Wolf, Farmer, & Cave Coves)

FIREY GIZZARD COVE (See Grundy Forest SNA)

FROZEN HEAD SNA 67

GOOSE POND 68

GRASSY CREEK CAVE 70

GRINDSTONE MOUNTAIN GEOLOGIC FEATURE 71

GRUNDY FOREST SNA AND FIERY GIZZARD COVE 73

GRUNDY LAKES STATE PARK 75

HARPER ROAD / SYCAMORE BRANCH 76

HARRISON BAY STATE PARK 77

HAWKINS COVE EAST 79

HICKS GAP SNA 80

HUBBARD'S CAVE SNA 82

INDIAN MOUNTAIN STATE PARK 84

ISSAC SPRINGS POND 85

LAUREL SNOW SNA 86

LEE FARM 88

LEES STATION ROAD BARRENS 89

LONE MOUNTAIN STATE FOREST 90

LOST CREEK CAVE 92

MAGENDANZ FALLS SNA 94

MARION COUNTY SINKHOLE....95
MEADOW CREEK SEEP....97
MEASLES GULF CAVE....98
MEREDITH CAVE....100
MILL CAVE....101
MILL CREEK HEMLOCK FOREST....102
MINGO SWAMP WMA....103
MUD CREEK SWAMP....105
NORRIS DAM STATE PARK....106
NORTH CHICKAMAUGA CREEK WMA, NORTH CHICKAMAUGA CREEK GORGE SNA, AND FALLING WATER FALLS SNA....108
OLD CCC ROAD BARKING TREEFROG POND....111
OLD HOG LOT ORCHID SITE....112
OLD TURNPIKE ROAD....113
OZONE FALLS SNA....114
PAINT ROCK CREEK (See Slickrock Branch)
PETERS BRIDGE SANDSTONE ROCKHOUSES....116
PICKETT STATE FOREST, WMA, AND STATE PARK....117
PINEY RIVER WATERSHED, STINGING FORK FALLS AND PINEY FALLS SNAs..120
PLANTATION POND....123
POWELL RIVER PRESERVE SNA....124
PRENTICE COOPER STATE FOREST AND WMA....126
ROARING CREEK GORGE....128

ROARING RIVER-BLACKBURN FORK-SPRING CREEK STATE SCENIC RIVER COMPLEX 130

ROCK ISLAND STATE PARK 133

ROYAL BLUE WMA (See Upper Cumberland)

RUGBY SNA 135

RUMBLING FALLS CAVE SYSTEM 137

SAVAGE GULF SNA AND COLLINS STATE SCENIC RIVER 139

SCOTTS GULF 142

SEQUATCHIE CAVE SNA 146

SHERWOOD ESCARPMENT 148

SLICKROCK BRANCH/PAINT ROCK CREEK 150

SPENCER POWERLINE SEEPS 151

SPRING CREEKS SCENIC RIVER (See Roaring River State Scenic River)

STANDING STONE STATE FOREST AND STATE PARK 152

SUNDQUIST WMA (See Upper Cumberlands)

SWAMP SPRINGS CAVE (See Rumbling Falls Cave System)

SYCAMORE BRANCH (See Harper Road)

TANAGER HILL 154

TENNESSEE RIVER GORGE 156

THUNDER RUN CAVE (See Rumbling Falls Cave System)

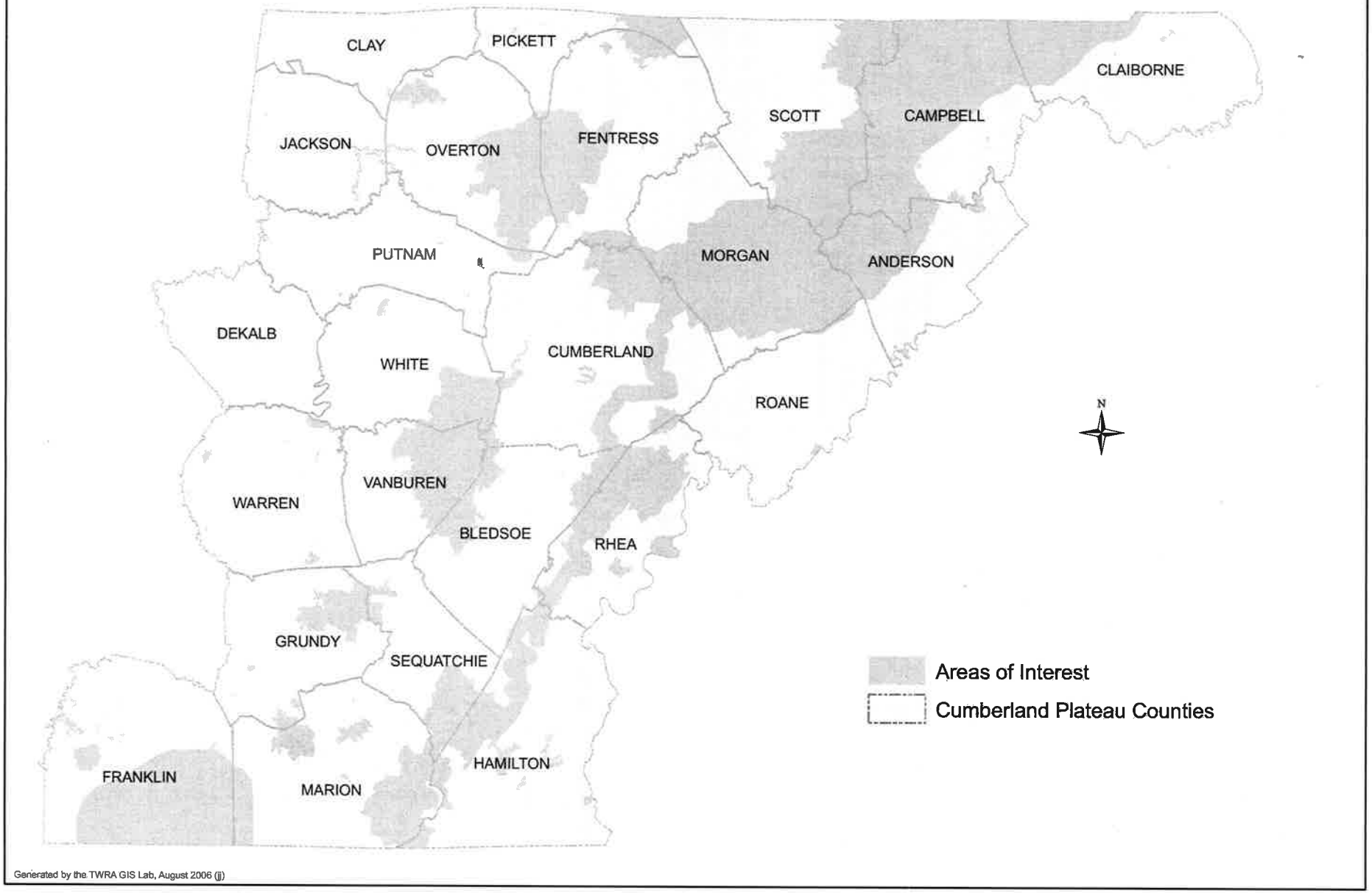
TIMS FORD STATE PARK 157

TURKEY CREEK 159

UPPER CANEY FORK 160

UPPER CUMBERLAND MOUNTAINS 161
VIRGIN FALLS SNA 166
WASHMORGAN HOLLOW SNA 168
WEST MORRISON POND AND LOW WOODS 169
WHITE BUIS CAVE & COONSIES CREEK CAVE 171
WHITE COUNTY WETLANDS COMPLEX 172
WHITES CREEK WATERSHED 174
WILLIAMS TRACT 177
WINDOW CLIFFS SITE 178
WOLF, FARMER & CAVE COVES 179
WOLF RIVER WHITE CEDAR SLOPES 180

Cumberland Plateau Region



IMPORTANT AQUATIC HABITAT AREAS OF THE CUMBERLAND PLATEAU

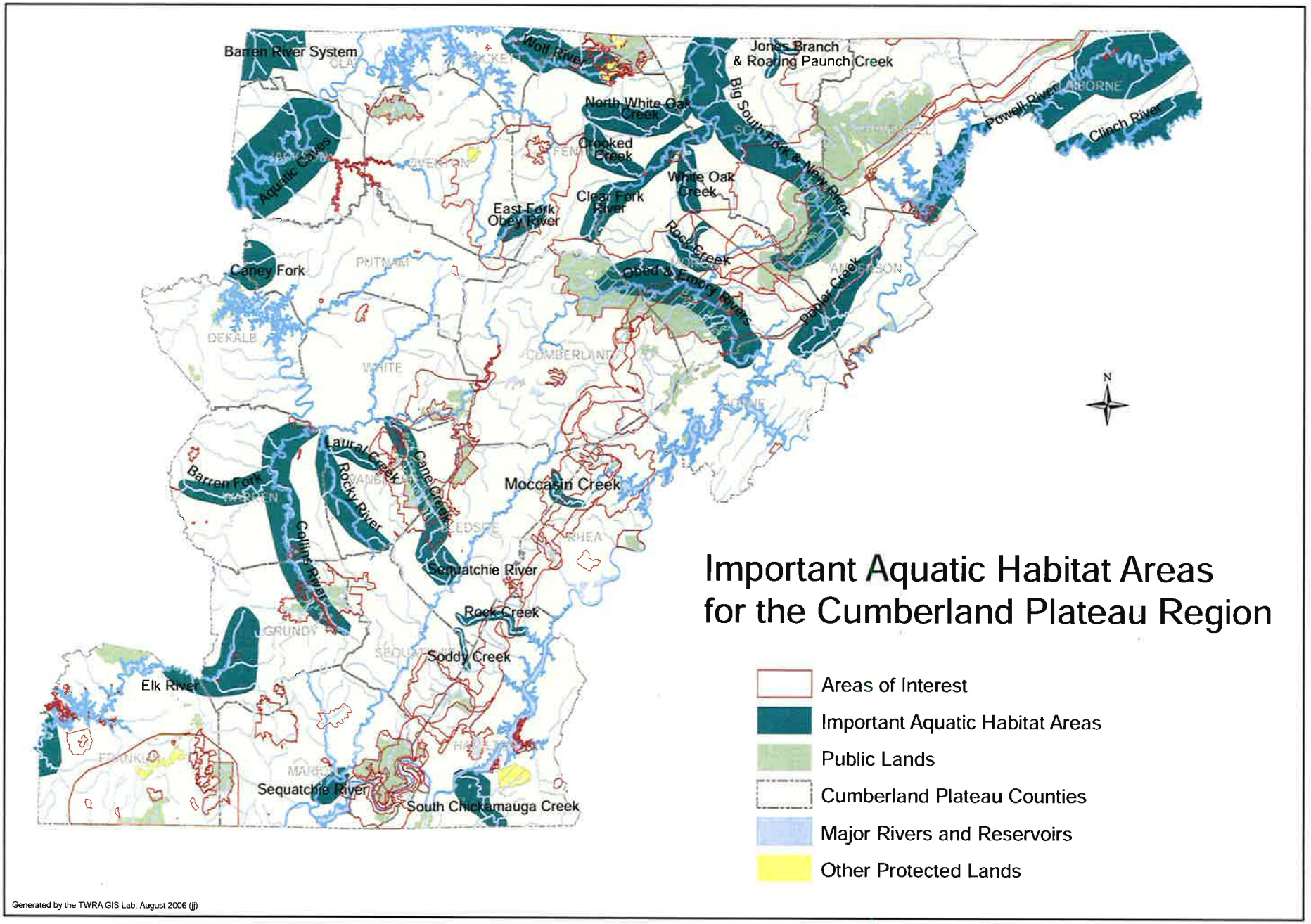
Location - 25 stream and river systems, and numerous caves were identified as critical aquatic habitats on the Cumberland Plateau as shown on the following map.

Description - The list includes small streams and large river systems. Small streams in this region are infertile and have very low flows in the summer. Water is often more abundant in caves providing critical habitat to rare cave species. Seasonally, water is a scarce commodity in this region. As public demand for water increases, even the larger rivers may not be able to supply adequate flows in the future. Watersheds in this region have been negatively impacted by poorly planned construction, development, mining, agricultural, and forestry practices.

Significance - These areas have been identified by state, federal, and private agencies as important aquatic areas because they represent critical habitats for rare species. These species include fishes, mussels, and crayfish that are listed by the TWRA and USFWS as threatened or endangered. Most of these species are endemic to this region, meaning they can be found nowhere else. Several Tennessee species have been lost, and without proactive measures to protect habitat, more losses are expected.

Strategies - Protection of streams and riparian zones through conservation programs or direct acquisition. Partners need to emphasize the use of Best Management Practices for agriculture, mining, forestry, and construction in these areas. It will also be critical to maintain adequate flows in streams and caves to provide habitat for aquatic species.

Potential Partners - TNC, USFWS, World Wildlife Fund, NRCS, TWRA, Tennessee Stream Mitigation Program, Cumberland Compact, and local watershed associations.


Barren River System
Wolf River
Jones Branch
& Roaring Paunch Creek
North White Oak Creek
Big South Fork & New River
Powell River
Clinch River
Aquatic Caves
Crooked Creek
White Oak Creek
Clear Fork River
East Fork Obey River
Rock Creek
Obed & Emory Rivers
Panther Creek
Caney Fork
PUTNAM
DEKALB
WHITE
CUMBERLAND
ANDERSON
MORGAN
Laural Creek
Cane Creek
Barren Fork
Rocky River
Moccasin Creek
Collins River
Sequatchie River
Rock Creek
GRUNDY
Soddy Creek
Elk River
FRANKLIN
MARION
Sequatchie River
South Chickamauga Creek
N
Important Aquatic Habitat Areas
for the Cumberland Plateau Region
Areas of Interest
Important Aquatic Habitat Areas
Public Lands
Cumberland Plateau Counties
Major Rivers and Reservoirs
Other Protected Lands
Generated by the TWRA GIS Lab, August 2006 (jj)

ARCHAEOLOGICAL SITES – CUMBERLAND PLATEAU

Location – Anderson, Bledsoe, Campbell, Claiborne, Clay, Cumberland, DeKalb, Fentress, Franklin, Grundy, Hamilton, Jackson, Marion, Morgan, Overton, Pickett, Putnam, Rhea, Roane, Scott, Sequatchie, Van Buren, Warren, and White counties.

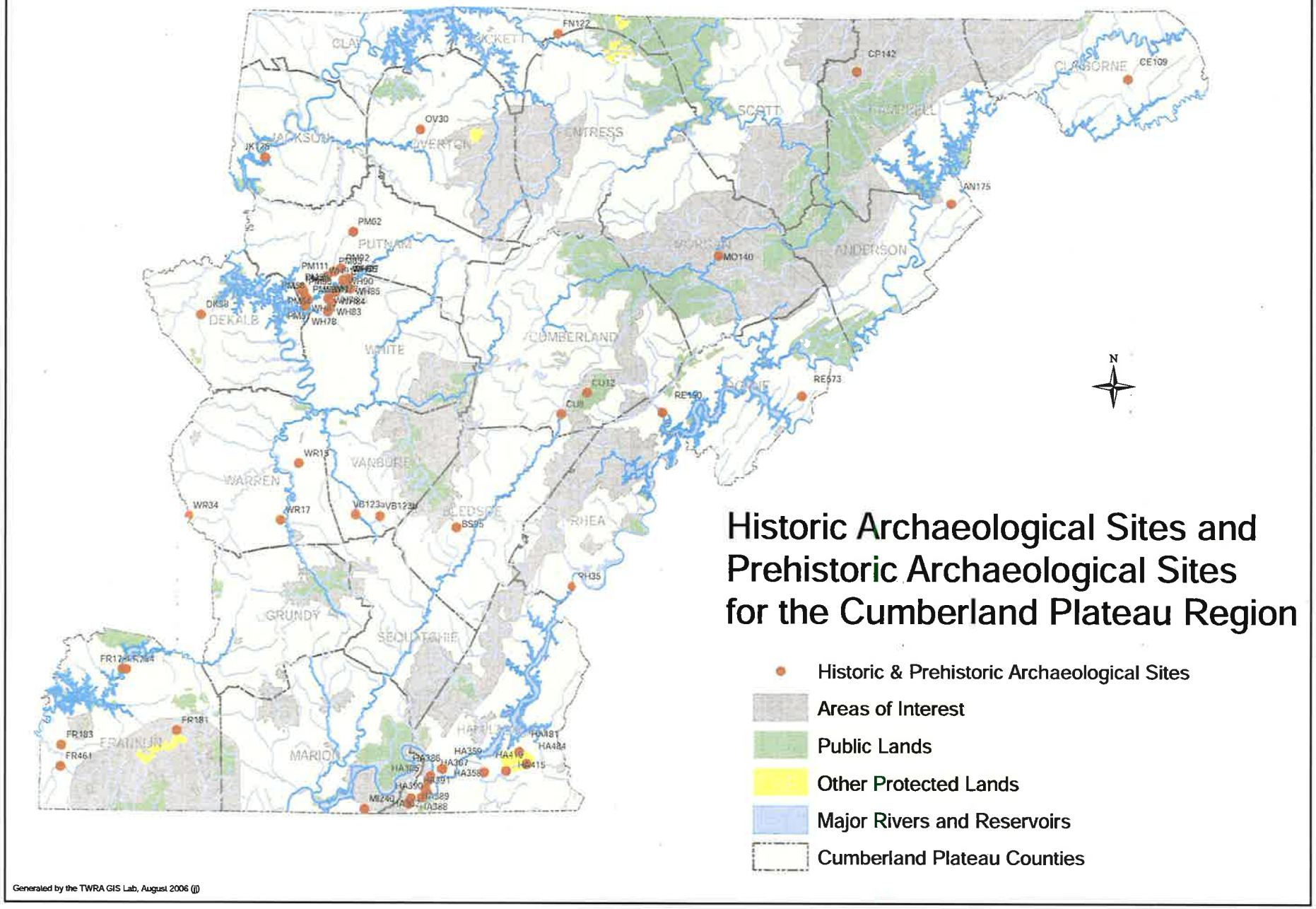
Description: Most of the 24 counties in the THCP's Cumberland Plateau region are in the physiographic region bearing this same name. Parts of some, however, fall in the Eastern Highland Rim, the Valley and Ridge, and the Sequatchie Valley physiographic regions. Stream draining is divided between tributaries of the Cumberland River system on the west and tributaries of the Tennessee River system on the east. Compared to other areas of the state, the population remains relatively small, and there are vast tracts of land owned by private corporations, including timber and mining interests. A lesser degree of development has been favorable to the preservation of archaeological resources, but this situation seems to be changing rapidly.

Prehistoric Sites: Prehistoric archaeological sites recorded within this physiographic region are classified into four major time periods: (1) Paleo-Indian, 10,000 B.C. to 8000 B.C.; (2) Archaic, 8000 B.C. to 1500 B.C.; (3) Woodland 1500 B.C. to A.D. 800; and (4) Mississippian, A.D. 900 to A.D. 1500. These sites range in size and complexity from relatively small Paleo-Indian and Archaic camps to substantial Mississippian mound centers. The prehistoric inhabitants also utilized a variety of caves to: (1) display their art (caves as portals to the underworld); (2) acquire resources, such as chert and minerals; and (3) use as seasonal living quarters.

Historic-Period Sites: Until the early 1800s, much of the Cumberland Plateau remained under control of the Cherokee, who were forced to relinquish almost all of it by 1805. Anglo-American settlement, where it had not already occurred, followed almost immediately. While there are a few recorded sites relating to the early settlement period, no systematic recording of such resources has been conducted. Two counties in this region, White and Putnam, were the focal points for an early and sustained stoneware pottery producing industry from the early 1820s until the 1930s. A systematic survey of archaeological sites relating to this industry has been conducted, and several important pottery sites are included on the attached table. While scattered Civil War action occurred throughout the region, relatively few major sites have been recorded in most counties. The exception is Hamilton County which saw a large amount of Civil War action. Only a few other themes are represented by sites listed on the table. As for all of the THCP regions under consideration, there are certainly other important historic-period archaeological sites that exist but that are just not presently identifiable based on the amount of survey work completed.

Land Protection Needs – 1,075 acres at an estimated cost of $4,100,000.

Potential Partners – The Archaeological Conservancy, Tennessee Council for Professional Archaeology, Tennessee Wars Commission


Historic Archaeological Sites and
Prehistoric Archaeological Sites
for the Cumberland Plateau Region
Historic & Prehistoric Archaeological Sites
Areas of Interest
Public Lands
Other Protected Lands
Major Rivers and Reservoirs
Cumberland Plateau Counties
N
Generated by the TWRA GIS Lab, August 2006 (jj)

Cumberland Plateau – Archaeological Sites

County	Site Number	Estimated Acreage	Name
Anderson	40AN175	15	Camp Wallace (CW)
Bledsoe	40BS95	20	Portion of Trail of Tears
Campbell	40CP142	10	Zeb Mountain Pottery
Claiborne	40CE109	10	Breastworks Hill (CW)
Clay		0	
Cumberland	40CU8	10	Devil Step Hollow Cave (prehist)
Cumberland	40CU12	40	Grassy Cove Saltpeter Cave
DeKalb	40DK38	15	Snow Hill Entrenchments (CW)
Fentress	40FN122	5	Wes Goodman Gunshop
Franklin	40FR178	10	Bethpage Bridge Defenses (CW)
Franklin	40FR181	10	Cowan Tunnel Defenses (CW)
Franklin	40FR183	5	William Bean, Jr. Gunshop
Franklin	40FR254	10	Bethpage Bridge Defenses (CW)
Franklin	40FR461	10	Portion of Trail of Tears
Hamilton	40HA358	5	Union Earthworks and Camps (CW)
Hamilton	40HA359	5	Union Earthworks and Camps (CW)
Hamilton	40HA360	25	Union Earthworks and Camps (CW)
Hamilton	40HA361	10	Union Earthworks and Camps (CW)
Hamilton	40HA362	5	Union Earthworks and Camps (CW)
Hamilton	40HA385	5	Union Earthworks and Camps (CW)
Hamilton	40HA386	10	Union Earthworks and Camps (CW)
Hamilton	40HA387	15	Union Earthworks and Camps (CW)
Hamilton	40HA388	10	Union Earthworks and Camps (CW)
Hamilton	40HA389	15	Union Earthworks and Camps (CW)
Hamilton	40HA390	5	Union Earthworks and Camps (CW)
Hamilton	40HA391	5	Union Earthworks and Camps (CW)
Hamilton	40HA415	5	Tyner Redoubt (CW)
Hamilton	40HA419	10	Chickamauga Blockhouse(CW)
Hamilton	40HA481	5	Earthworks and Camps (CW)
Hamilton	40HA484	5	Earthworks and Camps (CW)

County	Site Number	Estimated Acreage	Name
Grundy		0	
Jackson	40JK125	150	Fort Blount/Williamsburg Sites
Marion	40MI240	100	Whiteside Bridge Defenses (CW)
Morgan	40MO140	50	Second Montgomery (CW)
Overton	40OV30	150	Camp Zollicoffer (CW)
Pickett		0	
Putnam	40PM49	10	LaFever Pottery
Putnam	40PM52	20	W. C. Hedgecough Pottery
Putnam	40PM53	5	W. T. Hedgecough Pottery, # 1
Putnam	40PM54	5	W. T. Hedgecough Pottery, # 2
Putnam	40PM57	5	Vincent Pottery
Putnam	40PM58	5	T. Cole Pottery
Putnam	40PM59	5	C. LaFever Pottery
Putnam	40PM62	10	J. A. Roberts Pottery
Putnam	40PM63	10	C. Mitchell Pottery
Putnam	40PM92	15	J. E. Campbell Pottery
Putnam	40PM111	5	Roberts/Massa Pottery
Roane	40RE150	20	Piney Grove Furnace
Roane	40RE573	5	Littleton Pottery
Rhea	40RH35	40	Hiwassee Garrison
Scott		0	
Sequatchie		0	
Van Buren	40VB123a	10	Portion of Trail of Tears
Van Buren	40VB123b	30	Portion of Trail of Tears and Camp
Warren	40WR15	10	Cardwell Mtn. Mound (prehistoric)
Warren	40WR17	10	Irving College (prehistoric)
Warren	40WR34	10	Guest Hollow Stockade (CW)
White	40WH75	10	A. LaFever Pottery
White	40WH76	5	Jugtown Pottery

County	Site Number	Estimated Acreage	Name
White	40WH77	5	S. Cole Pottery
White	40WH78	10	Bussell Pottery
White	40WH81	5	G. Elrod Pottery
White	40WH83	5	W. C. Hitchcock Pottery
White	40WH84	5	J. Spears Pottery
White	40WH85	5	W. L. Hitchcock Pottery
White	40WH86	10	L. C. Hitchcock Pottery
White	40WH89	5	LaFever-Spears Pottery # 2
White	40WH90	5	Lafever-Spears Pottery # 3
White	40WH91	5	Lafever-Spears Pottery # 4
White	40WH97	10	LaFever Homestead
		1,075	

STREAM FISHING ACCESS – CUMBERLAND PLATEAU

Locations - The aquatic projects map indicates locations where access is needed on 26 important stream fisheries (yellow asterisks and yellow-lined streams).

Descriptions - There are two distinct types of property needed to provide fishing access: 1) boat access points for launching small boats, and 2) linear tracts in and adjacent to streams for wade fishing access.

Boat access points are most needed on the Sequatchie (9), Emory (5), and Collins (4) rivers, and in the trout fishing area on the Caney Fork River (1). These areas were chosen to complement existing access areas and improve the value of recreational fisheries. All areas are located adjacent to the named river. The exact location is not critical; it is possible that another parcel located within one mile could be substituted for the indicated location. Boat access points would be relatively small parcels (up to 2 acres) located in the floodplain, preferably near existing roads.

Wade fishing access is needed on 28 streams. These would provide parking for a few vehicles and provide access for anglers to walk in and along the stream for 1-3 miles. Areas adjacent to bridges would be ideal locations for small parking areas.

Recreational Significance – Streams and rivers in the plateau offer a variety of unique fishing opportunities for smallmouth bass, rock bass, sunfish, catfish, trout, and even muskellunge. While some of these fisheries are locate within public lands such as Catoosa WMA, many miles of waters are privately owned. Anglers must have the landowner's permission to wade and fish in these streams. The task of contacting multiple landowners and getting permission can be overwhelming for many anglers, especially those that are not nearby residents. Establishing public corridors would greatly increase the recreational value of these fisheries. With the appropriate management, these streams can attract many more anglers and still provide high quality angling opportunities.

Most rivers in this region have some public access for boats or canoes, but there are still vast reaches of river that are not accessible. These access points are used by anglers and recreational paddlers. Some of the existing access areas are owned by outfitters that operate canoe rental and shuttle services. Additional public access areas would complement these enterprises by providing more launching options. More public access would allow anglers to avoid high-use paddling areas. Public areas would allow anglers access to fish even when the outfitters are closed on weekdays and in the off-season.

The stream corridors needed to provide wade fishing access include the stream channel and the adjacent riparian zones. Riparian and instream habitats are essential for supporting aquatic life in streams. Public ownership of these important habitats would ensure their protection and provide opportunities for enhancement.

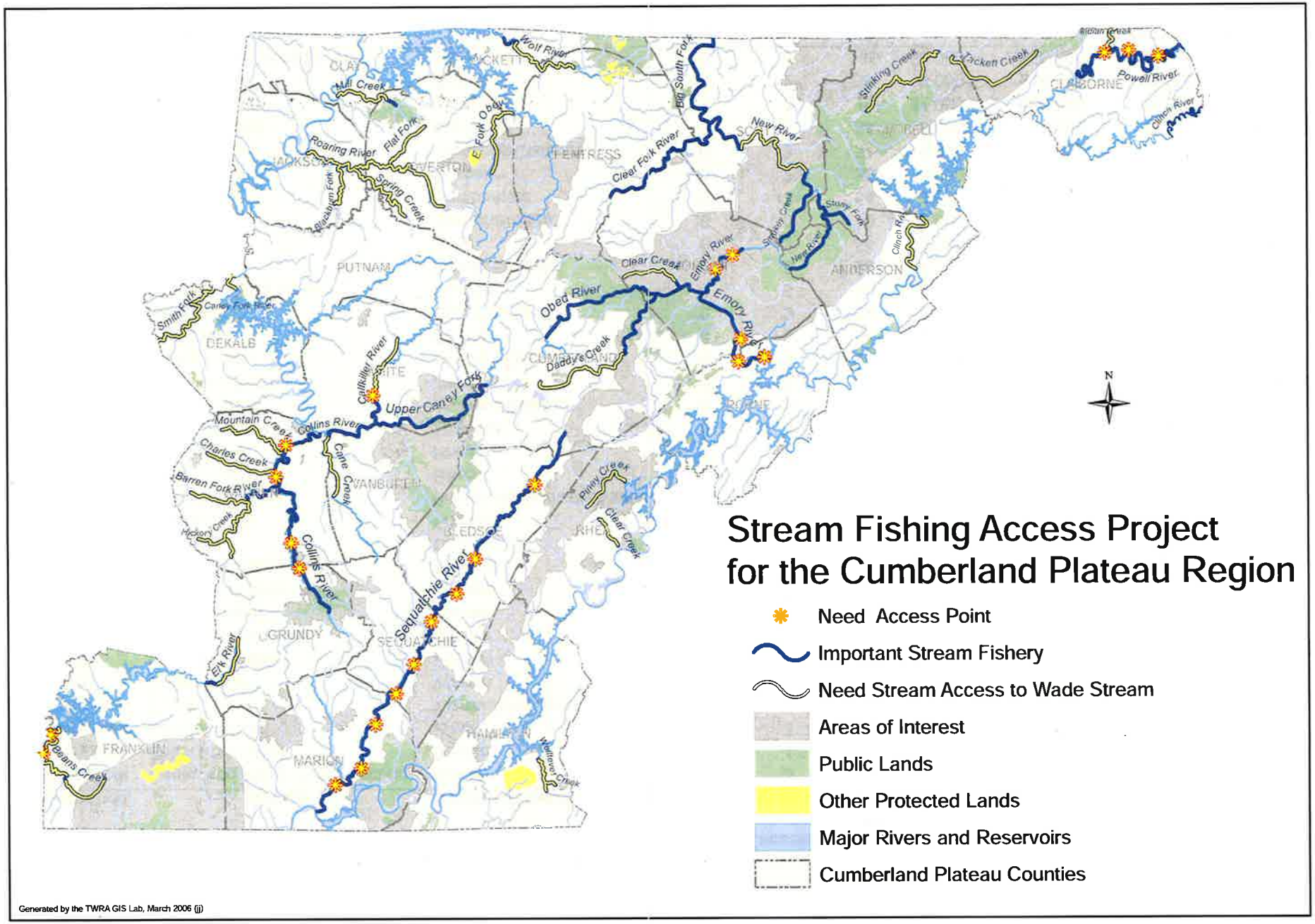
Strategy - TWRA would establish a small, gravel parking area at all access areas, and provide a narrow gravel or concrete ramp at boat access points. TWRA would develop access areas in a

manner that would minimize the footprint on the land and maximize the amount of forested riparian vegetation.

Land Protection Needs – 1,724 acres at an estimated cost of $17,457,000. See table on following page.

Potential Partners – TPGF, TWRA, Trout Unlimited, Tennessee Scenic Rivers Association, local tourism boards, and local watershed organizations.

Watershed	Stream	County of needed access	Boat access needed (#)	Wade access needed (miles)	Total Acres	Cost/ Acre	Land Cost	10% Surv. & Closing Fees	Total Cost
Caney Fork	Caney Fork River (Trout Section)	Dekalb	1	3	57	30,000	1,710,000	171,000	1,881,000
Caney Fork	Smith Fork Creek	Dekalb	0	4	72	5,000	360,000	36,000	396,000
Caney Fork	Calfkiller River	White	1	3	56	3,000	168,000	16,800	184,800
Caney Fork	Cane Creek	Warren/Van Buren	0	3	54	3,000	162,000	16,200	178,200
Collins	Collins River	Warren	4	0	8	3,000	24,000	2,400	26,400
Collins	Mountain Creek	Warren	0	3	54	3,000	162,000	16,200	178,200
Collins	Charles Creek	Warren	0	3	54	3,000	162,000	16,200	178,200
Collins	Hickory Creek	Warren	0	3	54	3,000	162,000	16,200	178,200
Collins	Barren Fork River	Warren	0	3	54	3,000	162,000	16,200	178,200
Elk	Elk River (Trout Section)	Franklin	1	5	92	20,000	1,840,000	184,000	2,024,000
Elk	Elk River	Grundy	0	1	18	3,000	54,000	5,400	59,400
Elk	Beans Creek	Franklin	0	2	36	4,000	144,000	14,400	158,400
Sequatchie	Sequatchie River	Bledsoe/Sequatchie/Marion	9	0	18	3,000	54,000	5,400	59,400
Tennessee	Clear Creek	Rhea	0	3	54	3,000	162,000	16,200	178,200
Tennessee	Piney Creek	Rhea	0	3	54	3,000	162,000	16,200	178,200
Tennessee	Wolfteves Creek	Hamilton	0	3	54	3,000	162,000	16,200	178,200
Roaring R.	Roaring River	Jackson/Overton	0	5	90	3,000	270,000	27,000	297,000
Roaring R.	Blackburn Fork	Jackson	0	3	54	3,000	162,000	16,200	178,200
Roaring R	Spring Creek	Jackson/Overton	0	3	54	3,000	162,000	16,200	178,200
Roaring R	Flat Creek	Overton	0	3	54	3,000	162,000	16,200	178,200
Obey	Mill Creek	Caly/Overton	0	3	54	3,000	162,000	16,200	178,200
Obey	East Fork Obey River	Overton	0	5	90	3,000	270,000	27,000	297,000
Obey	Wolf River	Pickett/Fentress	0	5	90	3,000	270,000	27,000	297,000
New River	New River	Scott	0	3	54	3,000	162,000	16,200	178,200
Emory	Emory River	Morgan/Roane	5	0	10	3,000	30,000	3,000	33,000
Emory	Daddy's Creek	Cumberland	0	3	54	3,000	162,000	16,200	178,200
Emory	Clear Creek	Morgan	0	2	36	3,000	108,000	10,800	118,800
Clear Fork	Tackett Creek	Campbell/Claiborne	0	3	54	6,000	324,000	32,400	356,400
Clear Fork	Stinking Creek	Campbell	0	3	54	6,000	324,000	32,400	356,400
Powell	Powell River	Claiborne	3	0	6	31,000	186,000	18,600	204,600
Powell	Indian Creek	Claiborne	0	2	36	6,000	216,000	21,600	237,600
Clinch	Clinch River (Trout Section)	Anderson	0	8	145	50,000	7,250,000	725,000	7,975,000
	TOTAL		**24**	**93**	**1724**		**$15,870,000**	**$1,587,000**	**$17,457,000**


Stream Fishing Access Project
for the Cumberland Plateau Region
Need Access Point
Important Stream Fishery
Need Stream Access to Wade Stream
Areas of Interest
Public Lands
Other Protected Lands
Major Rivers and Reservoirs
Cumberland Plateau Counties
N
Generated by the TWRA GIS Lab, March 2006 (jj)
Wolf River
Mill Creek
Roaring River
Flat Fork
Spring Creek
Blackburn Fork
E Fork Obed
Big South Fork
Clear Fork River
New River
Stinking Creek
Jacketh Creek
Powell River
Clinch River
Sturgill Creek
Stony Fork
Clinch River
Emory River
Clear Creek
Obed River
Daddy's Creek
Smith Fork
Caney Fork River
Cliffkiller River
Upper Caney Fork
Mountain Creek
Collins River
Charles Creek
Barren Fork River
Hickory Creek
Cane Creek
Collins River
Sequatchie River
Piney Creek
Clear Creek
Elk River
Beans Creek
Hellhove Creek
PUTNAM
DEKALB
ANDERSON
CLAIBORNE
GRUNDY
FRANKLIN
MARION

ALPINE MOUNTAIN CONSERVATION AREA

Location – (N36.3797, W85.1667) The Alpine Mountains Conservation Area straddles Overton and Fentress Counties just south of Hwy 52 on the northern Cumberland Plateau. This conservation area includes Skinner Mountain, located in Fentress County approximately 9 miles southwest of Jamestown.

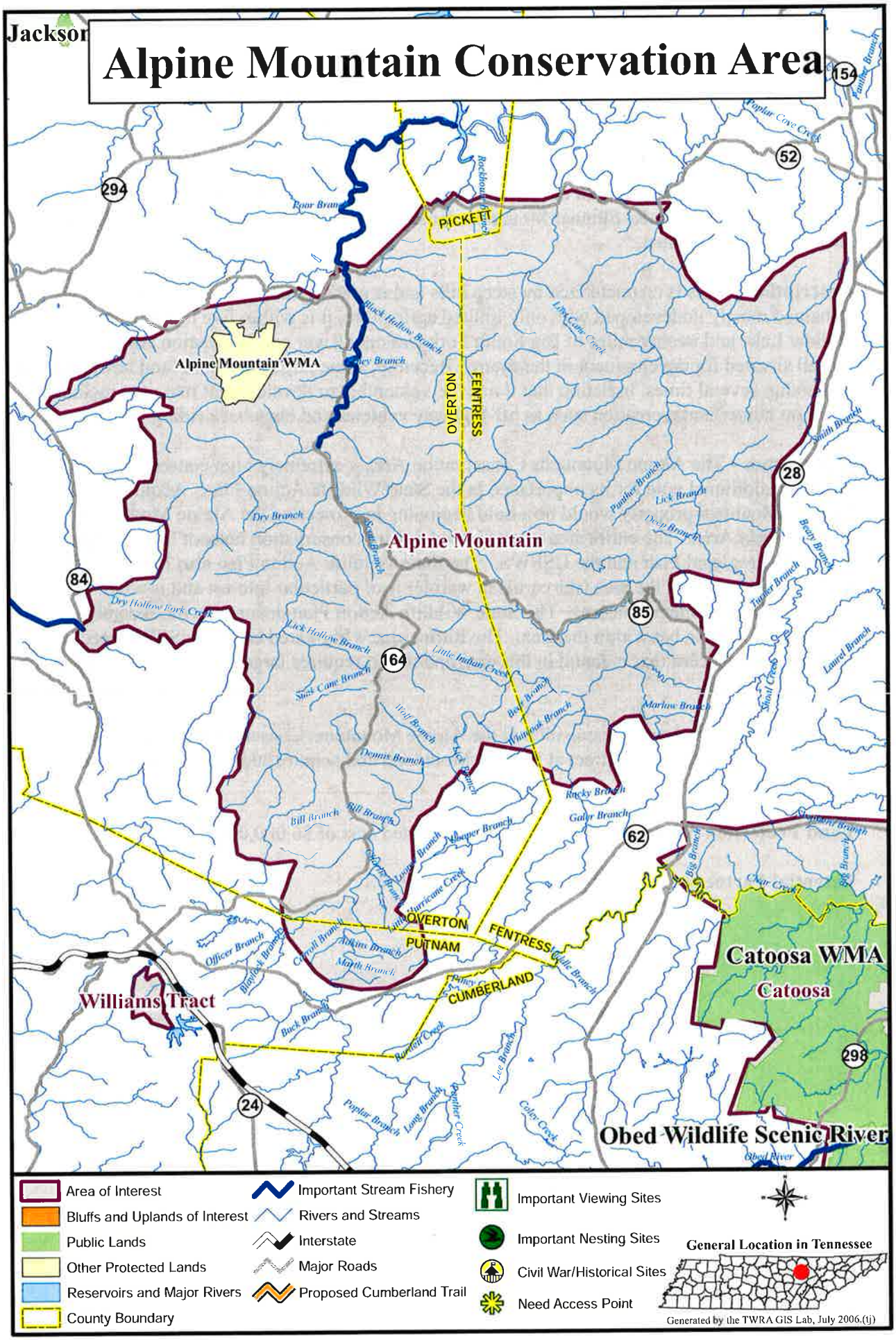
Description – This is characterized by steep hills and is predominately forested. While it has remained mostly undeveloped with only limited agriculture, it is within five miles of Dale Hollow Lake and twenty miles of Big South Fork National River and Recreation Area. The area is well situated for development in the future. Recently, some large parcels of land have changed ownership several times, indicting that it may be vulnerable to development that may include vacation homes and recreation such as off-highway vehicles and horseback riding.

Significance - The Alpine Mountains Conservation Area's extremely high conservation value deserves additional note for its importance in the State Wildlife Action Plan. Acquisition of the Skinner Mountain property would be a bold beginning in protecting the Alpine Mountains Conservation Area. The entire area is considered a "bird conservation hotspot" according to TNC's Ecoregional Plan and the USFWS. The State Wildlife Action Plan also lists fifteen bird species of note within the area (the cerulean warbler is of particular interest and is a USFWS species of management concern). The State Wildlife Action Plan documents the federally endangered Indiana bat within the area. The Rafinesque's big-eared bat is a USFWS species of management concern that is found in this area and it also requires large, native forested tracts for summer habitat.

Strategy - The strategy for acquisition at the Alpine Mountains Conservation Area is to acquire the Tower Investments LLC tract at Skinner Mountain, and acquire additional acreage as it becomes available.

Land Protection Needs – 10,000 acres at an estimated cost of $6,000,000.

Potential Partners – TNC, TWRA, TDEC, and USFWS.


Alpine Mountain Conservation Area
Jackson
PICKETT
OVERTON
FENTRESS
PUTNAM
CUMBERLAND
Alpine Mountain WMA
Alpine Mountain
Williams Tract
Catoosa WMA
Catoosa
Obed Wildlife Scenic River
294
52
154
28
84
85
164
62
298
24
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SGT. ALVIN C. YORK STATE HISTORIC PARK

Location – (N35424, W84.9603) Fentress County, approximately eight miles north of Jamestown, TN on Highway 127. (See Pickett State Forest map).

Significance - The historic park includes the York family farm and the gristmill he operated for many years on the banks of the Wolf River. The farm was donated to the state in 1974 to commemorate the life and times of Sgt. Alvin C. York.

Strategy - The strategy for future acquisitions at the York farm is to acquire properties surrounding the park that enhance the historic and natural aesthetics of the park as tracts become available.

Land Protection Needs - 145 acres at an estimated cost of $231,900.

Potential Partners - TDEC and Sgt. Alvin C. York Historic Association.

AMENT CAVE

Location – (N36.1450, W85.4900) Ament Cave is located Putnam County 1.25 miles south-southeast of the Putnam County Courthouse at Cookeville, 100 feet east of the Old Sparta Pike. (See Tanager Hill RSNA map)

Description – (Geologic horizon - Warsaw limestone) Ament Cave lies in a rapidly developing part of Cookeville. While the mouth of the cave occurs on city-owned land, the bulk of the cave lies beneath private property. The city is currently in negotiations with the USFWS concerning conservation measures on the portion they control.

According to Barr (1961): "Prior to the recent completion of a city sewage disposal plant, Cookeville sewage was dumped into a stream that flowed underground through Ament Cave. The mouth is a pit 20 feet deep and 30 feet wide, in a large depression 50 feet deep and 60 feet in diameter. An upper and lower level are developed; the stream flows through the lower one and emerges at the head of Pigeon Roost Creek 1,600 feet south of the entrance. The cave meanders about somewhat, and the total length of its passages is about 3,000 feet. About 1,100 feet of its passages may be explored without wading or boating in the stream. In the cave are several sizable canyons, the largest of which is 45 feet high, 40 feet wide, and 75 feet long."

Significance – Site Importance High (B3) - Ament Cave supports a moderately large population of the federally endangered gray bat (*Myotis grisescens*, S2). The cave has been reported alternatively as a summer roost for male bats (bachelor colony) and as a maternity roost for females and their young. Recent population estimates (2002) include 8,330 bats using the cave as a summer roost, and upwards of 18,000 gray bats congregating in August (Harvey, 2002; Britzke, 2003). The latter number is representative of gray bats using Ament Cave as a staging area prior to moving to hibernation caves.

Strategy – Because the target species presumably only uses the main entrance for access, protection of the city-owned entrance is imperative. Additionally, a forested buffer needs to be established to provide cover and potential temporary roosts for bats entering and leaving the cave. Acquisition and protection of other tracts, particularly those in close proximity to known roost locations in the cave, are essential to maintaining the integrity of the system. Because a significant portion of Cookeville's storm water runoff enters Ament Cave, acquisition of the cave's recharge area is impractical. However, control of lands above and adjacent to the cave should prove beneficial to the gray bat and other species that may be present.

Land Protection Needs - 91 acres at an estimated cost of $550,000.

Potential Partners – USFWS, TWRA, TNC, City of Cookeville, Bat Conservation International, and TDEC.

ANTIOCH BRIDGE–DADDY'S CREEK

Location – (N36.0139, W84.8233) The property is located in Cumberland County at the Antioch Bridge crossing of Daddy's Creek from river mile 9.5 downstream to near stream mile 5.5, near the community of Watson. (See Catoosa WMA map)

Description – This site consists of a four-mile segment of Daddy's Creek, a tributary to the Obed River. The stream reach is typical of a northern Cumberland Plateau high gradient stream. The formation of sand/cobble bars along the riparian zone creates habitat for several rare plant species. Expanding to Catoosa WMA would protect a four-mile stretch of river and approximately 340 acres.

Significance – Site Importance Very High (B2) - This stretch of river contains populations of seven rare species. A significant population of the Virginia spiraea (*Spiraea virginia*) is located here. The population contains hundreds of shrubs and is considered to have a high viability. Virginia spiraea is federally threatened and is considered very rare and imperiled globally (G2) and within the state (S2) according to DNA data. A historic population of Cumberland rosemary (*Conradina verticillata*) was known from this area, although habitat still exists. Cumberland rosemary is federally and state threatened, and is considered very rare and local throughout its range (G3) and rare and uncommon within the state (S3). This is the type locality (location from where a species is first described) for the Cumberland sandgrass (*Calamovilfa arcuata*). Cumberland sandgrass is state endangered, and is considered very rare and imperiled globally (G2) and within the state (S2). The site also contains a population of large-flowered Barbara's-buttons (*Marshallia grandiflora*), which is also state endangered, and is considered very rare and imperiled globally (G2) and within the state (S2). A population of drooping bluegrass (*Poa saltuensis*) is also known from this river reach. This grass is state threatened, and considered secure globally (G5) but extremely rare within the state (S1). A population of Nuttall's pondweed (*Potamogeton epihydrus*) is also known from this area. Nuttall's pondweed is of special concern in the state and very to extremely rare within the state (S1S2). Finally, a population of the tangerine darter (*Percina aurantiaca*) is also known from this river reach. This fish is deemed in-need-of-management which means additional information is needed relating to its distribution, abundance and management needs, and is considered apparently globally secure (G4) and rare and uncommon within the state (S3). Daddy's Creek is also designated as critical habitat for the spotfin chub (*Hybopsis monacha*), federally and state threatened, and considered very rare and imperiled globally (G2) and within the state (S2).

Strategy – A Recovery Land Acquisition grant(s) from the USFWS could be obtained to purchase tracts along this river corridor where federally listed species are known. Tracts of interest should at a minimum protect the riparian zone of the stream.

Land Protection Needs - 336 acres at an estimated cost of $810,000

Potential Partners – NPS, USFWS, TDEC, and TWRA

BERRY CAVE

Location - (N35.7597, W84.4519) Berry Cave is located in Roane County on the Cave Creek USGS topographic quadrangle. The mouth is found 0.23 mile west of the Tennessee River (mile 578.4), near Wright Bend, on the southeast side of the valley just east of Huckleberry Ridge, 0.15 mile west of State Hwy 72, at an elevation of 840 feet.

Description - According to Barr (1961): "The cave is apparently linked genetically with the half-mile-long 50-foot depression into which several creeks flow, just west of the actual cave entrance, which is on the west side of a wooded hill. The cave mouth is 40 feet high by 85 feet wide, and a steep slope of talus leads down into the cave. Just within the mouth the roof of a room at the right has collapsed, leaving a square vertical shaft 40 feet deep and 20 feet wide, which opens to the surface. The main part of the cave extends 520 feet along the strike in a northeasterly direction. This passage is 25 feet high and 20 feet wide at the beginning but lowers to 5 feet high in several places. The floor is cherty gravel, and a fairly large stream flows inward, coming from a spring 75 feet within the mouth. Toward the end of this main passage is a low updip crawlway over clay banks on the west side of the passage. This leads into a room 45 feet long and 7 feet high. At the northeast end of this room a small hole was opened to permit access to 330 feet of virgin passage, which averages 5 feet high by 6 feet wide, oriented along the strike. Near the entrance a passage extends southwest for 120 feet from the base of the rectangular shaft previously mentioned. Much of this passage is a crawlway over flowstone."

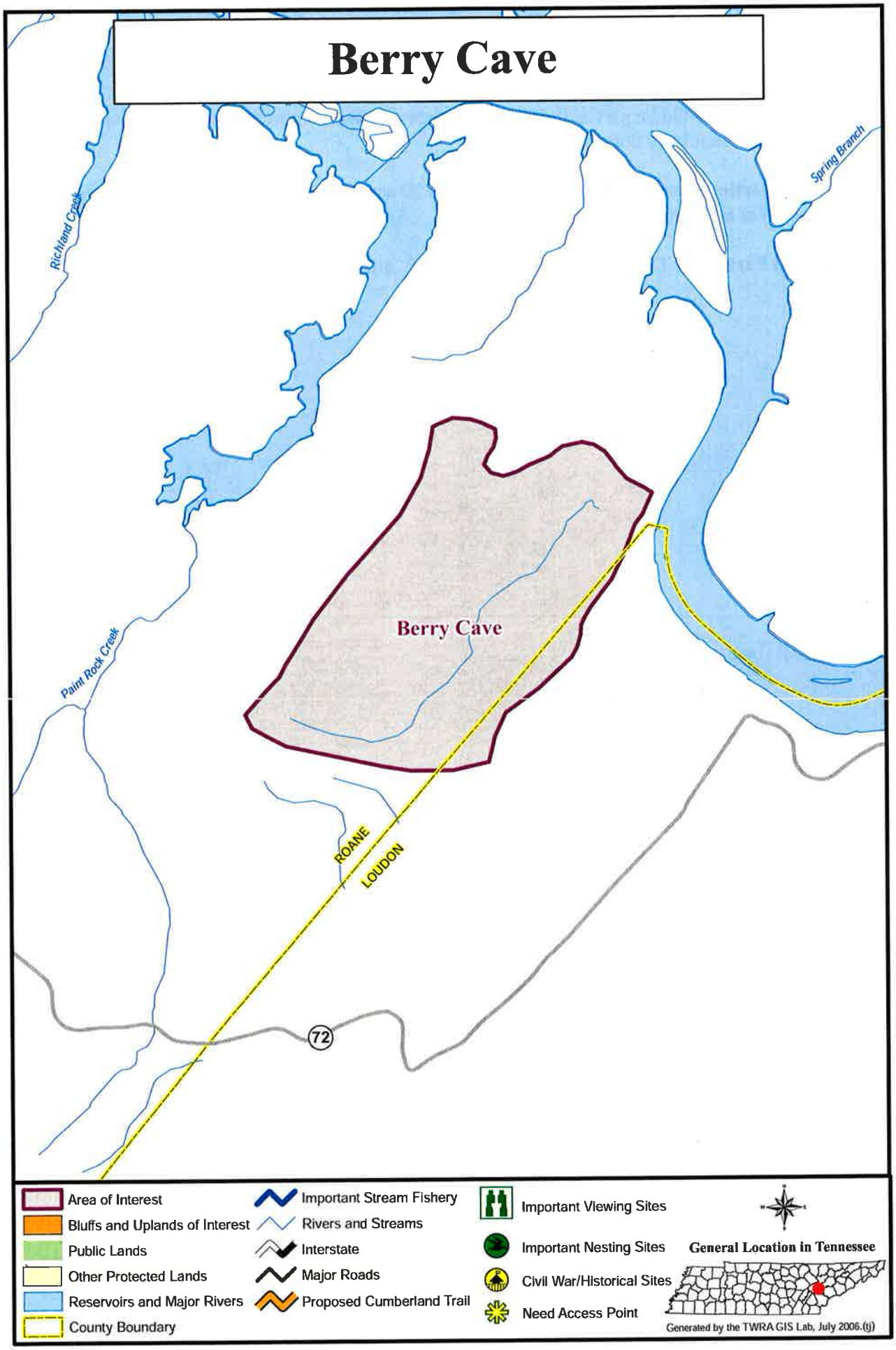
Significance - Berry Cave is the type locality for the imperiled aquatic Berry Cave salamander (*Gyrinophilus gulolineatus*, state-threatened), a species recently taxonomically split from the closely related and likewise protected Tennessee cave salamander (*Gyrinophilus palleucus*). The Berry Cave population was estimated to contain 25 animals in 1974; five specimens were observed during the winter of 2004-05 (Miller & Niemiller, 2006). The cave also is home to the rare incurved cave isopod (*Caecidotea incurva*), known from only two sites in Tennessee.

Strategy - Species of the genus *Gyrinophilus* and their food animals likely are subject to negative impacts from excessive sedimentation, fertilizer, pesticides, animal waste, chemical spills, and urban and agricultural runoff. A primary goal for any population is to control to the greatest extent possible the contributing sources in the recharge area supporting their cave habitats. Protecting watershed integrity is a particular need for Berry Cave. An estimated 877 acres comprise the drainage area for Berry Cave, the bulk of which is in a rural agricultural setting roughly bisected by one public right-of-way. The undeveloped portions of the drainage should be protected by acquisition or purchase of conservation easements, and the balance by entering into binding management agreements with willing landowners. TNC maintains a non-binding CMA with the owners of the mouth of the cave, and this has proven productive. However, this includes fewer than 20 acres. The majority of the level portions of the watershed are used for grazing or other agricultural purposes, and unrestricted livestock access to its feeder streams is believed to pose the greatest threat to the integrity of the cave system. All streams within the Berry Cave watershed must be evaluated for streamside integrity, and riparian zones reestablished with appropriate native species. Alternate water sources and livestock exclusion fencing should be provided at no cost to willing landowners. Regular water quality monitoring

within the cave should be part of the site's management, and comprehensive surveys of all biota in Berry Cave should be undertaken.

Land Protection Needs – 897 acres (core area of 20 acres under CMA and 877 acres in watershed) at an estimated cost of $1,220,000.

Potential Partners - TNC, USFWS, TWRA, TDEC, and NRCS.


Berry Cave
Richland Creek
Spring Branch
Berry Cave
Paint Rock Creek
ROANE
LOUDON
72
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BIG MOUTH CAVE

Location – (N35.3328, W85.8267) Big Mouth Cave is in western Grundy County on the north side of Payne Cove, near the mouth of Limekiln Hollow, in the escarpment of the Cumberland Plateau, at an elevation of 1,040 feet. (See Goose Pond map)

Description – (Geologic horizon - St. Louis limestone) – "Big Mouth Cave is aptly named. The entrance was formed by the collapse of one wall of a large gallery at a point where the gallery makes a sharp swing which brings it close to the surface of the hillside. The cave is located 300 yards west of the mouth of Big Room Cave and is part of the Big Room Cave system. The mouth, located on the north side of an elongate sink, is 140 feet wide and 20 feet high. There are two forks. The east fork is 375 feet long, 40 feet wide, and 12 feet high, ending in a breakdown. The other fork extends S. 80° W. for 425 feet to a low, wet crawlway. A wet-weather stream enters the sink and flows into this part of the cave. About 250 feet from the mouth a left hand passage opens. It runs parallel to the stream channel and intersects it 1,000 feet inside the cave. According to Dr. E. R. McCrady of Sewanee, Tennessee, it is possible to travel for some distance in the southwest branch and finally to reach a large underground stream. It is possible that this may be the same stream that is observed in Big Room Cave and that its debouchment is at Sartain Spring." (Barr, 1961).

Significance – Site Importance Very High (B2) - Big Mouth Cave is one of four locations for the Big Mouth Cave salamander (*Gyrinophilus palleucus necturoides*), a species listed as threatened in the state. Previous researchers have found the species only in limited numbers, but Miller (pers. comm.) observed 34 specimens in early 2005. The cave also supports the southern cavefish (*Typhlichthys subterraneus*, deemed in-need-of-management) and a rare but unlisted blind cave crayfish, *Orconectes australis*. Based on recent collections in the Cumberland Plateau, many other rare cave invertebrates are likely present.

Strategy – As each of the target species is aquatic, protection of the cave's recharge area is advisable. Though the exact recharge area has not been determined, an area of approximately 500 acres is estimated based on drainage patterns reflected in the Burrow Cove USGS topographic map. Additionally, access to the cave needs to be controlled to prevent unnecessary disturbance or illegal collection of *G. palleucus necturoides*. An initial purchase of approximately 20 acres would protect at least the mouth of the cave.

Land Protection Needs – 524 acres at an estimated cost of $333,000

Potential Partners – TNC, MTSU, TWRA, Southeastern Cave Conservancy (SCCi), and TDEC.

BIG WOODS

Location - (N35.7474, W85.9304) The approximately 1,000 acre site is located in Warren County about 1.9 miles north of Centertown. The site is bounded by Mears Rd on the north and by Hwy 70S on the south.

Description - Located in the "Barrens" region on the Eastern Highland Rim section of the Cumberland Plateau, the site is about 1,000 acres of woodlands, swamp forests, open wet meadows, and fields. A significant percent of the property is considered a wetland.

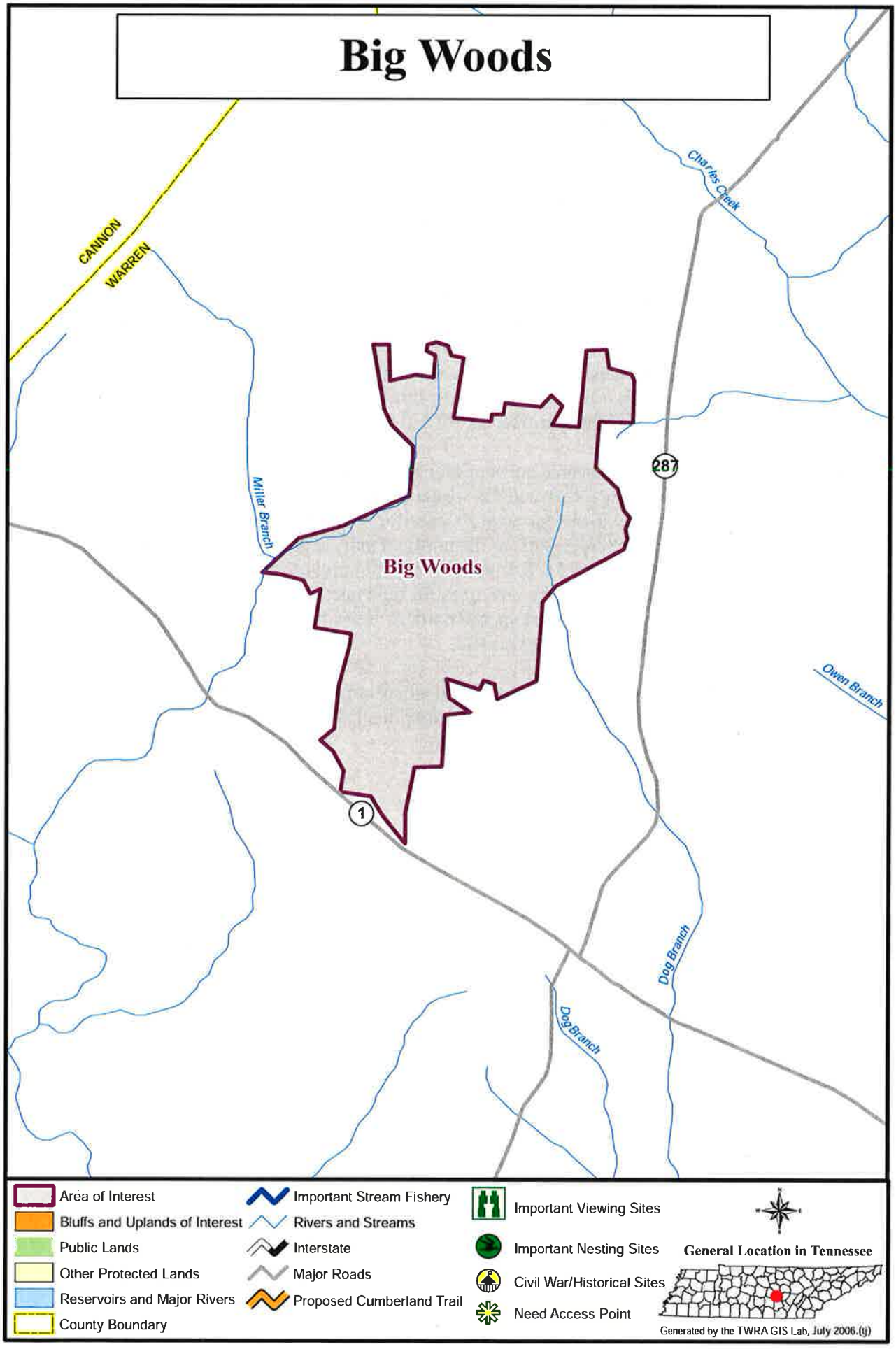
Significance – Site Importance Moderate (B4) - Big Woods is a representative example of oak-hickory woodlands, flatwoods, and open wet meadows, which were once abundant across the "Barrens" region. Two species of rare plants, dwarf huckleberry (*Gaylusaccia dumosa*) and death-camas (*Zigadenus leimanthoides*), are known from the property. Dwarf huckleberry is listed as threatened in the Tennessee and with less than 30 known populations (S3). Death camas is also listed as state threatened and considered imperiled within the state (S2) with only 14 extant occurrences. Other interesting species of plants include sundew (*Drosera intermedia*), several species of orchids: whorled pogonia (*Isotria verticillata*), rosebud orchid (*Cleistes divaricata*), green adder's-mouth (*Malaxis unifolia*), several *Platanthera* species; and numerous native grasses, rushes and sedges. Although these previously mentioned species are not legally rare they are indicative of a wet barrens community that has been previously described by NatureServe as the Eastern Highland Rim Prairie and Barrens Ecological System (CES202.354). Eastern Highland Rim Prairie and Barrens Ecological System is endemic to the state of Tennessee and may contain several critically imperiled (G1) or imperiled (G2) vegetation communities.

The state endangered and globally imperiled (G1G2) barrens darter (*Etheostoma forbesi*) is located immediately down stream of the site design in Dog Branch. The site could also include habitat for the state endangered and critically imperiled (G1/S1) barrens topminnow (*Fundulus julisia*).

Strategy - The strategy for acquisition at Big Woods is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of representative communities of Eastern Highland Rim Prairie and Barrens Ecological System. Preservation of these rare communities will provide protection for rare species and wildlife in Tennessee, while providing educational opportunities for area colleges, universities, and the general public.

Land Protection Needs - 945 acres at an estimated cost of $1,400,000.

Potential Partners - TWRA, TNC, TDEC, and Forest Legacy.


Big Woods
CANNON
WARREN
Charles Creek
Miller Branch
Big Woods
287
1
Owen Branch
Dog Branch
Dog Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BLEDSOE STATE FOREST

Location – (N35.7680, W85.2552) Bledsoe State Forest is located on the Cumberland Plateau where Bledsoe, Cumberland, Van Buren, and White Counties intersect just east of Fall Creek Falls State Park and just south of Bridgestone/Firestone WMA. (See Scotts Gulf map)

Description - Bledsoe State Forest - (6,782 acres). Bledsoe State Forest was part of a larger land purchase made by the State Department of Institutions in 1907. It was placed under the TDF in 1933. The timber type consists primarily of mixed upland hardwoods and most stands are in the 40 to 80+ age classes. The topography of this area includes very steep gorge-like drainages characteristic of major drainages of this region. The tops of the Plateau surrounding these gorges are relatively flat to rolling hills typically low in fertility. Due to fire, the area historically was predominantly pine and mix pine/hardwoods.

Significance – Bee Creek is a scenic corridor along the northern and western portion of the forest. The land between Bee Creek and the western forest boundary is vulnerable to development that would create serious access issues for managing the forest. TWRA WMAs (Bridgestone/Firestone and Scotts Gulf) to the north are only separated from the forest by a short distance. Connecting Bledsoe to TWRA properties would provide a larger intact area of public ownership to provide protection to the resources for both agencies and provide access to the isolated part of Bledsoe State Forest along the north of Bee Creek. These lands are in or adjacent to some of the most critical cave/karst habitats.

Strategy - Specifically the Bee Creek Gorge and adjacent properties are the target for acquisition to protect the scenic value and the watershed. Additionally, in-holdings and land to gain or control access is an important acquisition criteria.

Land Protection Needs – 6,042 acres at an estimated cost of $7,197,000.

Potential Partners – TDA, TWRA. and Forest Legacy

BLOOIN HOLLOW

Location - (N35.0328, W86.1920) The approximately 500 acre site is located in Franklin County. The site is located about 4.5 miles east southeast of Huntland, southeast end of Motlow Cove, headwaters of Wilhite Creek. (See Carter Mountain map)

Description - Located on the Eastern Highland Rim section of the Cumberland Plateau, the site is about 500 acres of rich cove forests and sub-mesic karst forests. The site design includes Blooin Hollow and the unnamed hollow to the north and includes a climb in elevation of over 600 ft.

Significance – Site Importance Outstanding (B1) - Steep Rocky limestone woods with a steep seasonal limestone creek with abundant ledges. Portions of the creek have steep cascading waterfall formations. The site is the only known location in Tennessee for the globally and critically imperiled (G1/S1), federally endangered Morefield's leather-flower (*Clematis morefieldii*). Morefield's leather flower was discovered in Tennessee in 2002. Other associated rare plant species include state imperiled (S2) American smoketree (*Cotinus obovatus*); three state threatened species - butternut (*Juglans cinerea*), Alabama snow-wreath (*Neviusia alabamensis*) and yellow honeysuckle (*Lonicera flava*); and the state endangered, critically imperiled (G1S1) limerock arrowwood (*Viburnum bracteatum*). The forest community on site is best defined by Natureserve as the geographically restricted, Allegheny-Cumberland Dry Oak Forest and Woodland. The abundance of rare plant species on site may yet represent an undescribed forest community.

Strategy - The strategy for acquisition at Blooin Hollow is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities of Allegheny-Cumberland Dry Oak Forest and Woodland Ecological System. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 538.4 acres at an estimated cost of $975,000.

Potential Partners - TNC: site could be of interest as it is close proximity to the Walls of Jericho. Other potential partners include Forest Legacy and USFWS.

BOOKER T. WASHINGTON STATE PARK

Location – (N35.1098, W85.1686) State Park is located in Hamilton County on the shores of Chickamauga Lake near Chattanooga.

Significance - Booker T. Washington State Park was developed for recreational purposes by TVA and was leased by the state from TVA in 1938. It was formally deeded to the state in 1950.

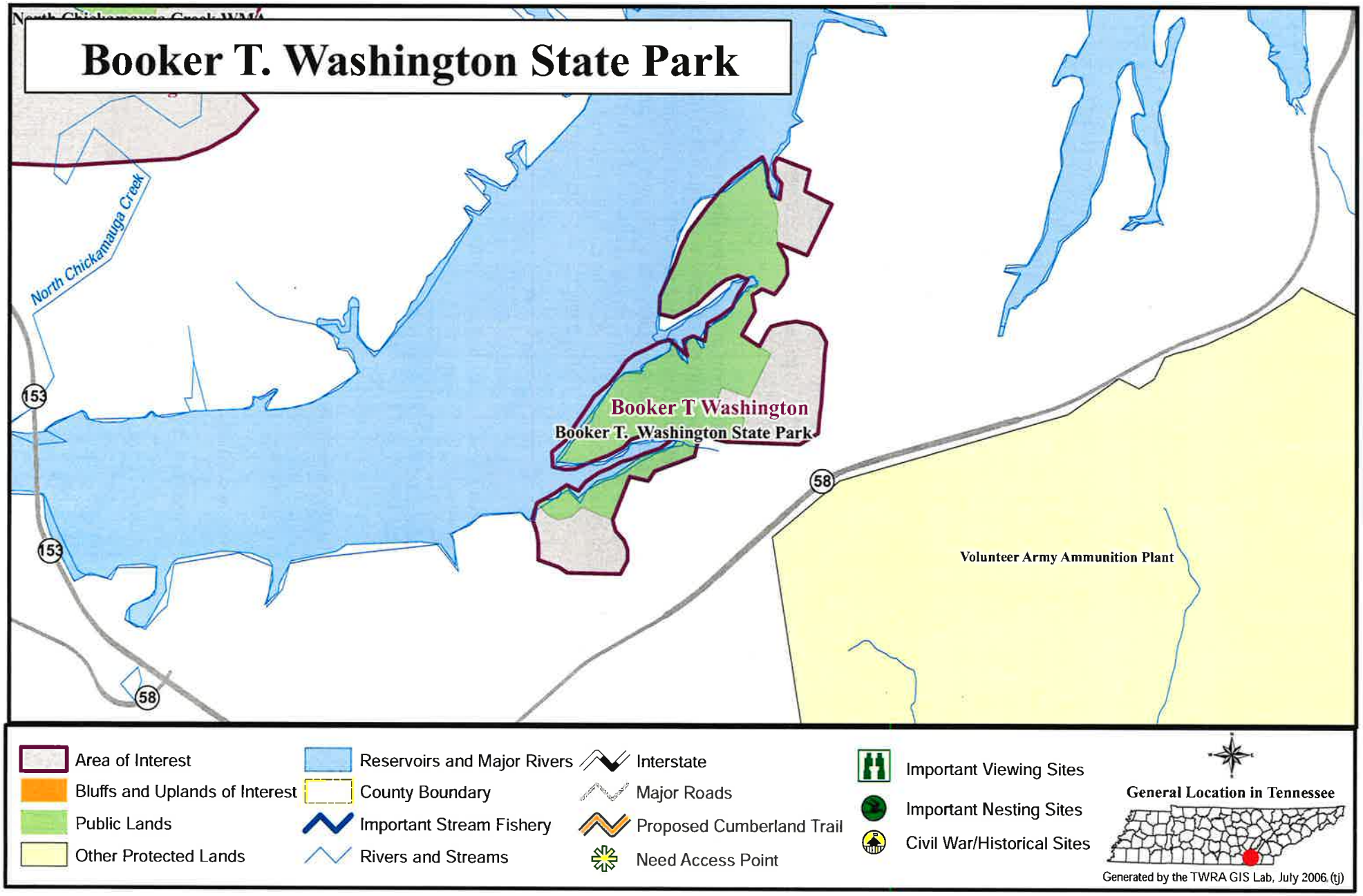
Its namesake, Booker Taliaferro Washington was born into slavery at Hales Ford, Virginia, however with great determination, secured an education and became one of America's best known and most loved citizens. He became a prominent writer, thinker, and educator and is most widely remembered for his many years of service as Founder and President of Tuskegee Institute now know as Tuskegee University, a historically black university.

The park provides a group camp and group lodge, picnic areas with shelters, fishing, bike trails and swimming.

Strategy - The strategy for future acquisitions for Booker T. Washington State Park is to acquire properties surrounding the park for watershed protection and properties that have significant cultural and natural features that further the wildlife, aesthetics, interpretive and recreation missions of Booker T. Washington State Park.

Land Protection Needs – 112 acres at an estimated cost of $550,000

Potential Partners - TNC, TCF, and TDEC.


Booker T. Washington State Park
North Chickamauga Creek
Booker T Washington
Booker T. Washington State Park
Volunteer Army Ammunition Plant
153
153
58
58
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

BOYD BARRENS

Location – (N35.6091, W85.8971) Boyd Barrens is located in Warren County on Sunny Acres Road off Hwy 55. The site is just across the road from the water treatment facility about 5 miles southwest of McMinnville. (See West Morrison Pond map).

Description – This 20-acre site on the Eastern Highland Rim is an excellent example of a once-extensive wetland prairie/barrens complex. Depending upon the season, the site is either dominated by native cool-season or warm-season grasses. Informed of its importance, the landowner continues annual mowing in the late fall or early winter. This management prevents woody species encroachment and allows the site to remain in an early successional state. A portion of the site contains a mature second-growth forest.

Significance – Site Importance High (B3) - This area has a long-history of botanical investigations. In the 1940s and 1950s several rare species were collected just outside of Morrison in habitats such as "marsh, edge of pond, or boggy field." Rare in Tennessee, the species are more common along the Atlantic and Gulf Coasts. At least 22 of the species collected are currently listed at the state level and 11 are considered critically imperiled in Tennessee. Recent investigations have found that the original collecting site has been degraded and many of the rare plants have not been seen in over 50 years.

During the 1990s additional plants were discovered a short distance from the original collecting site. DNA botanists have since visited Boyd Barrens and documented nine state-listed plant species and one state record hybrid. Additional visits are expected to yield more rare species. Many of the rare species are considered obligate wetland species, and are known from just a few counties in Tennessee. With its numerous state-listed species, and acidic, wet soils, Boyd Barrens is one of the most significant botanical sites in the state. The rare plants include:

		State Rank	State Status
Carex barrattii	Baratt's sedge	S2	Endangered
Drosera brevifolia	dwarf sundew	S2	Threatened
Gaylussacia dumosa	dwarf huckleberry	S3	Threatened
Gymnopogon brevifolius	broad-leaved beardgrass	S1S2	Special Concern
Iris prismatica	slender blue flag	S2S3	Threatened
Lechea pulchella	Leggett's pinweed	S1	Endangered
Lobelia canbyi	Canby's lobelia	S2S3	Threatened
Lysimatchia x *producta*	hybrid of two species	TN record	currently not listed
Pedicularis lanceolata	swamp lousewort	S1S2	Special Concern
Zigadenus leimanthoides	death camas	S2	Threatened

Strategy – Considering the recent development in the area, its protection is of utmost importance. TWRA wetland acquisition funds could be applied. Since the site is a grassland, NRCS grassland reserve program may be a potential source of funding.

Land Protection Needs - 18.9 acres at an estimated cost of $48,000.

Potential Partners – TWRA, NRCS, TNC, and TDEC.

BRADY MOUNTAIN

Location – (N35.8301, W84.9663) Brady Mountain is in Cumberland County in the general vicinity of Crossville on the Cumberland Plateau. It is northeast of Grassy Cove Karst.

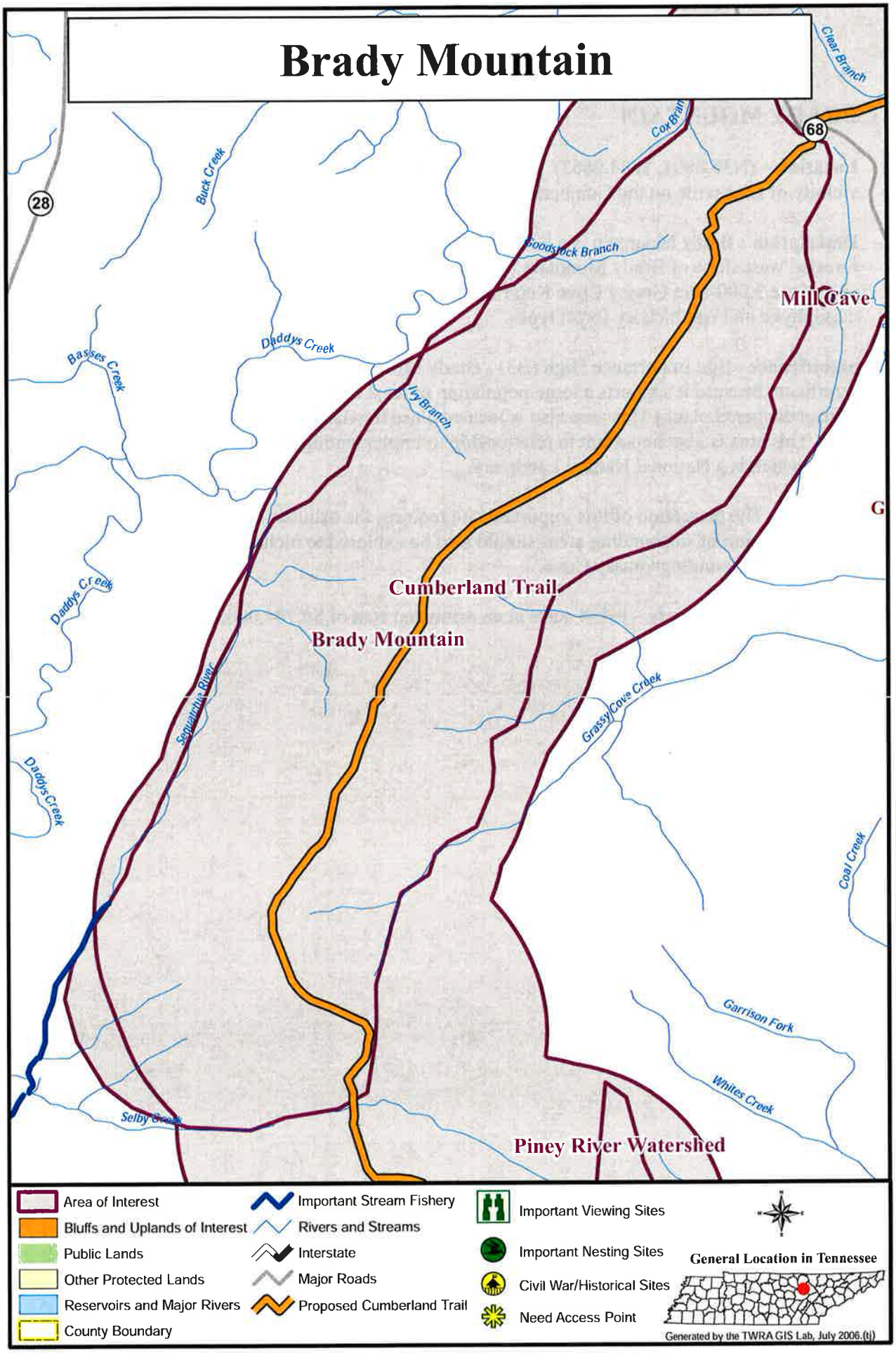
Description - Brady Mountain is a 93-acre privately owned registered SNA. The site is the forested west slope of Brady Mountain between Jewett Rd. and the crest of the mountain. It is part of the 3,000-acre Grassy Cove Karst Area. The forest community is a combination of mixed mesophytic and oak hickory forest types.

Significance - Site Importance High (B3) - Brady Mountain is a densely forested area and it is significant because it supports a large population of least trillium (*Trillium pusillum*), which is a state endangered plant. This area also is located close to where the Cumberland Trail is to be built. This area is also important in relationship to implementing a strategy that protects Grassy Cove, which is a National Natural Landmark.

Strategy - The protection of this important site requires the acquisition of 93 acres of private land. Protection of surrounding areas should also be explored to include the slopes and mountains surrounding Grassy Cove.

Land Protection Needs – 6,454 acres at an estimated cost of $6,704,000.

Potential Partners - TDEC


Brady Mountain
Clear Branch
Cox Branch
68
28
Buck Creek
Goodstock Branch
Mill Cave
Daddys Creek
Basses Creek
Ivy Branch
Cumberland Trail
Brady Mountain
Daddys Creek
Sequatchie River
Grassy Cove Creek
Daddys Creek
Coal Creek
Garrison Fork
Whites Creek
Selby Creek
Piney River Watershed
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BUCK CREEK COVE

Location – (N35.0325, W85.9269) Buck Creek Cove is located in Franklin County approximately 3.8 air miles south of Sherwood and 2.0 air miles northwest of Anderson, in the escarpment of the Cumberland Plateau. (See Carter Mountain map).

Description – The cove ranges from 700 - 1700 feet in elevation and drains generally southeasterly. From elevations of approximately 800 - 1200 feet the cove consists of a mixed mesophytic forest with Monteagle limestone cliffs and outcrops of various sizes. An unusual blue ash–giant cane community be can found sporadically in the calcareous areas. A portion of the cove was timbered by mule circa 1980. Above approximately 1300 feet the strata grades from Monteagle limestone to sandstone, with a concomitant change in cover to species adapted for drier, acid soils.

Significance: – Site Importance Outstanding (B1) - Buck Creek Cove is considered the type locality for the painted snake-coiled forest snail (*Anguispira picta*), which is federally threatened and state endangered. At one time the species was thought only to occur here, but surveys conducted in 2003-04 documented the species in similar habitats north of the cove and on the opposite side of the Crow Creek Valley (DNA 2003, DNA 2004). Currently *A. picta* is known from approximately 12 miles of Cumberland Plateau escarpment, all in the immediate Sherwood area. Nearly 20% of the snail's known range lies in Buck Creek Cove. The cove remains of great conservation value, in part because of the current owners' sensible stewardship of the property.

A. picta is locally abundant on limestone outcrops and cliffs on both sides of the cove, from approximately 850'-1200' elevation. During wet periods the snails may be seen grazing on vegetation or detritus on the surface of the limestone, and during drought or inclement conditions will apparently retreat to crevices that frequent the Monteagle formation. Though the species is most often associated with deeply shaded mesic slopes, it has been found on much drier west-facing slopes in other parts of its range (DNA, 2003).

Strategy: – Currently none of the snail's range is on public land, and a portion of occupied habitat is proposed for a limestone quarry. Ideally, high-quality sites will be brought into public ownership or protected through a conservation easement. The long-time owners of Buck Creek Cove (M/M Bobby Hoosier) have previously declined outright sale of the property or application of a conservation easement. The Hoosier family has owned the property for over 100 years, and in fact, Mr. Hoosier's grandfather was working the property at the time the snail was first collected and described (1906). Nonetheless, the family should again be approached about conservation instruments, as both M/M Hoosier are nearing retirement age.

Land Protection Needs: - 600 acres at an estimated cost of $660,000.

Potential Partners: – USFWS, TWRA, TNC, TDEC.

CANEY HOLLOW CAVE

Location - (N35.1217, W86.2633) Caney Hollow Cave is located in Franklin County 3 miles southeast of Lexie Crossroads, on the east side of Caney Hollow, 0.6 mile north of the road between Lexie Crossroads and Old Salem. (See Mingo Swamp map)

Description - (Geologic horizon - Catheys formation) - From Barr (1961): "Caney Hollow Cave is locally well-known. It has three mouths, 50 yards apart. The lower two are 8 feet high and 15 feet wide and are connected by a passage of the same dimensions. The third is a hole 2 feet by 3 feet connected to the main passage by a short side passage. The main cave trends northwest and is 1,200 feet in length. An additional 725 feet of passages, very irregular and containing much silt and gravel fill, were explored to the southwest and west of the main cave.

A crawlway leads from the second entrance into a room 10 feet high, 15 feet wide, and 100 feet long. The main cave then skirts a breakdown for 220 feet and intersects a large collapse dome to the left (at about 465 feet). Breakdown here has formed a chamber 30 feet in diameter and 8 feet high, the roof of which extends upward for about 6 feet into the Chattanooga shale. From this point an easily traversable walking passage leads back to a circular chamber 40 feet in diameter and 8 feet high, where the cave forks. The two forks form a loop. The more direct route to the northwest termination of the cave (in a breakdown) leads through a high, narrow stream canyon between 960 and 1,050 feet (from the first mouth of the cave), turns left from 1,050 to 1,130 feet through a wide, mud-floored passage to a breakdown, bends northwest again, and ends in breakdown at 1,200 feet from the mouth. A complex and highly irregular series of passages extends southeast from the breakdown for about 600 feet and eventually connects with the main cave again at the fork.

The cave contains several attractive formations, but few of them are large. Numerous small, white stalactites and some helicto-stalactites may be seen. A stream flows through the lowest level and emerges below the first mouth, and several side passages end in water-filled sumps. A large colony of bats inhabits the cave in summer, and extensive guano deposits occur in the larger rooms.

Another cave opens on the right bank of Caney Creek 300 yards north of Caney Hollow Cave. The mouth is 60 feet wide and 10 feet high, but the cave itself appears to be shallow and is not readily penetrable. It is immediately below the Chattanooga shale."

Significance - Site Importance High (B3) - Caney Hollow Cave provides a summer roost for approximately 5000 state/federally endangered gray bats (*Myotis grisescens*) (Harvey, 2002). Previous estimates placed the number closer to 17000 (Harvey & Pride, 1986). Though the cave was initially reported as a maternity cave for gray bats, it is now more appropriately considered a bachelor or mixed summer roost. In the 1970's the endangered Indiana bat (*Myotis sodalis*) reportedly used the cave as a transition roost, though more recent observations could not verify this claim (Harvey, 2002; Harvey & Pride, 1986). The S1 cave-obligate beetle *Ptomaphagus fecundus* was described from this cave in 1963 (Barr, 1963), and was seen in some number in 2004 (Barr, pers comm.).

Strategy - Based on current information, the primary conservation target for this cave is the gray bat. As such, attention should be paid to securing the three known entrances and controlling access to the cave during the time when bats are roosting. Additionally, a forested buffer needs to be established to provide cover and potential temporary roosts for bats entering and leaving the cave. Acquisition and protection of other tracts, particularly those in close proximity to known roost locations in the cave, would be beneficial to maintaining the integrity of the system. Such control of lands above and adjacent to the cave should prove beneficial to the gray bat and *P. fecundus.*

Land Protection Needs – 6.6 acres at an estimated cost of $15,000.

Potential Partners – TWRA, USFWS, TNC, Bat Conservation International, Southeastern Cave Conservancy (SCCi), and TDEC.

CARTER SNA

Location – (N35.1211, W85.9196) Carter SNA is located in Franklin County approximately 2 miles northwest of Franklin State Forest.. (See Carter Mountain map).

Description - The Carter SNA was acquired in 1976 as a donation from the late Mr. Harry Lee Carter. This donation is one of the most significant natural areas in Tennessee, featuring the highly significant Lost Cove Cave. The cave has one of the most impressive entrances in the state with a height and width of 100 feet and 80 feet, respectively.

Significance - The SNA is only accessible from the Buggytop Trail, which crosses private property for much of its length. Several rare plants including Cumberland rosin weed (*Silhium pinnatifidum*) and leafcup (*Polymia lavigata*) are found on this private area. The cave and surrounding area provide habitat for rare animal species including the Tennessee cave salamander and gray bats.

Strategy - The strategy for future acquisitions to Carter SNA is to acquire in-holdings, properties surrounding the park for access or access control, watershed protection, and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive, and recreation missions of the State Park System.

Land Protection Needs – 1,056 acres at an estimated cost of $900,000.

Potential Partners - The Friends of South Cumberland State Recreation Area, TNC, and Land and Water Conservation Fund.

CARTER MOUNTAIN

Location – (N35.0693, W85.0110) Carter Mountain is a very large project area which includes several sub-projects. It is located approximately ten miles south of Winchester in Franklin County. The area is on the western escarpment of the Cumberland Plateau on the Tennessee-Alabama state line.

Description – The property lies in a rugged region and includes several karst features such as caves, rock cliffs, springs and waterfalls. Most of the area is forested with the uplands being mostly dry oak/hickory forest types containing several perched wetland habitats. The gorges and narrow valleys consist of mixed mesophytic forest types. The area offers panoramic views of the eastern "barrens" of the Nashville Basin and has long been a popular area with outdoorsmen. The area offered extensive outdoor recreational opportunities for many years and was even a WMA during the 1970's and 1980's.

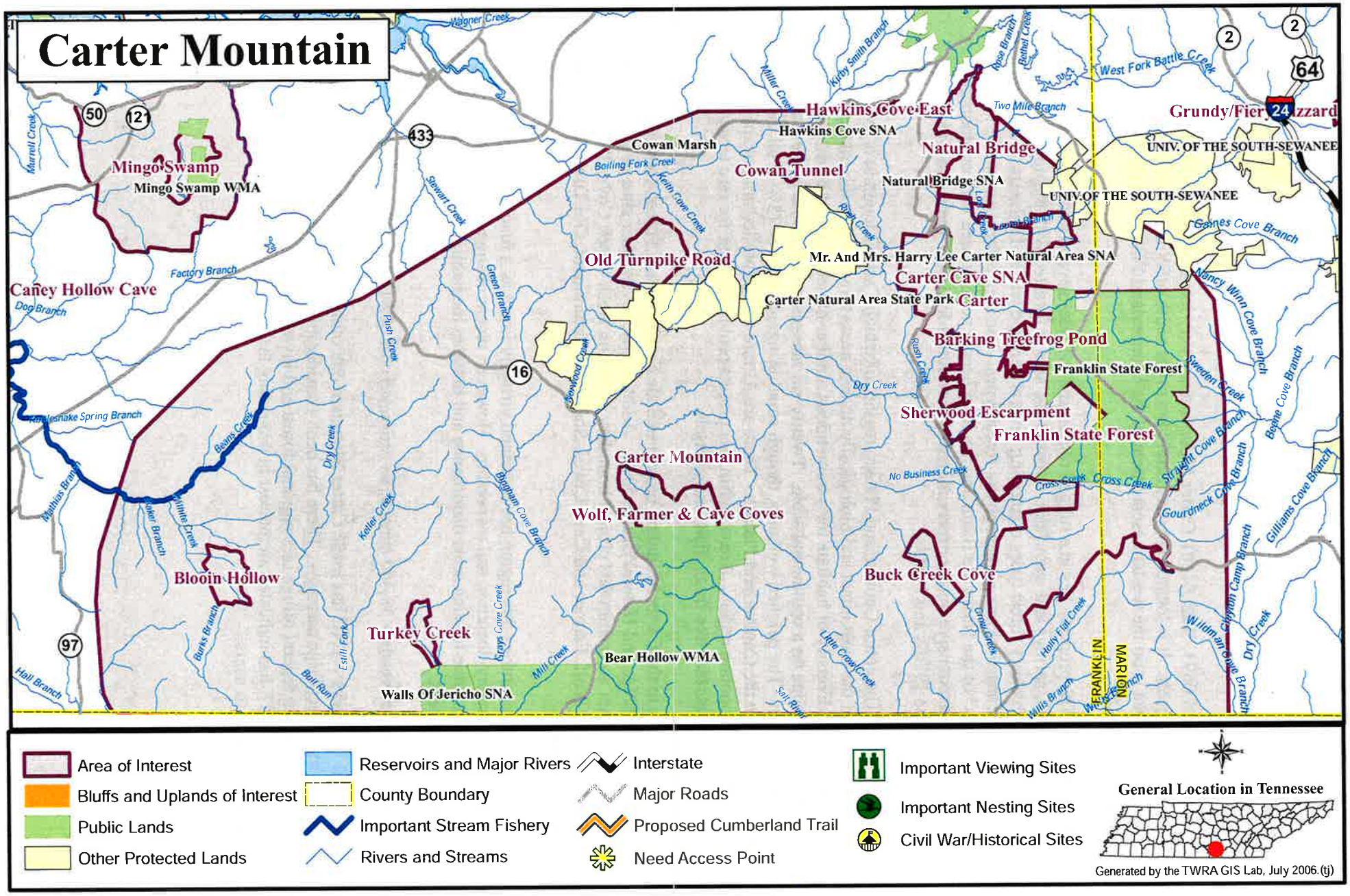
Significance – The entire Cumberland Plateau region, of which Carter Mountain is the southern anchor, is one of the most intact and biologically diverse areas remaining in the eastern US. The area provides a diversity of habitats for a tremendous number of neo-tropical birds, many of which are in decline on a continental scale. Twenty-six rare plants are found in the Carter Mountain region. The perched wetlands, though small in size, hold over 75% of all the rare plant species found on the Cumberland Plateau. There are 33 rare and imperiled animal species found in the Carter Mountain region. Areas within this project provide habitat for rare terrestrial and cave salamanders, rare tree frogs, fish, and mussels.

Key subprojects to the Carter Mountain project include Franklin State Forest, Carter SNA , Hawkins Cove SNA, and Natural Bridge SNA. Additionally, seven other sites of significance in the DNA program are within this project boundary including Buck Creek Cove, Turkey Creek, Blooin Hollow, Wolf, Farmer and Cave Coves, Sherwood Escarpment, Old Turnpike Rd, and Cowan Tunnel.

For almost two centuries this region has remained virtually intact as a functioning natural system due to its topography, location, and ownership. However, recent changes have made the region much more vulnerable to wide scale disturbance and threaten the habitats which have become globally significant.

Land Protection Needs – 38,460 acres at an estimated cost of $42,306,000.

Potential Partners – TNC has made Carter Mountain one of its top priorities and is already working to protect large acreages. There has been considerable discussion of trying to develop this project into a federal refuge or a national forest and investigation of those opportunities continues. NWTF has indicated an interest in protecting lands in this project area and making them accessible to users.


Carter Mountain
Hawkins Cove East
Hawkins Cove SNA
Cowan Marsh
Cowan Tunnel
Natural Bridge
Natural Bridge SNA
Grundy/Fiery Gizzard
UNIV. OF THE SOUTH-SEWANEE
UNIV.OF THE SOUTH-SEWANEE
Mingo Swamp
Mingo Swamp WMA
Old Turnpike Road
Mr. And Mrs. Harry Lee Carter Natural Area SNA
Carter Cave SNA
Carter Natural Area State Park Carter
Barking Treefrog Pond
Franklin State Forest
Sherwood Escarpment
Franklin State Forest
Carter Mountain
Wolf, Farmer & Cave Coves
Buck Creek Cove
Blooin Hollow
Turkey Creek
Bear Hollow WMA
Walls Of Jericho SNA
Caney Hollow Cave
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CATOOSA WMA

Location – (N36.0540, W84.7997) The Catoosa WMA is a approximately 79,700 acres in Cumberland, Morgan and Fentress Counties. It is located 20 miles north of Crossville and stretches east across the Cumberland Plateau and into the Cumberland Mountains.

Description - The topography of this area includes the typical, gently rolling terrain on the west and steep mountains to the east. Lying within the Emory River watershed, Catoosa is divided by a number of major stream drainages including the Obed River, Daddy's Creek, Clear Creek and Otter Creek. Elevations on Catoosa range from about 1,100 feet to over 2,300 feet. The soils on Catoosa for the most part, come from sandstone, shale, or sandstone conglomerate and the fertility is low to moderately low. Catoosa is more than 89 percent covered by forests.

History - It is suspected that some 5,000 years ago a primitive tribe of Native Americans settled in the Catoosa area. These first inhabitants were hunter/gatherers who lived under the overhanging rock shelves along the bluffs formed by the area's streams. White settlers passed over the plateau as early as 1796 on their way to the Nashville area, but few settled until 1830. In the late 1870's, near the town of Genesis, a stream operated sawmill was built. By 1877, a railroad operation was in place, followed by several timber and coal operations through 1930's. During the depression, little work was carried on, and the residents that stayed became dependent on the grazing of their livestock.

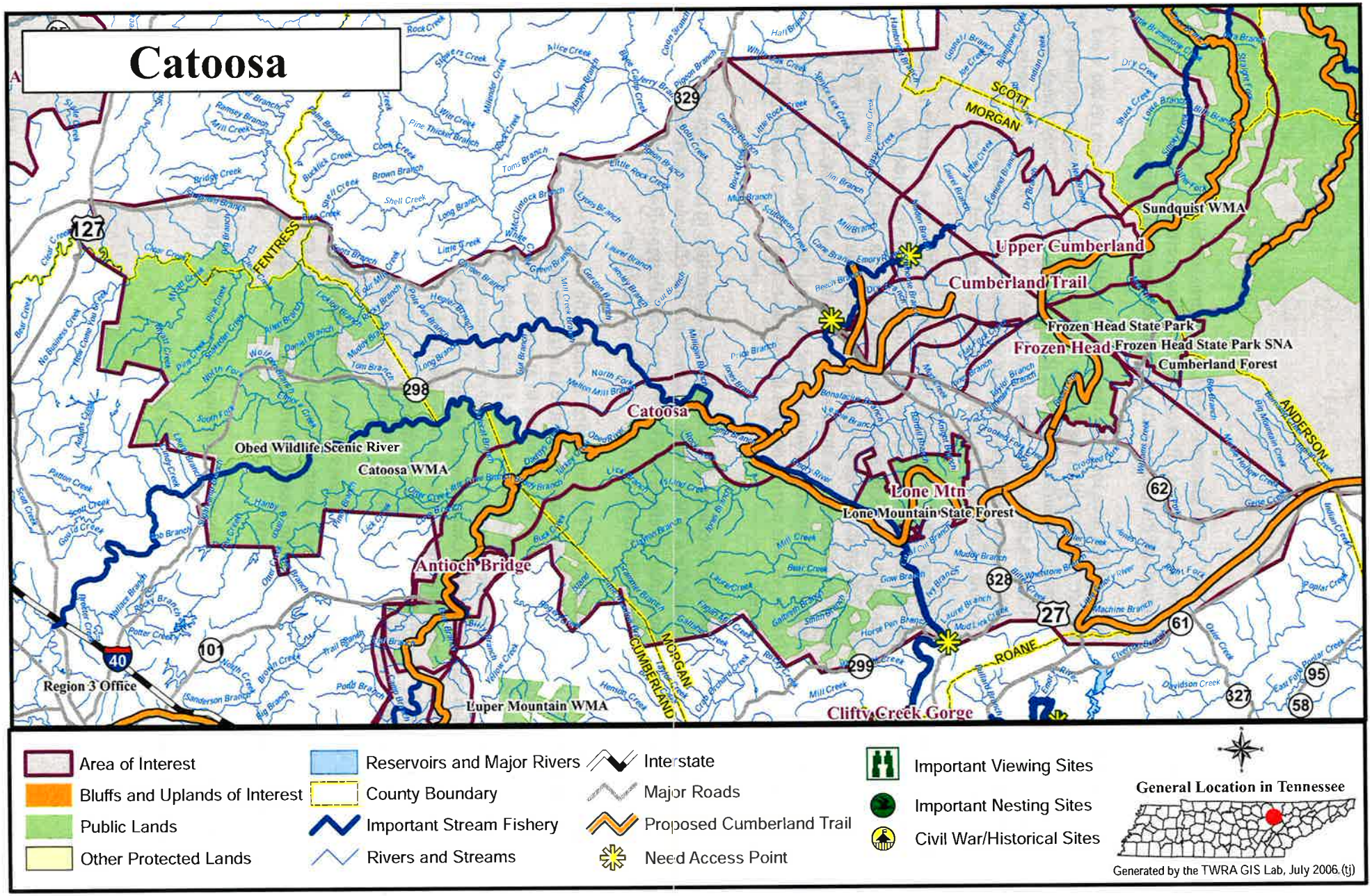
In the early 1940's the Crossville Exchange Club appointed a committee to encourage the state to purchase a large tract of land for a WMA. With this first step the Catoosa WMA was established in 1942 with the initial purchase of 63,000 acres with Pittman-Robertson federal aid funds as a wildlife restoration project mandated for wildlife conservation.

Significance - The entire Cumberland Plateau region is one of the most biologically diverse areas remaining in the eastern US, particularly notable is a tremendous number of neo-tropical birds. The area contains several caves that are home to at least one federally endangered species, the Indiana bat, as well as several other subterranean species such as the blind crayfish. The black mountain dusky salamander, deemed in-need-of-management, is known to occur in this general area and is restricted to the Cumberland Plateau. Several threatened species inhabit this area that includes the pine snake, the Tennessee cave salamander, the spotfin chub and the purple bean pearly mussel. The plateau has had occurrences of the peregrine falcon and golden eagle, as well as providing nesting habitat for several special concern bird species.

Strategy – The strategy for future acquisitions to the Catoosa WMA is to acquire in-holdings, adjacent properties for access or access control, watershed protection, and properties that contain representative forest cover types of the area that further the wildlife, aesthetics and wildlife recreation mission of the WMA system.

Land Protection Needs – 10,600 acres at an estimated cost of $16,600,100.

Potential Partners —NWTF, RMEF, QU, and TWRA.


Catoosa
SCOTT
MORGAN
FENTRESS
Sundquist WMA
Upper Cumberland
Cumberland Trail
Frozen Head State Park
Frozen Head
Frozen Head State Park SNA
Cumberland Forest
ANDERSON
Catoosa
Obed Wildlife Scenic River
Catoosa WMA
Lone Mtn
Lone Mountain State Forest
Antioch Bridge
CUMBERLAND
MORGAN
ROANE
Region 3 Office
Luper Mountain WMA
Clifty Creek Gorge
127
329
298
40
101
62
328
27
61
299
327
95
58
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CEDAR CREEK SULLIVANTIA SITE

Location - (N36.3563, W84.0360) This approximately 83 acre site is located in Campbell County. The site is the east facing slopes at approximately River Mile 2.7 of the Cedar Creek Embayment of Norris Lake. (See Upper Cumberland map)

Description - The property is approximately 83 acres and consists of east facing slopes and cliffs of Cedar Creek Embayment of Norris Lake. A spring fed creek flows over the face of a cliff above the embayment.

Significance - Site Importance Moderate (B4) - Several state listed plants are known from the site. This protection planning site is the only location in Tennessee for special concern listed Sullivantia (*Sullivantia sullivantii*), a critically imperiled plant species (S1) within the state. In addition, the state endangered and imperiled (S2) Kentucky rosinweed (*Silphium wasiotense*) is found on this site. A state rare tree, northern white-cedar (*Thuja occidentalis*), is also located along the bluff line above the Cedar Creek Embayment. Tennessee is the southern-most extent of this widely distributed northern tree. It is thought that these Tennessee populations are remnant populations from the last glacial period (20,000 years ago). Individuals on similar bluff lines elsewhere may be as old as 400-500 years old (Cane Creek Falls – Falls Creek Falls State Park and SNA). The presence of northern white cedar may also indicate a presence of Appalachian Cliff White-cedar Woodland, a globally imperiled vegetation community.

Strategy - The strategy for acquisition at the Sullivantia Site is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 82.3 acres at an approximate cost of $283,000

Potential Partners - TVA, TNC, Forest Legacy

CHIMNEY ROCK

Location – (N36.4404, W84.0594) Chimney Rock is located in Campbell County.. It lies just east of Sundquist WMA and north east of the city of LaFollette, and straddles the Ridge and Valley and the Cumberland Mountains Physiographic Provinces.

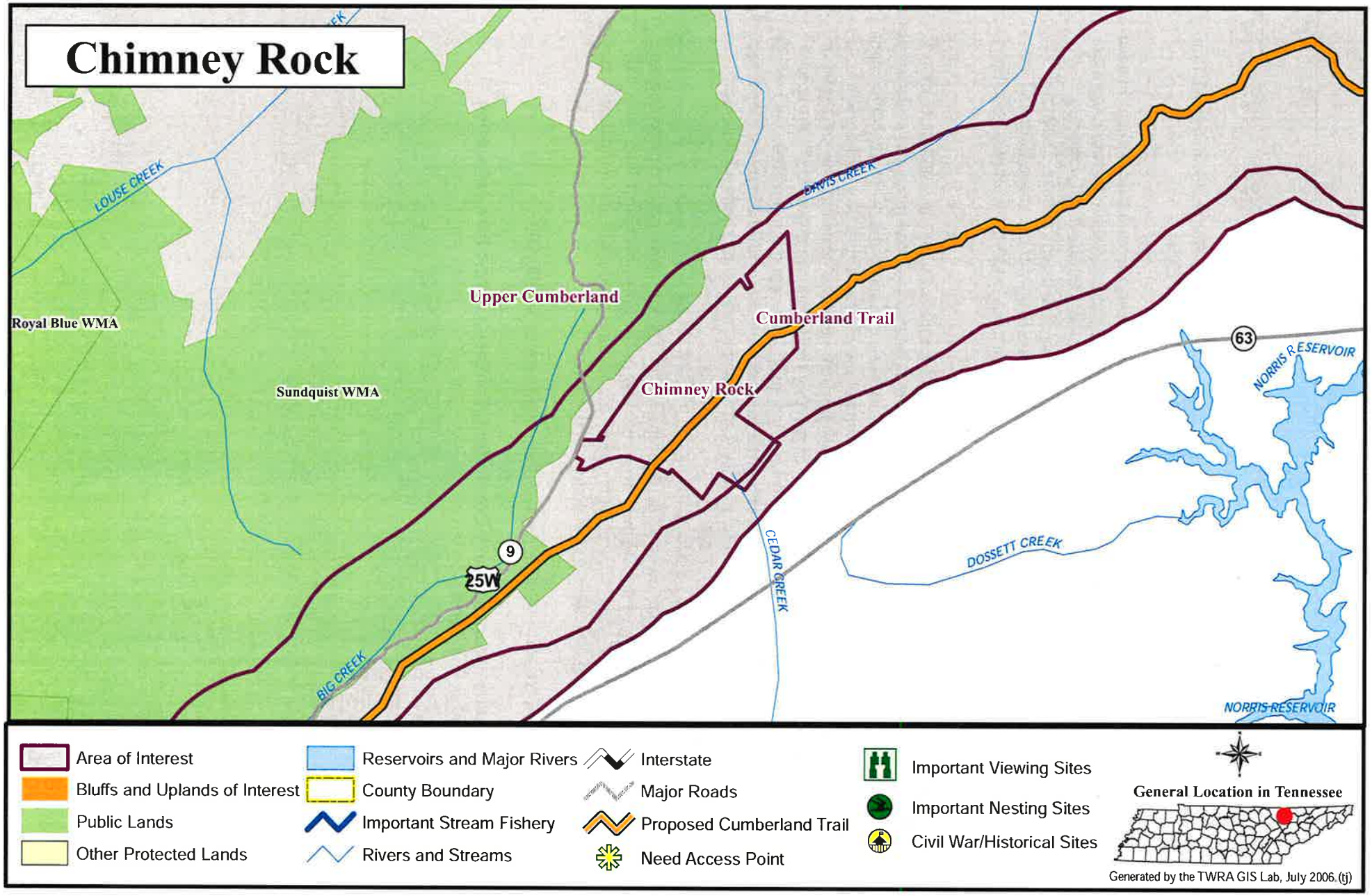
Description – Chimney Rock is a forested area containing an extensive variety of geologic features representative of the physiography between the Ridge and Valley Province and the crest of the Cumberland Mountains. Unusual features include numerous rock "chimneys", two natural bridges, several significant rock houses, and panoramic vistas that overlook the Great Valley of East Tennessee.

Significance – (B5) The significance of Chimney Rock lies in its unique concentration of geologic features, including a garden of at least 12 chimneys (vertical, standing, often spire-shaped, natural rock formations) ranging in height from 30-60 feet, and arches. This site was identified as early as 1986 as a Proposed Safe Growth Natural and Cultural Acquisition target. It is also an important acquisition need for this section of the Cumberland State Scenic Trail.

Strategy - The strategy for acquisition at Chimney Rock is to acquire properties within and adjacent to the site design (site boundary) for access or access control, preservation of its geologic features, watershed protection, preservation of rare species and representative communities, and for the Cumberland Trail corridor.

Land Protection Needs – 1,183 acres at a cost of $1,183,000.

Potential Partners – TDEC and TWRA


Chimney Rock
LOUSE CREEK
DAVIS CREEK
Upper Cumberland
Cumberland Trail
Royal Blue WMA
Sundquist WMA
Chimney Rock
63
NORRIS RESERVOIR
9
25W
CEDAR CREEK
DOSSETT CREEK
BIG CREEK
NORRIS RESERVOIR
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CHIMNEYS SNA

Location – (N35.2120, W85.5764) Chimneys is on the Cumberland Plateau located in Marion County. It is accessible via Highway 108 between Whitwell and Palmer.

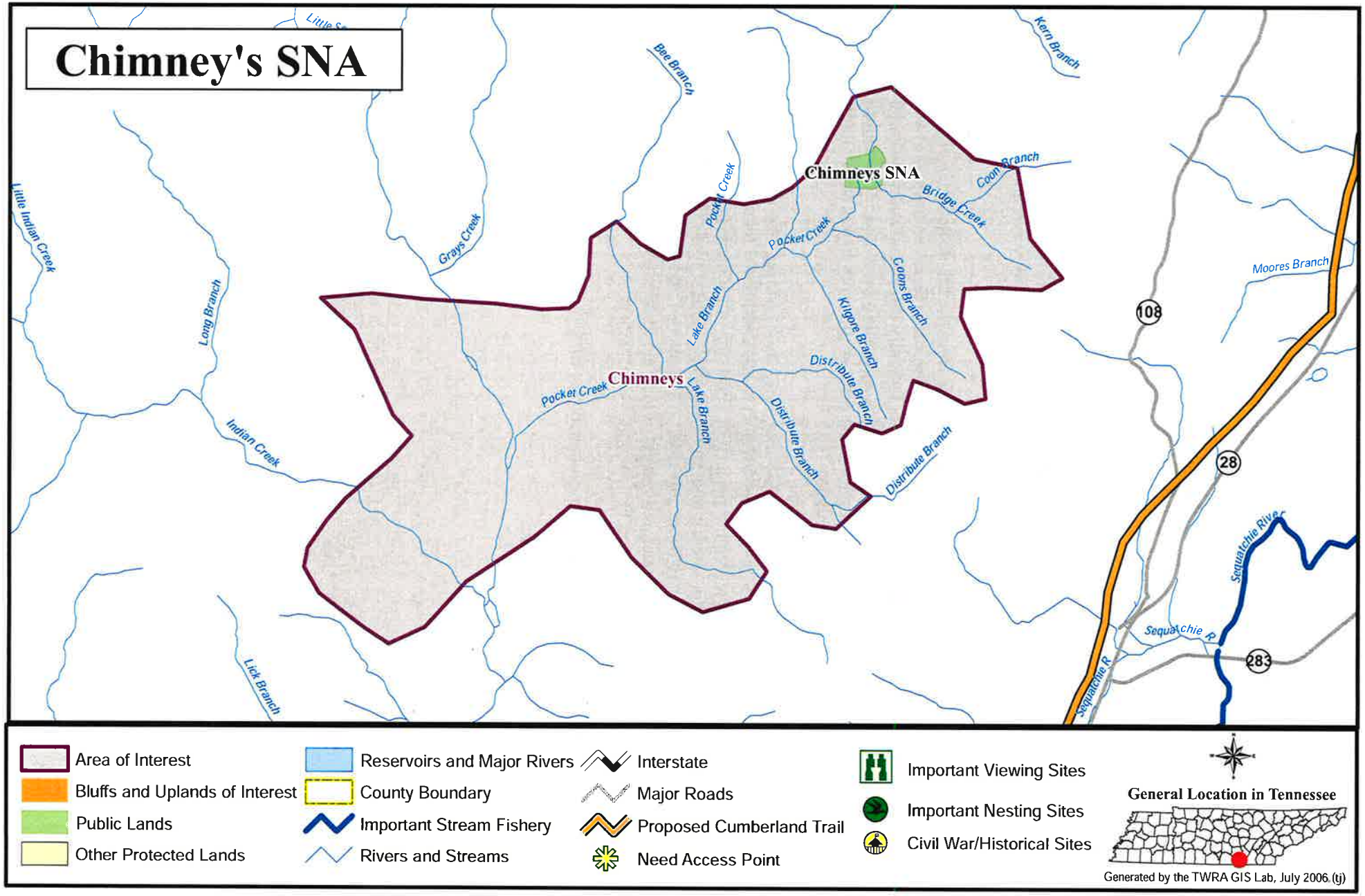
Description - The Chimneys are located where Pocket Creek cuts through Cumberland Plateau sandstone forming Pocket Gorge. Pocket Creek has sculpted the impressive feature known as the Chimneys over vast geological time. They are two isolated, 200-feet high, towering pinnacles of Pennsylvanian Warren Point sandstone connected to a central base. A natural window forms at the base. The pinnacles and natural bridge rise from the gorge floor and are nearly as high as the surrounding bluff. The natural area is adjacent to the Chimneys Scenic Park.

Significance - A dry oak-pine woodland surrounds the Chimneys on the surrounding bluffs. Chestnut oak and Virginia pine are common to this area. Maple-leaf viburnum and sweet-shrub are also often found in these types of areas. Small pockets of glade and barrens vegetation can be found in a few areas with shallow soil on dry upper and bluffs. There is an old growth hemlock forest in the gorge comprised of densely forested hemlock, chestnut oak, magnolia or cucumber tree, and striped maple. A thicket of rosebay rhododendron grows along the creek, making passage to the base of the Chimneys challenging. There are numerous ferns and mosses covering sandstone talus boulders at the base the steep slopes. Some of the steepest slopes are wet seep cliffs that support a diversity of mosses, liverworts, and other plants not found elsewhere on the site.

Strategy - Presently the State owns 33 acres of this area. The site conservation plan proposes the protection of 5,390 acres that include the remainder of the gorge and bluff line. This will ensure protection of the gorge view corridor, geologic features, and plant and animal community and enhance greater public access opportunity to the area.

Land Protection Needs – 5,360 acres at an estimated cost of $4,300,000.

Potential Partners - Marion County Government, Chimney's Scenic Park Association, U.S. Steele Corporation, and TDEC.


Chimney's SNA
Chimneys SNA
Chimneys
Bee Branch
Kern Branch
Coon Branch
Bridge Creek
Pocket Creek
Grays Creek
Little Indian Creek
Long Branch
Lake Branch
Kilgore Branch
Coons Branch
Distribute Branch
Moores Branch
108
28
283
Indian Creek
Lick Branch
Sequatchie River
Sequatchie R
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

CLIFTY CREEK GORGE

Location – (N35.9500, W84.5861) This site is located just upstream of the confluence of Clifty Creek with the Emory River in Morgan and Roane Counties about 2 miles northwest of Harriman.

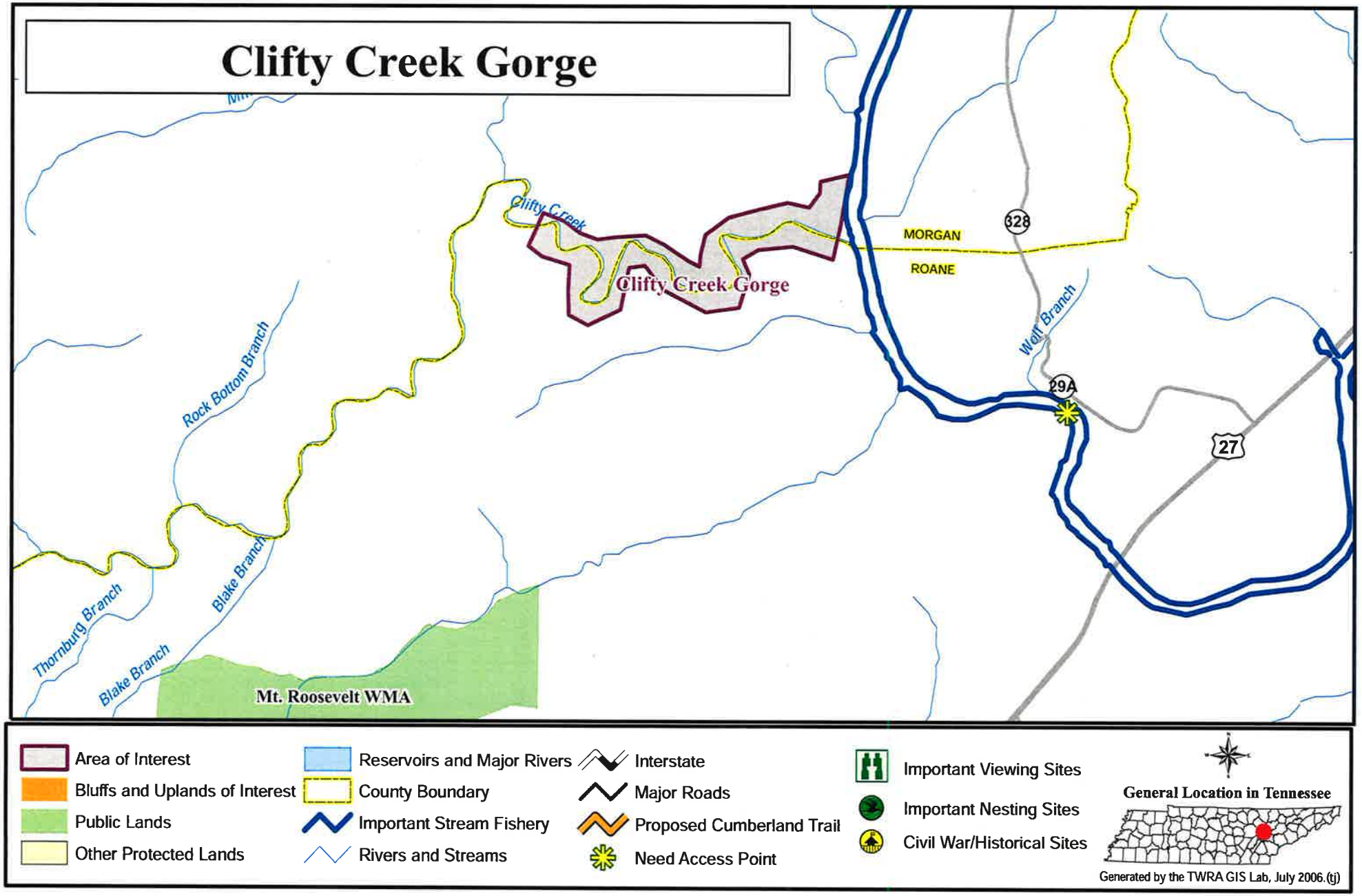
Description – This approximately 210 acre area contains steep, inaccessible 200 ft. high bluffs above Clifty Creek, numerous springs and waterfalls, and a population of Virginia spirarea. Clifty Creek is a typical high gradient Cumberland Plateau stream. The gorge vegetation is primarily eastern hemlock dominated mixed-mesophytic forest. TNC owns approximately 78 acres of this river gorge.

Significance – Site Importance Very High (B2) - Aside from the scenic qualities of the steep-sided stream gorge, a significant population of Virginia spiraea (*Spiraea virginiana*) is known from this stretch of Clifty Creek. Virginia spiraea is federally threatened and state endangered, and considered very rare and imperiled globally (G2) and within the state (S2) according to Natural Heritage data. A few hundred stems of the plant scattered in four areas along the stream have been documented within this population.

Strategy – Presently, TNC protects only half of this site on the Morgan County side of the gorge. In order to protect the population of Virginia spiraea additional tracts, especially on the Roane County side of the gorge, require protection. Portions of as many as twelve tracts would require protection. The portion of each tract from the creek to the top of the bluff on both sides of the creek should be the priority for acquisition. A Recovery Land Acquisition grant(s) from the USFWS could be obtained to purchase tracts of land along this river corridor. Matching funds from the State Land Acquisition Fund would be necessary.

Land Protection Needs - 210 acres at an estimated cost of $166,000.

Potential Partners – TNC and TDEC.


Clifty Creek Gorge
Clifty Creek
Clifty Creek Gorge
MORGAN
ROANE
328
29A
27
Wolf Branch
Rock Bottom Branch
Blake Branch
Thornburg Branch
Blake Branch
Mt. Roosevelt WMA
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

COLDITZ COVE SNA

Location – (N36.3553, W84.8726) Colditz Cove is on the Cumberland Plateau located in Fentress County. It is located east of Allardt approximately one mile south Hwy 52.

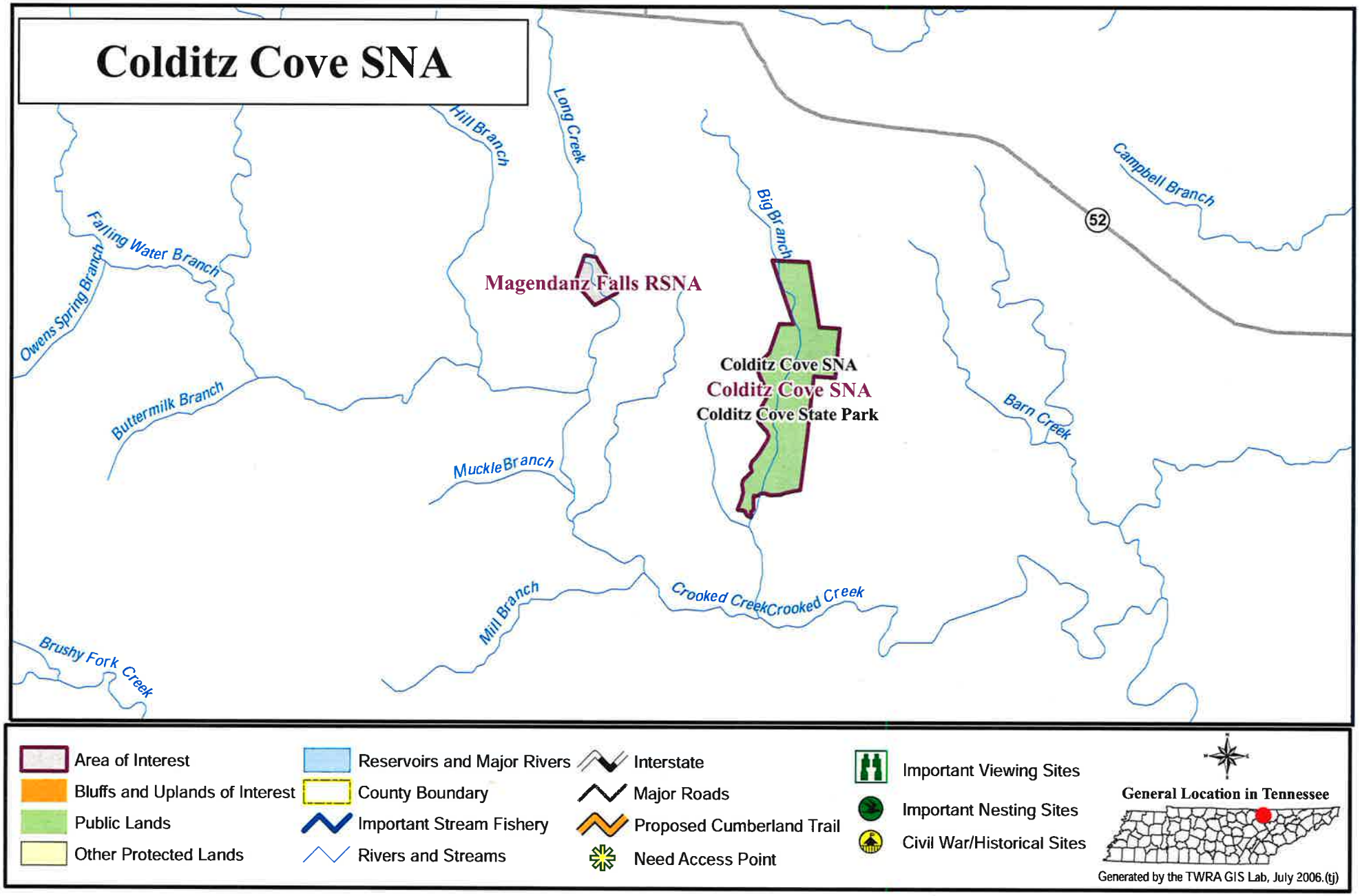
Description - Colditz Cove is a 165-acre natural area. Its most impressive feature is Northrup Falls. This is one of Tennessee's most stunning waterfalls plunging more than 60 feet over a protruding rock ledge into a scenic, narrow, gorge along Big Branch Creek. The waterfall is named for the family who settled here and operated a mill above the falls in the 1800's. These high cliffs and "rock houses" (cave-like overhangs) at the falls and along the creek gorge were once used by cliff-dwelling Woodland Indians over 3,000 years ago.

Significance - Colditz Cove has several relatively rare animals including the black mountain dusky salamander (*Desmognathus welteri*), the woodland jumping mouse (*Napaeozapus insignis*), the smoky shrew (*Sorex fumeus*), the pygmy shrew (*Sorex hoyi*), and the southeastern shrew (*Sorex longirostris*). The forest above the falls supports a mixed oak-hickory forest dominated by white oak with Virginia pine scattered with more xeric species on the southwest bluff where oaks, hemlock, Virginia and short leaf occur. A mixed mesophyptic forest below the falls is comprised of large hemlocks and white pines and hardwoods, with trees over 200 years old. Several species of ferns, sedges, rushes, and plants like grass-of-parnassus and alumroot are associated with this waterfall-gorge habitat.

Strategy - Presently the State owns 165 acres of this area. The site conservation plan proposes the protection of 503 additional acres that include the remainder of the gorge and bluff line. This will ensure protection of the gorge view corridor, geologic features, and plant and animal community and enhance greater public access opportunity to the area.

Land Protection Needs – 503 acres at an estimated cost of $350,000.

Potential Partners - TDEC.


Colditz Cove SNA
Hill Branch
Long Creek
Big Branch
Campbell Branch
52
Falling Water Branch
Owens Spring Branch
Magendanz Falls RSNA
Colditz Cove SNA
Colditz Cove SNA
Colditz Cove State Park
Buttermilk Branch
Muckle Branch
Barn Creek
Mill Branch
Crooked Creek
Crooked Creek
Brushy Fork Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CORDELL HULL STATE HISTORIC PARK

Description – (N36.5783, W85.1841) The Cordell HullBirthplace State Historic Park consists of nearly 45 acres in Pickett County. The site consists of a replica of the Hull cabin, an activity building and a museum. The site also includes Bunkum Cave, a site where Cordell's father set up a moonshine still.

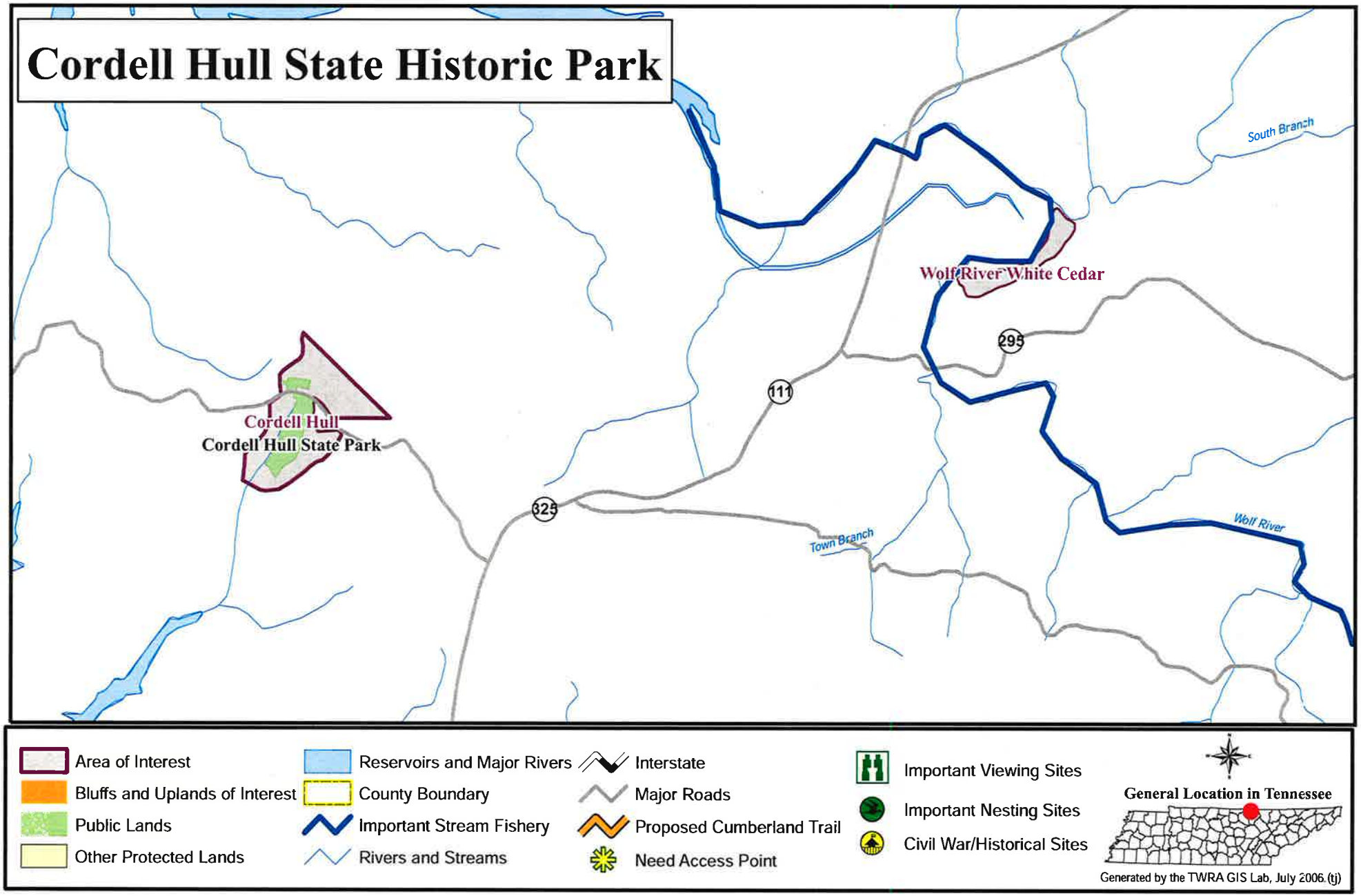
Location - Cordell Hull Birthplace and Museum is located just a few miles west of Byrdstown. It is 1.5 miles off Hwy. 111 on State Route 325.

Significance – Cordell Hull was a US senator. Secretary of State under Franklin D. Roosevelt, and received the Nobel Peace Prize in 1945. This park is responsible for the preservation of the birthplace as well as to provide historic and natural resource interpretive opportunities for the public.

Strategy - The strategy for future acquisitions for Cordell Hull Birthplace is to acquire properties surrounding the park for access or access control, watershed protection, and properties that contain representative forest cover types of the Cumberland Plateau and to further enhance the interpretive and recreation mission of the park.

Land Protection Needs – 42 acres at an estimated cost of $157,200

Potential Partners - Founded in 1989, the Friends of Cordell Hull is a non- profit organization dedicated to preserving the legacy and statesmanship of Cordell Hull; to advocate the traditional American values, acquaint school children and the general public of the contributions Cordell Hull made to the citizens of the world; to promote involvement of the public in all activities concerning the life, times and accomplishments of Cordell Hull through the Cordell Hull Park.


Cordell Hull State Historic Park
Wolf River White Cedar
Cordell Hull
Cordell Hull State Park
South Branch
Wolf River
Town Branch
295
111
325
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

COVE LAKE STATE PARK

Location – (N36.3120, W84.2143) Cove Lake State Park is located at Caryville in Campbell County on the shores of Cove Lake. (See Upper Cumberland map)

Significance - Cove Lake State Park is situated in a picturesque valley surrounded by the towering Cumberland Mountains. This park is a bird watchers paradise and provides ample opportunity for nature enthusiasts, while also providing a variety of recreational opportunities. Most of the park facilities are handicap accessible, including two playgrounds.

The park includes a 106 site modern campground. It also has a swimming pool, restaurant, picnic shelters, boat rentals and meeting rooms.

Strategy - The strategy for future acquisitions for Cove Lake State Park is to acquire in-holdingss and properties surrounding the park for watershed protection and properties that contain representative forest cover that further the wildlife, aesthetics, interpretive and recreation missions of Cove Lake State Park.

Land Protection Needs – 51 acres at an estimated cost of $170,000.

Potential Partners: TCF, TNC, and TDEC.

COWAN TUNNEL

Location– (N35.1611, W85.9778) The Cowan Tunnel site is located on the western slope of the Cumberland Plateau in Franklin County approximately 1.5 miles southeast of Cowan along the CSX railroad. (See Carter Mountain map)

Description – The western slope of the Cumberland Plateau in this approximately 127 acre area consists of dry rocky woods. The second-growth forest is composed of mixed-hardwoods and eastern red cedar growing over limestone bedrock. The CSX railroad passes through the Cumberland Plateau nearby via the Cowan Tunnel. The old Louisville & Nashville railroad traverses the slope from Sewanee to Cowan and bisects the site. The Cowan Tunnel site is between the Hawkins Cove SNA, which also protects a population of the Cumberland rosinweed, and TNC's David Carter Preserve.

Significance – Site Importance Moderate (B4) - The Cowan Tunnel site is the type locality (location from where a species is first described) for Cumberland rosinweed (*Silphium brachiatum*). Augustin Gattinger first collected the plant from this area in 1887. The type locality for this plant species does not contain a great number of individuals, but it is remarkable that the population still exists more than 100 years after Gattinger's discovery. Cumberland rosinweed is known only from Tennessee and Alabama along the western slopes of the Cumberland Plateau. Cumberland rosinweed is state endangered and is considered very rare and imperiled globally (G2) and within the state (S2) by Natural Heritage data. The site also contains an occurrence of the rare White prairie-clover (*Dalea candida*) which is considered secure globally (G5) but very rare within the state (S2).

Strategy – To purchase tracts of land that would protect the western slope of the Cumberland Plateau at the type locality for Cumberland rosinweed and potentially connect the Hawkins Cove SNA with TNC's David Carter Preserve.

Land Protection Needs – 127 acres at an estimated cost of $115,000.

Potential Partners – TNC, TWRA, South Cumberland Regional Land Trust, TDEC.

CUMBERLAND MOUNTAIN STATE PARK

Location – (N35.9049, W85.0115) Cumberland Mountain State Park is located in Cumberland County approximately 4 miles south of Crossville on Highway 68.

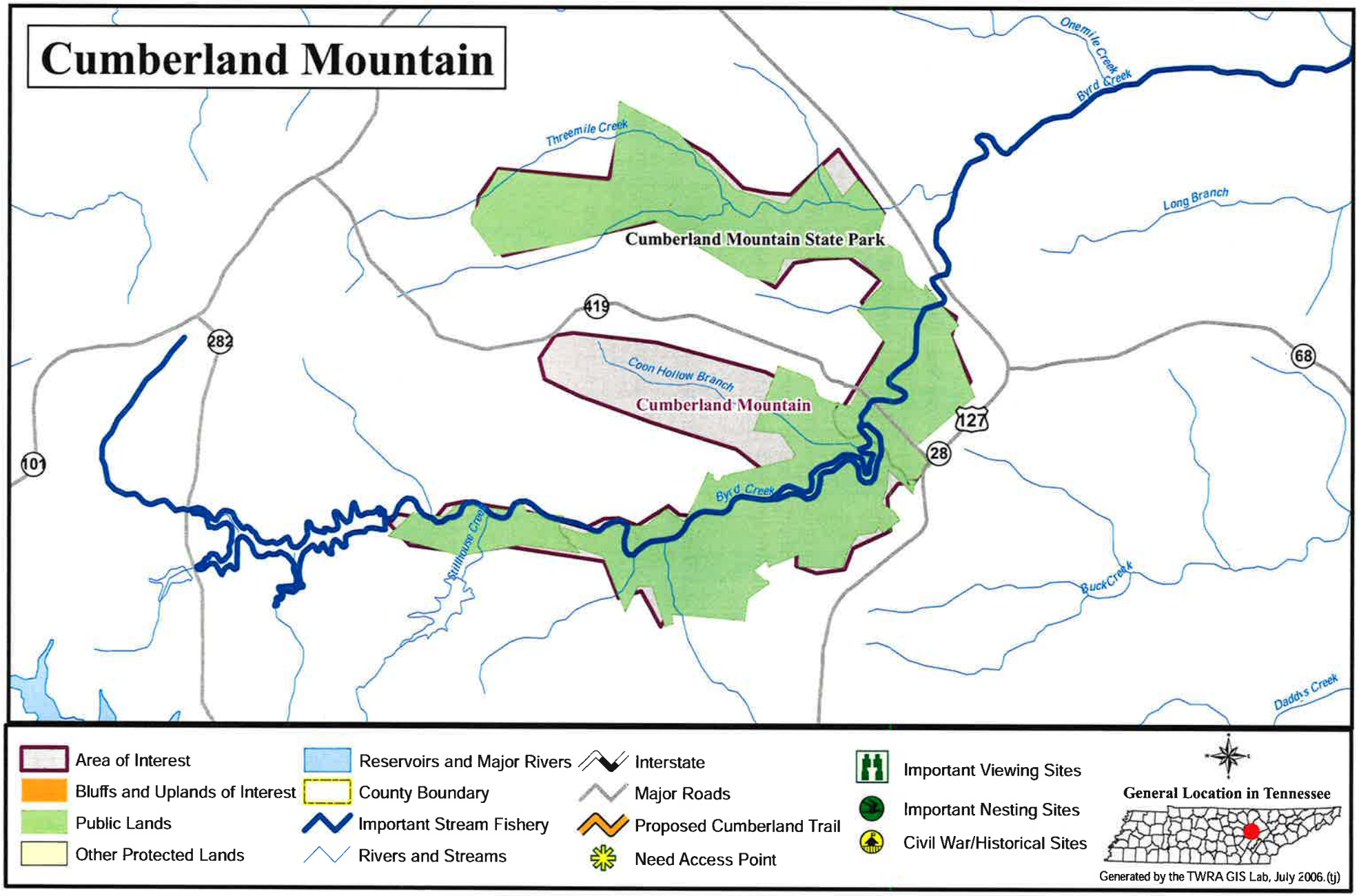
Description - Cumberland Mountain State Park is situated on the Cumberland Plateau, a segment of the great upland, which extends from western New York to central Alabama. It is said to be the largest timbered plateau in America. This 1,720-acre park was acquired in 1938 as a project of the Farm Security Administration to provide a recreational area for some 250 families selected to homestead on the Cumberland Plateau.

Significance - Cumberland Mountain State Park was acquired from the Federal Department of Agriculture as an integral component of the Cumberland Homesteads Project. The park was intended to provide recreational opportunities for some 250 families selected to homestead the "subsistence farms" in the general area of Cumberland County.

Strategy: - The strategy for future acquisitions for Cumberland Mountain State Park is to acquire properties surrounding the park that contain representative forest cover types of the Cumberland Plateau and those lands that enhance the wildlife, aesthetics, interpretive and recreation mission of the park.

Land Protection Needs – 142 acres at an estimated cost of $150,000

Potential Partners - TCF and other land conservancy groups.


Cumberland Mountain
Onemile Creek
Byrd Creek
Threemile Creek
Long Branch
Cumberland Mountain State Park
419
282
68
Coon Hollow Branch
Cumberland Mountain
127
28
101
Byrd Creek
Stillhouse Creek
Buck Creek
Daddys Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

CUMBERLAND STATE SCENIC TRAIL STATE PARK

Location - The Cumberland Trail runs from Cumberland Gap in Claiborne County to Signal Point Park in Chattanooga along the escarpments, gorges and Cumberland Mountains of the Cumberland Plateau. See Upper Cumberland project for map of northern half of Cumberland Trail State Park

Description - This Tennessee State Scenic Hiking Trail became Tennessee's 53rd state park in 1998. The Cumberland Trail is also Tennessee's first linear park, following a line of high ridges and deep gorges along or near the rugged eastern escarpment of Tennessee's Cumberland Plateau.

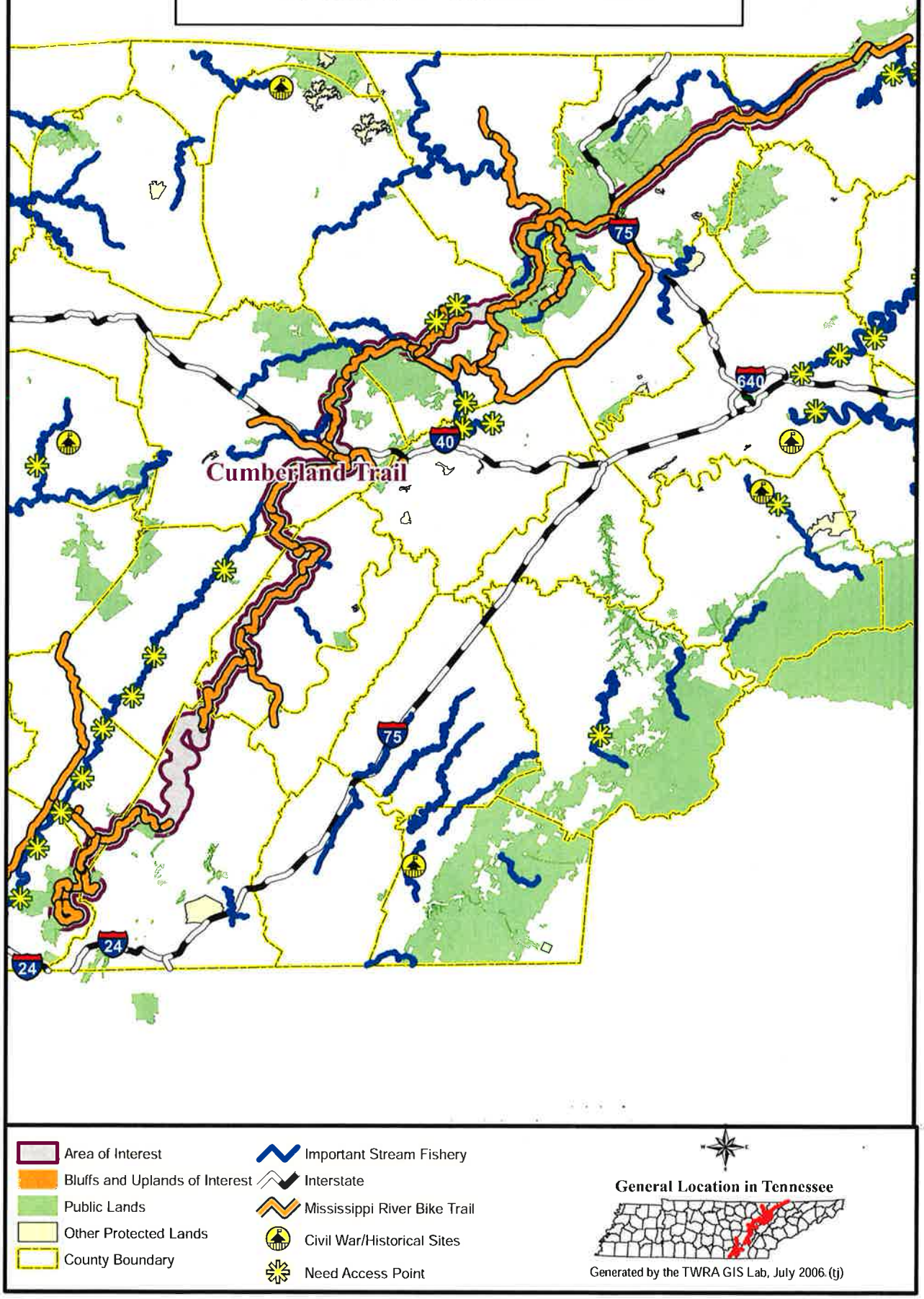
Significance - Upon completion, the Cumberland Trail State Park, the state's only linear park, will be 300 miles long, cutting through 11 Tennessee counties from the Cumberland Gap National Historic Park on the Tennessee-Virginia-Kentucky border, to Signal Point near Chattanooga.

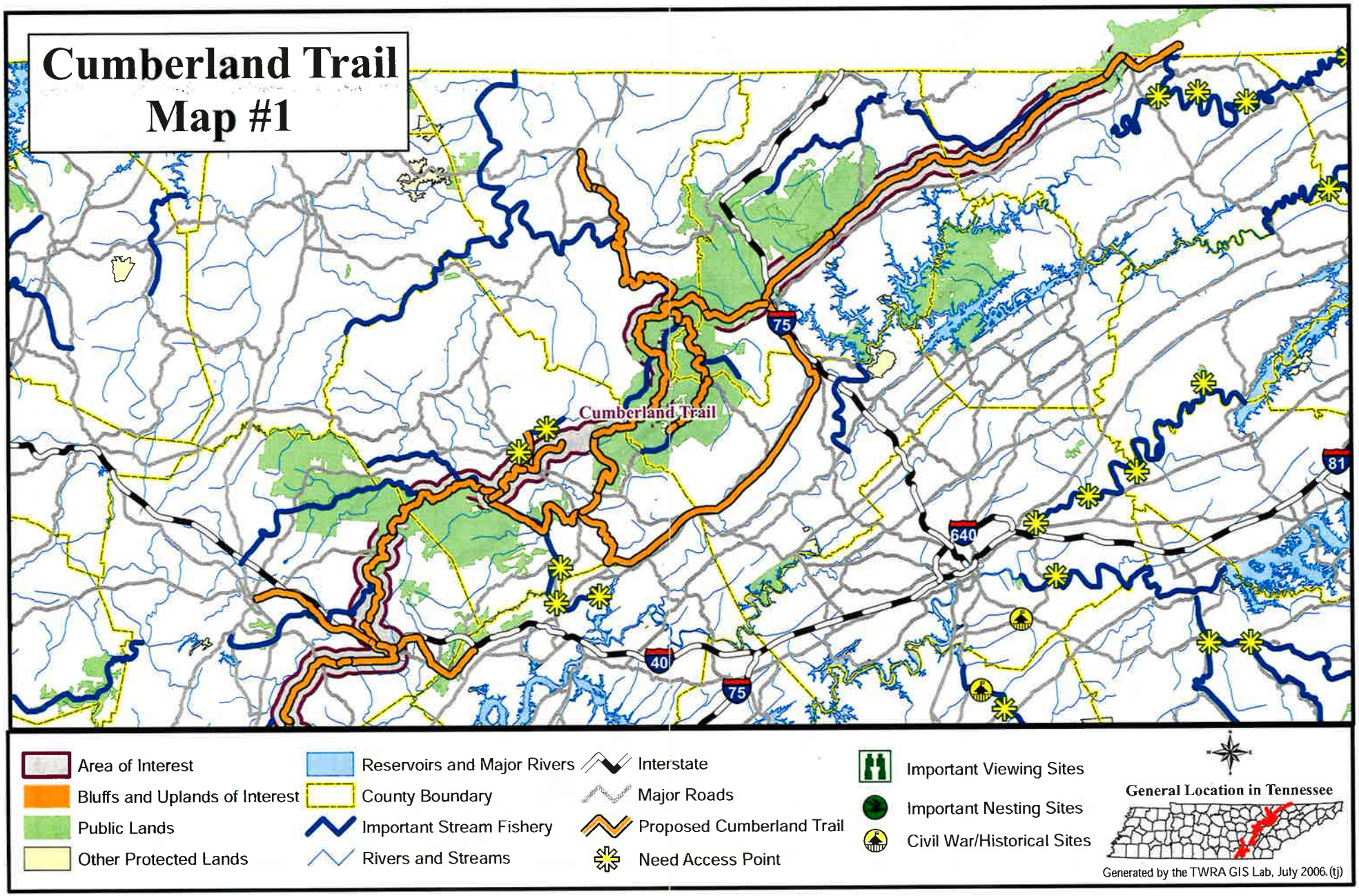
Strategy - The strategy for future acquisitions to the Cumberland Trail is to acquire properties that will link contiguously across the entire length of the proposed trail route as they become available. Acquisitions will be justified through the established land acquisition plan for the Cumberland Trail State Park.

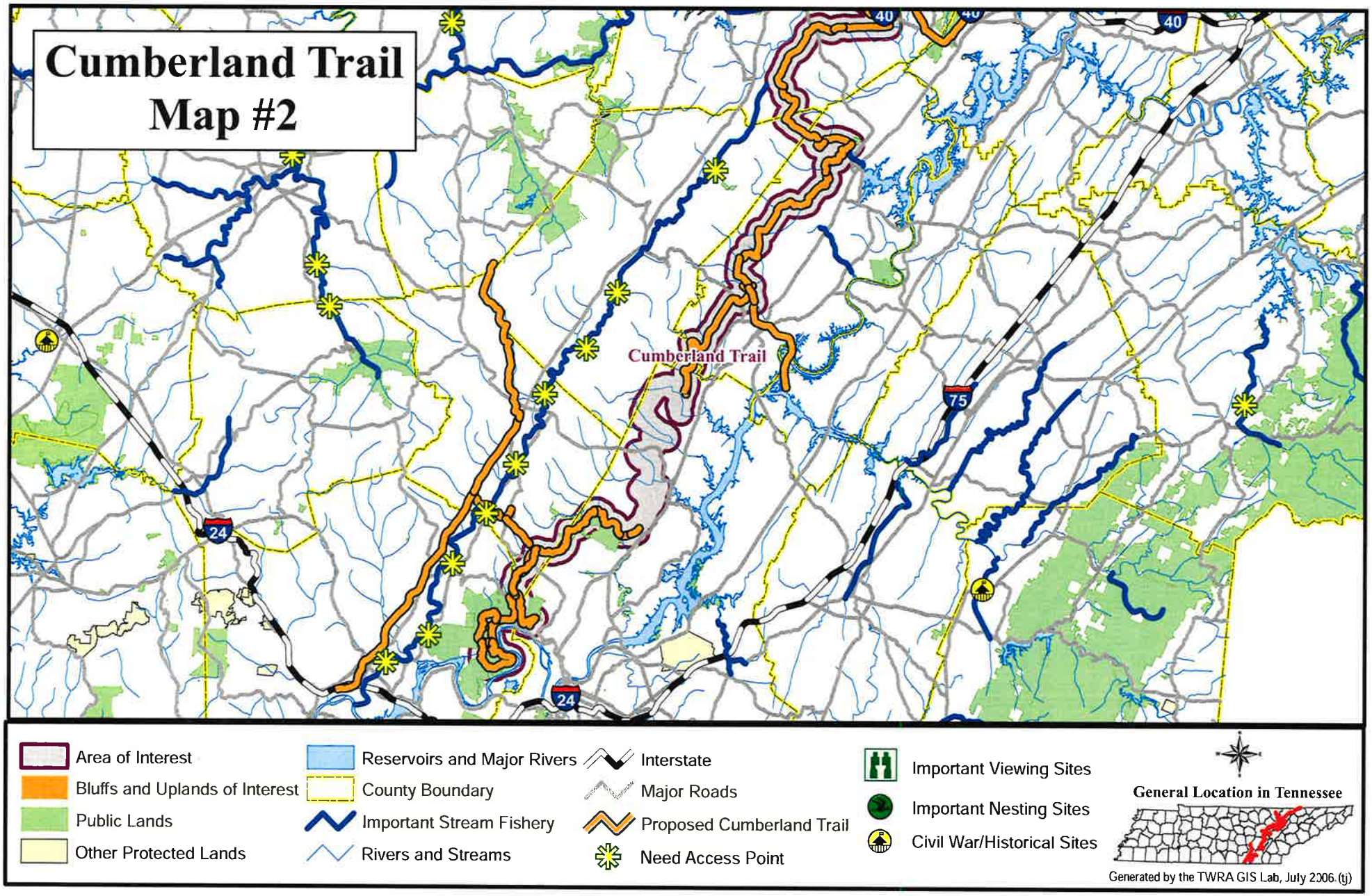
Land Protection Needs – 158,379 acres at an estimated cost of $97,500,000.

Potential Partners - The Cumberland Trail Conference is associated with the Tennessee Trails Association and its sole purpose is to construct, maintain and assist with the acquisition of trail corridor for the Cumberland Trail. TCF has been very active in assisting the state and the Cumberland Trail Conference in acquiring key tracts.

Cumberland Trail




Cumberland Trail
Map #1
Cumberland Trail
75
81
640
40
75
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)


Cumberland Trail Map #2
Cumberland Trail
40
40
40
75
24
24
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CUMMINGS COVE AND AETNA MOUNTAIN (RACCOON MOUNTAIN)

Location – (N35.0163, W85.4808) Cummings Cove and Aetna Mountain are located approximately 15 miles west of Chattanooga in Marion County. This area lies just south of the Tennessee River across from Prentice Cooper WMA. The area is also adjacent to lands already owned by the Tennessee River Gorge Trust and lies between Walnut Ridge and Sand Mountain.

Description – While the lowlands are sparsely inhabited by people, the top of the mountain contains less than 10 families, some of which have lived there for generations without electrical power or electricity. Historically the thriving town of Aetna was located here, but has long since been disappeared. While some residual mining continued until recently, most of the operations ceased in the early 1900's. Much of the area was acquired by Bowater prior to 1960. Some of the land was donated to the Tennessee River Gorge Trust in 1980 via the TNC. Additional lands (Cummings Cove WMA) was acquired a few years ago using Forest Legacy funds.

The property consists of reclaimed mining lands, pine plantations, and mixed hardwood forests. Old narrow gauge railroad beds now provide a system of roads on much of the property. Much of the area was once designated a Public Hunting area by TWRA

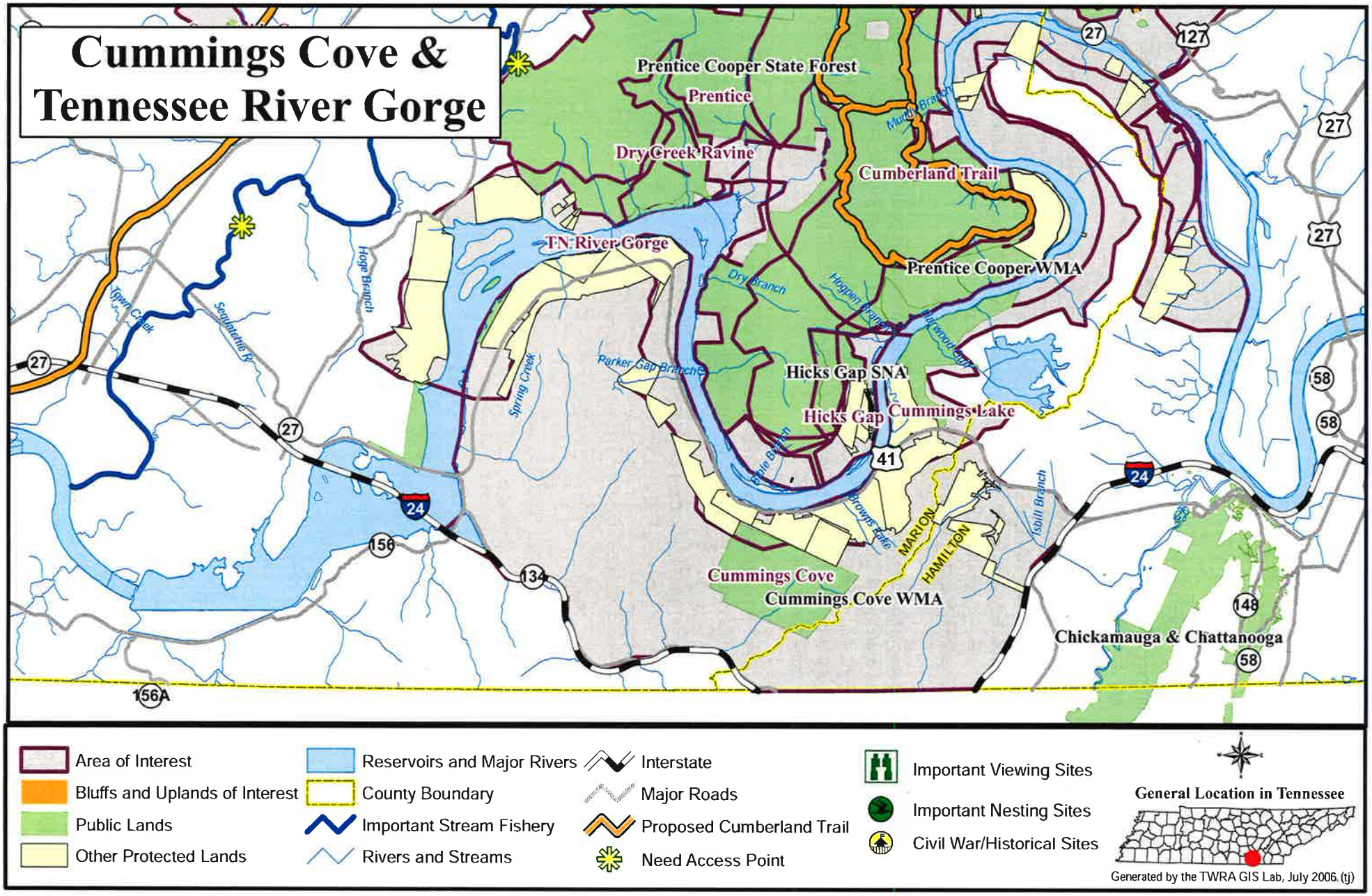
Significance – This area provides significant habitat for a variety of game species including deer, turkey, grouse, squirrels, and other small game species. It is also an important nesting and foraging habitat for many raptors, including the bald eagle which likely nest just north of the area. The diversity of areas makes it an important feeding areas for several special of bats including a population of eastern pipistrelles that roosts in Whiteside Cave just off the southern boundary of the area.

The springs creeks, and ponds developed as a result of mine site reclamation are important rearing areas for many species of amphibians, reptiles and water birds.

Strategy - This area has historically been an important recreational area for wildlife watchers, hunters and other outdoor users due to its proximity to Chattanooga. With several small public landholdings already existing in this area, this acquisition will tend to tie many of the properties together into a more cohesive unit, making protection and management of this entire area more feasible.

Land Protection Needs – 1,500 acres at an estimated cost of 1,300,000.

Potential Partners – TNC, TRGT, TWRA, and NWTF.


Cummings Cove &
Tennessee River Gorge
Prentice Cooper State Forest
Prentice
Dry Creek Ravine
Cumberland Trail
TN River Gorge
Prentice Cooper WMA
Hicks Gap SNA
Hicks Gap
Cummings Lake
Cummings Cove
Cummings Cove WMA
Chickamauga & Chattanooga
Hoge Branch
Spring Creek
Parker Gap Branch
Dry Branch
Muddy Branch
Browns Lake
Sbill Branch
MARION
HAMILTON
27
127
58
24
41
156
134
148
156A
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

CUMMINGS LAKE

Location – (N35.0412, W85.4281) Cummings Lake is a shallow embayment located in Marion County near Tennessee River Mile 442, west of McNabb Road, near where Hwy. 41 crosses Raccoon Mountain. (See Hicks Gap SNA map)

Description – This shallow embayment of Nickajack Reservoir is approximately 134 acres. The flooding of the river bottom has created narrow peninsulas and islands which separate the embayment from the main body of the reservoir. The shallow water and low lying areas which are not maintained as fields are of marsh or willow vegetation type. Mixed bottomland hardwoods occur on some portions of the river bottom, while the upland forests on the site are of the Virginia pine-mixed oaks-tulip poplar type.

Significance – Site Importance High (B3) - Cummings Lake provides excellent habitat for water birds, including the bald eagle (*Haliaeetus leucocephalus*), which is federally threatened. While widespread throughout its range (G4), the bald eagle is rare and uncommon within the state (S3). This site also provides excellent habitat for osprey (*Pandion haliaetus*), great blue heron *(Ardea herodias*) and migratory waterfowl.

Strategy – Acquisition of properties within and adjacent to the site would provide watershed protection as well as preservation of rare species and their associated habitat.

Land Protection Needs – 134.3 acres at an estimated cost of $115,000.

Potential Partners – TDEC.

DRY CREEK RAVINE

Location: – (N35.0982, W85.4816) Dry Creek Ravine is located north of Nickajack Lake in Marion county, just west of Mullens Creek Embayment, and encompasses most of the ravine formed by Dry Creek. The northern portion of the site lies within Prentice Cooper State Forest. (See Prentice Cooper map).

Description – This site is approximately 978 acres and includes the Dry Creek watershed from its mouth up to an elevation of approximately 1600 feet. The lower portion of the ravine is comprised of the Virginia pine-mixed oaks-tulip poplar vegetation type. Mature examples of oak-hickory and hemlock-mixed mesophytic forest can be found in the middle portions of the ravine. The upper slopes of the ravine, up to the base of the bluffs, are chestnut oak-mixed oak-hickory forests. In the very upper reaches of the site are a series of abandoned mines on the west side of Dry Creek, which are used by gray bats (*Myotis grisescens*).

Significance – Site Importance High (B3) - Dry Creek Ravine provides diverse habitat for four rare species: gray bat, peregrine falcon (*Falco peregrinus*), large-flowered skullcap (*Scutellaria montana*), and three-parted violet (*Viola tripartita* var. *tripartita*). Gray bats, listed as federally and state endangered, are considered rare and local throughout their range (G3) and very rare and imperiled within the state (S2). They have been documented from the abandoned mine portals at the upper reaches of the site as well as the abandoned mines near the mouth of Dry Creek. The state endangered peregrine falcon was historically documented from this site, however additional surveys are needed to confirm whether populations are still present. The peregrine falcon is considered secure globally (G4) but extremely rare and critically imperiled in the state (S1N). The site also contains several populations of the large-flowered skullcap growing along the dry woods and escarpment to the south. Listed as federally and state threatened, large-flowered skullcap is considered very rare and imperiled globally (G2) and within the state (S2). Dry Creek Ravine also provides habitat for the three-parted violet, a state species of special concern. The best habitat for this species appears to be near the edges of Dry Creek.

Strategy – Acquisition of properties within and adjacent to the site would provide watershed protection as well as preservation of rare species and their associated habitat.

Land Protection Needs – 418.3 acres at an estimated cost of $450,000.

Potential Partners – TDEC, TWRA, USFWS, and Tennessee River Gorge Trust.

EDWARDS POINT SANDSTONE OUTCROPS

Location – (N35.1254, W85.3754) Edwards Point Sandstone Outcrops is located adjacent to the Town of Signal Mountain, north of Nickajack Lake, and encompasses the southwest-facing escarpment of Edwards Point. Most of the site lies within Prentice Cooper State Forest, but a portion extends off of State Forest land.

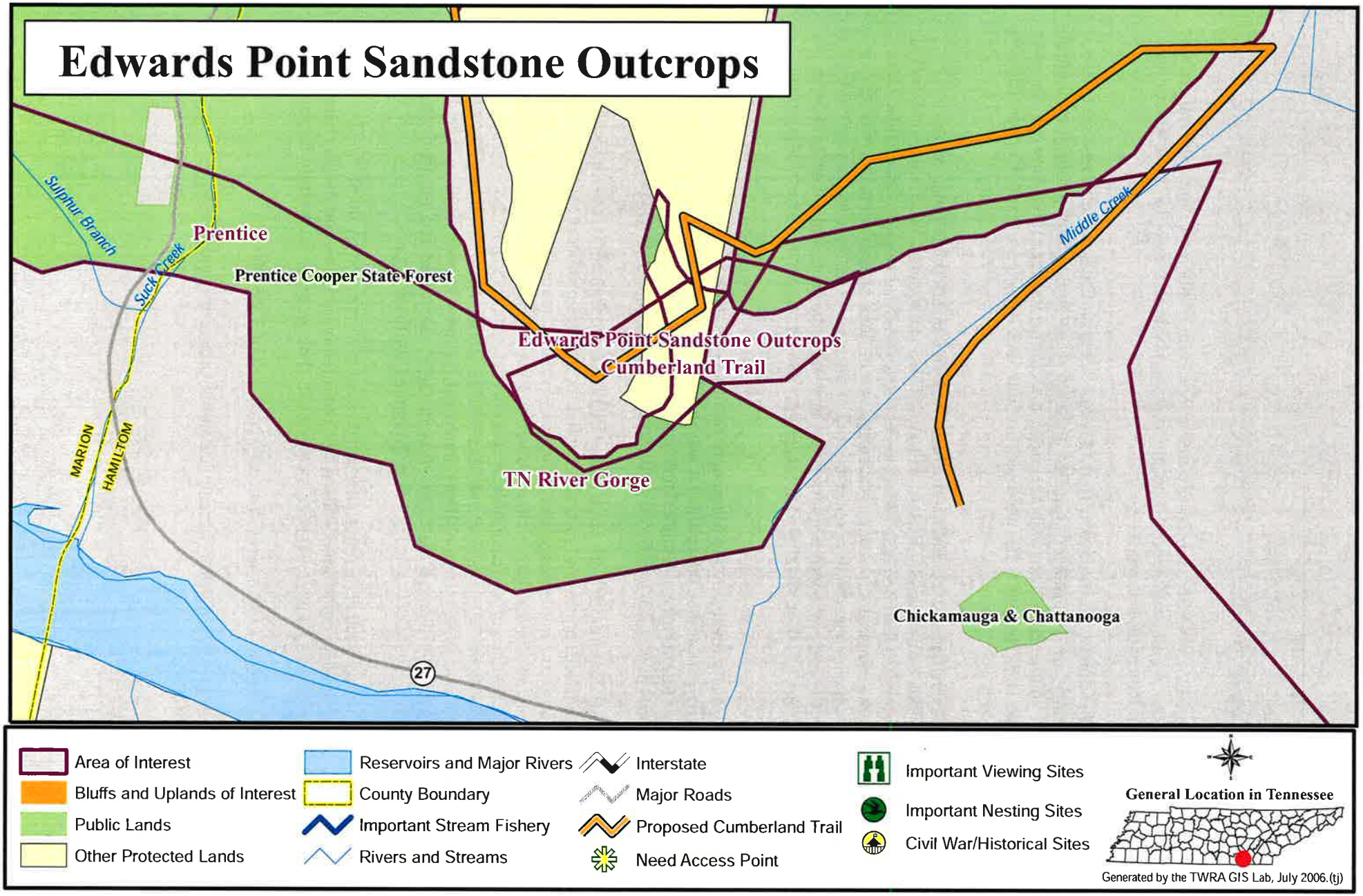
Description – This 51 acre site at the southeast end of Edwards Point contains the only good examples of primary successional communities on flat sandstone outcrops in the Tennessee River Gorge. The outcrops proper consist of islands of vegetation, with the tallest plants in the center and progressively more diminutive species ranging out to bare rock. This zonation is typical of flat rock successional patterns, with the Sandstone Successional communities being represented at several locations on the Cumberland Plateau escarpments. The forests surrounding the flat rock communities are primarily Virginia pine-mixed oak forests above the bluff line, and chestnut oak-mixed oak hickory below the bluffs.

Significance – Site Importance Moderate (B4) - This site contains a rare plant restricted to flat sandstone outcrops, the round-leaved fame flower (*Talinum teretifolium*). While this state threatened plant is secure globally (G4), it is considered very rare and imperiled within the state (S2) and is one of only ten known populations in Tennessee.

Strategy – Acquisition of properties within and adjacent to the site would help preserve representative communities of the Cumberland Plateau system as well as provide watershed protection and preservation of rare species and their associated habitat.

Land Protection Needs - 31 acres at an estimated cost of $68,000.

Potential Partners – TDEC, TWRA, TDA, and Tennessee River Gorge Trust


Edwards Point Sandstone Outcrops
Sulphur Branch
Suck Creek
Prentice
Prentice Cooper State Forest
Edwards Point Sandstone Outcrops
Cumberland Trail
Middle Creek
MARION
HAMILTOM
TN River Gorge
Chickamauga & Chattanooga
27
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

ENGLISH CAVE

Location – (N36.5425, W83.6131) English Cave is located in Claiborne County, 0.9 mile south of Hamilton School, on the south side of a hollow running northwest toward Powell River mile 67.0. (See Powell River Reserve map)

Description of Property - According to Barr (1961): "English Cave is the largest cave visited in Claiborne County. It is developed in gently inclined strata and exhibits strong joint control. The cave trends southeastward through the ridge that forms the interfluve between the cave hollow and Pine Hill Hollow. Its geologic horizon is Chepultepec (and Copper Ridge?) dolomite.

The main passage averages 40 feet high and 20 feet wide and is 3,500 feet long. Many formations are developed, including a large, balloon-shaped stalagmite 15 feet high and 8 feet in diameter, a flowstone 20 feet high and 10 feet wide, and a variety of smaller stalagmites. Cave coral incrusts the walls and floor in many places and two or three extensive breakdowns have formed, over which one must climb to reach the end of the cave. The floor is damp or muddy throughout. Near the end a wet-weather surface stream enters the cave, and a cobble-floored canyon 300 feet long has been developed at this point. It tapers down to a low bedding-plane crawl.

English Cave, formerly owned by the Massengill family, is sometimes spoken of as "Massengill Cave." In the early part of the 20th century it was developed commercially by a utilitarian socialist colony of Englishmen at Cumberland Gap, and it still bears the name "English Cave." The rotting remains of wooden stairways, walkways, and bridges may be seen in many places."

Significance – Site Importance Very High (B2) - English Cave is the only known location for two cave-obligate invertebrates, and provides habitat for numerous other rare species. It is reported as the only cave in the Ridge and Valley province containing three different species of cave beetles, implying a particularly rich and diverse fauna. Species reported from English Cave include: *Kleptochthonius affinis* (cave-obligate pseudoscorpion, S1S2), *Pseudanophthalmus rotundatus* (cave-obligate beetle, S1), *P. pallidus* (S1S2), *P. engelhardti* (S1; only known location), *Stygobromus finleyi* (cave-obligate amphipod, S1; only known location), and *Myotis sodalis* (Indiana bat, S1). Though the *P. engelhardti* and *P. rotundatus* records are considered historical, this probably reflects a lack of recent sampling for these taxa.

Strategy: – The primary concern at this site is that excessive visitation by uninformed individuals could damage the habitats upon which the rare invertebrates and Indiana bats depend. The entrance needs to be secured and access controlled. The property is currently for sale.

Land Protection Needs – 175.8 acres at an estimated cost of $265,000.

Potential Partners – TNC, TWRA, Lincoln Memorial University, and TDEC.

FALL CREEK FALLS STATE PARK AND SNA

Location – (N35.7040, W85.3443) Fall Creek Falls in located in Van Buren County, approximately 11 miles east of Spencer. (See Scotts Gulf map).

Description - Fall Creek Falls State Park is one of the most scenic and spectacular recreation areas in America. Its waterfalls, cascades, sparkling streams, gorges, timberland and an unmatched variety of recreation facilities and activities have made it one of the most popular parks in the Southeast. Fall Creek Falls is one of the highest waterfalls east of the Rocky Mountains, plunging 256 feet into a shaded pool at the base of its gorge. The park's other falls, (Piney, Cane Creek and Cane Creek Cascades), though smaller, are just as impressive.

Significance - The oak and hickory forest that covers most of the park gives way to tulip poplar and hemlock forest in the gorges. The plants and animals of the moist, protected gorges are not unlike the species found in southern Canada. Mountain laurel and rhododendron are abundant throughout the park, as are other plants and animals.

Strategy - The strategy for future acquisitions for Fall Creek Falls is to acquire in-holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive and recreation missions of Fall Creek Falls State Park.

Land Protection Needs – 10,000 acres at an estimated cost of $7,000,000

Potential Partners - TCF, TNC, TDEC, and the Friends of Fall Creek Falls.

FRANKLIN STATE FOREST

Location – (N35.0805, W85.8754) Franklin Forest is located on the Cumberland Plateau approximately 7 miles south of Sewanee and one mile east of Sherwood in Franklin and Marion Counties. Major access is from Hwy 156. (See Carter Mountain map).

Description - Franklin State Forest - (6,941 acres) The area was purchased by the State from Gross Creek Coal Company in 1936. TDF assumed management of the area in 1940. About 99% of the land is forested and about 96% of the land is in mature hardwood sawtimber and pole timber Only about 3% of the Forest is in pine types. The area has a history of timber abuse by diameter-limit cuts, high-grading and uncontrolled wildfires.

Significance – Franklin Forest and the surrounding landscape is representative of the southern Cumberland Plateau with rolling hills on top of the escarpment dissected with deep gorges. It is underlain by Mississippian limestone and numerous limestone outcroppings. These features provide scenic overlooks into Sweeten, Cross Creek and Lost Coves. The limestone outcrops are the exclusive habitat for the paint snake forest coiled snail (*Anguispira picta*), an extremely rare species found only in about a square mile area near Sherwood immediately adjacent to the current State Forest boundary on the west side.

This area is under intense development pressure with developments underway adjacent to the south and north boundaries. Projections indicate urbanization will increase dramatically over the next 15 years. The scenic Plateau escarpment overlooks and proximity to Chattanooga and Atlanta make this area highly desirable for development.

State Forest Strategy - Development interests on the west, northwest and southwest sides of the forest would cause serious management problems for the forest. These properties, if developed, would require ingress/egress through the forest. Current roads and power lines already utilize much of the forest. Additional interests would further fragment the forested area. The strategy for acquisition is to first protect vulnerable areas that would affect the forest. The next priorities would be to acquire any in-holdings, or lands to gain or control access to the forest. Access control to reduce indiscriminate use of motorized/non-motorized vehicles and horses is needed to protect the forest resources.

Land Protection Needs – 7,424 acres at an estimated cost of $3,915,772

Potential Partners – USFWS, NWCF, Forest Legacy, TNC, Thunder Enterprises.

FROZEN HEAD SNA

Location – (N36.1516, W84.5169) Frozen Head SNA is located in Morgan County just north of the community of Petros. (See Catoosa WMA map)

Description - Love Mountain is owned by Heartwood Forestland Fund based in Chapel Hill North Carolina. It is located on the southwest boundary of Frozen Head State Park and SNA. The property consists of approximately 935 acres of hardwood forest. The Chimney Top Trail, a historic CCC hiking trail, is partially located on this property. Elevations run from 1,300 feet to 2,800 feet above sea level.

Significance - This tract is critical to preserving the Flat Fork viewshed approaching the park as well as views within the park and along State Highway 62. This tract provides prime habitat for rare and threatened species of neo-tropical migrants such as the cerulean and Canada warblers and is host to a rich and diverse botanical community.

Strategy - The strategy for future acquisitions to Frozen Head is to acquire properties surrounding the park for access or access control, watershed protection, view-shed protection and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive, and recreation missions of the State Park System.

Land Protection Needs – 941 acres at an estimated cost of 400,000

Potential Partners - TCF, TDEC, Tennessee Citizens for Wilderness Planning, and Friends of Frozen Head.

GOOSE POND

Location – (N35.2839, W85.8688) Goose Pond is located in Grundy County on the Eastern Highland Rim of the Cumberland Plateau about 0.5 miles south-southwest of the Mt. View community on U.S. Hwy 41.

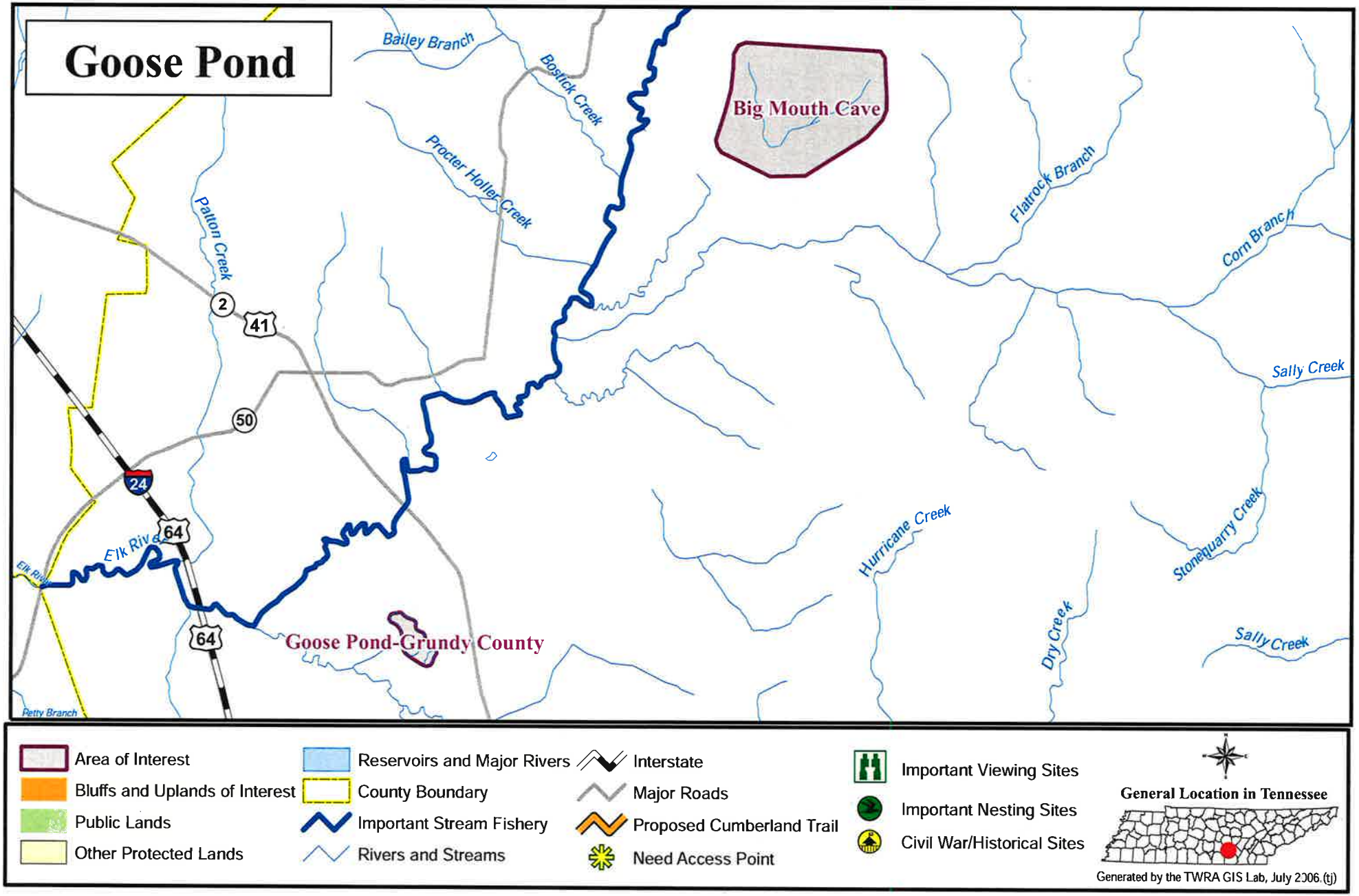
Description - Goose Pond is a natural upland pond and fresh water marsh underlain by Monteagle Limestone.

Significance - Site Importance Moderate (B4) - Goose Pond is a natural upland pond and fresh water marsh on the Eastern Highland Rim of the Cumberland Plateau. It is well known for its diversity in wildlife and plant life. Rare birds known to nest at Goose Pond include the deemed in need of management (D) - least bittern, state critically imperiled (S1) - American bittern, purple gallinule, and the king rail (D). Goose Pond is also significant in its floristic diversity and community representation. Two rare plants are known from the site are the state rare creeping mannagrass (*Glyceria acutiflora*) and maidencane (*Panicum hemitomon*). Both rare grasses are known to occur within rare globally imperiled communities such as the Interior Highland Maidencane Pond.

Strategy - The strategy for acquisition at Goose Pond is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs - 34.6 acres at an estimated cost of $72,000.

Potential Partners – TWRA, TDEC, and TNC


Goose Pond
Bailey Branch
Bostick Creek
Procter Holler Creek
Big Mouth Cave
Flatrock Branch
Corn Branch
Patton Creek
2
41
50
24
64
64
Elk River
Elk River
Sally Creek
Hurricane Creek
Stonequarry Creek
Dry Creek
Sally Creek
Goose Pond-Grundy County
Petty Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

GRASSY CREEK CAVE

Location – (N35.5278, W84.9122) Grassy Creek Cave is located in Rhea County approximately 0.4 mile south of Washington, 150 yards east of Hwy. 30, near an abandoned limestone quarry, at an elevation of 700 feet. (See Laurel Snow Pocket Wilderness map)

Description – According to Barr (1961): "Before emptying into Town Creek, Grassy Creek disappears underground and reappears no less than four times. The last time it flows through a large cave, a tunnel which extends N. 50° E. downstream for 900 feet. The upper entrance is 20 feet wide and 7 feet high. Most of the cave consists of a damp, upper-level passage of the bedding-plane or round tube variety. This passage is entirely separate from the stream except at both ends of the cave. A few small speleothems were noted. Exploration is hampered by a large colony of bats (*Myotis grisescens*)."

Significance - Site Importance Very High (B2) - Grassy Creek Cave is home to at least three rare species, including *Pseudanophthalmus nortoni* (cave-obligate beetle, S1), *Nesticus dilutus* (Grassy Creek cave spider, S1S2), and *Myotis grisescens* (gray bat, S2, state/federal endangered). This is the only known location for both the beetle and the spider. Gray bats use the cave as a summer roost, with 13,900 bats reported in 2002. As many as 40,000 gray bats have been reported previously.

Strategy – The upper (accessible) stream entrance to the cave needs to be secured, and acreage lying above the cave needs to be managed in a fashion conducive to maintaining the biota of the cave. The area immediate to the entrance should be reforested, as appropriate.

Land Protection Needs - 5.6 acres at an estimated cost of $20,000.

Potential Partners – TWRA, TNC, USFWS, and TDEC.

GRINDSTONE MOUNTAIN GEOLOGIC FEATURE

Location – (N35.0745, W85.0181) Grindstone Mountain Geologic Feature is located in Bradley and Hamilton Counties. The site is 2.4 miles east of Ooltewah, south of Hwy 11.

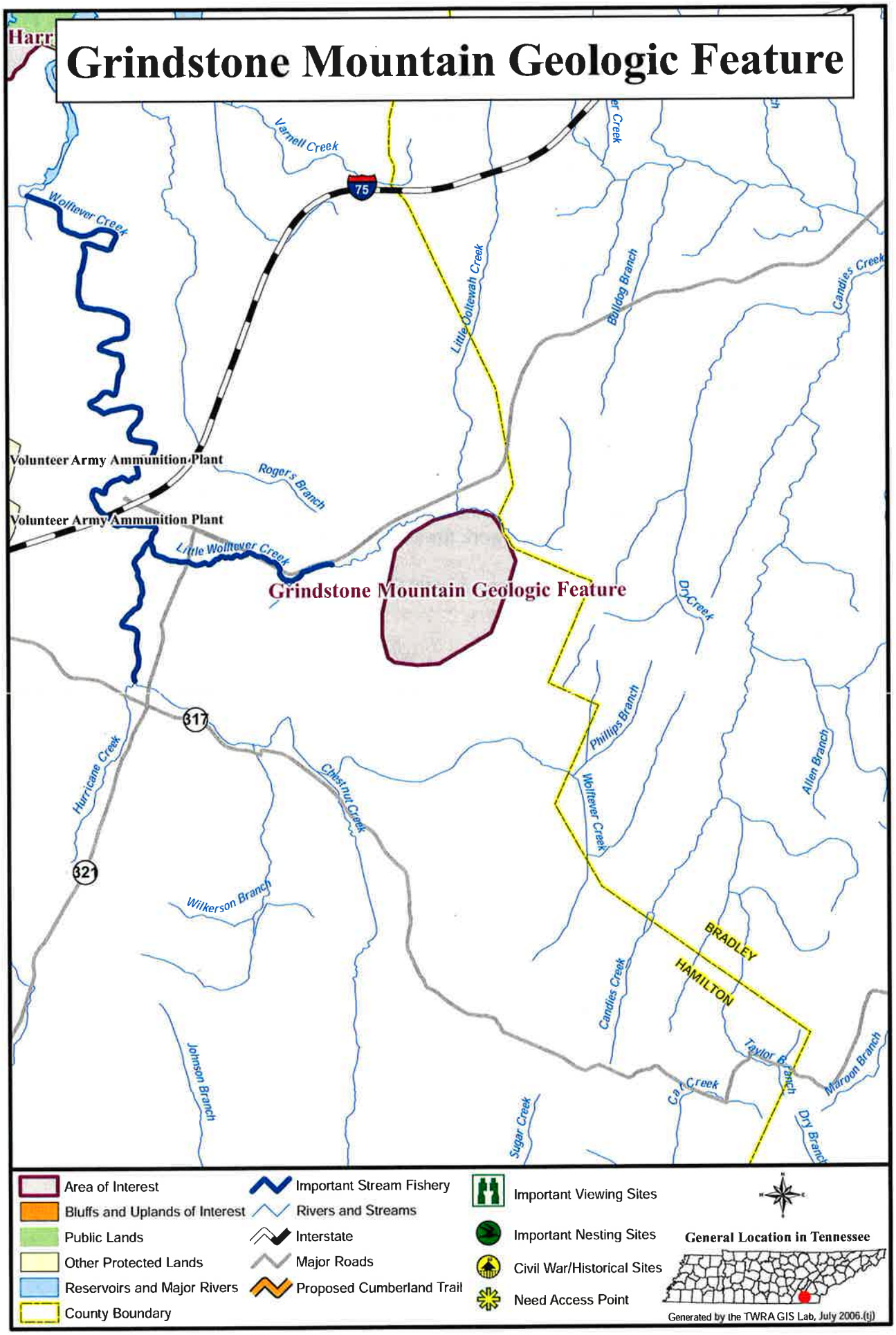
Description – The site is an outlier to the Cumberland Plateau, 18 miles east of the eastern edge of the plateau. This steep sided mountain has a top, which is comparatively gentle. The upper ½ to $^{2}/_{3}$ of the slope exhibits the Pennsylvanian sandstone bedrocks of the plateau. The slopes are dominated by oak forests.

Significance – Site Importance General Interest/Open Space (B5) – No rare elements are identified from this site.

Strategy - The strategy for acquisition at Grindstone Mountain Geologic Feature is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 813 needed acres $1,500,000.

Potential Partners – TDEC.


Grindstone Mountain Geologic Feature
Harr
Varnell Creek
Wolftever Creek
75
Little Ooltewah Creek
Bulldog Branch
Candies Creek
Volunteer Army Ammunition Plant
Roger's Branch
Volunteer Army Ammunition Plant
Little Wolftever Creek
Grindstone Mountain Geologic Feature
Dry Creek
317
Phillips Branch
Hurricane Creek
Chestnut Creek
Wolftever Creek
Allen Branch
321
Wilkerson Branch
BRADLEY
HAMILTON
Candies Creek
Taylor Branch
Maroon Branch
Johnson Branch
Sugar Creek
Dry Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

GRUNDY FOREST SNA AND FIERY GIZZARD COVE

Location – (N35.1998, W85.7223) This area is located in Marion and Grundy Counties just south of the Tracy City.

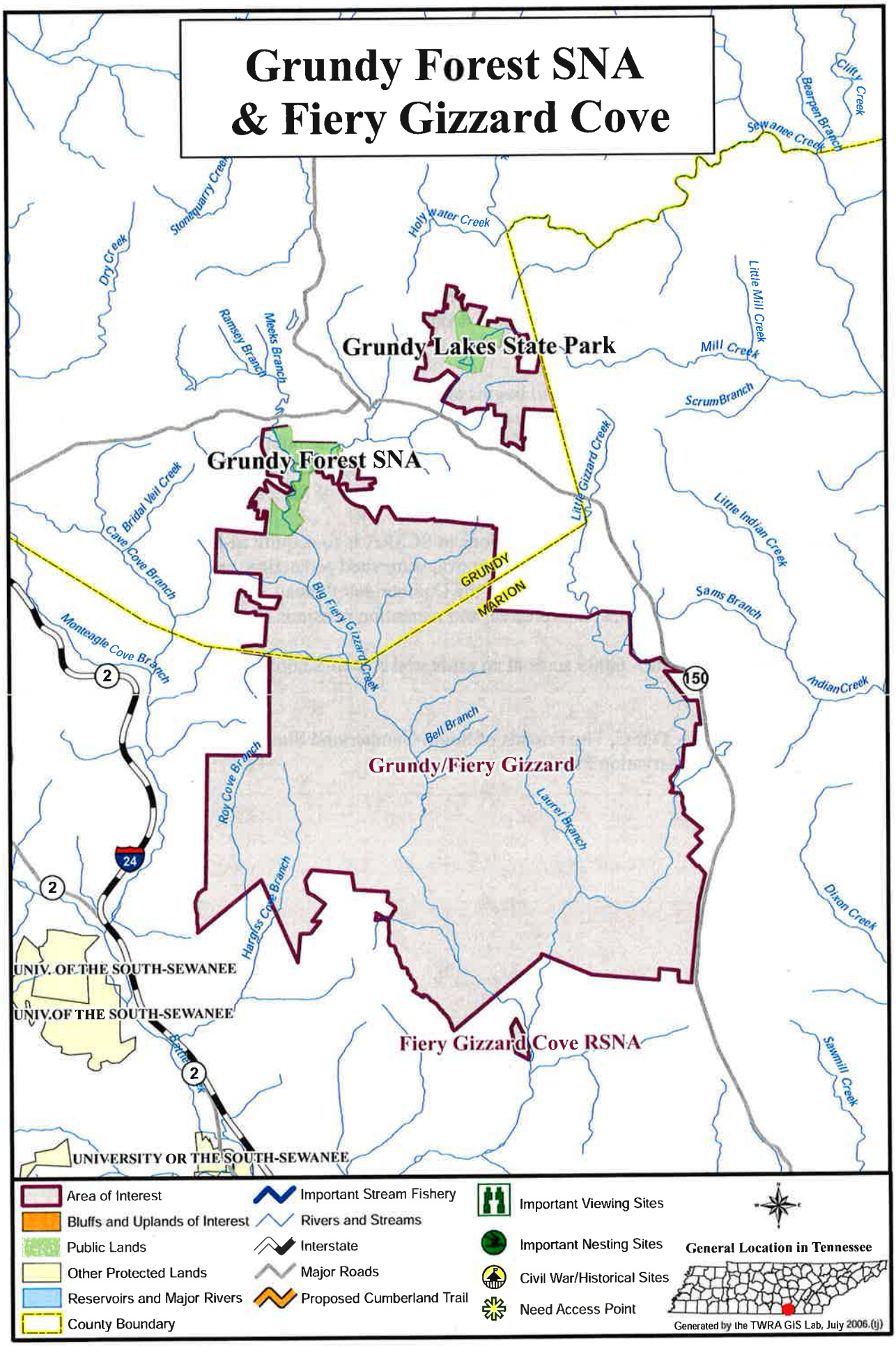
Description: The 234 acre Grundy Forest SNA was donated to the State in 1935 by a group of local citizens in Tracy City. The group asked that the tract become a state forest suitable for accommodating the Civilian Conservation Corps Camp S-67. A picnic shelter was built and the beginning of perhaps the most beautiful and diverse trail in Tennessee, the Fiery Gizzard, which follows the Gizzard Cove.

Significance - The Fiery Gizzard trail begins at the Grundy Forest Natural Area and ends at the Foster Falls TVA property. It is unique in that it is located almost totally on private lands. For years now those landowners have been gracious in allowing the public to use their land. Along this trail one will experience hemlock forests, rock shelters, waterfalls, rock columns, old moonshine stills, breathtaking overlooks and a diverse array of flora and fauna.

Strategy - The strategy for future acquisitions to SCSRA is to acquire in-holdings, properties surrounding the park for access or access control, watershed protection, and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive, and recreation missions of the State Park System.

Land Protection Needs – 6,000 acres at an estimated cost of $2,665,700 (In Negotiations. Very Sensitive)

Potential Partners - TDEC, The Friends of South Cumberland State Recreation Area, TNC, and Land and Water Conservation Fund.


Grundy Forest SNA
& Fiery Gizzard Cove
Grundy Lakes State Park
Grundy Forest SNA
Grundy/Fiery Gizzard
Fiery Gizzard Cove RSNA
GRUNDY
MARION
Sewanee Creek
Holly Water Creek
Stonequarry Creek
Dry Creek
Ramsey Branch
Meeks Branch
Mill Creek
Little Mill Creek
ScrumBranch
Little Gizzard Creek
Bridal Veil Creek
Cave Cove Branch
Big Fiery Gizzard Creek
Little Indian Creek
Sams Branch
Monteagle Cove Branch
Bell Branch
Roy Cove Branch
Laurel Branch
Hargiss Cove Branch
Dixon Creek
Sawmill Creek
UNIV. OF THE SOUTH-SEWANEE
UNIV.OF THE SOUTH-SEWANEE
UNIVERSITY OR THE SOUTH-SEWANEE
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

GRUNDY LAKES STATE PARK

Location - Grundy County (See Grundy Forest SNA ap)

Description of Property - Grundy Lakes was donated to the State of Tennessee in the 1930's for a Civilian Conservation Corps recreation project. Famous for its coke ovens, which was utilized in the later 1800's by convict labor to "purify" the coal that came from local mines. A turbulent era in Tracy City history, as revolts from the local miners that had no jobs ensued. These rebels stormed the Lone Rock stockade, which is were the prisoners were kept, burned it and marched all the prisoners to a train where the engineer was ordered to "take them back to Nashville". With the rebellion, came a state militia of more than 5000 men that quickly ended the situation in 1896. Today the coke ovens are still there and surprisingly well intact. The Grundy Lakes is the most popular day use area that South Cumberland Recreation Area has for the local that may be interested in canoeing, fishing, or an easy stroll around the lakes to view the richness and beauty the area has to offer.

Significance - This area is now recognized and on the National Historic Register.

Strategy/Criteria: The strategy for future acquisitions to SCSRA are to acquire in-holdings, properties surrounding the park for access or access control, watershed protection, and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive, and recreation missions of the State Park System.

Land Protection Needs – 451 acres at an approximate cost of $500,000

Potential Partners - Friends of South Cumberland State Recreation Area, TNC, and the Land And Water Conservation Fund.

HARPER ROAD / SYCAMORE BRANCH

Location – (N35.6175, W85.5803) Harper Road/Sycamore Branch is located in Van Buren County adjacent to Harper Road at the Sycamore Branch crossing, approximately 1.5 miles west of the junction of Rocky River Road and Harper Road, north of Curtistown, near the Warren County line. (See Hubbard's Cave SNA map)

Description – This forested three acre site encompasses a boggy streamhead and is dominated by herbaceous wetland species. Associated plant species include: New York fern (*Thelypteris noveboracensis*), cinnamon fern (*Osmunda cinnamomea*), and sphagnum moss (*Sphagnum* spp.).

Significance – Site Importance High (B3) - A significant population of white fringeless orchid (*Platanthera integrilabia*) is located at this site. Listed as state endangered and a candidate for federal listing, white fringeless orchid is considered very rare and local throughout its range (G2G3) and very rare and uncommon within the state (S2S3).

Strategy – Acquisition of properties within and adjacent to the site would provide watershed protection as well as preservation of rare species and their associated habitat.

Land Protection Needs – 2.8 acres at an estimated cost of $14,000.

Potential Partners – TDEC and USFWS.

HARRISON BAY STATE PARK

Location – (N35.1560, W85.1007) Harrison Bay State Park is located in Hamilton County on the shores of Chickamauga Lake near Chattanooga.

Significance - Harrison Bay State Park is a 1,200-acre park located along 40 miles of Chickamauga Lake shoreline that was originally developed as a Tennessee Valley Authority recreation demonstration area in the 1930's by the Civilian Conservation Corp.

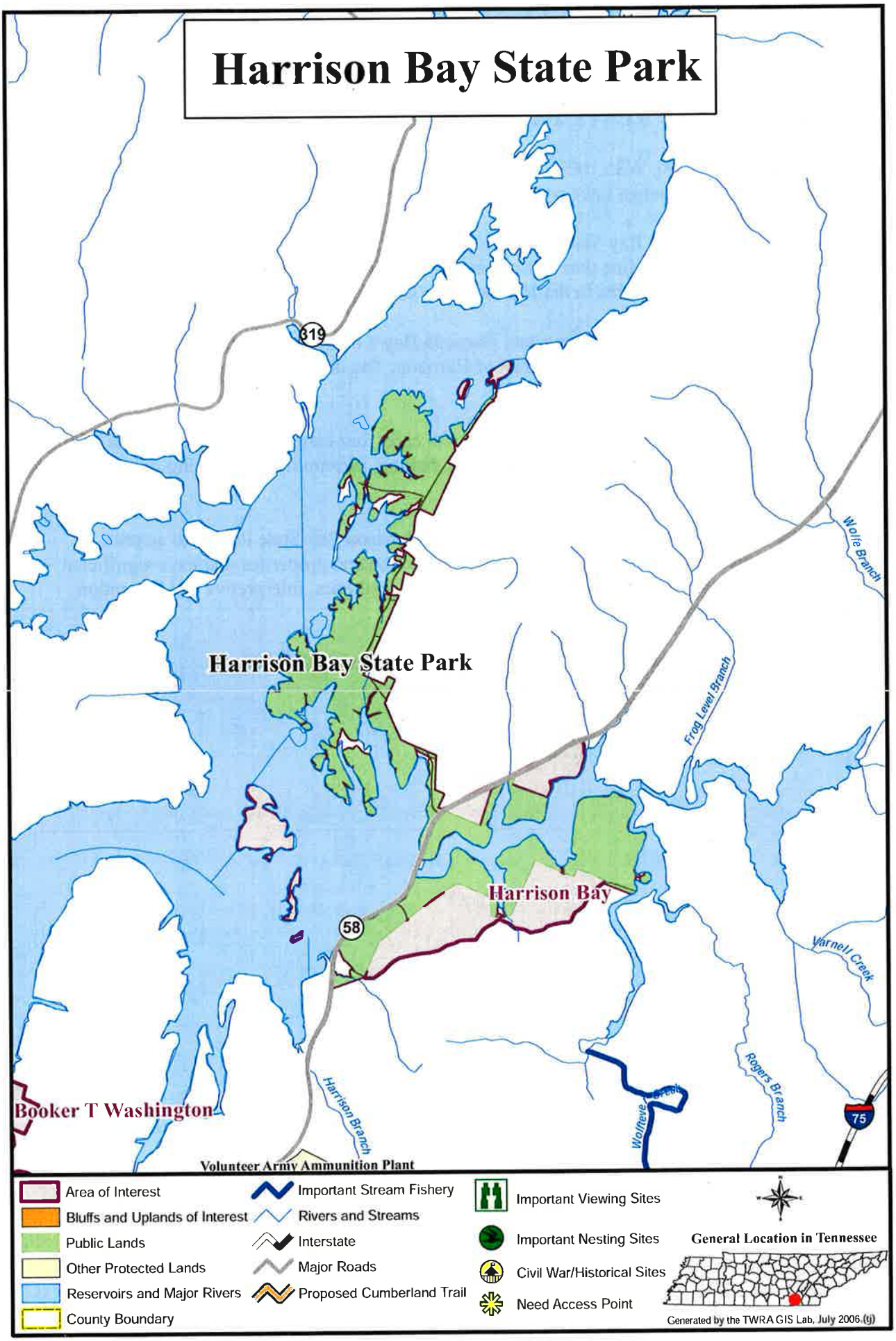
Being the oldest state park in Tennessee, Harrison Bay's name is derived from a large bay of the Tennessee River that covers the old town of Harrison. The original town site was also the last Cherokee campground.

The park provides a fully operational marina with café, four camping areas with a total of 162 sites, a group camp, picnic areas with pavilions, fishing, swimming pool, hiking, bike trails and an 18 hole golf course.

Strategy - The strategy for future acquisitions for Harrison Bay State Park is to acquire properties surrounding the park for watershed protection and properties that have significant cultural and natural features that further the wildlife, aesthetics, interpretive and recreation missions of Harrison Bay State Park.

Land Protection Needs – 344 acres at an estimated cost of $1,200,000.

Potential Partners – TCF and TNC.


Harrison Bay State Park
319
Harrison Bay State Park
Harrison Bay
58
Booker T Washington
Volunteer Army Ammunition Plant
Harrison Branch
Wolfe Branch
Frog Level Branch
Varnell Creek
Rogers Branch
Wolfeye Branch
75
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HAWKINS COVE EAST

Location - (N35.1764, W85.9461) Hawkins Cove East is located on the Cumberland Plateau in Franklin County halfway between Sewanee and Cowan along the south side of Highway Alt. 41. (See Carter Mountain map)

Description - Hawkins Cove East is located adjacent to the 235-acre Hawkins Cove SNA, which was originally acquired by TNC of Tennessee and then sold to the state to protect a population of Cumberland rosinweed (*Silphium brachiatum*). The forest in this area consists mostly of oaks and hickories occurring on a north facing colluvial slope and is second growth. There are a few small limestone outcroppings with cedar barren type vegetation found scattered on the property.

Significance - This area is important because it is adjacent to the SNA and supports more of the same population of Cumberland rosinweed (*Silphium brachiatum*) that is in the natural area. Cumberland Rosinweed is a type of sunflower found only in Tennessee on the Cumberland Plateau. The barrens and openings located here provide the best habitat for the Cumberland Rosinweed. The rosinweed is mostly found on the upper slope terraces, particularly along the ridges.

Strategy - The site conservation for this site includes acquisition of 75 acres to increase further protection of Cumberland rosinweed by protecting more of the population found at this location.

Land Protection Needs - 75.2 acres at an estimated cost of $73,000.

Potential Partners - TDEC.

HICKS GAP SNA

Location – (N35.0478, W85.4433) Hicks Gap is located on the Cumberland Plateau in Marion County between Chattanooga and Powell's Crossroads on Highway 27 (Suck Creek Road) about seven miles northwest of Chattanooga in the Tennessee River Gorge. It is a part of the 26,000-acre Prentice Cooper State Forest and is adjacent to Tennessee River Gorge Trust property known as Kelley's Ferry Slopes..

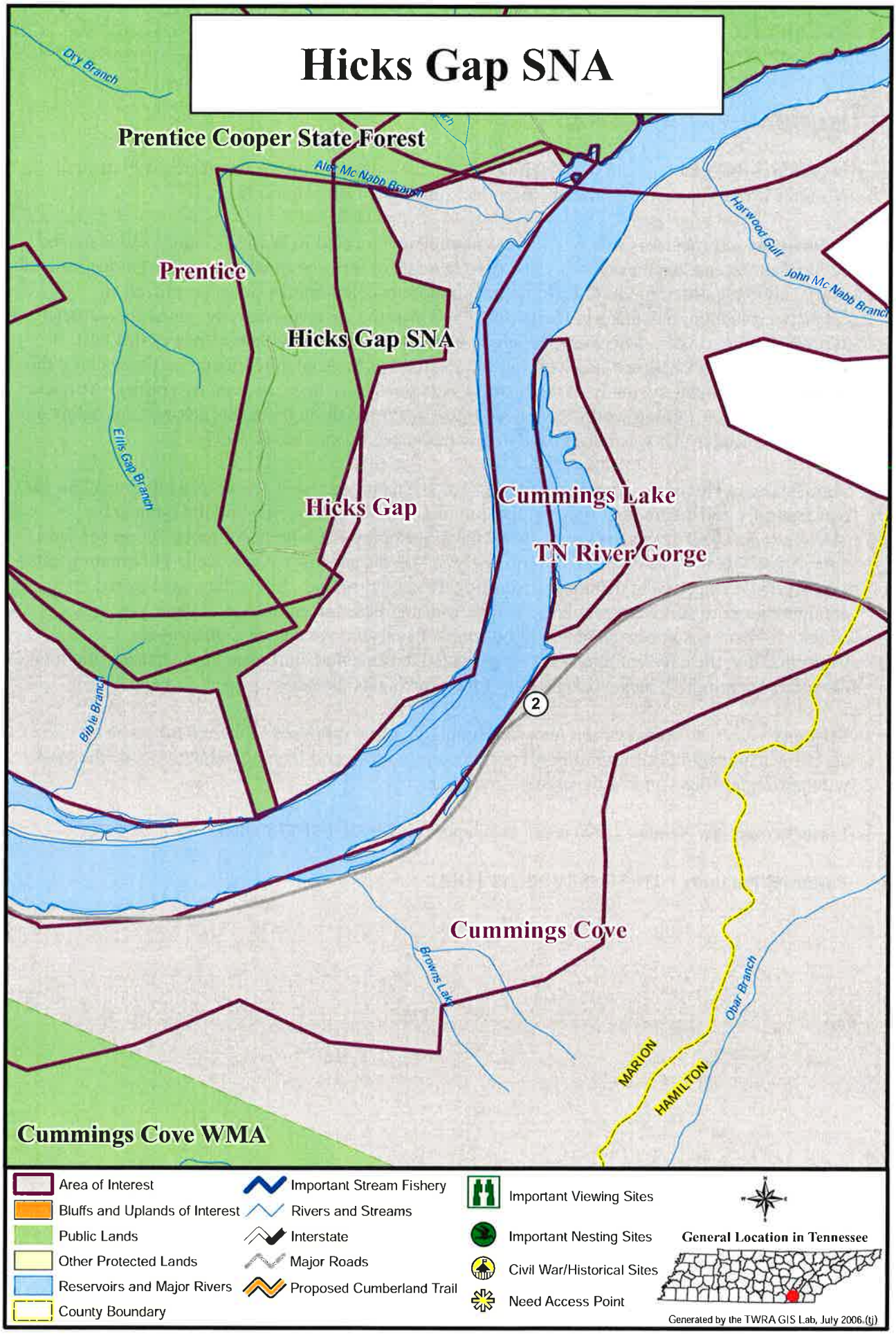
Description - Hick's Gap is a 350-acre natural area that occurs along the slopes of the Cumberland Plateau Escarpment in the Tennessee River Gorge. The upper slopes of Hicks Gap consist of a xeric (dry) to subxeric forest dominated by Virginia and shortleaf pines, with oaks and other hardwoods interspersed. The lower slope contains a mesic oak-hickory hardwood forest where white oak is prevalent. A dry somewhat open condition is optimum habitat for large-flowered skullcap. This area supports the largest known population of the federally threatened large-flowered skullcap (*Scutellaria montana*).

Significance - While Hicks Gap is a small site, it is nested within a large conservation area deep within the biologically rich Tennessee River Gorge. This area was designated because it, combined with Kelly's Ferry Slopes, supports the largest known population of the federally threatened large-flowered skullcap (*Scutellaria montana*). Because of this protection the large flowered skullcap has recently been downlisted under the Federal Endangered Species Act by the USFWS from endangered to threatened. The gorge is also home to many archeological sites dating back as much as 10,000 years.

Strategy - The site conservation plan for Hicks Gaps identifies existing private land for acquisition between The Tennessee River and the State Forest. The plan increases the acreage for the protection for the large flower skullcap to 1,580 acres.

Land Protection Needs – 1,237 acres at an estimated cost of $1,130,000.

Potential Partners - The Tennessee River Gorge Trust, TDA, and TDEC.


Hicks Gap SNA
Prentice Cooper State Forest
Dry Branch
Alex Mc Nabb Branch
Harwood Gulf
John Mc Nabb Branch
Prentice
Hicks Gap SNA
Ellis Gap Branch
Hicks Gap
Cummings Lake
TN River Gorge
Bible Branch
2
Cummings Cove
Browns Lake
Obar Branch
MARION
HAMILTON
Cummings Cove WMA
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HUBBARD'S CAVE SNA

Location – (N35.5481, W85.6744) Hubbard's Cave is located on the Cumberland Plateau in Warren County. It is approximately 10 miles southeast of McMinnville.

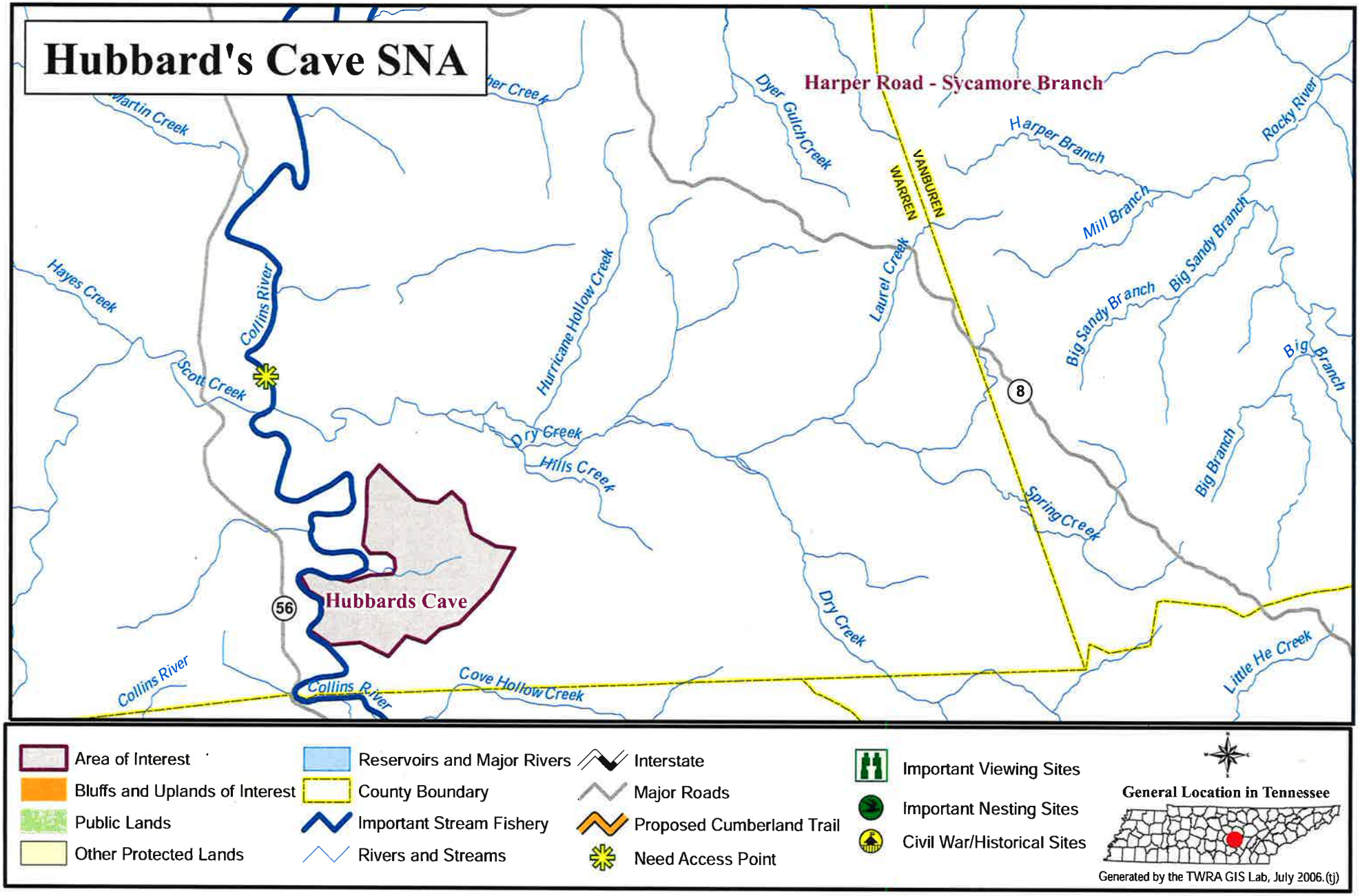
Description - Hubbard's Cave is a 50-acre natural area located in Warren County and is owned by the Tennessee Chapter of TNC. The cave consists of three entrances (branches) at the base of a large sinkhole. In addition to its biological importance, Hubbard's Cave has played an extensive role in human history. During the Civil War the cave was heavily mined for saltpeter to produce gunpowder. The west passage in particular is littered with evidence of this past human use. Researchers are still working to record all of the signatures found on the walls of this passage. Unfortunately, many of the historic signatures have been covered by graffiti. Artifacts from the saltpeter mining works have been found scattered throughout this passage, including a remarkable ladder that was burned and nearly destroyed by vandals in 1997.

Significance - Hubbard's cave is ecologically significant because it serves as a hibernaculum for two federally endangered bat species, the gray bat (*Myotis grisescens*) and the Indiana bat (*Myotis sodalis*). The cave is known to be the largest gray bat hibernaculum in Tennessee with over 100,000 bats observed here. Many other bat species use this cave as well. Hibernating bats are extremely sensitive to disturbance during hibernation period. Since they have stored up just enough energy to survive through the winter, rousing them forces the use of these precious stores. In many instances the bats will be unable to survive the winter if disturbed. Consequently, the cave entrances have been gated to prevent disturbance of the bats during their hibernation period. A mesic oak-hickory forest surrounds the cave.

Strategy - The site conservation plan for Hubbard's Cave proposes to increase the size to 1,252 acres by acquiring the surrounding property that provides good feeding habitat outside the cave with particular focus on nearby streams and rivers.

Land Protection Needs - 1,200 acres at an approximate cost of $750,000.

Potential Partners - TNC , USFWS, and TDEC.


Hubbard's Cave SNA
Harper Road - Sycamore Branch
Martin Creek
Dyer Gulch Creek
Harper Branch
Rocky River
VANBUREN
WARREN
Mill Branch
Big Sandy Branch
Big Sandy Branch
Laurel Creek
Hayes Creek
Collins River
Hurricane Hollow Creek
Scott Creek
8
Big Branch
Dry Creek
Hills Creek
Big Branch
Spring Creek
Hubbards Cave
56
Dry Creek
Collins River
Collins River
Cove Hollow Creek
Little He Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

INDIAN MOUNTAIN STATE PARK

Location – (N36.5865, W84.1474) Indian Mountain State park is located in Campbell County in the City of Jellico. (See Upper Cumberland map)

Significance - Indian Mountain State Park is a multi-use, approximately 200 acre park in Campbell County near Tennessee's northern boundary. It serves as a living demonstration of how good environmental practices can reclaim wasteland and convert it to beneficial use. The park is on the site of a reclaimed coal strip mine. Visitors to the park are likely to see geese, ducks, beaver, blue herons, and deer.

The park has a 47 site modern campground and serves both tent and RV campers. The park also has three hiking trails, picnic pavilions and a swimming pool.

Strategy - The strategy for future acquisitions for Indian Mountain State Park is to acquire in-holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive and recreation missions of Indian Mountain State Park.

Land Protection Needs – 264 acres at an estimated cost of $530,000.

Potential Partners - TCF, TNC, and TDEC.

ISSAC SPRINGS POND

Location - (N35.5218, W85.5908) Issac Springs Pond is located in Grundy County about 1.1 miles southeast of the junction of Grundy, Sequatchie, and Warren Counties along an old logging road paralleling the Grundy-Sequatchie Co. line. (See Savage Gulf map)

Description - Site is about 19 acres of swampy forest and an open water pond near the headwaters of a small unnamed creek entering Dry Creek Gulch. A dense stand of alder surrounds the pond, making it difficult to reach. The area was logged and grubbed in the spring of 2000 and replanted in the fall 2000.

Significance - Site Importance High (B3) - The forest at the site is comprised of red maple, black gum, and sourwood. The site is surrounded by a clearcut. A population of the state endangered white fringeless orchid is known from Issac Springs Pond with as many as 200-300 flowering individuals. The white fringeless orchid is a candidate for listing with the USFWS meaning sufficient information exists to list at the federal level. The site needs reevaluation to determine if the white fringeless orchid still exist and to determine how logging has affected the site.

Strategy - The strategy for acquisition at Issac Springs Pond is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 20 acres at an approximate cost of $19,000.

Potential Partners - TWRA, TDEC, USFWS, Forest Legacy, and TNC.

LAUREL SNOW SNA

Location – (N35.5383, W85.0320) Laurel Snow SNA is located on the Cumberland Plateau in Rhea County north of Dayton. It is accessed via Highway 27/29.

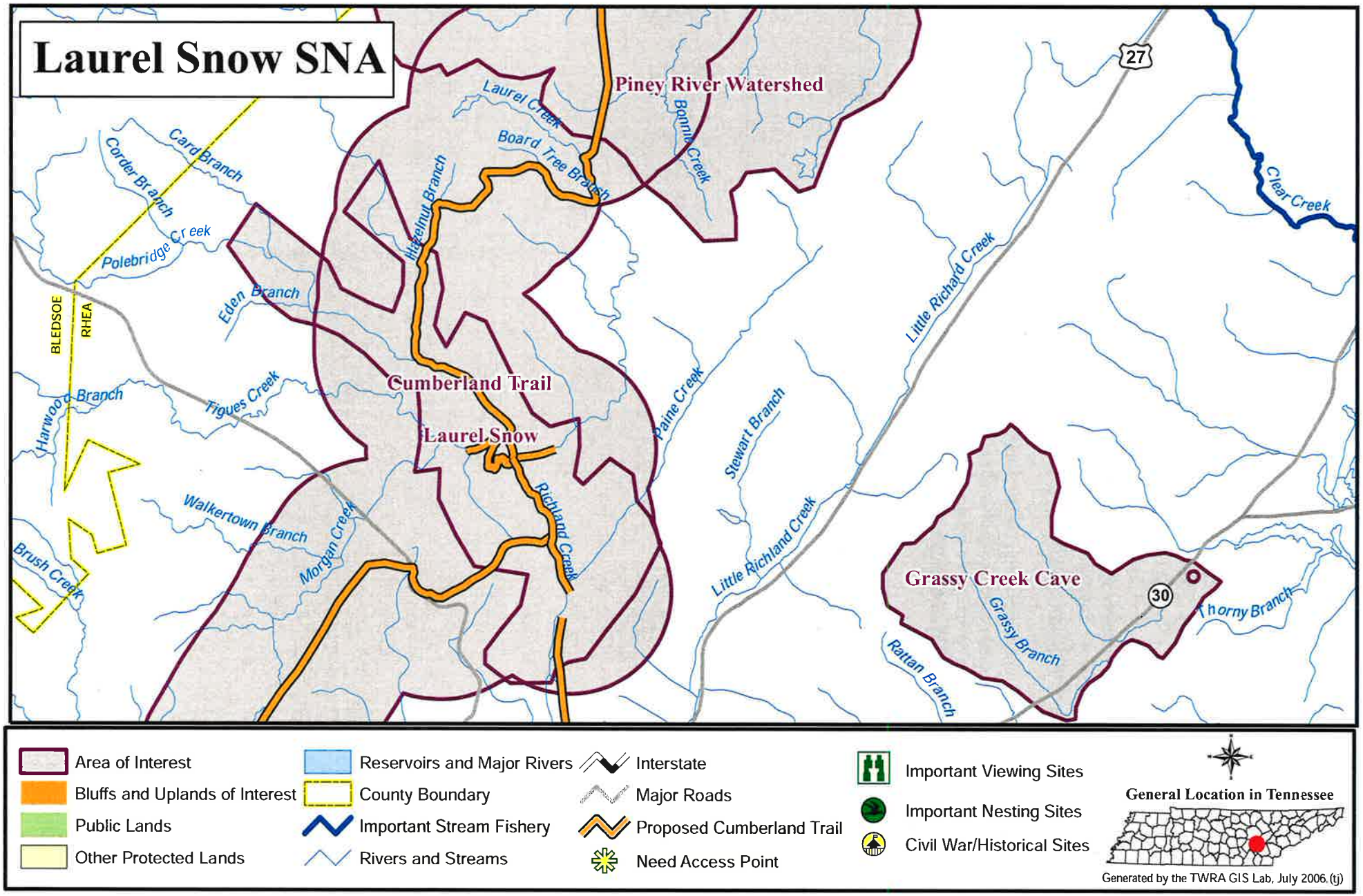
Description - Laurel Snow is a 710-acre natural area owned and managed by Bowater Incorporated. The natural area contains a section of gorge deeply cut into Walden Ridge of the Cumberland Plateau by Morgan, Henderson, Laurel, and Richland Creeks. The site is named after two scenic waterfalls, Laurel Falls (80 feet) and Snow Falls (35 feet).

Significance - Laurel Snow Pocket Wilderness Area features scenic creeks, overlooks, steep gorges, geologic features, a small stand of virgin timber, and a wide variety of plants and animals. Splendid views of gorges and Ridge and Valley landscapes can be seen from Snake Head and Buzzard Points.

Strategy - The site conservation plan proposes to acquire Laurel Snow from Bowater.

Land Protection Needs - 710 acres at an estimated cost of $645,000.

Potential Partners – TDEC and Bowater Incorporated.


Laurel Snow SNA
Piney River Watershed
Laurel Creek
Board Tree Branch
Bonnie Creek
Hickory Nut Branch
Card Branch
Corder Branch
Polebridge Creek
Eden Branch
BLEDSOE
RHEA
Harwood Branch
Tigues Creek
Cumberland Trail
Laurel Snow
Walkertown Branch
Morgan Creek
Brush Creek
Richland Creek
Paine Creek
Stewart Branch
Little Richland Creek
Little Richard Creek
Clear Creek
27
Grassy Creek Cave
30
Thorny Branch
Grassy Branch
Rattan Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LEE FARM

Location – (N35.4198, W85.6876) Lee Farm is located in Grundy County on a small tributary of Big Creek just south of Savage Gulf and southeast of Altamont. (See Savage Gulf map)

Description – This 55 acre site encompasses a wooded riparian leave strip (stream buffer zone) surrounded by a clear-cut. The forested area of the stream provides habitat for the white fringeless orchid (*Platanthera integrilabia*).

Significance – Site Importance High (B3) - A significant population of white fringeless orchid (*Platanthera integrilabia*) is located at this site. Plants are scattered over ¼ mile up the draw. Listed as state endangered and a candidate for federal listing, white fringeless orchid is considered very rare and local throughout its range (G2G3) and very rare and uncommon within the state (S2S3).

Strategy – Acquisition of properties within and adjacent to the site would provide watershed protection as well as preservation of rare species and their associated habitat.

Land Protection Needs - 56 acres at an estimated cost of $47,000.

Potential Partners – TDEC and TDA.

LEES STATION ROAD BARRENS

Location - (N35.5498, W85.2545) This 3.5 acre site is located in Bledsoe County about 0.5 miles south of the Lees Station Community and 0.7 miles north of Pemberton Branch. It lies between Hwy 127 and Nashville, Chattanooga and St. Louis Railroad. (See Scotts Gulf map)

Description - The property is estimated at 3.5 acres of flat to undulating limestone barrens dominated by little bluestem which appears to be mowed annually.

Significance - Site Importance Moderate (B4) - The site is a good example of a limestone barrens at the base of the eastern escarpment of the Cumberland Plateau with moderate (B4) biodiversity significance. The barrens are dominated by little blue stem but includes other species such as stiff goldenrod and big blue stem. Rare plants found on the site are the state endangered, earleaved false foxglove (*Agalinus auriculata*) and state rare naked-stem sunflower (*Helianthus occidentalis*). Both species are considered very rare and imperiled within the state of Tennessee.

Strategy -The strategy for acquisition at Lees Station Road Barrens is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 4 acres at an estimated cost of $8,000.

Potential Partners - TDOT, TDEC, TNC, and Bledsoe County Government

LONE MOUNTAIN STATE FOREST

Location: – (N36.0511, W84.5697) Lone Mountain is located in Morgan County along the Emory River near the community of Mossy Grove and Catoosa WMA.

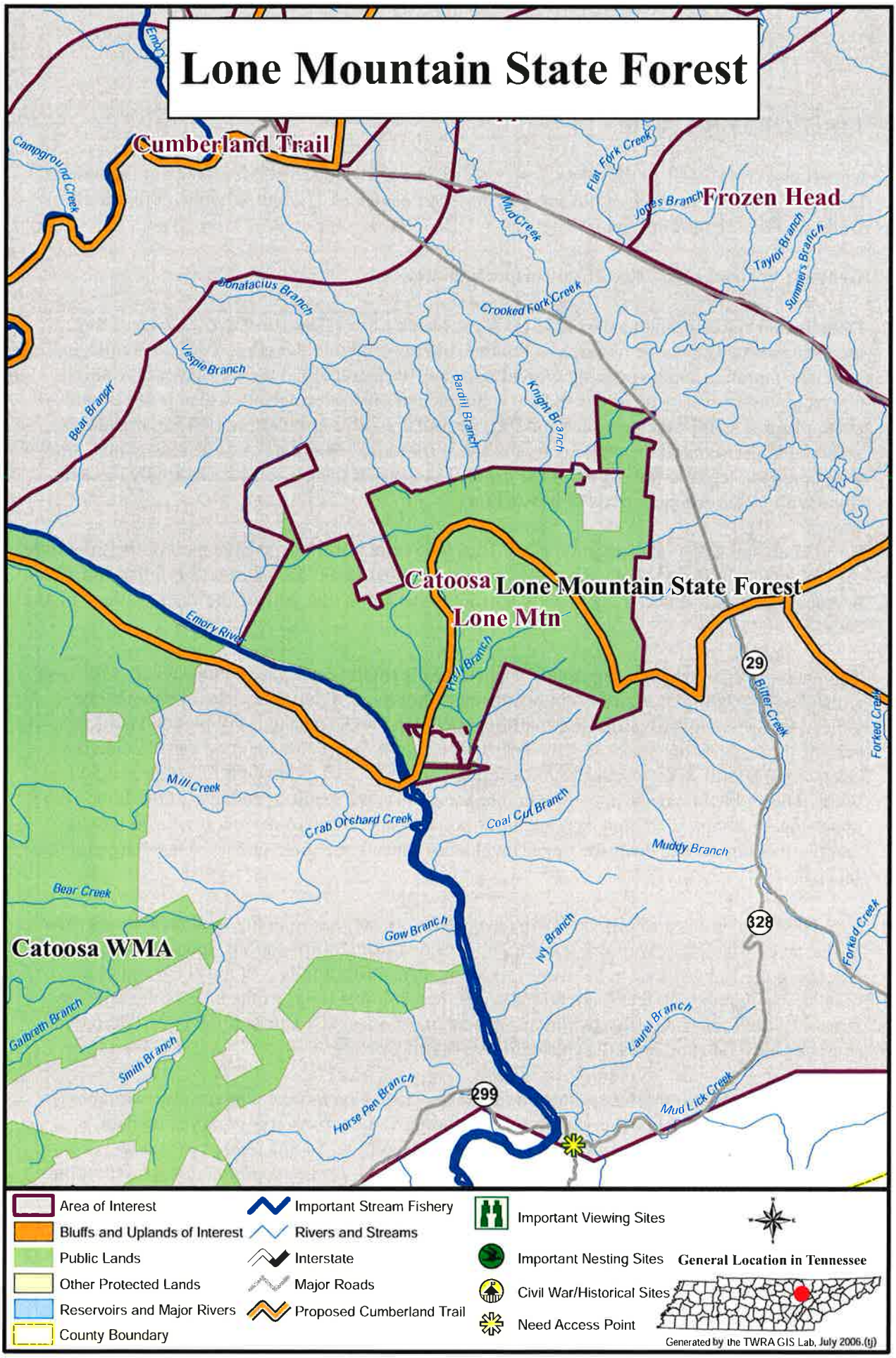
Description - Lone Mountain State Forest - (3,597 acres)
Lands for the Forest were acquired through a tax delinquency sale from the Morgan County Chancery Court in 1939 and through a donation by Lone Mountain Land Company in 1938. The Forest was known as the Lone Mountain Section of Morgan State Forest until 1970 when Morgan State Forest became part of the Division of State Parks and Lone Mountain became a separate State Forest. The Forest is located in the Cumberland Plateau and Mountains physiographic province in Morgan County. Forest types consist of 1,974 acres of upland hardwoods, 877 acres of mixed hardwood-pine, and 804 acres of pine. Little timber management has taken place because of the under stocked nature of the stands and repeated southern pine beetle damage.

Significance – Lone Mountain is adjacent to Catoosa WMA and borders the Emory River, identified by TWRA as an aquatic conservation zone. Lone Mountain proper is an outlying parcel of the Cumberland Mountains and is heavily utilized for recreation and forestry demonstrations.

State Forest Strategy – In-holdings and forest access, gaining it or controlling it, are the primary criteria for acquisitions.

Land Protection Needs – 402 acres at an estimated cost of $566,400

Potential Partners – Unknown


Lone Mountain State Forest
Cumberland Trail
Campground Creek
Flat Fork Creek
Jones Branch
Frozen Head
Mud Creek
Taylor Branch
Summers Branch
Bonafacius Branch
Crooked Fork Creek
Vespie Branch
Bear Branch
Bardill Branch
Knight Branch
Catoosa
Lone Mountain State Forest
Lone Mtn
Emory River
Hall Branch
29
Bitter Creek
Forked Creek
Mill Creek
Crab Orchard Creek
Coal Cut Branch
Muddy Branch
Bear Creek
Catoosa WMA
Gow Branch
Ivy Branch
328
Forked Creek
Galbreth Branch
Smith Branch
Laurel Branch
Horse Pen Branch
299
Mud Lick Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LOST CREEK CAVE

Location – (N35.8419, W85.3608) Lost Creek Cave is located in White County at the base of a huge sink a half-mile south of the submergence of Lost Creek, 2.1 miles north-northeast of Dodson. (See Scotts Gulf map)

Geologic horizon - Ste. Genevieve-Gasper limestone

Description – According to Barr (1961): "Lost Creek Cave ("Dodson Cave") is one of the largest caves in Tennessee in terms of volume, although its total length is less than a mile and a half. The mouth is a huge opening 60 feet wide and 40 feet high, at the east side of the sink. Opposite, on the west side of the sink, is a spectacular 60-foot waterfall, which is fed by the stream from a small cave near the top. The stream falls into a circular pool 40 feet in diameter, and around the walls of the pool are a number of solutional openings. A wide stream bed, strewn with boulders, leads to the mouth of the cave. The floor of the entire sink reportedly has been filled with water during periods of heavy rain.

Lost Creek sinks at an elevation of 1,240 feet, 0.65 mile north of the cave mouth. It is possible that its stream emerges from the cave at the top of the sink, flows over the falls, and sinks, perhaps being encountered again in a 40-foot waterfall at the end of the main gallery of the cave.

The main passage, which is horseshoe-shaped, heads southwest at the mouth, swings 130° over a distance of 2,000 feet and runs almost due north for the last 500 feet. Near the mouth the gallery slants downward gradually; the floor is covered with sandstone cobbles and boulders, and the dimensions are about 40 feet wide and 15 feet high. A few hundred yards inside the cave a high lateral gallery opens to the left near the top of a vast dome 80 feet high and 50 feet wide. The sudden increase in ceiling height probably is the result of collapse of the floor of the upper-level passage. The high passage leads into a system of galleries totaling 1,800 feet in length. It is possible to enter the upper level, pass beneath the main gallery, and emerge on the far side.

At 2,000 feet there is a fork in the main cave, both forks rejoining in the final breakdown room of the cave. The left, lower fork has a number of confusing ramifications, most of which emerge in the right fork or in the waterfall room. The 40-foot falls is at the north end of a breakdown chamber 40 feet high, 60 feet wide, and 250 feet long. At the base of the falls the stream flows into a side passage and disappears under a ledge." Currently over 21,000 feet of passages have been mapped (Tennessee Cave Survey, 2002).

Significance – Site Importance Outstanding (B1) - Lost Creek Cave contains a remarkable assemblage of cave-obligate invertebrates, including *Triacanthella copelandi* (Copeland's springtail, S1), *Kleptochthonius daemonius* (pseudoscorpion, S1S2), *Scoterpes ventus* (millipede, S1S2), *Aloconota diversiseta* (rove beetle, S1), *Pseudanophthalmus* sp. (Rumbling Falls Cave beetle, S1), *Litocampa* sp. (Rumbling Falls Cave dipluran, S1), *Trechus cumberlandus* (Cumberland ground beetle, S2), *Stygobromus* sp. (Swamp River Cave amphipod, S1), and *Orconectes australis* (cave crayfish, S3) (Lewis, 2002). The cave is also

home to a winter roost of a small number of Indiana bats (*Myotis sodalis*, S1), which are state/federally endangered, with 41 bats counted during winter 2001-02 (Harvey, 2002).

Strategy – The entrance and adjoining sinkhole should be acquired and added to the nearby Bridgestone/Firestone Centennial Wilderness. Access to the cave should be monitored for impacts or abuse.

Land Protection Needs - 3.1 acres at an estimated cost of $9,000.

Potential Partners – TNC, TWRA, Tennessee Cave Survey, and TDEC.

MAGENDANZ FALLS

Location – (N36.3628, W84.8890) Magendanz Falls is located on the Cumberland Plateau in Fentress County only a few miles south of Allardt. (See Colditz Cove SNA map).

Description - Magendanz Falls Registered SNA is a 40 foot falls on a 16-acre site where Long Creek cuts through sandstone cap rock shortly before its confluence with Crooked Creek. The falls is not regarded for a spectacular drop but noteworthy for the plants that grow on the dripping edges and its scenic seclusion, as it is surrounded by a rhododendron slick.

Significance - Site Importance Moderate (B4) - The most notable plant reported growing here is the insectivorous round-leaved sundew (*Drosera rotundifolia*), which is known to occur in Blue Ridge Mountains at high elevations and is state threatened. Another disjunct plant from the Blue Ridge Mountains that occurs here is the sedge (*Carex prasina*). These plants, along with the orchids tuberous grass pink (*Calopogon puchelleus)* and rose pogonia (*Pogonia ophioglossoides)* which is state endangered, grow here as well.

Strategy - The site conservation of this area requires the purchase of this area for the protection of this small ledge bog community.

Land Protection Needs - 16.5 acres at an estimated cost of $41,000.

Potential Partners – TDEC and TPGF.

MARION COUNTY SINKHOLE

Location – (N35.0125, W85.7408) This small site is near the town of South Pittsburg in Marion county along Poplar Spring Branch approximately 0.4 miles from the Richard City limit.

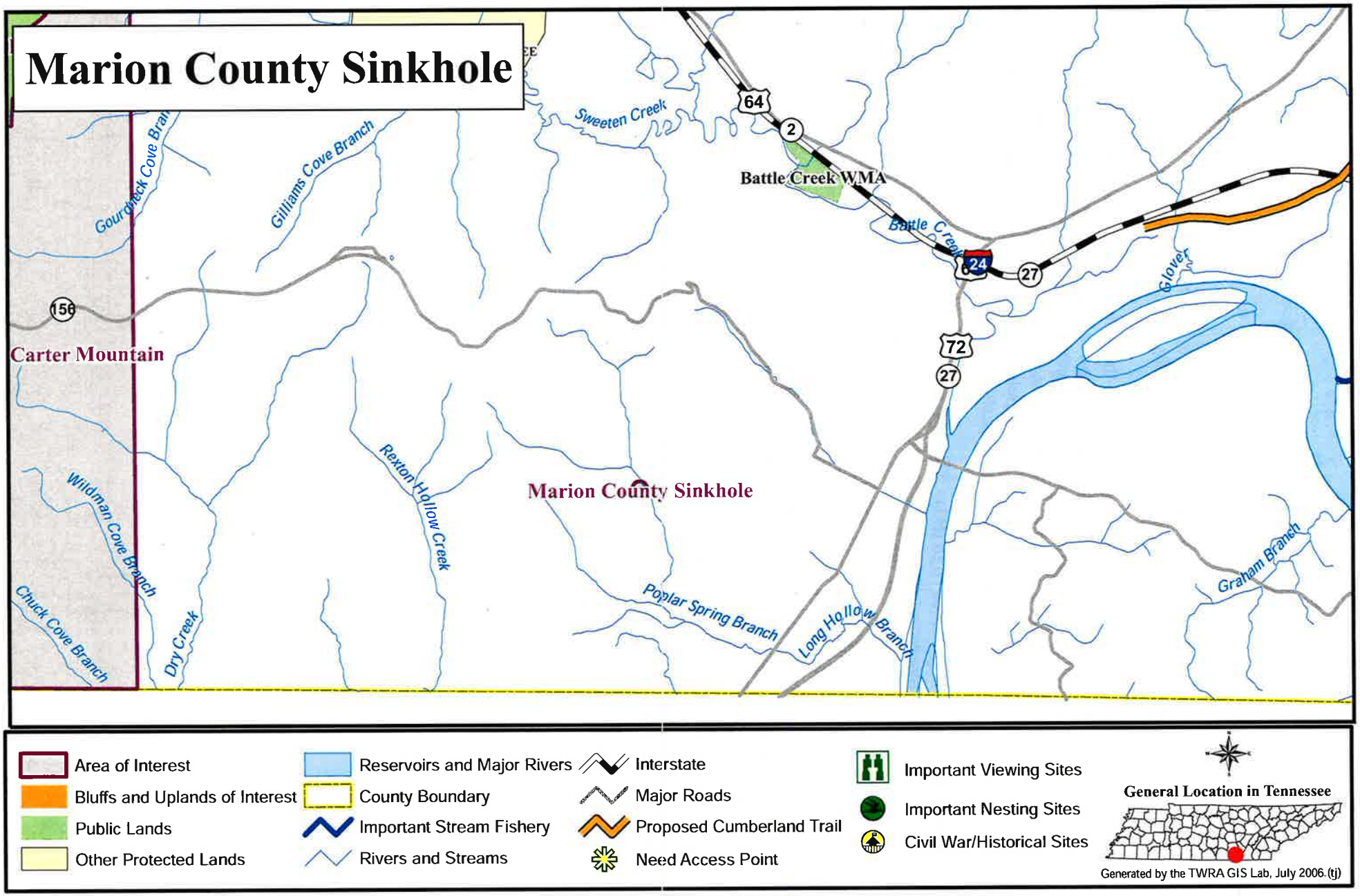
Description – This approximately 8.0 acre site protects the mouth of Poplar Spring Pit that harbors a population of a federally threatened fern. The pit is located just upslope from Poplar Spring Branch on a hardwood-forested slope of a Cumberland Plateau cove. A small ephemeral stream flows into the pit over a cascading waterfall. The cool air and mist from the waterfall creates a microhabitat that supports the small fern population and other herbaceous plants that form a lush groundcover around the pit and on rock shelves below.

Significance – Site Importance High (B3) - The American Hart's-tongue Fern (*Asplenium scolopendrium* var. *americanum*) is federally threatened and state endangered, and is considered very rare and local throughout its range (G4T3) and extremely rare and critically imperiled within the state (S1). This is the only known extant site in the state, and one of only three known sites in the Southeast United States.

Strategy – A Recovery Land Acquisition grant(s) from the USFWS could be obtained to purchase tract(s) of land where Federal Listed species and associated habitat are known. Matching funds from the State Land Acquisition Fund would be necessary.

Land Protection Needs - 8 acres at an estimated cost of $13,000.

Potential Partners – Southeastern Cave Conservancy, TNC, South Cumberland Regional Land Trust, and TDEC.


Marion County Sinkhole
Sweeten Creek
Gilliams Cove Branch
Battle Creek WMA
64
2
24
27
72
Glover
156
Carter Mountain
Marion County Sinkhole
Rexton Hollow Creek
Wildman Cove Branch
Chuck Cove Branch
Dry Creek
Poplar Spring Branch
Long Hollow Branch
Graham Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MEADOW CREEK SEEP

Location - (N35.4549, W85.5485) This estimated 7.8 acre site is in Grundy County north of Hwy 399 past Savage Gulf SNA. (See Savage Gulf map).

Description - The property consists of an upland stream head seep community, which was recently converted to a pine plantation.

Significance - Site Importance Very High (B2) - The stream head seep community has been converted to pine, however the pines are not growing well in the seep. The presence of the state endangered white fringeless orchid (*Platanthera integrilabia*) has benefited from the recent removal of forest canopy. The white fringeless orchid is listed as a federal candidate by the USFWS meaning sufficient information on biological vulnerability exists to support federal listing. Other species present but not rare include cardinal flower (*Lobelia cardinalis*), water hemlock (*Cicuta maculata*) and yellow fringed orchid (*Platanthera ciliaris*). The site has a very high importance (B2). There has been a dramatic decline in number or plants between 1997 and 2000, presumably from thick herbaceous cover. The population numbers at this site have been as high as 1000 flowering plants.

Strategy - The strategy for acquisition at Meadow Creek Seep is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs - 7.8 acres at an estimated cost of $13,000.

Potential Partners- TDEC, TWRA, and TNC.

MEASLES GULF CAVE

Location – (N35.7053, W85.5306) Measles Gulf Cave is on the east side of Baker Mountain, in Marion County 1.6 miles east and slightly north of Grove Point, and 1.3 miles northeast of Highland Church, at an elevation of 1,370 feet.

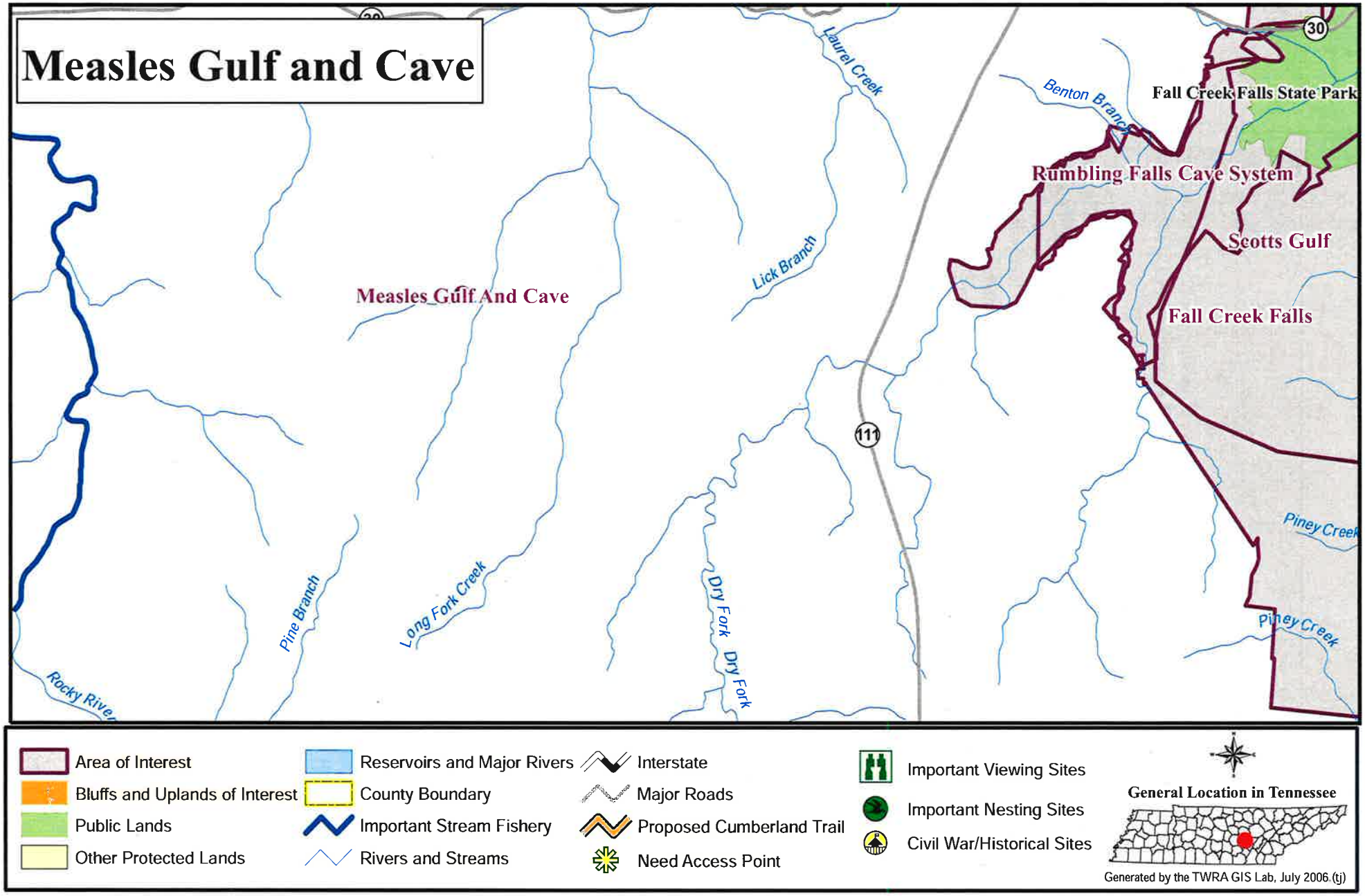
Description – (Geologic horizon - Bangor limestone) - According to Matthews (1971): "The entrance is in the woods at the northeast edge of a field. It is 6 feet high ad 25 feet wide. The floor slopes downward until the passage is 40 feet high and 25 feet wide. This passage extends northeast with these dimensions for 800 feet, at which point the cave ends in a breakdown. Near the entrance is the cast of a saltpeter vat. A stream flowing southwest enters and leaves the cave along the southeast wall. A 20-foot pit about 200 feet from the end of the cave may open into a lower level but was not explored. Another cast of a saltpeter vat is near this small pit. Tally marks were noted on the walls in the vicinity of both of these vats. A small colony of bats was roosting about midway through the cave.

Significance – Site Importance Moderate (B4) - Measles Gulf Cave is a winter roost for *Corynorhinus rafinesquii* (eastern big-eared bat, S3, deemed in-need-of-management). The estimated size of the colony has varied from 100-300 bats, with 100 big-eared bats observed as late as March 2002. This colony has been regarded as one of the largest in Tennessee for ten years, as *C. rafinesquii* is generally found in much lower numbers in both summer and winter roosts (< 50 individuals). A winter roost of this size is particularly significant, in part because this is a time during which the bats are most susceptible to disturbance.

Strategy – Due to the vulnerability of bat winter roosts to disturbance, the cave mouth and a reasonable portion of adjoining Measles Gulf should be acquired and protected. A forested buffer should be maintained around the cave. Any abandoned buildings, barns, etc. obtained in the acquisition of this site should be protected and stabilized as potential big-eared bat summer roosts.

Land Protection Needs – 4.1 acres at an estimated cost of $8,000.

Potential Partners – TDEC, TWRA, TNC, and Mr. Doug Malone (McMinnville).


Measles Gulf and Cave
Measles Gulf And Cave
Laurel Creek
Lick Branch
Benton Branch
Fall Creek Falls State Park
Rumbling Falls Cave System
Scotts Gulf
Fall Creek Falls
Piney Creek
Piney Creek
Pine Branch
Long Fork Creek
Dry Fork
Dry Fork
Rocky River
30
111
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MEREDITH CAVE

Location – (N36.3389, W84.0403) Meredith Cave is located in Campbell County 0.25 miles north and slightly west of Shanghai Boat Dock, 6 miles southeast of LaFollette, at an elevation of 1,210 feet. (See Upper Cumberland map)

Description - According to Barr (1961): "Meredith Cave, also known as Saltpeter Cave, is one of the largest known caves in East Tennessee. It is a long, winding and branching cave. The entrance is a semicircular opening 40 feet wide and 12 feet high. Immediately back of the entrance is a spacious room about 190 feet long and from 40 to 60 feet wide. Back of this, most of the cave is much narrower. The combined length of all the penetrable passages is at least 5,149 feet. The average width for the entire cave is about 25 feet. The ceiling is unusually high, probably averaging between 60 and 70 feet. Most of the floor is dry and level. However, in a few places dripping water keeps it wet and in places it is necessary to progress up or down steep slopes."

Several formations are present in Meredith Cave, and many are still actively developing. Most of the deposits are black in color, as a result of natural staining. During the Civil War the earth on the floor of the cave was worked extensively for nitrates. The remnants of several wooden troughs and hoppers are still in the cave. Wagon tracks and markings where the walls were scratched by wagon wheels are still to be seen in the cave several hundred feet back of the entrance. Numerous white chalk-like deposits occur in the drier portions of the cave.

In 1929 the cave was being used by the entire community as a storage place for fruits and vegetables. In the dry places, such perishable farm products as sweet potatoes are said to keep from year to year. Several stairways were constructed in Meredith Cave about 30 years ago in an attempt to develop it as an attraction. These are now rotten and unsafe.

Archaeological investigations in Meredith Cave conducted by Webb (1938) revealed 13 burials near the entrance. Ash and midden debris were found to a distance of 600 feet from the mouth, and some pottery and bone instruments were uncovered."

Significance – Site Importance High (B2) - Meredith Cave was once believed to be a roost site for both gray (*Myotis grisescens*) and Indiana bats (*M. sodalis*)(S1 and S2 respectively). Neither species has been documented in recent surveys (Harvey, 2002). The cave is however the only known location of *Pseudanophthalmus sidus* (Meredith Cave beetle, S1), a cave-obligate species last reported in 1965. The gray bat also may be using the site as a migratory stopover roost at times when few surveys are conducted.

Strategy – Following successful re-inventory for *P. sidus*, the cave should be monitored for excessive visitation, and the cave and an immediate area should be protected.

Land Protection Needs – 6.9 acres at an estimated cost of $24,750.

Potential Partners – TDEC, TNC, TVA, TWRA, and USFWS.

MILL CAVE

Location – (N35.8558, W84.9269) Mill Cave is 1.0 mile north-northwest of Grassy Cove community in Cumberland County, 2,000 feet west of Hwy. 68, at the foot of Brady Mountain, at an elevation of 1,550 feet. (See Brady Mountain map)

Description – (Geologic horizon - Ste. Genevieve-Gasper limestone) - According to Barr (1961): "Mill Cave is one of the largest caves in Middle Tennessee and is popularly supposed to be the headwaters of Sequatchie River, 7.5 miles to the southwest and 390 feet lower in elevation. It is possible that its stream emerges in Devilstep Hollow. The entire drainage from Grassy Cove, including the stream from Bristow Cave, flows into the mouth and through the cave.

The main entrance is 30 feet wide and 10 feet high. A passage 15 to 20 feet high and 30 feet wide runs westward for 3,500 feet to the second entrance, which is 8 feet high and 25 feet wide and opens high above the stream. Beyond the second entrance the cave continues with much larger dimensions-80 feet wide and 75 feet high. It was explored for another 3,600 feet, through two extensive breakdowns. The stream has rapids in many places, and huge boulders covered with a thin, wet film of silt make progress very difficult."

Significance - Site Importance High (B3) - Mill Cave is one of three known locations for the cave-obligate *Pseudanophthalmus jonesi* (Grassy Cove Cave beetle, S1S2). Though the species has not been reported there since it was described in the 1940s, this may be an artifact of limited sampling. The cave also is a notable geologic and hydrologic resource, as it drains the entirety of Grassy Cove, a National Natural Landmark.

Strategy – Following successful re-inventory for *P. jonesi*, the cave should be monitored for excessive visitation and for water quality, and as appropriate, the cave and an immediate buffer area should be acquired and protected.

Land Protection Needs - 5 acres at an estimated cost of $13,000

Potential Partners – TNC, TWRA, and TDEC

MILL CREEK HEMLOCK FOREST

Location – (N36.3006, W85.4761) Site is approximately 12 miles north of Cookeville in Putnam and Overton Counties, west of State Highway 136. (See Roaring River map)

Description – This site is approximately 80 acres and is located on the Highland Rim of the Cumberland Plateau. This mature forested tract occurs along the slopes of Mill Creek which flows north over Ordivician limestone into the Spring Creek State Scenic River. Eastern hemlock (*Tsuga canadensis*) dominates the slopes. Other trees and shrubs include tulip poplar, hop hornbeam, mountain laurel, dogwood, sourwood, big leaf magnolia, umbrella magnolia, spicebush, American beech, red maple, mountain stewardia, strawberry bush, and various oaks and hickories.

Significance – Site Importance Moderate (B4) - During her review of sites recommended for potential natural landmarks, Keever (1971) indicated that the Mill Creek slopes contain the best example of a semi-virgin hemlock forest on the Highland Rim of the Cumberland Plateau. Eastern hemlock is much more abundant on the Plateau proper and the Mill Creek site also contains other species more common further east such as arrow wood (*Viburnum dentatum*) and big leaf magnolia (*Magnolia macrophylla*).

The hemlock forests in the eastern United States are threatened from the hemlock woolly adelgid, a small aphid-like insect from Asia. Since this pest is now in East Tennessee, the Mill Creek slopes could act as a refuge for the hemlock since it located further west than most hemlock stands in the state.

Since this site is adjacent to Spring Creek, its protection would only enhance the beauty and protection of the scenic river.

Strategy – Forest legacy funding could be used for site protection.

Land Protection Needs - 82.6 acres at an estimated cost of $225,000.

Potential Partners – TDA, TNC, and TDEC.

References – Keever, Catherine. 1971. A study of the mixed mesophytic, and oak chestnut regions of the eastern deciduous forest including a review of the vegetation and sites recommended as potential natural landmarks. Prepared for the National Park Service.

MINGO SWAMP WMA

Location – (N35.1595, W86.2147) The Mingo Swamp lies between Hwys 50 and 64, north of the community of Belvedere and six miles west of Winchester in Franklin County.

Description - Mingo Swamp is a large karst fen surrounded by a low rim 20-50 feet high, enclosing a drainage basin of about four square miles. The soil is extremely impermeable and water remains in the swamp for most of the winter and into early spring. Mingo Pond is the only semi-permanent open water within the swamp and has a great diversity of plant species. The core of the swamp is a willow and water oak swamp with very little plant diversity. Higher sites are predominately willow, white, and red oaks, red maple and ash stands with a diverse plant understory. Past and current use is agricultural with some harvesting of timber.

Significance - Mingo Swamp is representative of a vanishing ecosystem once common on the Interior Low Plateaus. It is of national significance ecologically and geologically. In a 1978 publication, Mingo Swamp was recommended as a National Natural Landmark by Dr. Elsie Quarterman and R. L. Powell. It is regarded as the largest undrained karst fen in the Interior Low Plateaus. It is one of the last oak swamps remaining in this area. It is one of only four sites in Tennessee and one of approximately 15 in the Southeast that contains a late glacial pollen record which can provide critical information concerning the biota and climate of the Middle Tennessee area over the past several thousand years.

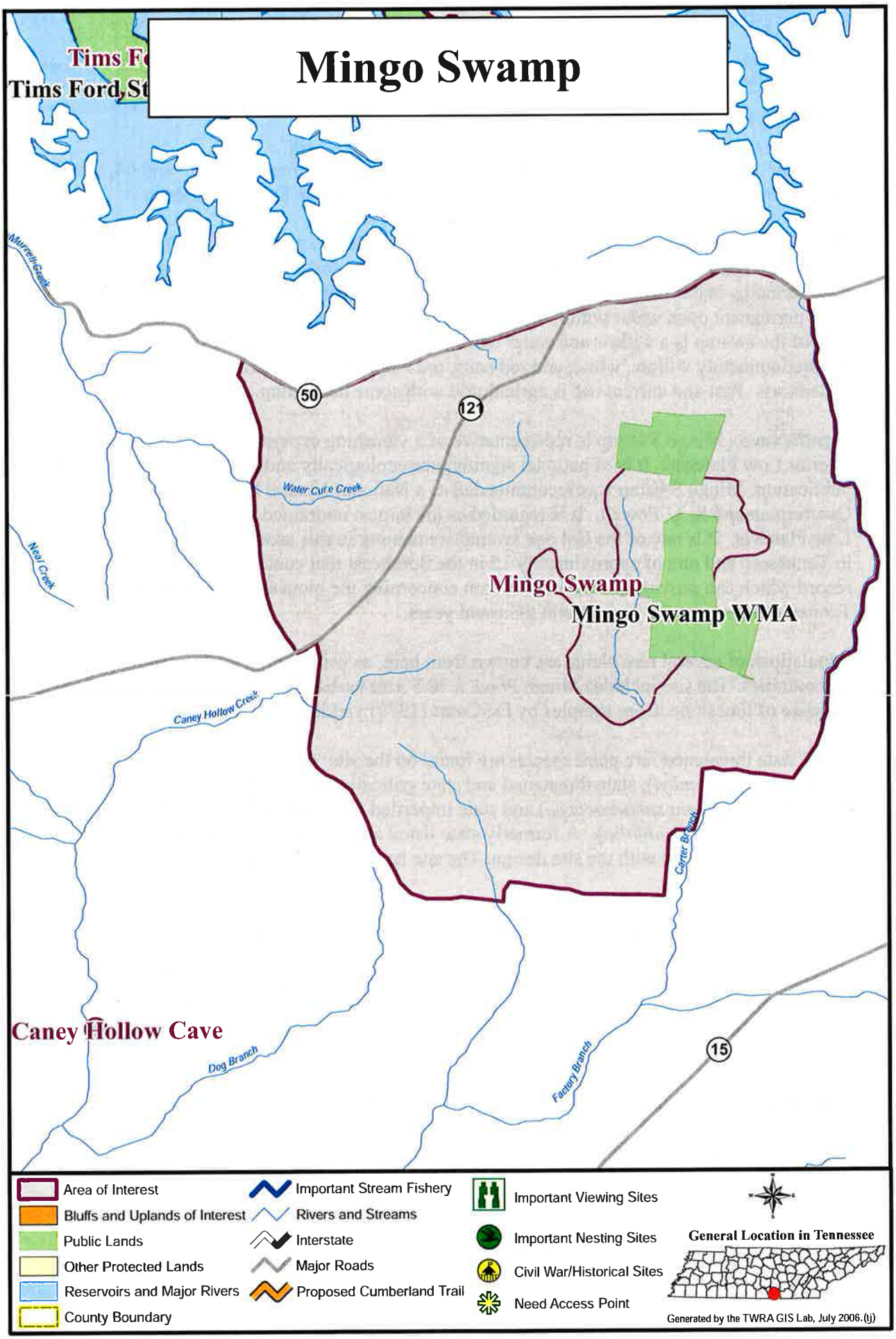
Populations of several rare plants are known from here, as well as high quality natural communities. The site includes Mingo Pond, a 38.5 acre herbaceous marsh feature formed by the collapse of limestone. Core samples by DelCourt (1979) yielded sediments 14,000 years in age.

Three state threatened rare plant species are found on the site: the state imperiled (S2S3) Canby's lobelia (*Lobelia canbyi*), state threatened and state critically imperiled (S1) globe fruit false loosestrife (*Ludwigia sphaerocarpa*) and state imperiled (S2)wide-leaved yellow-eyed grass (*Xyris laxifolia* var. *iridifolia*). A formerly state listed animal, mole salamander (*Ambystoma talpoideum*) is located with the site design. The site has a high (B3) biodiversity significance in Tennessee.

The project area provides many different avian habitats and is a biodiverse ecosystem. Species such as common snipe, swamp sparrow, hooded warbler, Swainson's warbler, prothonotary warbler, white-eyed vireo, blue grosbeak, common yellowthroat, marsh wren, Louisiana waterthrush, yellow-throated warbler, belted kingfisher, and song sparrow can be found here. It is an important winter habitat for a variety of waterfowl species while also providing habitat for, white-tailed deer, wild turkey, and other wildlife.

Land Protection Needs – 5,033 acres at a cost of $4,844,500.

Potential Partners – TWRA and TDEC.


Mingo Swamp
Tims Ford, St
Murrell Creek
50
121
Water Cure Creek
Neal Creek
Mingo Swamp
Mingo Swamp WMA
Caney Hollow Creek
Carter Branch
Caney Hollow Cave
Dog Branch
Factory Branch
15
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MUD CREEK SWAMP

Location – (N35.7484, W85.6632) Mud Creek Swamp is located in Warren County north of Hwy 30, approximately 2.5 miles east of McMinnville and extends northward to the L &N railroad track. (See Rock Island State Park map)

Description – This 136 acre site encompasses a wetlands complex located in the Eastern Highland Rim. Associated plant species include: red maple, lizard's tail, arrowhead, jewelweed, and Jack-in-the-pulpit.

Significance – Site Importance Moderate (B4) - Mud Creek Swamp provides habitat for the state listed fen orchis (*Liparis loeselii*), a type of orchid. Listed as threatened, fen orchis is considered demonstrably secure globally (G5) but extremely rare and critically imperiled in the state (S1). There are only 12 extant occurrences known from Tennessee.

Strategy – Acquisition of properties within and adjacent to the site would provide watershed protection as well as preservation of rare species and their associated habitat.

Land Protection Needs – 136.6 acres at a cost of $115,000.

Potential Partners – TDEC and TWRA.

NORRIS DAM STATE PARK

Location – (N36.2419, 84.1021) Norris Dam is located on Highway 441 in Campbell County near the city of Norris. The park is located on the shore of Norris Lake and situated on 4,000 acres in the ridge and valley region of East Tennessee.

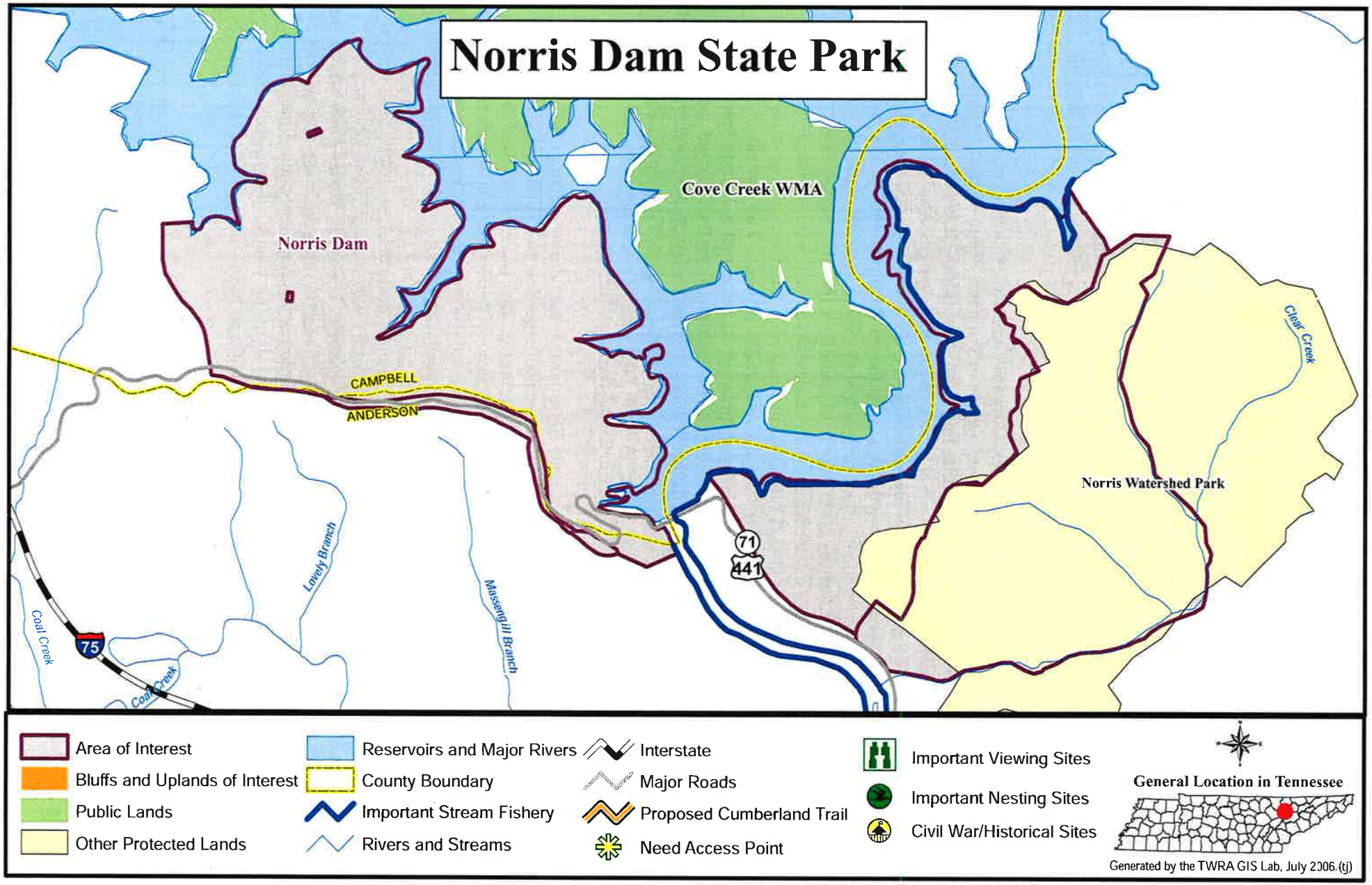
Significance - During construction of Norris Dam, TVA's first project, President Roosevelt sent workers known as the Civilian Conservation Corp (CCC) to create a recreational park. Many (36) of the facilities that were constructed by the CCC in 1933 are still in use.

The park provides 19 rustic cabins and 10 modern cabins, meeting rooms, a 75 site modern campground, picnic areas and pavilions, hiking fishing, the Lenoir Museum, swimming pool and a privately operated fully equipped marina.

Strategy - The strategy for future acquisitions for Norris Dam State Park is to acquire properties surrounding the park for watershed protection and properties that have significant cultural and natural features that further the wildlife, aesthetics, interpretive and recreation missions of Norris Dam State Park.

Land Protection Needs – 705 acres at an estimated cost of $2,350,000.

Potential Partners - TCF, TNC, and TDEC.


Norris Dam State Park
Cove Creek WMA
Norris Dam
CAMPBELL
ANDERSON
Norris Watershed Park
Clear Creek
Lovely Branch
Massengill Branch
Coal Creek
Coal Creek
75
71
441
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

NORTH CHICKAMAUGA CREEK WMA, NORTH CHICKAMAUGA CREEK GORGE SNA, AND FALLING WATER FALLS SNA

Location - 1: North Chickamauga Creek (N35.1527, W85.3027) is located on the Cumberland Plateau in Hamilton and Sequatchie Counties 15 miles north of Chattanooga. **2: Falling Water Falls** (N35.1872, W85.2767) is located on the Cumberland Plateau in Hamilton County about 10 miles north of downtown Chattanooga partly within the Town of Walden where a small cliff top section of the natural area occurs while most of the natural area is located below the falls in Soddy Daisy.

Description - 1: **North Chickamauga Creek Gorge** is currently a 4,864-acre SNA. It is an outstanding deep gorge cut into the sandstone plateau of Walden's Ridge on the Cumberland Plateau. The gorge is approximately ten miles long with steep slopes, sandstone bluffs, and rich coves. A high diversity of plant and animal habitat exists in the gorge. A mixed mesophytic forest combines with oak-hickory, and oak-pine forests to form a rich mosaic throughout much of the gorge. Small pockets of old growth forest with towering tulip poplar, yellow buckeye, and basswood occur in remote locations where rugged topography has protected the forest from past logging. 2. **Falling Water Falls** is a 132 acre SNA named for the 110' high waterfall on Little Falling Water Creek that drops over the resistant sandstone cap of the Cumberland Plateau. It plunges into the Falling Water Gorge, tumbling over cascades and passing large moss covered boulders, before joining the Big Falling Water Creek in Pickett Gulf. The vertical cliffs of the escarpment with its rugged, steep, rocky slopes appear in stark contrast to Falling Water Falls Gorge. The gorge is sheltered and stays moist with mist coming from the falls and cascades during most of the year. A scenic vista of the Tennessee River Valley, Pickett Gulf and Buzzard Point exists at the top of the falls above the 840-feet-high escarpment. Far below, Levi Cave is located at the base of the escarpment slope. A small 2-foot wide hole leads down into a 750-feet-long cave consisting of several large rooms and dripstone formations.

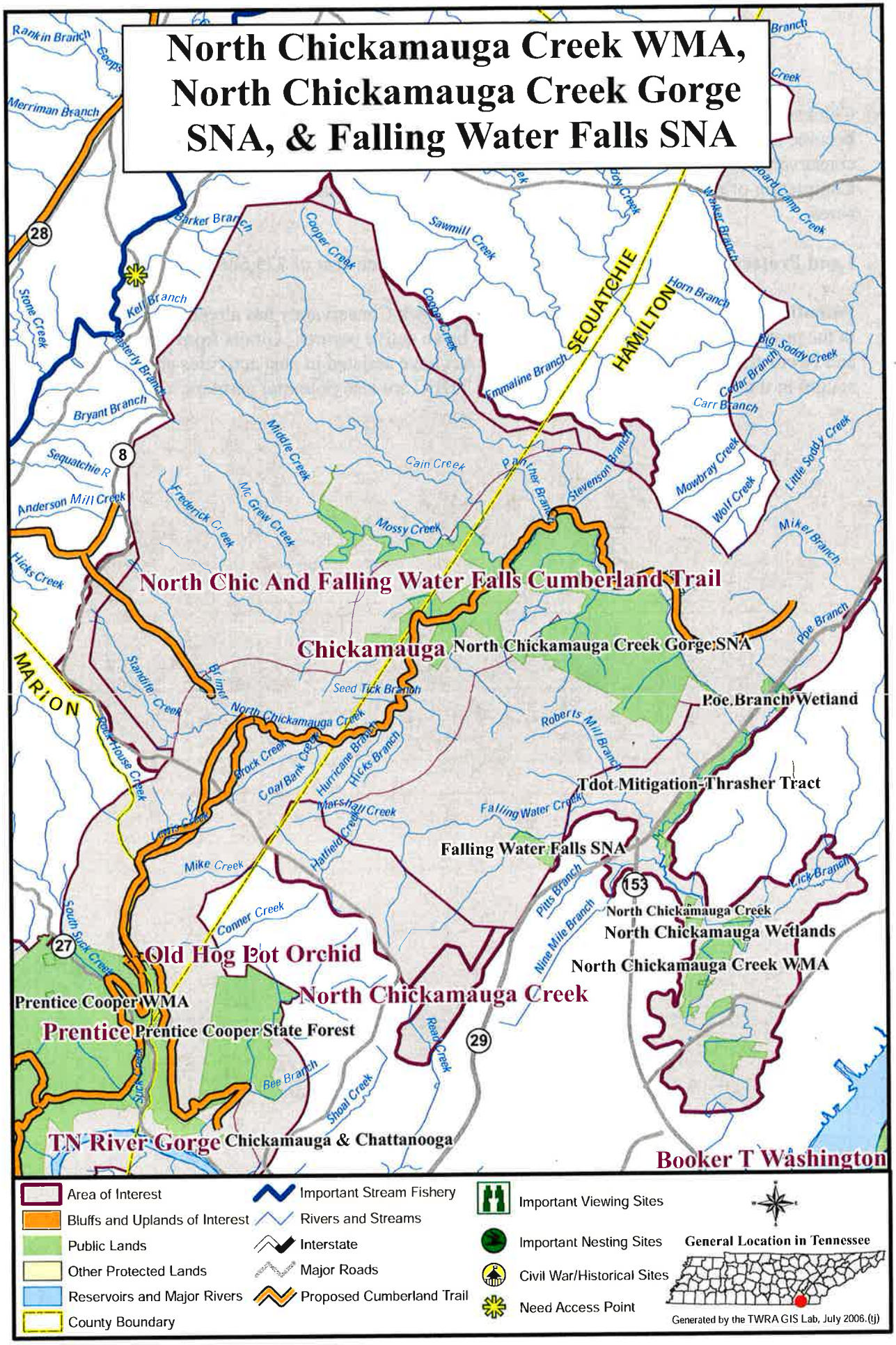
Significance - 1.**North Chickamauga Gorge SNA** has ten state and/or federally listed plants occurring in the gorge including the federally threatened large-flowered skullcap (*Scutellaria montana*) and the federally endangered Virginia spiraea (*Spiraea virginiana*). Bald eagles (*Haliaeetus leucocephalus*) and peregrine falcons (*Falco peregrinus*) have also been reported here. On the uplands and bluffs, there are oak-hickory and oak-pine forests, upland ponds, and sandstone glades and barrens. Riverside shoals and stream cobble bars in North Chickamauga Creek provide habitat for several threatened and endangered plants. The creek is a popular kayaking stream during parts of the year. It is also a popular destination for hikers. The natural area is contiguous to the 1,000 acre Bowater- owned North Chickamauga Creek Pocket Wilderness and Registered SNA on the east side of the creek. 2. **Falling Water Falls** has second growth hardwood forest comprised of oak-hickory and mixed mesophytic forest communities. There is an oak-pine forest on the drier parts of the natural area, particularly above the falls. Mountain laurel and rosebay rhododendron are common. Falling Water Falls supports a great diversity of plant and animal life including a small population of the large-flowered skullcap (*S. montana*).

Strategy - The conservation site plan proposes to protect most of the watershed which includes the remaining unprotected gorge and upland and its creek and tributaries for both North

Chickamauga Creek and Falling Water Falls. In accomplishing this task, these two SNAs would become contiguous in certain locations. Significant acreage proposed for acquisition in the conservation site plan is owned by a relatively few number of landowners who own large tracts. Completion of this plan would increase the total acres for both natural areas combined to 44,153 acres.

Land Protection Needs – 22,621 areas at an approximate cost of $25,686,440

Potential Partners – The North Chickamauga Creek Conservancy has already taken a lead role in the protection of the area and continues to be an active partner. Grants from Forest Legacy and North American Wetland Conservation Act have assisted in past activities and will also be sought in the future. Bowater, USFWS, and TDEC are also potential partners.


North Chickamauga Creek WMA,
North Chickamauga Creek Gorge
SNA, & Falling Water Falls SNA
Rankin Branch
Merriman Branch
Barker Branch
Cooper Creek
Sawmill Creek
Horn Branch
Emmaline Branch
SEQUATCHIE
HAMILTON
Big Soddy Creek
Cedar Branch
Carr Branch
Stone Creek
Kell Branch
Easterly Branch
Bryant Branch
Sequatchie R
Anderson Mill Creek
Middle Creek
Cain Creek
Panther Branch
Stevenson Branch
Mowbray Creek
Wolf Creek
Little Soddy Creek
Frederick Creek
Mc Grew Creek
Mossy Creek
Mikel Branch
Hicks Creek
North Chic And Falling Water Falls Cumberland Trail
Chickamauga North Chickamauga Creek Gorge SNA
Poe Branch
MARION
Standifer Creek
Seed Tick Branch
North Chickamauga Creek
Poe Branch Wetland
Roberts Mill Branch
Brock Creek
Coal Bank Creek
Hurricane Branch
Hicks Branch
Tdot Mitigation-Thrasher Tract
Marshall Creek
Falling Water Creek
Falling Water Falls SNA
Mike Creek
Hatfield Creek
Pitts Branch
Nine Mile Branch
Lick Branch
North Chickamauga Creek
North Chickamauga Wetlands
North Chickamauga Creek WMA
Conner Creek
Old Hog Pot Orchid
North Chickamauga Creek
Prentice Cooper WMA
Prentice Prentice Cooper State Forest
Bee Branch
Shoal Creek
Road Creek
TN River Gorge Chickamauga & Chattanooga
Booker T Washington
28
8
27
153
29
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
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OLD CCC ROAD BARKING TREEFROG POND

Location – (N35.1050, W858934) This property is located in Franklin County just outside the Franklin/Marion State Forest on the Old CCC Road off Highway 156. (See Carter Mountain map)

Description - The most important element of this property a one acre limestone sinkpond. The locals call this an antediluvian pond because of its ancient appearance. Tall sweetgums tower over a pond surrounded by buttonbush and covered with watershield. The neighbors also call this Copperhead pond with just reason. The pond is surrounded by 68.9 acres of mixed mesophytic hardwood forests.

Significance - The area has a rich herpetofauna including the mole Salamander (*Ambystoma talpoideum*) and the barking treefrog (*Hyla gratiosa*), with both species deemed in-need-of-management. This pond is host to one of the few known breeding populations of barking treefrogs in the Cumberland Mountains. It holds water throughout the year, a requirement for *H. gratiosa* in this region.

This area is being developed rapidly with secondary homes. There are no known dolomite ponds such as this anywhere else in this region.

Lands Protection Needs - 69 acres at an estimated cost of $128,200.

Potential Partners – TWRA, TDEC, TDA, and existing landowners and neighbors.

OLD HOG LOT ORCHID SITE

Location – (N35.1643, W85.3574) This small site is in Hamilton County within the town of Signal Mountain along Shackleford Ridge Road approximately 0.25 miles north of Prentice Cooper State Forest. (See North Chickamauga Creek map).

Description – This approximately 3.5 acre site used to be a hog lot. Now it is a young upland mixed-hardwoods forest. The site occupied by the orchids is at the head of a hollow that drains into Stanley Branch. Signal Mountain is a growing residential community outside Chattanooga and this location will likely be developed in the near future.

Significance – Site Importance High (B3) - Two federally listed species occur on this site. The small whorled pogonia (*Isotria medeoloides*) is federally threatened and state endangered, and is considered very rare and imperiled globally (G2) and extremely rare and critically imperiled within the state (S1). This orchid is considered to be one of the rarest orchids east of the Mississippi River. There are only two known locations within the state and this may represent the only viable occurrence. The large-flowered skullcap (*Scutellaria montana*) also occurs at this location. The large-flowered skullcap is federally and state threatened, and is considered very rare and imperiled globally (G2) and very rare and imperiled within the state (S2). A few dozen plants are scattered in this location.

Strategy: – A Recovery Land Acquisition grant(s) from the USFWS could be obtained to purchase tract(s) of land where Federal Listed species and associated habitat are known. Matching funds from the State Land Acquisition Fund would be necessary. It is possible to expand Prentice Cooper State Forest to include this location.

Land Protection Needs – 3.5 acres at an estimated cost of $13,000.

Potential Partners – TDA, TDEC, and City of Signal Mountain.

OLD TURNPIKE ROAD

Location - (N35.1302, W86.0324) The approximately 950 acre site is located in southeast central Franklin County. (See Carter Mountain map)

Description - The site is on the steep western escarpment of the Cumberland Plateau. Roadsides of the well worn jeep trail bisects a forest whose canopy ranges from mostly closed to partially open. The forests are primarily comprised of yellow chestnut oak, white oak, black oak, sugar maple, fragrant sumac, hop hornbeam, rusty black-haw, and smoke tree.

Significance - Site Importance High (B3) - This site has a high biodiversity significance (B3) based on globally imperiled (G2) rare plant populations. All rare plants known within the site design are considered imperiled (S2) in Tennessee and include the state endangered Cumberland rosinweed (*Silphium brachiatum*); and state special concern mountain honeysuckle (*Lonicera dioica*), smoketree (*Cotinus obovatus*) and white prairie-clover (*Dalea candida*). The preservation of this site would add approximately 950 contiguous acres onto the TNC owned David Carter TNC Preserve.

Strategy - The strategy for acquisition at Old Turnpike Road is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs - 716 acres at an estimated cost of $640,000.

Potential Partners - TNC, TWRA, TDA, and TDEC.

OZONE FALLS SNA

Location – (N35.8800, W84.8203) Ozone Falls is on the Cumberland Plateau located in Cumberland County. The falls are located off Hwy 70 about 4 miles from the I-40 exit.

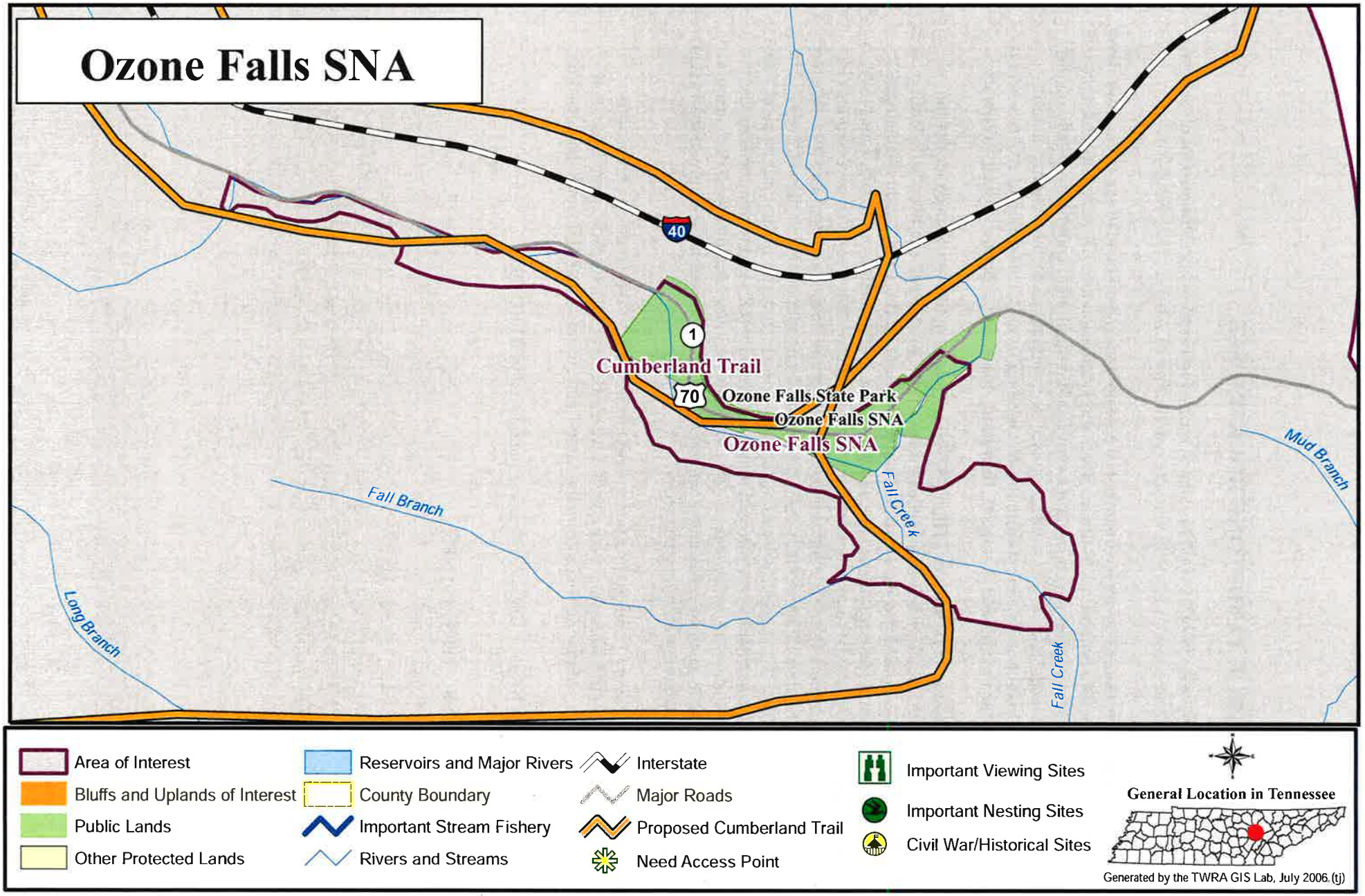
Description - Ozone Falls is a 26-acre natural area. Ozone Falls plunges 110 feet over a sandstone cap rock into a deep blue, rock-strewn pool. Fall Creek then disappears underground until it re-emerges several feet downstream. An impressive rock house "amphitheater" can be seen behind the falls that was created over geologic time by wind, water, freeze/thaw, and erosion. Fall Creek below the falls contains many huge boulders, some the size of houses, and many small placid pools. A rugged ¾-mile trail begins along the bluff near the falls and then descends into the gorge passing a small rock house called Gamblers Den.

Significance - Small open glades occur on the bluffs that support native grasses and prairie plants. The surrounding upland vegetation is dominated by oaks and Virginia pine. A remnant old-growth mixed mesophytic forest community is found beneath the waterfall. It is comprised of eastern hemlock, white pine, magnolia, yellow birch, sugar maple, tulip poplar, and red oak and with rosebay rhododendron in the shrub layer.

Strategy - Presently the State owns 26 acres of this area. The site conservation plan proposes the protection 190 additional acres that include the remainder of the gorge and bluff line. This will ensure protection of the gorge view corridor, geologic features, and plant and animal community and enhance greater public access opportunity to the area.

Land Protection Needs – 190 acres at an estimated cost of $200,000.

Potential Partners - TDEC.


Ozone Falls SNA
40
1
Cumberland Trail
70
Ozone Falls State Park
Ozone Falls SNA
Ozone Falls SNA
Fall Branch
Fall Creek
Mud Branch
Long Branch
Fall Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
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Generated by the TWRA GIS Lab, July 2006.(tj)

PETERS BRIDGE SANDSTONE ROCKHOUSES

Location – (N36.3206, W84.7858) This area is located in Fentress and Morgan Counties near the Clear Fork River south of Hwy 52 near the community of Allardt. (See Rugby map)

Description – This site is an approximately 110 acre area in a sharp bend of the Clear Fork River just outside of the Big South Fork National River and Recreation area. A series of sandstone rockhouses are located here, which contain a significant natural plant community found on the northern Cumberland Plateau. The cooler, moister environment created by the rockhouses creates growing conditions different from the surrounding forest. This different environment is suitable to a unique assemblage of mosses, liverworts, ferns, and endemic herbaceous plants.

Significance – Site Importance Very High (B2) - This site contains ten occurrences of the Cumberland sandwort (*Arenaria cumberlandensis*). The Cumberland sandwort is federally endangered, and is considered very rare and imperiled globally (G2) and within the state (S2) according to Natural Heritage data. The sandwort is not found outside of the Big South Fork River drainage. A population of Lucy Braun's white snakeroot (*Agertina luciae-brauniae*) is also located here. Lucy Braun's white snakeroot is state threatened, and is considered very rare and local throughout its range globally (G3) but rare and uncommon within the state (S3). The piratebush (*Buckleya distichophllya*) was historically known from this area. Piratebush is state threatened, and is considered very rare and imperiled globally (G2) and within the state (S2). The Swainson's warbler (*Limnothlypis swainsonii*) is also known from this area. Swainson's warbler is deemed in-need-of-mManagement, and is considered apparently secure globally (G4) but rare and uncommon within the state (S3).

Strategy – A Recovery Land Acquisition grant(s) from the USFWS could be obtained to purchase tracts of land along this river corridor where Federal Listed species and associated habitat are known. Matching funds from the State Land Acquisition Fund would be necessary.

Land Protection Needs - 108 acres at an estimated cost of $140,000.

Potential Partners – TDEC and NPS.

PICKETT STATE FOREST, WMA, AND STATE PARK

Location – (N36.5690, W84.8496) This project is located in Pickett and Fentress counties approximately 10 miles northeast of Jamestown, TN. The Big South Fork National River and Recreation Area bound the project to the east and the Daniel Boone National Forest to the north in Kentucky with Pickett State Forest as the central focus area.

Description - Pickett State Forest contains 20,043 acres. The topography of this area includes very steep gorge-like drainages characteristic of major drainages of this region. The tops of the Plateau surrounding these gorges are relatively flat to rolling hills underlain with sandstone and typically low in fertility. Due to fire, the area historically was predominantly pine and mix pine/hardwoods. Due to its topography and the advent of fire control, many of the gorges are now in oak/hickory and some cove hardwood forest types. The project lies in a rugged region and includes several karst features such as caves, rock cliffs, springs and waterfalls.

Pickett Forest originated from a land donation to the State by Stearns Coal and Lumber Company in 1933. It became a State Forest in 1934. At the time of donation, most of the merchantable sawtimber had been removed and the area had been repeatedly subjected to fire and grazing. About 53% of the Forest is in hardwood types, 24% in pine type, and 21% in mixed hardwood and pine. Ninety-five percent of the Forest is in trees older than 40 years and most of the area is well stocked. Between 1994 and 2004 an additional 9,700 acres have been added to the forest through various acquisitions. The latest being over 1,600 acres acquired along Jim Creek through purchase and a donation from TNC.

The State Park was formed in 1949 (270 acres) in and around the old CCC camp with an additional 575 acres added in 1970. The area traditionally has offered extensive outdoor recreational opportunities and part of the existing state forest is managed as a WMA while the state park offers a variety of non-consumptive outdoor recreational activities. The John Muir Trail runs through much of the Forest and now connects the Park with Jim Creek.

Significance - The entire Cumberland Plateau region is one of the most biologically diverse areas remaining in the eastern United States, particularly notable is a tremendous number of neo-tropical birds. The area contains several caves that are home to at least one federally endangered species, the Indiana Bat, as well as several other troglobitic species such as the blind crayfish. The Black Mountain Dusky Salamander, listed as "in need of management" is known to occur in this general area and is restricted to the northern half of the Cumberland Plateau. Other species of note inhabiting this northern plateau area include the Eastern Woodrat and Slender Glass Lizard, both listed as "in need of management".

The scenic bluff overlooks offer extraordinary vistas of extensive gorges, sheer sandstone cliffs, and other areas such as "Yellow Door" geological formation. The project is also part of the area where Sergeant Alvin York developed his hunting skill and sought spiritual inspiration prior to World War I. There are also 45 known archaeological sites on the areas already protected.

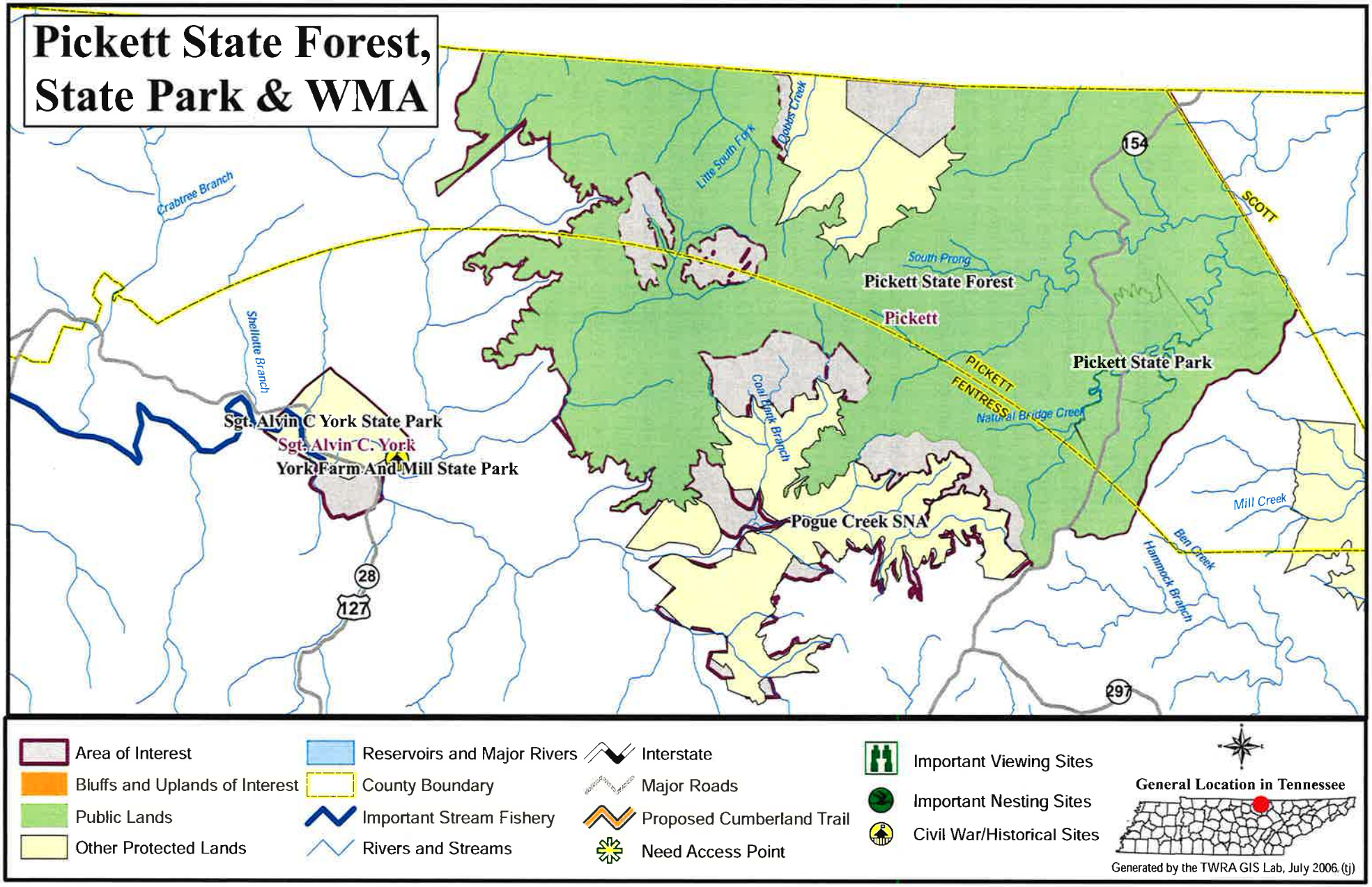
Strategy – The strategy for future acquisitions to Pickett State Forest is to acquire in-holdings, properties surrounding the forest for access or access control, watershed protection, and

properties that contain representative forest cover types of the Plateau, escarpment and gorges, that further the wildlife, aesthetics, demonstration, timber production and recreation missions of the State Forest System.

The strategy for future acquisitions to Pickett State Park are to acquire in-holdings, properties surrounding the park for access or access control, watershed protection, and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive, and recreation missions of the State Park System.

Land Protection Needs – 7,039 acres at an estimated cost of $5,971,100.

Potential Partners — TNC has made Pickett Forest one of its top priorities and is already working to protect large acreages. They already have protected areas along Pogue Creek and the Tally Wilderness straddling the Kentucky border. They are seeking Forest Legacy Funding for additional work in the area. NWTF has indicated an interest in protecting lands in this project area and making them accessible to users.


Pickett State Forest, State Park & WMA
Crabtree Branch
Little South Fork
Dobbs Creek
154
SCOTT
South Prong
Pickett State Forest
Pickett
Pickett State Park
PICKETT
FENTRESS
Natural Bridge Creek
Shellotte Branch
Coal Bank Branch
Sgt. Alvin C York State Park
Sgt. Alvin C. York
York Farm And Mill State Park
Pogue Creek SNA
Mill Creek
Ben Creek
Hammock Branch
28
127
297
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

PINEY RIVER WATERSHED, STINGING FORK FALLS AND PINEY FALLS SNAs

Location - The Piney River Watershed project area is approximately 5 miles North of Spring City in Rhea County. The project area includes **Stinging Fork Falls** (N 35.7179, W84.9251) and **Piney Falls** (N35.7233, W84.8677) SNAs

Description - The Piney River watershed lies on the eastern escarpment of the Cumberland Plateau. The eastern escarpment is characterized by steep forested slopes and high velocity, high gradient streams. Local relief is often 1000 feet or more. Vegetation community types in the ravines and gorges include mixed oak and chestnut oak on the upper slopes , more mesic forests on the middle and lower slopes (beech-tulip poplar, sugar maple-basswood-ash-buckeye), with hemlock along rocky streamsides and river birch along floodplain terraces

1. Stinging Fork Falls is a 104-acre SNA owned by Bowater, Inc. It is named for the 30 ft. waterfall located within the Stinging Fork gorge. The creek waters slide over the fan shaped falls, then quickly slip through chutes, and tumble over cascades below the falls. **2. Piney Falls** is a 440-acre SNA located where Little Piney and Soak Creeks have carved deep gorges into the Cumberland Plateau. Piney Falls is recognized as one of only 14 National Natural Landmarks in Tennessee. These landmarks are recognized as the country's best remaining examples of major biotic communities and geologic features.

Significance - The Piney River is one of the highest quality streams on the eastern escarpment of the Cumberland Plateau. There is little development in the drainage leaving the forested slopes intact. Remote, rugged terrain and ownership patterns have limited wildlife survey efforts in this watershed. The Tennessee Wildlife Action Plan (TWAP) identified a diverse mix of ecological systems within the watershed (Table 1). The diversity of available habitats indicates that additional wildlife survey work would yield even higher species diversity than represented in tables 2 and 3 (especially for amphibians, reptiles, and mammals).

The Laurel Dace is an endemic fish that is found in only three systems on Walden Ridge. There are three creeks within the Piney River watershed with extant Laurel Dace populations: Young Creek, Moccasin Creek, and Bumbee Creek.

1. Stinging Fork Falls gorge contains a 60- year old second growth mixed mesophytic forest community. Seep cliffs may be found along the smaller bluffs that descend into the gorge. An oak-pine forest can be found along the gorge bluff. Indian Head Point provides a view of the gorge and creek 160 feet below. **2. Piney Falls** is especially significant because of its old growth forest. The tallest and most magnificent trees are the white pines that are found in the mixed mesophytic forest that occur on lower slopes in the gorge below Lower Piney Falls. These trees are nearly 40 inches in diameter and exceed 100 feet in height. The mixed mesophytic forest below the Upper Falls is not nearly as spectacular, as it lacks the giant white pines found in the gorge below Lower Piney Falls. However, large tulip poplar, hemlock, buckeye, and basswood do grow below Upper Piney Falls.

Strategy - The site conservation plan proposes to acquire Bowater properties and other lands that would connect the subunits as a large landscape scale project. This project also includes sections of Piney Creek and locations where the Cumberland Trail is planned to be built.

Land Protection Needs – 8,042 acres at an estimated cost of $6,000,000.

Potential Partners – TDEC, TWRA, TNC, TDA, and Bowater Inc.

Table 1. Significant ecological systems identified by the TWAP in the Piney River watershed.

South-Central Interior Mesophytic Forest
Southern and Central Appalachian Cove Forest
Appalachian Hemlock-Hardwood Forest
Allegheny-Cumberland Sandstone Box Canyon and Rockhouse
South –Central Interior Small Stream and Riparian
Cumberland Seepage Forest

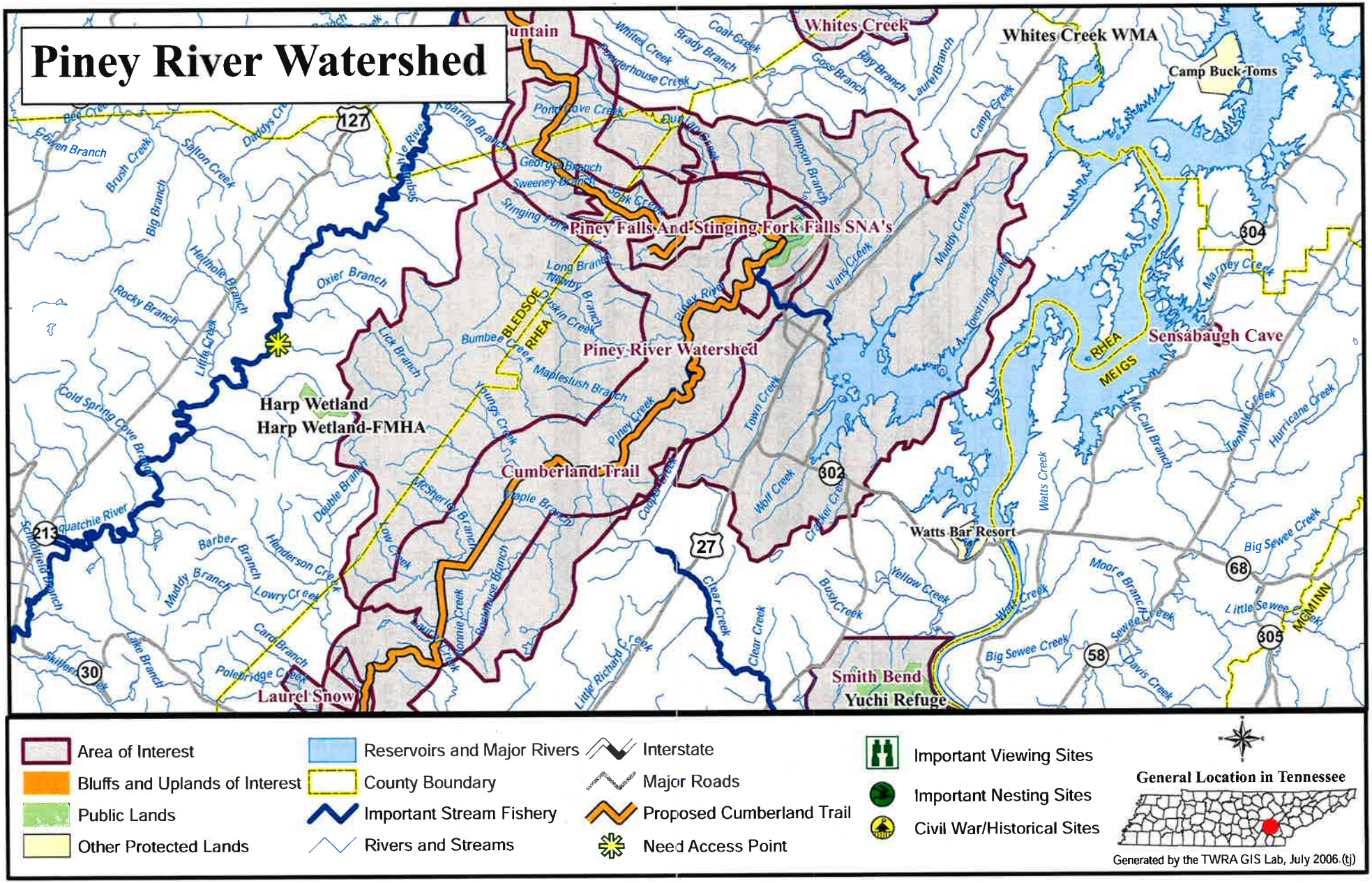
Table 2. Aquatic species identified by the TWAP as occurring in the Piney River watershed.

TaxaGrp	Common Name	Fed Status	State Status	GCN*
Fish	Laurel Dace		E	Yes
Fish	Tangerine Darter		D	Yes
Fish	Tennessee Dace		D	Yes
Fish	Flame Chub	MC	D	Yes
Amphibian	Black Mountain Dusky Salamander			Yes

Table 3. Terrestrial species identified by the TWAP as occurring in the Piney River watershed

TaxaGrp	Common Name	Fed Status	State Status	GCN*
Bird	Cerulean Warbler	MC	D	Yes
Bird	Bachman's Sparrow	MC	E	Yes
Bird	Whip-poor-will			Yes
Bird	Yellow-throated Vireo			Yes
Bird	Yellow-throated Warbler			Yes
Bird	Worm-eating Warbler			Yes
Bird	American Woodcock			Yes
Bird	Yellow-billed Cuckoo	(PS)		Yes
Bird	Eastern Wood-pewee			Yes
Bird	Black-throated Green Warbler			Yes
Bird	Bald Eagle	LT	D	Yes
Bird	Hooded Warbler			Yes
Bird	Wood Thrush			Yes
Bird	Kentucky Warbler			Yes
Bird	Acadian Flycatcher			Yes
Mammal	Rafinesque's Big-eared Bat	MC	D	Yes

*GCN - Species of Greatest Conservation Need as identified by the TWAP).


Piney River Watershed
Whites Creek
Whites Creek WMA
Camp Buck Toms
Piney Falls And Stinging Fork Falls SNA's
Piney River Watershed
Sensabaugh Cave
Harp Wetland
Harp Wetland-FMHA
Cumberland Trail
Watts Bar Resort
Smith Bend
Yuchi Refuge
Laurel Snow
BLEDSOE
RHEA
MEIGS
127
304
302
27
213
30
68
305
58
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

PLANTATION POND

Location - The approximately 20 acre site is located in Grundy County near the Sequatchie County line along the south rim of Dry Creek Gulch. (See Savage Gulf map)

Description - Shallow pond surrounded by a boggy margin comprised of sphagnum moss mat, which is surrounded by flat swampy woods dominated by red maple and black gum. Other species present include poison sumac, hazel alder, royal fern, cinnamon fern and netted chain fern, tubercled rein orchid, small green wood orchid, yellow fringed orchid and crested yellow orchid. The area was extensively timbered and converted to pine plantation except for pond and creek border. The site is surrounded by a large private commercial forest and abandoned stripmines.

Significance - The state endangered, globally very rare white fringeless orchid (*Platanthera integrilabia*) is known from the site design. Other species present include poison sumac (*Toxicodendron vernix*), hazel alder (*Alnus serrulata*), royal fern (*Osmunda regalis*), cinnamon fern (*Osmunda cinnamomea*), netted chain fern (*Woodwardia areolata*), tubercled rein orchid (*Platanthera flava var. herbiola),* small green wood orchid (*Platanthera clavellata*), yellow fringed orchid (*Platanthera ciliaris*) and crested yellow orchid (*Platanthera cristata*). While it is not a state-listed plant the poison sumac is known from only six counties in Tennessee and is an indicator of wetland communities. The tubercled rein orchid is a state-threatened plant species. The white fringeless orchid is also listed as a candidate species by the USFWS, meaning sufficient information exists to list at the federal level. Some of these species are more typical in areas of the coastal plain.

Strategy - The strategy for acquisition at Plantation Pond is to acquire properties within and adjacent to the site design for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage. The remoteness of this site would limit disturbance but would also limit opportunities for management activities. Presence of the white fringeless orchid should be verified prior to future conservation efforts.

Land Protection Needs - 20 acres at a cost of 20,000.

Potential Partners - Bowater, TWRA, TDA, and TNC.

POWELL RIVER PRESERVE SNA

Location – (N36.5539, W83.5920) Powell River Preserve is located in Claiborne County in the Ridge and Valley north of Tazewell on the Powell River. It is on River Road off of Hwy 25E.

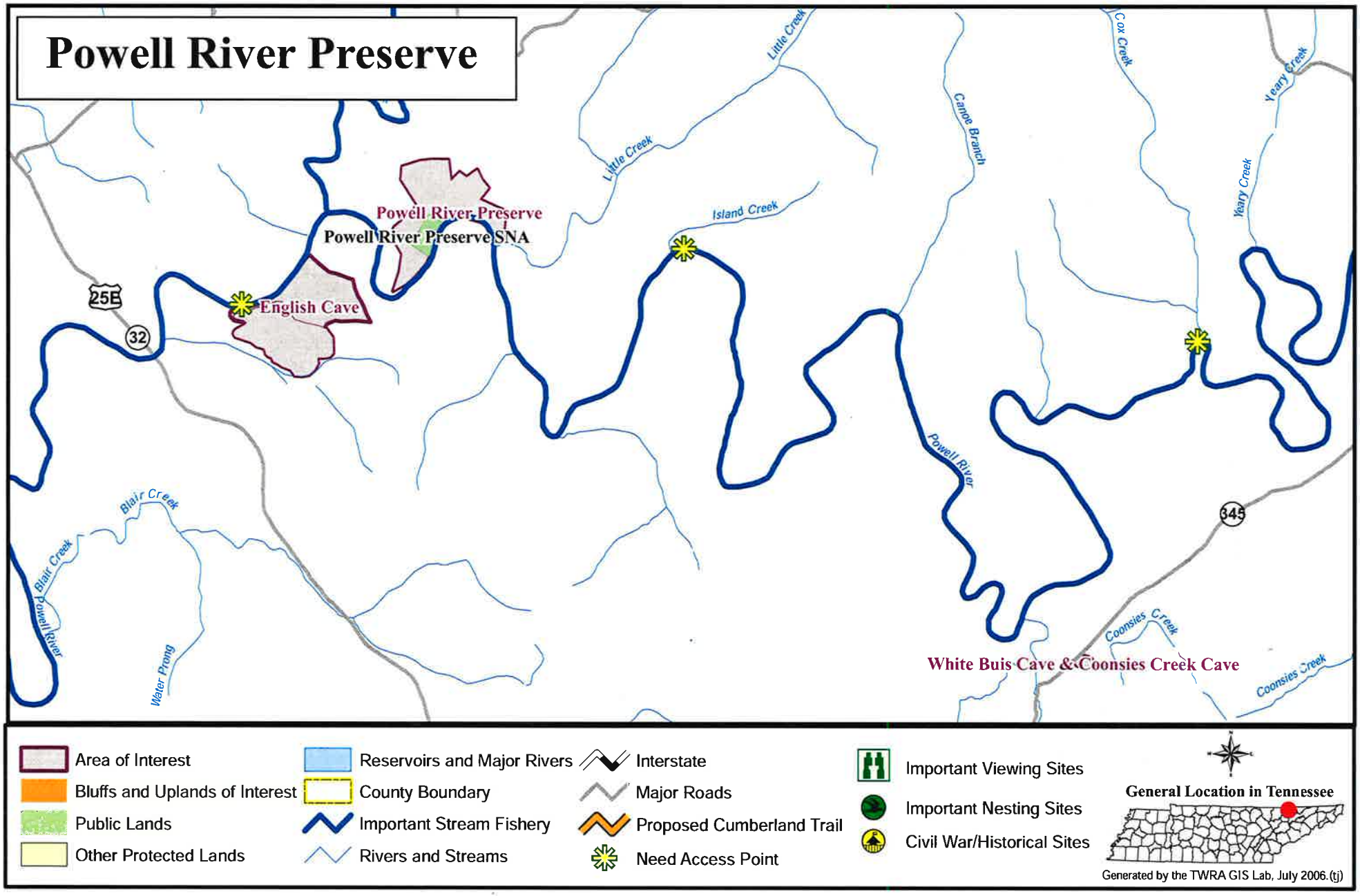
Description - This small 29 acre preserve occurs on moist calcareous slopes where wet seeps support large populations of state listed species. The natural area contains a small seep area and white cedar shrub area both of which are relatively small. Much of the natural area is a mixed mesophytic forest with oak species, white ash, red and sugar maple, buckeye, basswood, and tulip poplar. Chinkapin oak is the most dominant species at midslope, while tulip poplar is most prevalent on the lower slopes. There are also open areas down slope that occur on bedrock ledges where marl and loose stone create a medium that grows moss, parnassia, selaginella, sedges, and panic-grass. Barren species like little bluestem, sunflower, boneset, coreopsis, and goldenrods grow where soils tend to accumulate in open areas. Alder, cane, sycamore, Indian grass, and little bluestem occur in a riparian plant community near the river,

Significance - The most distinctive communities at the Powell River Preserve are the northern white cedar shrub community and white cedar mixed hardwood community. The shrub community is a discontinuous stand of shrubs and stunted trees that form a dense thicket around the rocky opening. The inside of the cedar stand is dark and the litter layer is of a "mor" type, often characteristic of conifers. Shrubs commonly associated with this rocky area include witch hazel, spicebush, fragrant sumac, and southern black haw. Trees in this community include hackberry, redbud, eastern red cedar, tulip poplar, chinkapin oak, and white cedar. In the small seep area there are several rare species which include shining ladies'-tresses (*Spiranthes lucida*), maple-leaf alumroot (*Heuchera longiflora var. aceroides*), and grass-of-parnassus (*Parnassi grandifolia),* along with more common species like cane, coreopsis, and false rue.

Strategy - The site conservation plan for Powell River Preserve expands the area into surrounding forest land to enhance protection of the core conservation area. Upon completion of the acquisition project, Powell River Preserve would be expanded to 270 acres.

Land Protection Needs: - 244 acres at an estimated cost of $275,000.

Potential Partners: - TDEC and TNC.


Powell River Preserve
Powell River Preserve
Powell River Preserve SNA
English Cave
25E
32
Little Creek
Little Creek
Island Creek
Canoe Branch
Cox Creek
Yeary Creek
Yeary Creek
Powell River
345
Blair Creek
Blair Creek
Powell River
Water Prong
White Buis Cave & Coonsies Creek Cave
Coonsies Creek
Coonsies Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

PRENTICE COOPER STATE FOREST AND WMA

Location – (N35.1115, W85.4432) Prentice Cooper is located in Marion County adjacent the town of Signal Mountain and along the Tennessee River just west of Chattanooga.

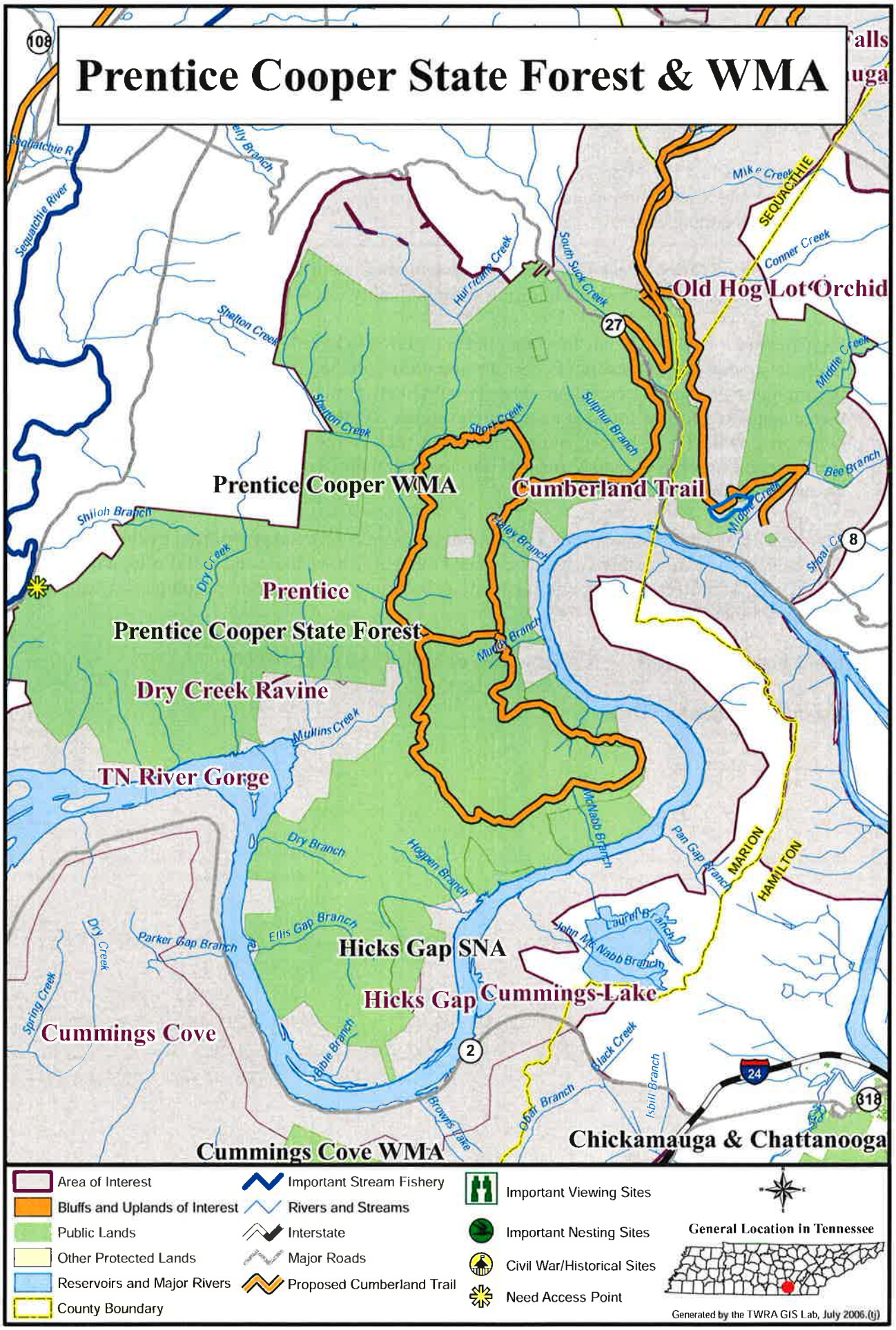
Description - Prentice Cooper State Forest - (23,759 acres) The property for Prentice Cooper was acquired by fee simple purchase between 1938 and 1944. The site was proclaimed a State Forest in 1945. Sixty-nine percent of the forest is in multiple use-regulated forests and the remainder is in conservation areas that include the Hicks Gap SNA and unregulated scenic areas.

Significance – Like most of the Plateau escarpment, cliffs and scenic views are prime conservation values. This area is heavily utilized for recreation and hunting. The "Tennessee Wall" is a world class rock climbing location. Much of the area is managed for the scenic value of the Tennessee River Gorge with some of the area under agreement with the Tennessee Gorge Trust to protect the river's scenic value. Also located on the forest is the Hicks Gap SNA, home of the federally listed large flowered skullcap (*Scutellaria montana*).

Strategy - Acquisition of in-holdings and for access and access control to the forest are the primary criteria for additions to the Forest.

Land Protection Needs – 1,017 acres at an estimated cost of $1,430,900.

Potential Partners – TDA and Forest Legacy.


Prentice Cooper State Forest & WMA
Prentice Cooper WMA
Cumberland Trail
Old Hog Lot Orchid
Prentice
Prentice Cooper State Forest
Dry Creek Ravine
TN River Gorge
Hicks Gap SNA
Hicks Gap
Cummings-Lake
Cummings Cove
Cummings Cove WMA
Chickamauga & Chattanooga
Sequatchie River
Shelton Creek
Hurricane Creek
South Suck Creek
Conner Creek
Middle Creek
Sulphur Branch
Bee Branch
Shiloh Branch
Dry Creek
Mulkey Branch
Mullins Creek
Dry Branch
Hogpen Branch
Ellis Gap Branch
Parker Gap Branch
Spring Creek
Bible Branch
Browns Lake
Vicknabb Branch
Pan Gap Branch
John McNabb Branch
Laurel Branch
Black Creek
Ishill Branch
Obar Branch
MARION
HAMILTON
SEQUATCHIE
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
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ROARING CREEK GORGE

Location – (N35.4770, W85.1227) Roaring Creek Gorge is located on the Cumberland Plateau in Bledsoe and Rhea Counties just northeast of Graysville. It is located on the Brayton and Graysville quadrangles.

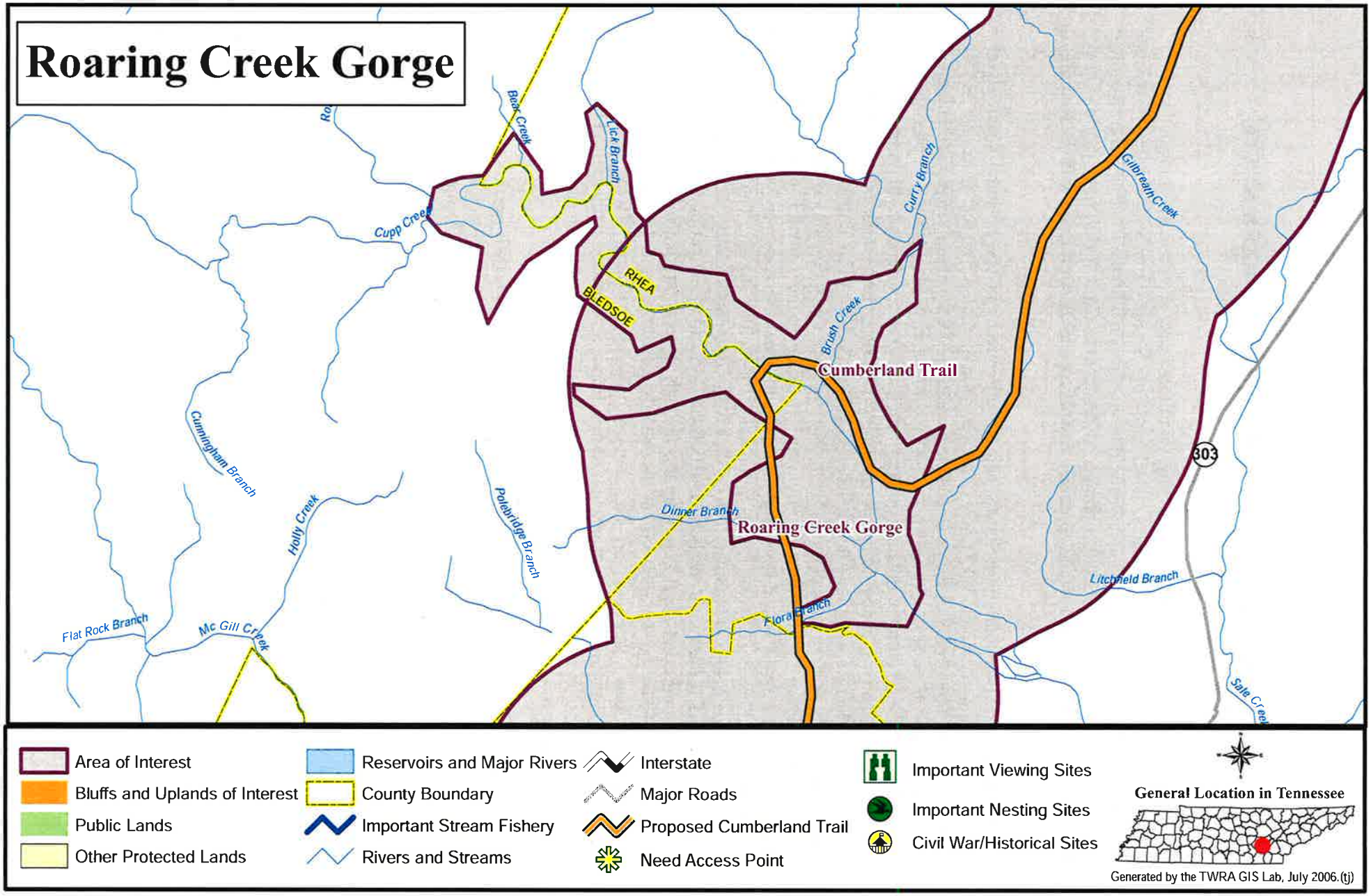
Description - Roaring Creek Gorge is a 1,500-acre gorge with steep escarpments and a deeply cut gorge that is reported to have undisturbed high quality forest throughout the area.

Significance - This area needs inventory but is reported to have high quality forest land which is likely to support mixed mesophytic forest communities in the gorge and along its lower slopes becoming dryer at higher elevations where would likely grade into in oak hickory forest type and then change to oak-pine forest at its upper elevations. A site visit to this area has not yet been completed by the DNA, but is pending. Roaring Creek Gorge is noted as a whitewater kayaking stream with Class III, IV, and V runs. It also located in the planning area for development of the Cumberland Trail

Strategy - This importance of this area has not yet been confirmed at this time by the DNA. However, reports from others who have visited this gorge have indicated that it is high quality and in need of protection. This report conditionally proposes acquisition pending a site visit and inventory by the DNA.

Land Protection Needs – 1,535 acres at an estimated cost of $1,700,000.

Potential Partners - TDEC.


Roaring Creek Gorge
Cupp Creek
Lick Branch
RHEA
BLEDSOE
Curry Branch
Gilbreath Creek
Brush Creek
Cumberland Trail
303
Cunningham Branch
Holly Creek
Polebridge Branch
Dinner Branch
Roaring Creek Gorge
Litchfield Branch
Flora Branch
Flat Rock Branch
Mc Gill Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
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ROARING RIVER-BLACKBURN FORK-SPRING CREEK STATE SCENIC RIVER COMPLEX

Location – (N36.3408, W85.5277) This complex of three state scenic rivers is located in Jackson, Overton, and Putnum Counties. Blackburn Fork Scenic River begins at the county road at Cummings Mill and continues downstream to its confluence with the Roaring River; Roaring Scenic River begins at Hwy 136 and continues downstream to Cordell Hull Lake; Spring Creek Scenic River begins at Hwy 136 and continues downstream to its confluence with the Roaring River.

Description – The Blackburn Fork State Scenic River begins as a Class I Natural Scenic River and continues for approximately 1.5f miles, dropping approximately 150 feet as its cuts its way through the Highland Rim Fort Payne limestone formation. Downstream from this relatively undisturbed river segment Blackburn Fork is a Class II Pastoral Scenic River as it becomes much more placid and lined with floodplains, some of which are used for agricultural purposes. In this Class II section, the river gently drops approximately 170 feet over 13 miles before joining the Roaring River. The Roaring State Scenic River begins at Highway 136 in Overton County as a class I Natural River Area and continues for approximately 2 miles dropping some 140 feet along the way. From 2 miles below the Highway 136 bridge to the Cordell Hull Lake the river is designated as a Class II Pastoral River and drops an additional 145 feet over 9 miles. The Spring Creek and Blackburn Fork Scenic Rivers join it along this quieter stretch. The Spring Creek State Scenic River begins at Highway 136 on the Overton-Putnam County line. The first segment is a Class II Pastoral River between Highway 136 and the Waterloo Mill, dropping about 30 feet in a mile and a half as it meanders through pastoral farmland on the Eastern Highland Rim. From the Waterloo Mill to the Overton-Jackson County line Spring Creek is designated as a Class I Natural River. This segment drops approximately 90 feet in elevation while only traveling 4 miles, with nearly half of this drop is at Waterloo Falls itself. From the Overton-Jackson County line to its confluence with the Roaring River it is again a Class II Pastoral River as it winds its way through a rural/agricultural landscape.

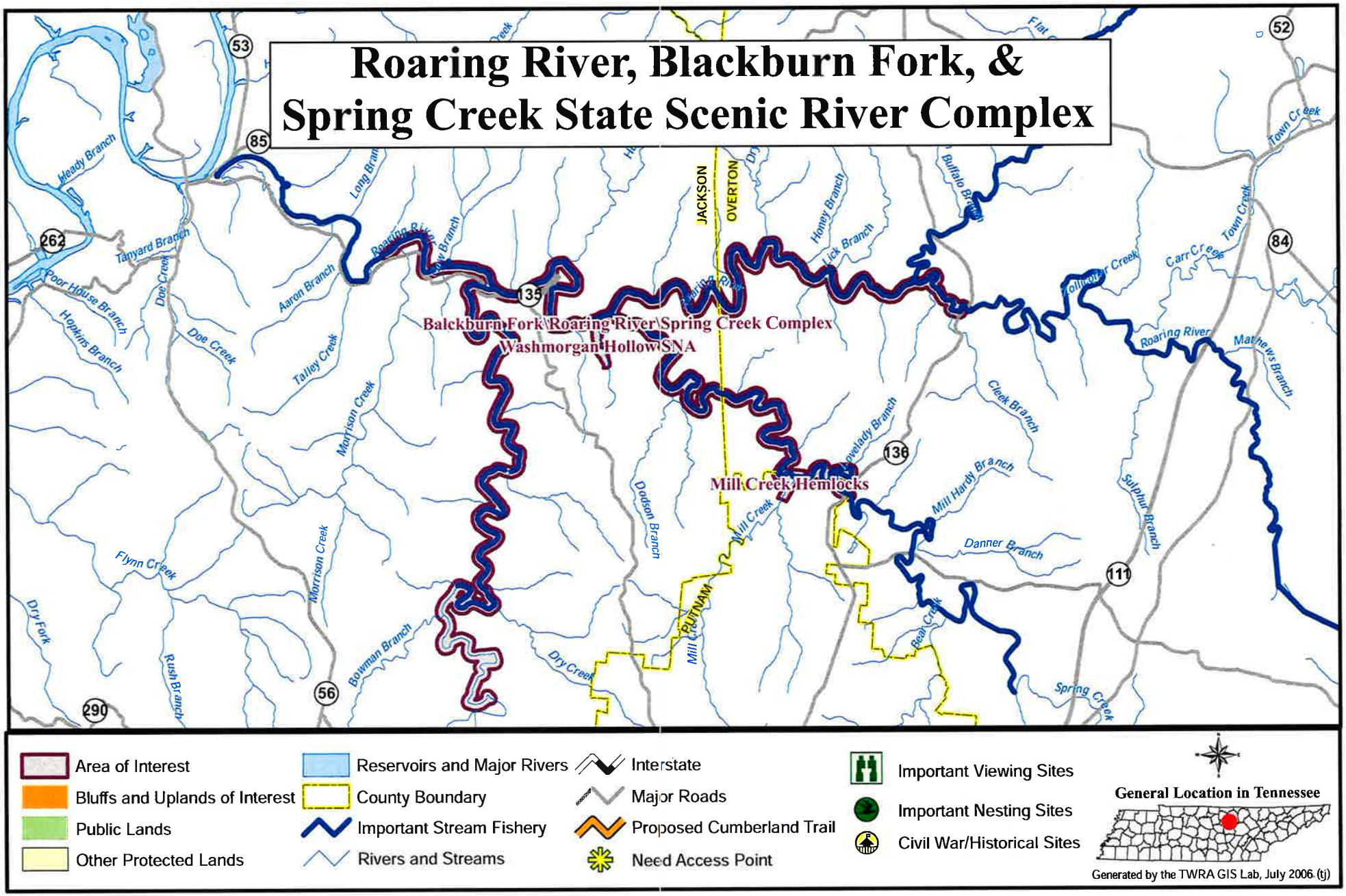
Significance – Much of the significance of this complex of rivers is their scenic values. The upper reaches of each of these rivers are designated as Class I Natural Rivers, are largely undisturbed, and are located within deep gorges lined with hemlocks and mountain laurel where they cascade over numerous large and small waterfalls. They also each pass by the remains of several old mills. The lower reaches are Class II Pastoral Rivers passing through a gently rolling landscape with wide floodplains dominated by agricultural fields and rural homes. Located on Blackburn Fork State Scenic River is Cummins Falls near the site of an old mill, one of the most spectacular waterfalls in the area cascading some 50 feet into the gorge below. On Roaring River is an approximate 13-foot Roaring River Falls located at the site of an old mill, and located along its lower reaches is a high volume spring discharge known as the "boils" (which has recently been acquired by TWRA). On Spring Creek are numerous waterfalls, most notable the approximate 5-foot Upper Waterloo Falls and the approximate 35-foot Waterloo Falls located at the site of an old mill. Also located on the Roaring River is Washmorgan Hollow SNA.

Strategy – Protecting the riparian corridors of these rivers, and connecting contiguous protected areas to other state and other publicly owned lands along these rivers is a major strategy. The

external boundaries of Class I scenic rivers shall include the entire scenic vista from the river and its banks, and in the case of gorge rivers shall be no more than 3,000 feet from the center of the river on either side. On Class II rivers the external boundary should include the vista from the river and shall be no more than 450 feet from the usual banks of the river. Methods for conserving these areas are by fee title purchases, conservation easements, landowner assistance programs, and conservation buyers. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river, however, public ownership of the entire river corridor is not practical. Strategically located river access points will also be critical.

Land Protection Needs – 1,000 acres at an estimated cost of $1,650,000.

Potential Partners - TDEC, TWRA, TNC, USFWS, USACE, County Governments, Private Corporations, Foundations, Individual Donors.


Roaring River, Blackburn Fork, &
Spring Creek State Scenic River Complex
Balckburn Fork\Roaring River\Spring Creek Complex
Washmorgan Hollow SNA
Mill Creek Hemlocks
JACKSON
OVERTON
PUTNAM
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
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Proposed Cumberland Trail
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Civil War/Historical Sites
General Location in Tennessee
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ROCK ISLAND STATE PARK

Location - Rock Island State Park is located approximately 15 miles southwest of Sparta in Warren County.

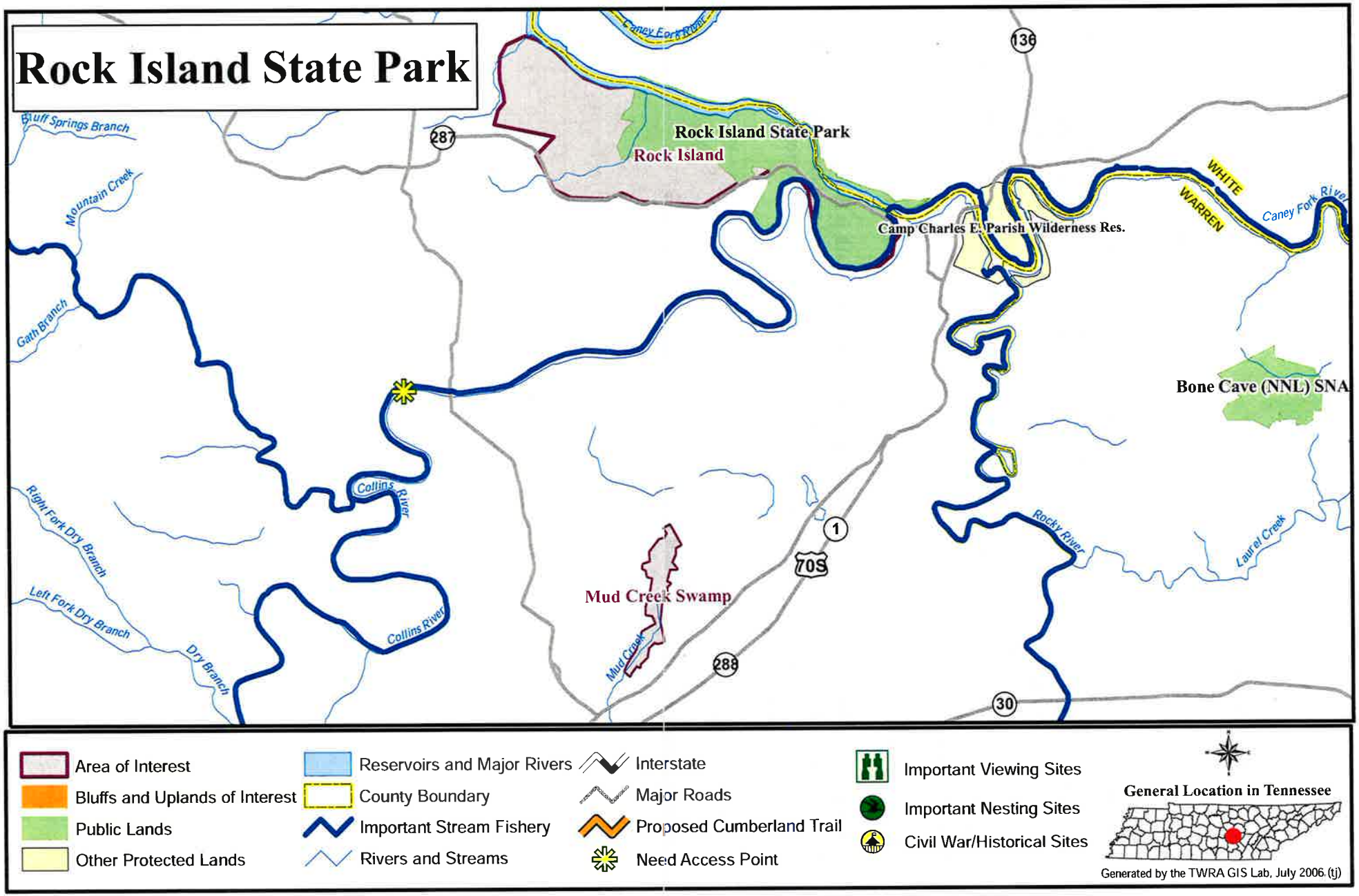
Significance - Rock Island State Park is noted for water and water related activities and contains 883 acres. Rock Island was named for an island in the Caney Fork River. A textile mill operated here in the 1890's. In 1917 a hydroelectric plant was built by the Tennessee Electric Power Company just downstream fromt eh Caney Fork and Collins Rivers, creating Great Falls Lake. The plant's village and Rock Island thrived during this time, for employees and as a resort. The community water supply, resembling a castle, is now a charming park feature. The Tennessee Valley Authority took over operations in the 1940's, and in 1966 leased land to the State of Tennessee for park development.

The park includes cabins, campground, fishing, picnic areas, hiking, swimming and boating.

Strategy - The strategy for future acquisitions for Rock Island State Park is to acquire in holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover that further the wildlife, aesthetics, interpretive and recreation missions of Rock Island State Park.

Land Protection Needs – 792 acres at an estimated cost of $4,200,000

Potential Partners – TCF, TNC, and TDEC.


Rock Island State Park
Caney Fork River
136
Bluff Springs Branch
287
Rock Island State Park
Rock Island
WHITE
WARREN
Caney Fork River
Mountain Creek
Camp Charles E. Parish Wilderness Res.
Gath Branch
Bone Cave (NNL) SNA
Collins River
Right Fork Dry Branch
Left Fork Dry Branch
Dry Branch
Collins River
1
70S
Rocky River
Laurel Creek
Mud Creek Swamp
Mud Creek
288
30
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

RUGBY SNA

Location – (N36.3481, W84.7084) Morgan County, The Rugby site is located in Morgan County near the historic town of Rugby on Highway 52, near the junction of Morgan, Scott, and Fentress Counties.

Description – The Rugby project area is located along the southern boundary of Historic Rugby and includes the watershed of Little Creek (and several tributaries) from its headwaters to its confluence with White Oak Creek. The Rugby project area is contiguous with the Big South Fork National River and Recreation Area, and several pending TNC Forest Legacy projects. The area in predominantly forested, though the majority of it has been cut over in recent times. Approximately 323 acres are owned and managed by TDEC as a SNA.

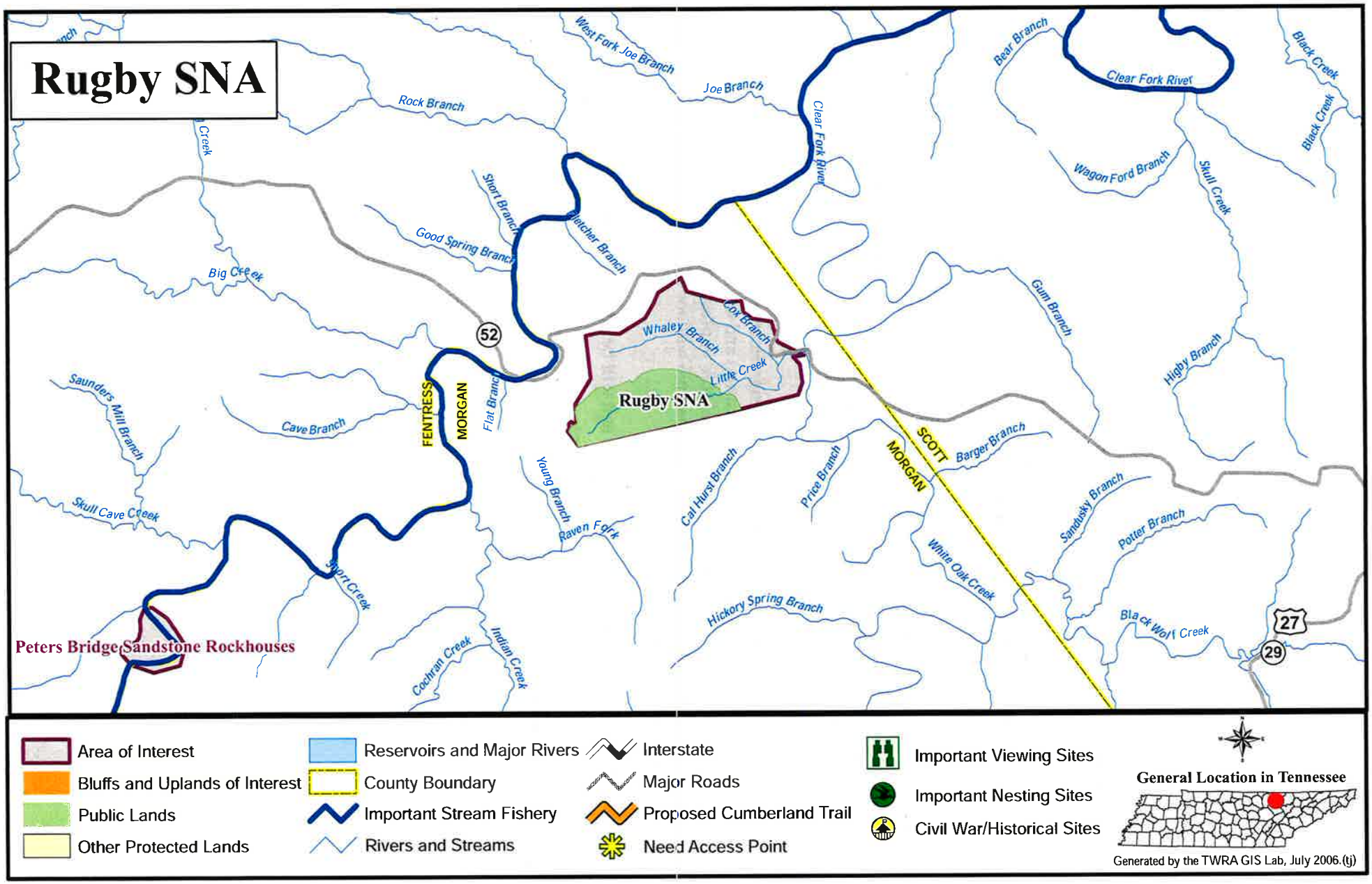
Significance – Site Importance General Interest (B5) - The Rugby project area's significance is derived from its locational setting as it is contiguous with the Big South Fork National River and Recreation Area, two Forest Legacy projects, and the town of Historic Rugby. This brings together interests and values that are both natural and cultural resources related. Through Historic Rugby, Inc., it also involves a vested and dedicated non-governmental partner. This local partnership can help ensure that this project has local support and oversight.

By preserving from conversion and development a significant amount of acreage immediately adjacent to Historic Rugby (a National Historic District) and the Big South Fork National River and Recreation Area, this project can play a critical role in preserving the integrity of these two areas. Additionally, the project will provide for passive outdoor recreation opportunities through public access to the watershed of Little Creek.

Botanical and floristic inventory data is limited and will be added to as additional site visits are made.

Land Protection Needs - 638 acres at an estimated cost of $715,000.

Potential Partners – TNC, TDEC, TDF-Forest Legacy Program, TWRA, Historic Rugby, Inc., and TDOT.


Rugby SNA
West Fork Joe Branch
Joe Branch
Rock Branch
Clear Fork River
Bear Branch
Black Creek
Wagon Ford Branch
Skull Creek
Short Branch
Fletcher Branch
Good Spring Branch
Big Creek
Gunn Branch
Higby Branch
Whaley Branch
Cox Branch
Little Creek
Rugby SNA
52
FENTRESS
MORGAN
Flat Branch
Saunders Mill Branch
Cave Branch
SCOTT
Barger Branch
Young Branch
Raven Fork
Cal Hurst Branch
Price Branch
Sandusky Branch
Potter Branch
Skull Cave Creek
Short Creek
White Oak Creek
Hickory Spring Branch
Black Wolf Creek
27
29
Peters Bridge Sandstone Rockhouses
Cochran Creek
Indian Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

RUMBLING FALLS CAVE SYSTEM

Location –(N35.7513, W85.4317) Rumbling Falls Cave is in Van Buren County adjacent to Highway 30, approximately 3.0 miles east of the intersection of Hwy 111 in Spencer.

Description – The Rumbling Falls Cave System consists of three caves: Rumbling Falls, Thunder Run, and Swamp Spring Caves, all three of which are hydrologically connected. The openings for Swamp Spring Cave and Thunder Run Cave are at the base of Spencer Mountain and the Rumbling Falls Cave mouth is located on Fall Creek Falls State Park. Rumbling Falls Cave is famous for its "Rumble Room," a five-acre room with a 200' ceiling (larger than any single room at Mammoth Cave, Kentucky). Several swallets in nearby Dry Fork Creek communicate with phreatic (ground water) passages in this cave system.

The current site design includes over 10,000 acres in order to capture the recharge and discharge area from this system. The cave system has been recognized as a priority cave conservation site of national significance.

Significance – Site Importance Outstanding (B1) - Aside from the significance of the "Rumble Room," which alone is a magnificent feature, the biological significance of the Rumbling Falls Cave System cannot be overstated. Currently, there are 34 rare species known from the caves, many of which are considered extremely rare and critically imperiled at the global level (G1).

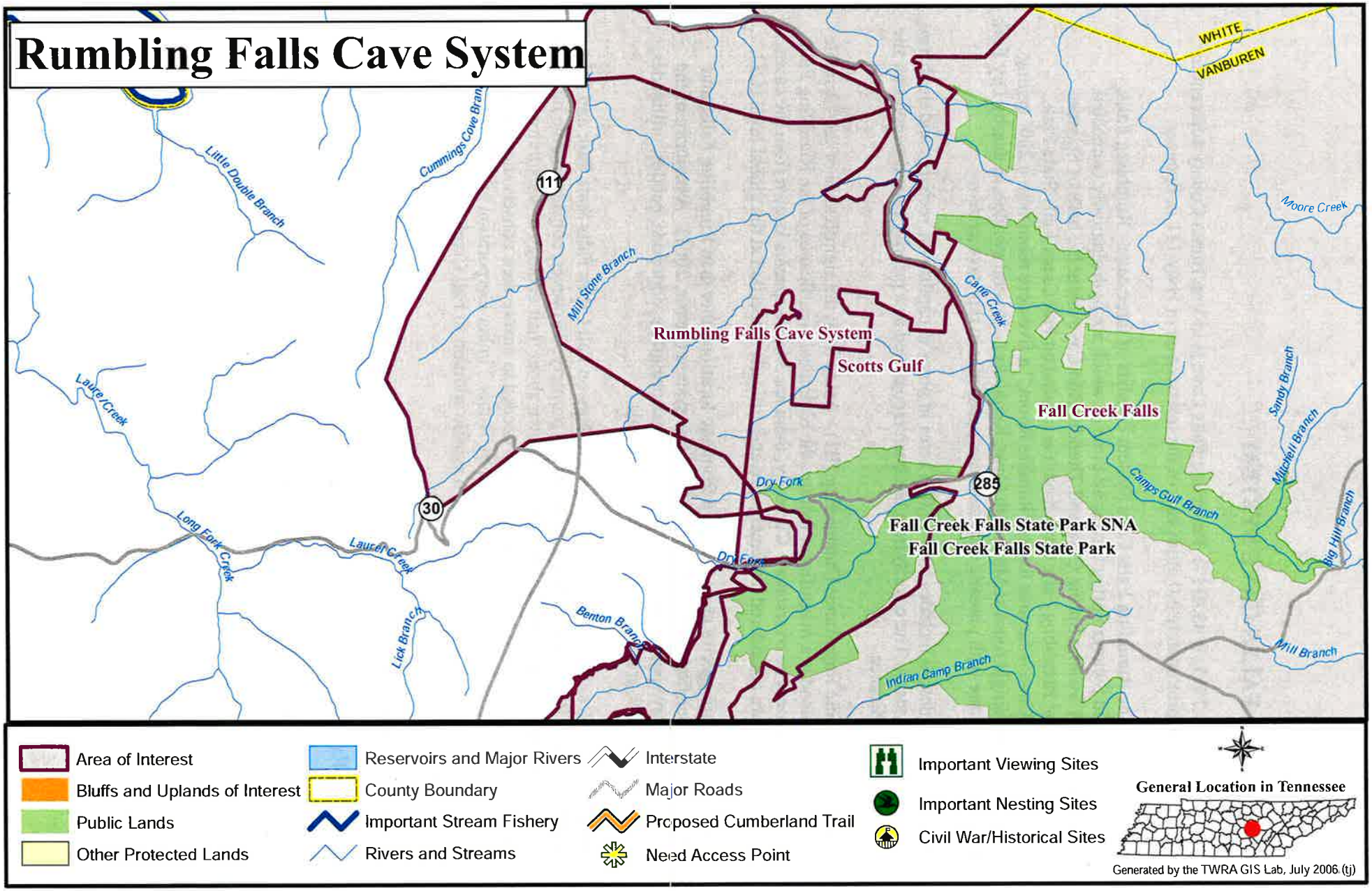
Some of these rare species are not known from any location other than Rumbling Falls, and experts have identified eight new species from this system (Lewis, 2001). A majority of the cave-dwelling rare species are invertebrates such as springtails, copepods, beetles, millipedes, crickets, ostracods, crayfish, spiders, and amphipods.

Strategy – The Rumbling Falls Cave entrance occurs on Fall Creek Falls State Park and SNA and the Rumble Room occurs below state-owned property. However, considering the numerous globally rare species-and the fact that little is known about their ecology or sensitivity – protection of the recharge and discharge area is needed to ensure their conservation. The recharge area includes lands formerly owned by Huber Timber Corporation and this large-primarily forested area-would either make a sizable addition to Fall Creek Falls State Park, or a future TWRA WMA.

Land Protection Needs - 8,847 acres at an estimated cost of $6,300,000.

Potential Partners – TWRA, TNC, TDA, and TDEC.

References – Lewis, Julian J. 2001. A biological reconnaissance of the Rumbling Falls Cave System, Van Buren County, Tennessee. J. Lewis & Associates, Clarksville, Indiana. 21 pp.


Rumbling Falls Cave System
WHITE
VANBUREN
Little Double Branch
Cummings Cove Branch
111
Moore Creek
Mill Stone Branch
Camp Creek
Rumbling Falls Cave System
Scotts Gulf
Fall Creek Falls
Sandy Branch
Laurel Creek
Mitchell Branch
Dry Fork
285
Camps Gulf Branch
30
Fall Creek Falls State Park SNA
Fall Creek Falls State Park
Long Fork Creek
Laurel Creek
Dry Fork
Big Hill Branch
Benton Branch
Lick Branch
Mill Branch
Indian Camp Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

SAVAGE GULF SNA AND COLLINS STATE SCENIC RIVER

Location – (N35.4505, W85.5964 and N35.4323, W85.6051, respectively) The Collins River watershed includes parts of Cannon, Coffee, Grundy, Sequatchie and Warren Counties and drains 804 square miles before emptying into the Caney Fork River. Approximately 6.6 miles of the Collins River within Savage Gulf SNA in Grundy County is designated as a Class II State Scenic River.

Savage Gulf SNA - The geology of Savage Gulf area has set the stage for its rugged beauty, steep sandstone cliffs and lush, inaccessible canyon. Sandstone outcroppings over 250 feet thick contain fossils of shellfish, algae and microscopic organisms. Geologists estimate sediments extend nearly a mile deep below the area and were some 800 million years in the making. The limestone outcroppings lower in the gulfs are estimated to be nearly 350 million years old, and the three major creeks in the area disappear into sinks within this strata during most of the year. Tree species typical of the mixed mesophytic forest found in abundance at Savage Gulf include beech, poplar, basswood, maple, buckeye, hickory, oak, chestnut sprouts, and hemlock. Beneath the forest canopy is a vast array of shrubs, vines, wildflowers, mosses, and ferns which rival the flora of the Great Smokey Mountains in number and variety.

Savage Gulf SNA is a 15,590 acre botanical museum piece that is an example of the greatest diversity in temperate forests in North America, and is a baseline for evaluating adjacent disturbed but otherwise similar areas. Its organisms contain a gene pool that could become a major medical, economic, or other importance in future times. Enjoyment of its beauty and diverse landscapes may lead to development of a "land ethic" attitude among its visitors, helping to insure that this legacy will pass onto future generations. The gulf's genetic diversity includes such endangered species as false hellebore (*Veratrum woodii*) and white fringeless orchid (*Plantanthera integrilabia*). The Savage Gulf SNA is an officially recognized National Natural Landmark. The Stageroad, built with slave labor, is within the gulf and is on the National Register of Historic Places.

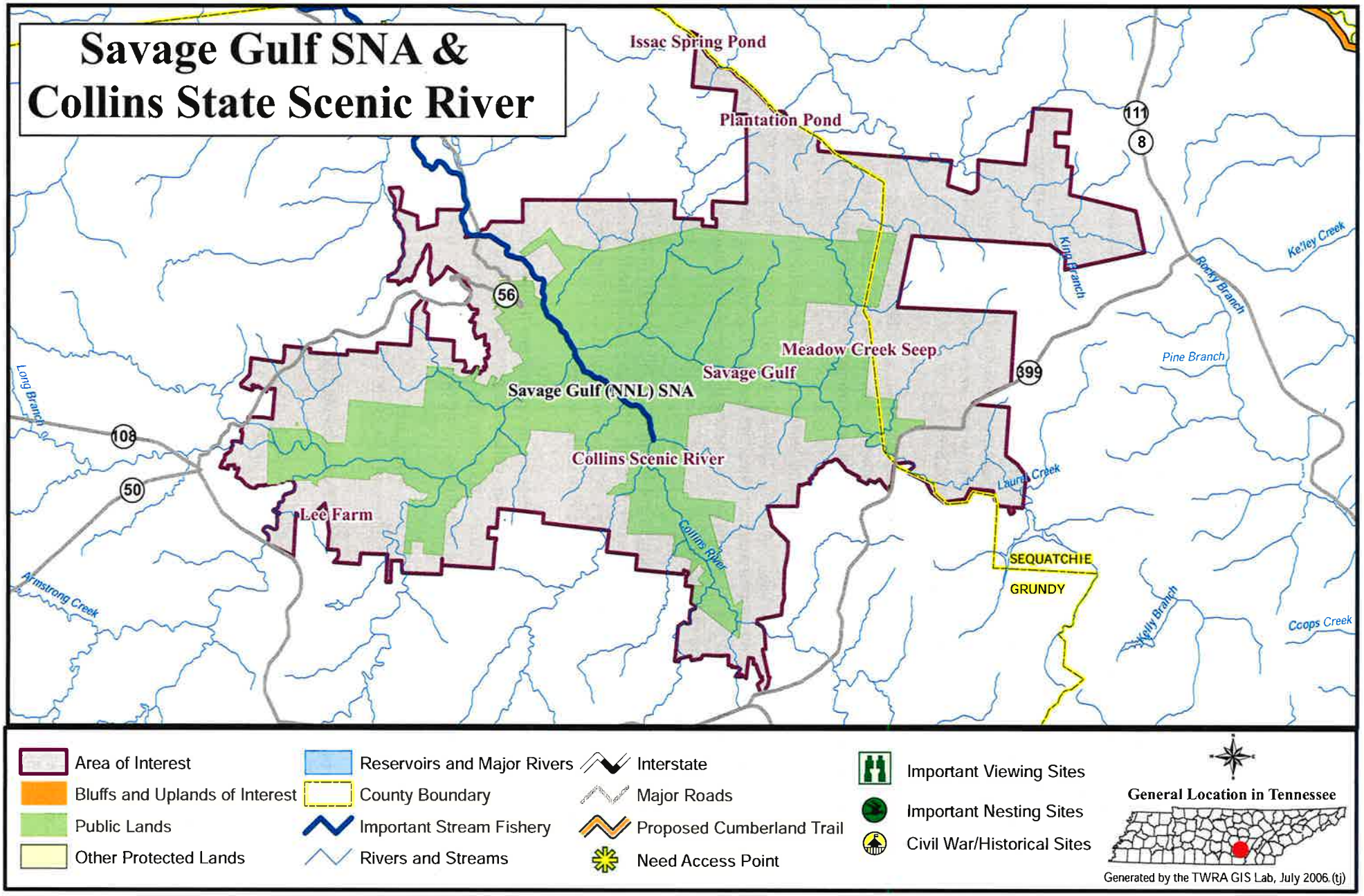
Collins State Scenic River - At a length of five miles each, the Big Creek, Collins River and Savage Creeks tumble down over 800 feet in elevation through narrow gorges, locally known as "Gulfs." Rimmed by sheer sandstone cliffs, the rugged canyons offer the hardy visitor a fine glimpse of the true wilderness still remaining in our State's midsection. All of the larger streams flow underground before reaching their mouths, making dry streambeds a common feature. But during periods of heavy rainfall, these streams can become swift and treacherous torrents, so flash flooding is a very real danger. At the heads of the gorges the streams drop off the hard caprock in breathtaking waterfalls. Collins River and Ranger Creek have disappearing waterfalls and associated karst features. Deep in the gorges, these streams drop over limestone ledges and flow into sinks. Logging has occurred in most sections of the gorges, but the forests are recovering rapidly. A diverse display of wildflowers blankets the gorge slopes in the early spring. This headwater-type river contains stocked populations of both brown and rainbow trout and a variety of other cooler-water species. The upper section of the Collins River epitomizes the typical rugged Cumberland Plateau stream and its associated geological features.

The Collins State Scenic River contains populations of rare fish, mollusks, amphibians, and plants of state and federal concern. According to a TNC/NatureServe publication entitled, "Rivers of life: Critical Watersheds for Protecting Freshwater Biodiversity," the Collins River is listed among the US watershed hot spots with 10 or more at-risk imperiled aquatic species, with 11 at risk fish and mussel species including four listed by the USFWS. It also flows through and is entirely contained within Savage Gulf SNA. A 1998 Tennessee River Assessment Report found that the rivers natural and scenic qualities were of local to statewide significance, recreational boating was of regional significance, its fishery was excellent, and its water quality was fully supporting its designated uses.

Strategy - The strategy for future acquisitions to SGSRA is to acquire in-holdings, properties surrounding the park for access or access control, watershed protection, view-shed protection and properties that contain representative forest cover types of the Cumberland Plateau, escarpment and gorges, that further the wildlife, aesthetics, interpretive, and recreation missions of the State Park System. The site conservation plan for the Collins State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 450 feet from the usual banks of the river on each side. Identifying additional reaches of the Collins River to add to the scenic river, and connecting contiguous protected areas to state and other publicly owned lands along the entire river corridor are a major approach toward protecting the Collins River and making it a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, landowner assistance programs, and conservation buyers. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river. Acquisition of key tracts for public access and use will be strategically targeted.

Land Protection Needs – 20,777 acres in Savage Gulf at an estimated cost of $14,500,000; 500 acres along the Collins River at an estimated cost of $500,000.

Potential Partners - The Friends of South Cumberland State Recreation Area, TNC, The Land And Water Conservation Fund, TCF, USFWS, USACE, and county governments


Savage Gulf SNA &
Collins State Scenic River
Issac Spring Pond
Plantation Pond
111
8
56
Meadow Creek Seep
Savage Gulf
Savage Gulf (NNL) SNA
399
Collins Scenic River
108
50
Lee Farm
SEQUATCHIE
GRUNDY
Long Branch
Armstrong Creek
Collins River
King Branch
Rocky Branch
Ke'ley Creek
Pine Branch
Laura Creek
Kelly Branch
Coops Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SCOTTS GULF

Location – (N35.7744, W85.3283) Scott's Gulf is a very large project area. It includes the subprojects of Fall Creek Falls, Bledsoe Forest, and Bridgestone/Firestone Centennial Wilderness WMA, Virgin Falls, Lost Creek Cave, Camps Gulf Cave, Rumbling Falls Caves, and the Upper Caney Fork Gorge. It is located fifteen to twenty miles southeast of Sparta, in White and Van Buren Counties.

Description – The topography of this area includes very steep gorge-like drainages characteristic of several tributaries to the Caney Fork River. The tops of the Plateau surrounding the Gulf are relatively flat to rolling hills. Due to its topography, much of the area remains in oak/hickory and cove hardwood forest. The gorges of the upper Caney Fork River have been recognized for their scenic quality by many outdoor organizations.

Significance – This is yet another significant area of the Cumberland Plateau. Much of the threat to this area is due to its diversity, uniqueness, and its natural beauty. This general region boasts numerous waterfalls, caves, scenic vistas and tranquil retreats found in few other places.

As with other Plateau areas, this region is home to numerous imperiled species. There is an extensive cave system in the area, some of it unexplored, which provides habitat for several unique and imperiled cave organisms including the Indiana bat gray bat, eastern big-eared bat, and eastern small-footed bat. Also inhabiting the karst areas of the region are southern cavefish and numerous troglobitic invertebrates.

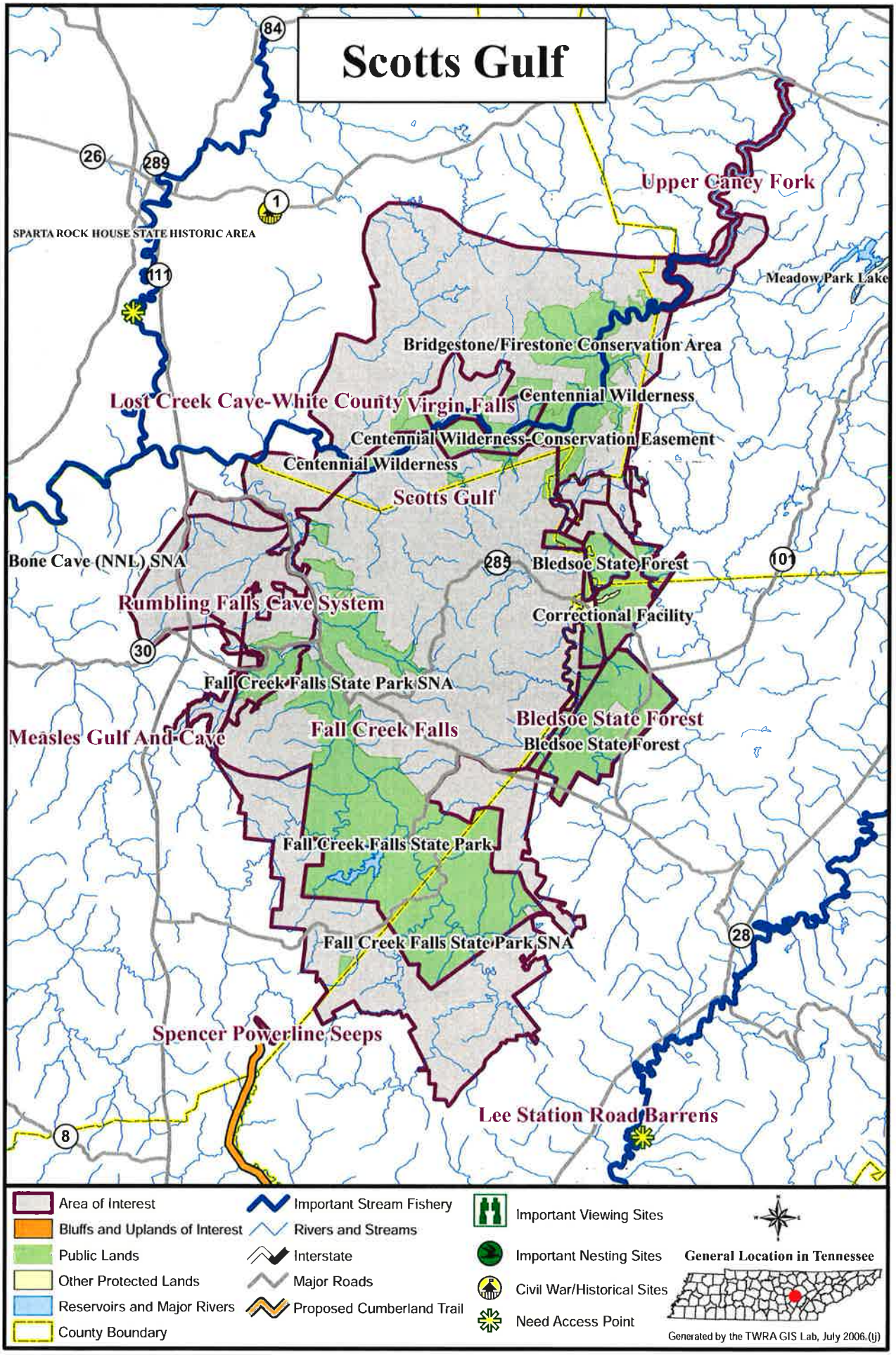
Aquatic and cave dwelling rare species are found in the Scotts Gulf area. Endemic species include two rare fish and one freshwater mussel. The state listed bedrock shiner and federally listed jewell darter and Cumberland pigtoe mussel are found in the headwaters of the Cumberland River system and nowhere else in the world.

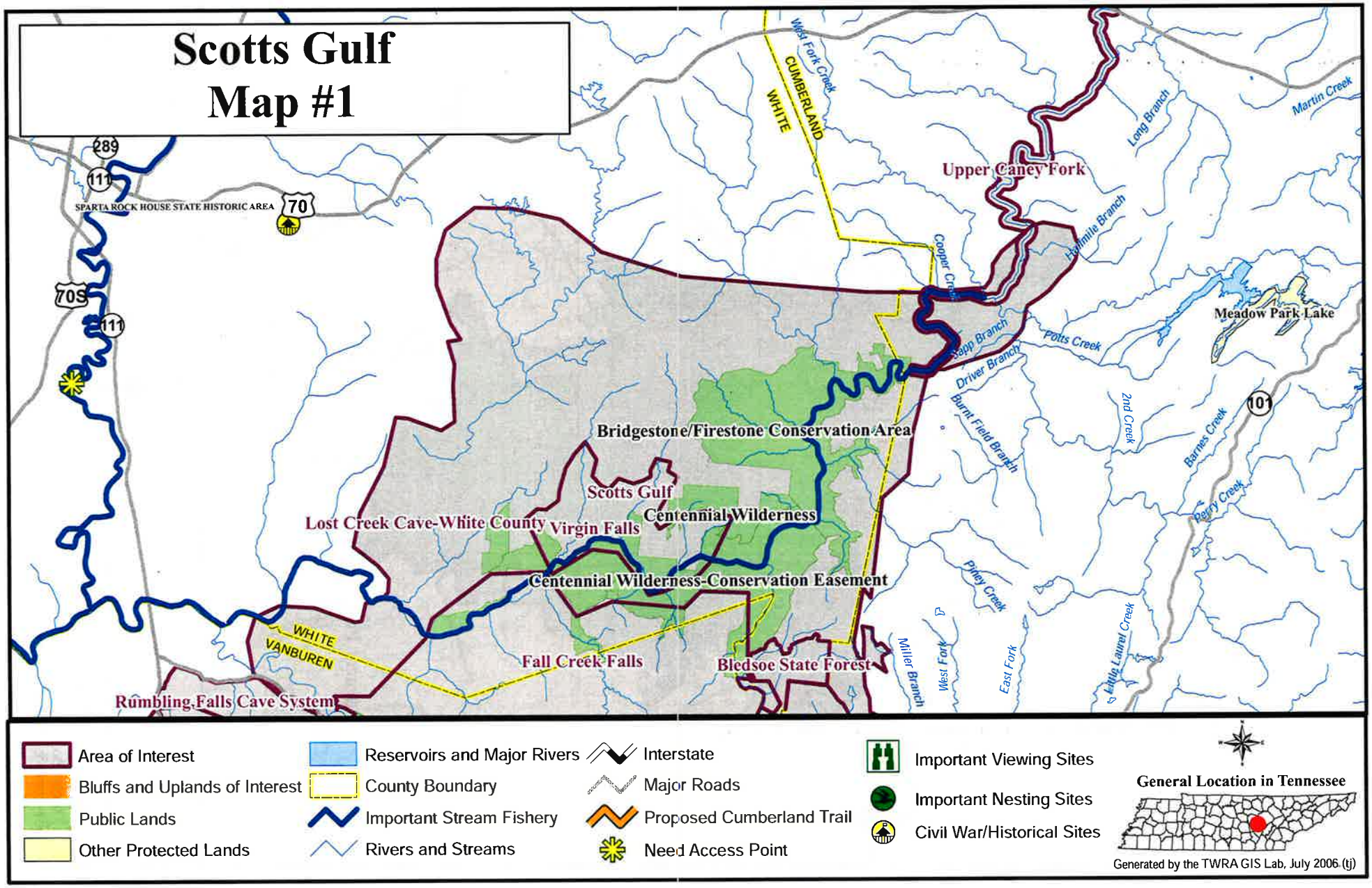
Numerous species of neo-tropical birds that are in decline are found in this area including several species of warblers, Louisiana waterthrush, yellowbreasted chat, wood thrush. Peregrine falcons have been observed in the area and the cliffs along the gorge region may hold promise for the eventual establishment of a nesting population in the area.

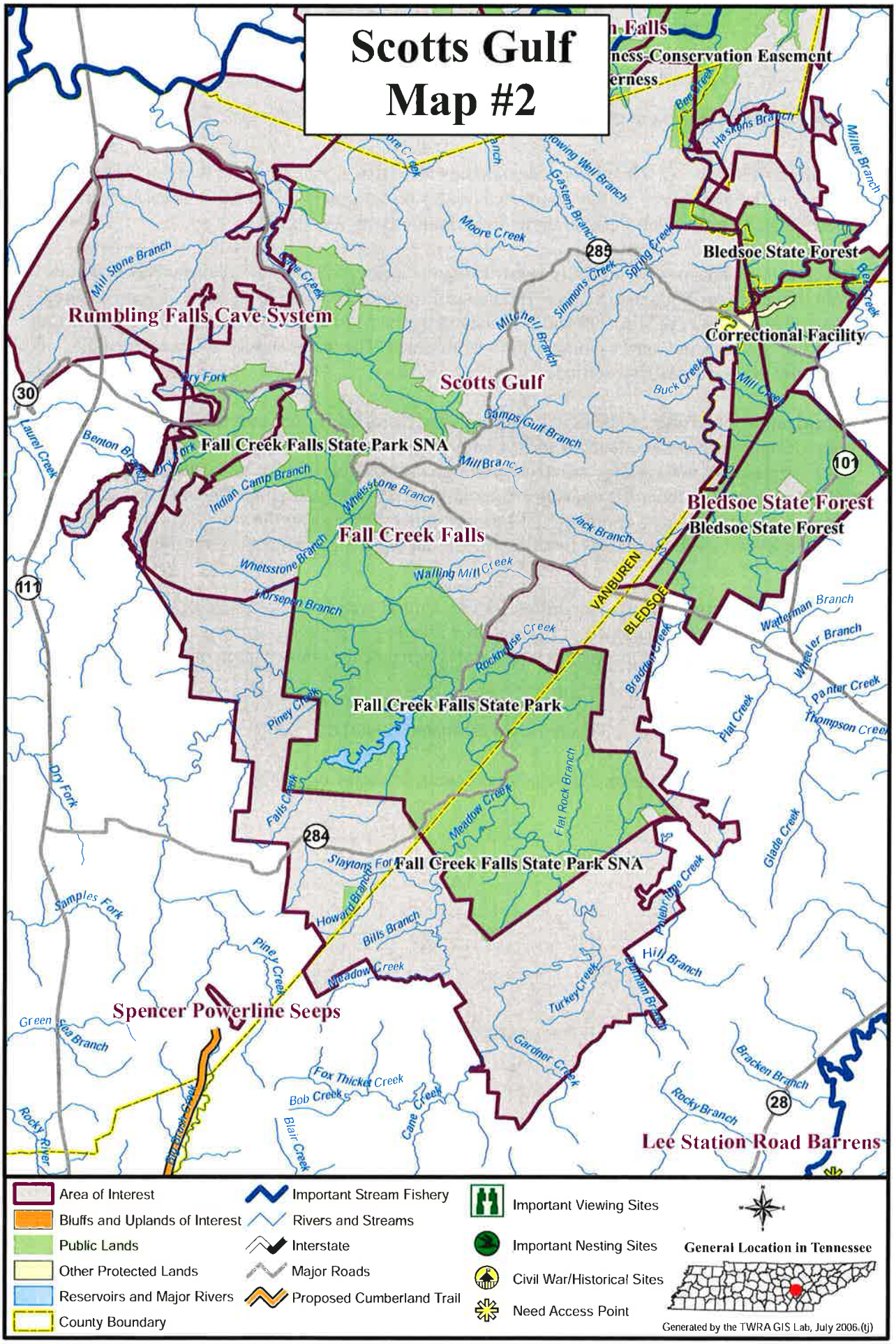
In addition to the unique fauna of the area, there are several plant species in the area that are of concern including Cumberland rosemary and netted chain fern.

Lands protection needs – 29,506 acres at an estimated cost of $22,238,700.

Potential Partners – Several entities have already been active in the protection of land in the project area including TWRA, TDA, TDEC, TNC, and Bridgestone Firestone Trust. These same entities likely will continue to partner in further protection this area.


Scotts Gulf
84
26
289
1
SPARTA ROCK HOUSE STATE HISTORIC AREA
111
Upper Caney Fork
Meadow Park Lake
Bridgestone/Firestone Conservation Area
Lost Creek Cave-White County Virgin Falls
Centennial Wilderness
Centennial Wilderness-Conservation Easement
Centennial Wilderness
Scotts Gulf
Bone Cave (NNL) SNA
285
Bledsoe State Forest
101
Rumbling Falls Cave System
Correctional Facility
30
Fall Creek Falls State Park SNA
Measles Gulf And Cave
Fall Creek Falls
Bledsoe State Forest
Bledsoe State Forest
Fall Creek Falls State Park
Fall Creek Falls State Park SNA
28
Spencer Powerline Seeps
Lee Station Road Barrens
8
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(ij)


Scotts Gulf
Map #1
289
111
SPARTA ROCK HOUSE STATE HISTORIC AREA
70
70S
111
WHITE
CUMBERLAND
West Fork Creek
Upper Caney Fork
Long Branch
Martin Creek
Cooper Creek
Hurricane Branch
Meadow Park Lake
Potts Creek
Rapp Branch
Driver Branch
Burnt Field Branch
2nd Creek
Barnes Creek
101
Perry Creek
Bridgestone/Firestone Conservation Area
Scotts Gulf
Centennial Wilderness
Lost Creek Cave-White County
Virgin Falls
Centennial Wilderness-Conservation Easement
WHITE
VANBUREN
Fall Creek Falls
Bledsoe State Forest
Rumbling Falls Cave System
Piney Creek
Miller Branch
West Fork
East Fork
Little Laurel Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)


Scotts Gulf
Map #2
Falls
ness-Conservation Easement
erness
Bledsoe State Forest
Correctional Facility
Rumbling Falls Cave System
Scotts Gulf
Fall Creek Falls State Park SNA
Fall Creek Falls
Bledsoe State Forest
Bledsoe State Forest
Fall Creek Falls State Park
Fall Creek Falls State Park SNA
Spencer Powerline Seeps
Lee Station Road Barrens
Moore Creek
Mill Stone Branch
Rye Creek
Gasters Branch
Simmons Creek
Spring Creek
Mitchell Branch
Buck Creek
Mill Creek
Camps Gulf Branch
Mill Branch
Indian Camp Branch
Whetsstone Branch
Jack Branch
Walling Mill Creek
Horsepen Branch
Rockhouse Creek
Bradden Creek
Watterman Branch
Wheeler Branch
Panter Creek
Thompson Creek
Flat Creek
Piney Creek
Falls Creek
Meadow Creek
Flat Rock Branch
Glade Creek
Howard Branch
Bills Branch
Hill Branch
Turkey Creek
Gardner Creek
Bracken Branch
Rocky Branch
Fox Thicket Creek
Bob Creek
Cane Creek
Blair Creek
Rocky River
Samples Fork
Green Sea Branch
Laurel Creek
Benton Branch
Dry Fork
VANBUREN
BLEDSOE
30
111
285
101
284
28
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
Need Access Point
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SEQUATCHIE CAVE SNA

Location - (N35.1200, W85.5939) Sequatchie Cave is an eight acre SNA located in Marion County in the Sequatchie Valley about five miles north of Jasper. The site is accessed via Valley View Road by turning on Park Street in the community of Sequatchie.
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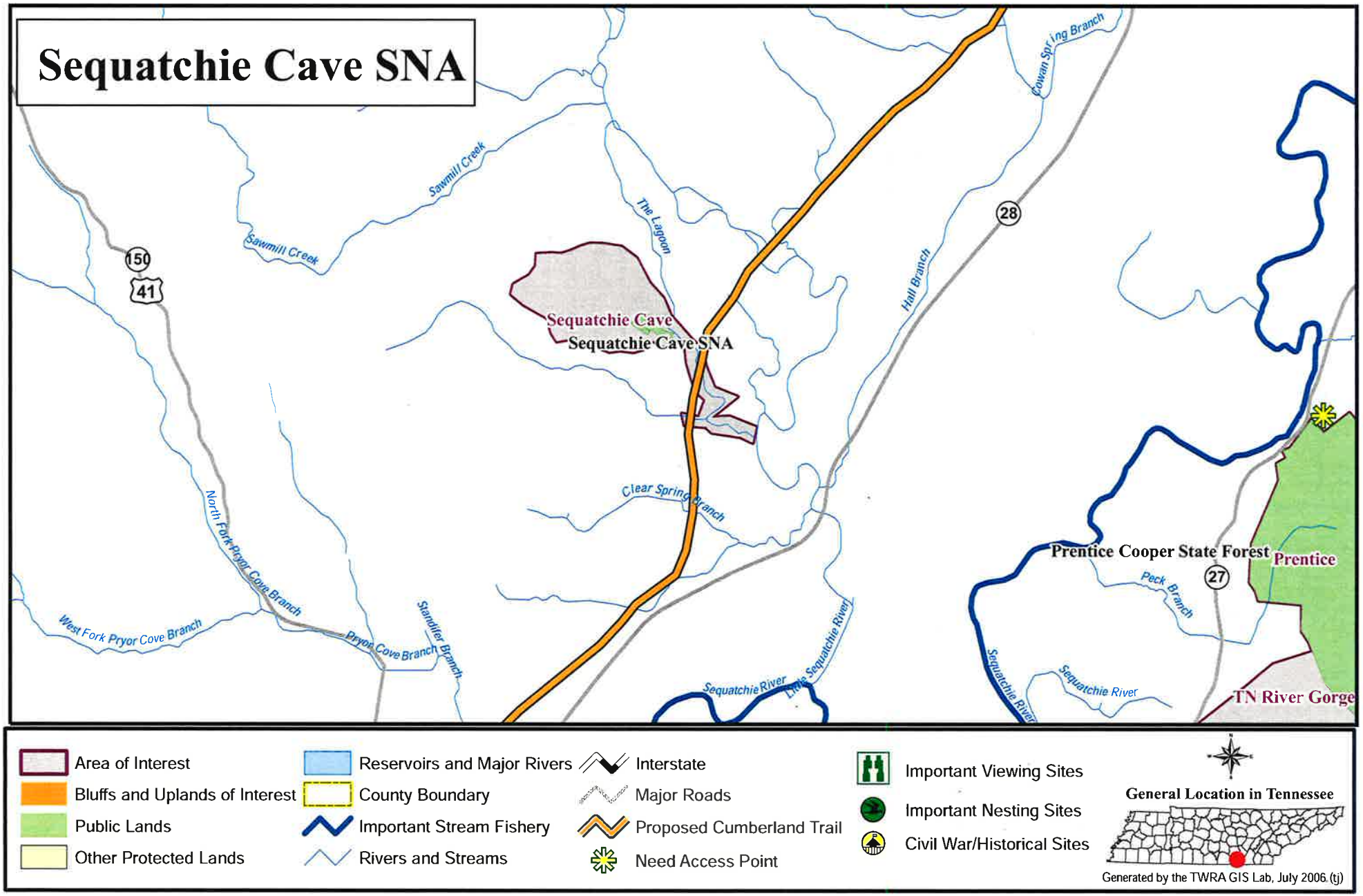
Description - This is a biologically significant area located where Owen Spring Branch flows from the mouth of Sequatchie cave. The site is a former TDOT roadside park. It was renamed "Sequatchie Cave Park" in 1999 and is managed by the Marion County Highway Department on behalf of the Marion County Conservation Committee. The water supply at Owen Spring is, in part, why this area was first settled.

Significance - The mix of ecological, cultural, and historical values makes Sequatchie Cave a unique area. The cave and its cold spring water support three federally and state listed species, three species of state concern, and many other aquatic and cave inhabitants. This is one of only two sites where the federally endangered royal snail (*Pyrgulopsis ogmorphaphe*) is known to occur in the entire world. Both are in Marion County. This is also the site where the rare cadisfly (*Glyphopsyche sequatchie*) was first described, making it the type locality for this species.

Strategy - The conservation site design for this natural area proposes to increase its acreage to 346 in order to protect as much of the recharge area that is presently known and protect suitable habit downstream from the existing boundary to enhance the conservation of the rare species that occur here.

Land Protection Needs – 338 acres at an estimated cost of $275,000

Potential Partners - Marion County Government, Marion County Conservation Committee, USFWS, and TDEC.


Sequatchie Cave SNA
Sawmill Creek
Sawmill Creek
The Lagoon
Cowan Spring Branch
Hall Branch
28
150
41
Sequatchie Cave
Sequatchie Cave SNA
Clear Spring Branch
North Fork Pryor Cove Branch
West Fork Pryor Cove Branch
Pryor Cove Branch
Standifer Branch
Sequatchie River
Little Sequatchie River
Prentice Cooper State Forest
Prentice
Peck Branch
27
Sequatchie River
Sequatchie River
TN River Gorge
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
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SHERWOOD ESCARPMENT

Location - (N35.0817, W85.9058) Sherwood Escarpment in Franklin County is centered immediately east of the town of Sherwood, and includes the escarpment of the Cumberland Plateau from approximately one mile north of Sherwood to one mile southeast of the town center. The site lies east of Hwy 56 and south of the CCC Road, and north of Sherwood School. (See Carter Mountain map)

Description - The primary feature of Sherwood Escarpment is Youngs Creek Cove, a gulf containing approximately three miles of Cumberland Plateau escarpment. An additional ½-mile portion of the site north of Sherwood faces the Crow Creek Valley proper. Elevations at the site range from 700 feet to 1700 feet. Above approximately 1350 feet the site contains a mixed oak hardwood forest dominated by various oaks and including white ash and shagbark hickory as associated species. Soils above this elevation are largely sandstone-derived, and sandstone outcrops and rocks are found sporadically. Below approximately 1350 feet the site is largely defined by Monteagle limestone, including minor cliffs, outcrops, boulders, and rocks. Soils are limestone-influenced and this is reflected in the plant community. The herb layer includes small-headed sunflower (*Helianthus microcephalus*), pale flowered polymnia (*Polymnia canadensis*), and scattered patches of Cumberland rosinweed (*Silphium brachiatum*). A generally richer flora is evident, with the overstory including species associated with more mesic forests (sugar maple, blue ash, basswood, etc.). A blue ash-giant cane community is present in parts of the site. Total acreage of Sherwood Escarpment is approximately 1250 acres.

Included in the site are the remnants of the former Gager Mine Company, a limestone mining operation that ceased operations circa 1949. The escarpment portion of the mine includes a large level working area carved out from the mountain, and an extensive series of tunnels (portals) from which high quality lime was previously mined. Mined areas exist both beneath and adjacent to the working area. The site has been generally inactive since the closure of the Gager mine, though numerous attempts have been made to find other uses for the property (mushroom farming, alternative energy production, etc.). The Gager lands, which include the mine proper and an additional approximately 3,100 acres of escarpment and Cumberland Plateau, were purchased by an Ohio company in 2004 with the intent to operate a mine or gravel pit on the old mine site. Save for two relatively small parcels in the northwestern section of Sherwood Escarpment, the entire conservation site is owned by the Ohio company.

Significance - Site Importance Outstanding (B1) - Sherwood Escarpment contains the northernmost known population of the painted snake-coiled forest snail (*Anguispira picta*)(S1), a federally threatened and state endangered species. Approximately 30% of the known habitat of this species occurs within the site. This land snail is found on limestone outcrops and cliffs from approximately 750 to 1300 feet elevation. *A. picta* encircles the working area of the Gager mine, and has been observed just outside one of the lower portals. The species has been found at the base of spoil piles left from mining activities, and occurs in a cedar-blue ash forest immediately adjacent to the upper portals. The snail, however, has apparently not recolonized the open mine face, possibly because of insufficient forest cover or xeric conditions.

The state endangered Cumberland rosinweed (*Silphium brachiatum*, S2) also has been documented from Sherwood Escarpment, along with butternut (*Juglans cinerea*, S3, state threatened) and goldenseal (*Hydrastis canadensis*, S3, state special concern).

Strategy - At the present time all known occurrences of *A. picta* fall on private lands. The known range of the species includes approximately twelve miles of Cumberland Plateau escarpment, roughly half on each side of the upper Crow Creek Valley at Sherwood. The species is not reported elsewhere. The Sherwood Escarpment includes over 60% of the known range of the species on the east side of the Valley, or 30% of the total range of the species. If the entire Gager tract is considered, nearly 80% of the known *A. picta* population on the east side of the Valley is included. Acquisition of the Gager tract would secure a substantial population of the snail on public land. Additionally, portions of the Gager tract share a border with both Carter Caves SNA and Franklin-Marion State Forest.

At present the acreage immediately surrounding the mine has been rezoned for industrial use (approximately 300 acres). The balance of the land- and bulk of occupied snail habitat- remains in a natural state. If the current landowner is agreeable, this property should be acquired by the State and evaluated for potential as a SNA.

Land Protection Needs – 1,260 acres at an estimated cost of $1,300,000.

Potential Partners – TDEC, TNC, Land Trust for Tennessee, USFWS, TWRA, and TDA.

SLICKROCK BRANCH/PAINT ROCK CREEK

Location - (N36.3923, W84.4622) The approximately 30 acre site is located in Scott County approximately two miles southeast of Huntsville on an alluvial floodplain to the east of the Paint Rock Creek-New River Confluence on the north bank of New River. (See Upper Cumberlands map)

Description - The property consists of a broad sandy floodplain of the New River. The forest is an early successional hardwood forest. The New River is a characteristicly high gradient Cumberland Plateau river.

Significance - Site Importance High (B3) - The site design includes the largest known southern lady slipper (*Cypripedium kentuckiense*) population in Tennessee. The site has been termed the "mother lode" population. The southern lady slipper is state endangered and its existence is considered imperiled in the State meaning less then 20 populations are currently documented within Tennessee. Because of the rarity of the southern lady slipper and large size of the population, the site has a high biodiversity significance (B3).

Strategy - The strategy for acquisition at Slickrock Branch is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs - 17 acres at an estimated cost of $20,000.

Potential Partners - TNC, TDEC.

SPENCER POWERLINE SEEPS

Location - (N35.5841, W85.4196) The approximately 80 acres is located in Van Buren County approximately 10 miles south of Spencer off Hwy. (See Scotts Gulf map)

Description - The property consists of a series of seeps under TVA power lines, where it is crossed by an abandoned power line running NW to SE. This site is dominated by numerous rare wetland species. Excellent examples of dry barrens are also located on the site. Some plants typical of the site include switch grass, big bluestem, Maryland meadow beauty, and dense blazing star. The site has very high biodiversity significance (B2) due to the number and quality of rare plant populations and diversity of habitats.

Significance - Site Importance Very High (B2) - The site is an excellent example of native herbaceous communities of open wet and dry barrens and meadows. The site also includes an old abandoned farm pond which has become a significant refuge for a rare species of yellow eye grass. The abundance of rare plants known from the site range from those which are considered critically imperiled (S1 - less than 5 known occurrences), imperiled (S2 – less than 20 known occurrences), and those that are rare or uncommon (S3 – less than 100 occurrences).

Three state endangered orchids are known from the site: white fringeless orchid (*Platanthera integrilabia* – S2S3), yellow fringeless orchid (*Platanthera integra* – S1), and rose pogonia (*Pogonia ophioglossoides* – S2). It is important to note that the white fringeless orchid is a candidate for federal listing, meaning sufficient information exists on biological vulnerability of the species. Other state endangered plant species include few-flowered beak rush (*Rhynchospora rariflora* – S1) and coastal plain yellow-eyed grass (*Xyris ambigua* – S1), both of which are obligate wetland species. Several state threatened plants occur on site including Canada lily (*Lilium candense* – S3), zigzag bladderwort (*Utricularia subulata*- S1), and Canby's lobelia (*Lobelia canbyi* – S2S3). Low frostweed (*Helianthemum propinquum* – S1S2) is also known from the site and listed as special concern in Tennessee.

Strategy - The strategy for acquisition at Spencer Powerline Seeps is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation rare species and representative communities. Preservation of these rare species and wildlife, will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs - 78 acres at an estimated cost of $68,000.

Potential Partners - TNC, TWRA, and TDEC.

STANDING STONE STATE FOREST AND STATE PARK

Location – (N36.4602, W85.4206) Standing Stone State Forest is located just south of Dale Hollow Lake in Overton and Clay Counties. The State Forest lies just north of the community of Hilham and approximately ten miles south of the Kentucky state line. The area is accessible from Hwy 52, approximately 12 miles northwest of Livingston, and from Hwy 136 approximately 30 miles north of Cookeville.

Description - Standing Stone State Forest - (8,445 acres/3,418 ha)
This Forest had its beginning in lands purchased by the Resettlement Administration and deeded to the State in 1955. It became a State Forest in 1961. Most of the State Forest lies technically in the Eastern Highland Rim Physiographic Province. Recent investigation by Smalley (2004), doing landtype mapping, further described the forest location as a transition between the Eastern Highland Rim and Cumberland Plateau regions.

Ninety-eight percent of the land is in regulated forest and 89% is in upland hardwoods, 6.8% in pine, and 4% in mixed hardwood and pine. Thirty-four percent of the forest is in stands 80+ years old and 48% is in stands 50-80 years old, and only 18% is less than 50 years old. Standing Stone State Park is an in-holding to the forest.

Significance – Although Braun (1950) classified this area within the Western Mesophytic Forest region, she indicated that this dissected portion of the Eastern Highland Rim is essentially a part of the Mixed Mesophytic Forest region. One of the primary differences that Standing Stone has with the Mixed Mesophytic Forest is the dominance of beech - as opposed to hemlock - in the ravine slopes.

Recently, TDF contracted TDEC to complete a biological assessment of Standing Stone, "An Ecological Assessment of Standing Stone State Forest" (Withers and others, 2004). Several vertebrate and invertebrate rare animals have been recorded or observed on or in the proximity of Standing Stone. Prior to the survey, no rare plants had been documented on Standing Stone.

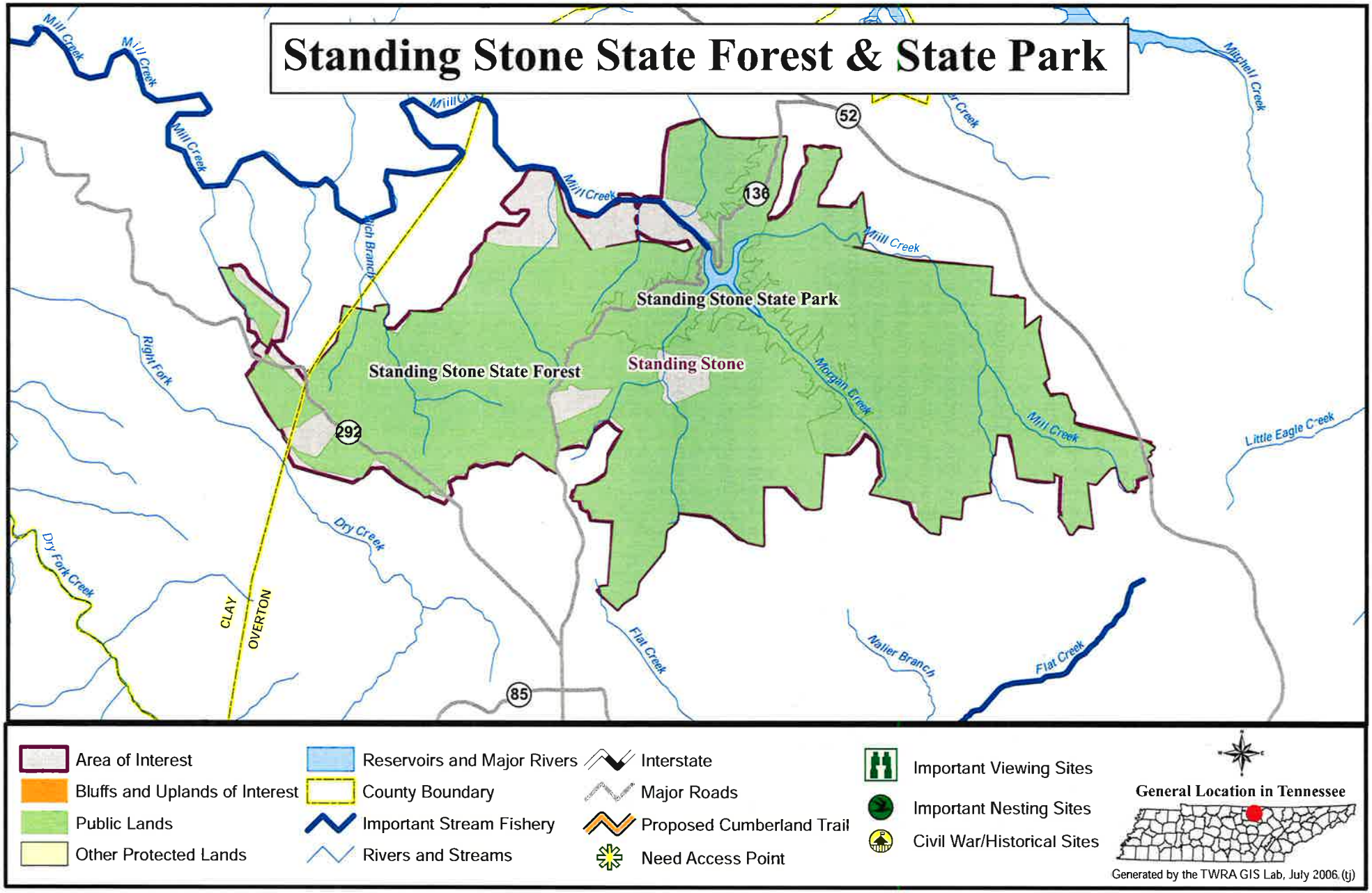
Recreationally, this area is served by Dale Hollow Lake and Standing Stone State Forest and Park. Hunting is a traditional activity on these State lands.

The Standing Stone name comes from a large rock monument in the vicinity of the forest that delineated traditional Indian hunting lands.

State Forest Strategy – Acquisition of in-holdings, for access and access control to the forest are the primary criteria for additions to the Forest.

Land Protection Needs – 695 acres at an estimated cost of $646,590

Potential Partners - TDA.


Standing Stone State Forest & State Park
Standing Stone State Park
Standing Stone State Forest
Standing Stone
Mill Creek
Mill Creek
Mill Creek
Mill Creek
Mill Creek
Mill Creek
Mitchell Creek
Right Fork
Morgan Creek
Little Eagle Creek
Dry Creek
Dry Fork Creek
Flat Creek
Flat Creek
Nailer Branch
52
136
292
85
CLAY
OVERTON
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

TANAGER HILL

Location - (N36.1636, W85.3653) Tanager Hill is located in Putnam County about 5 miles east of Cookeville.

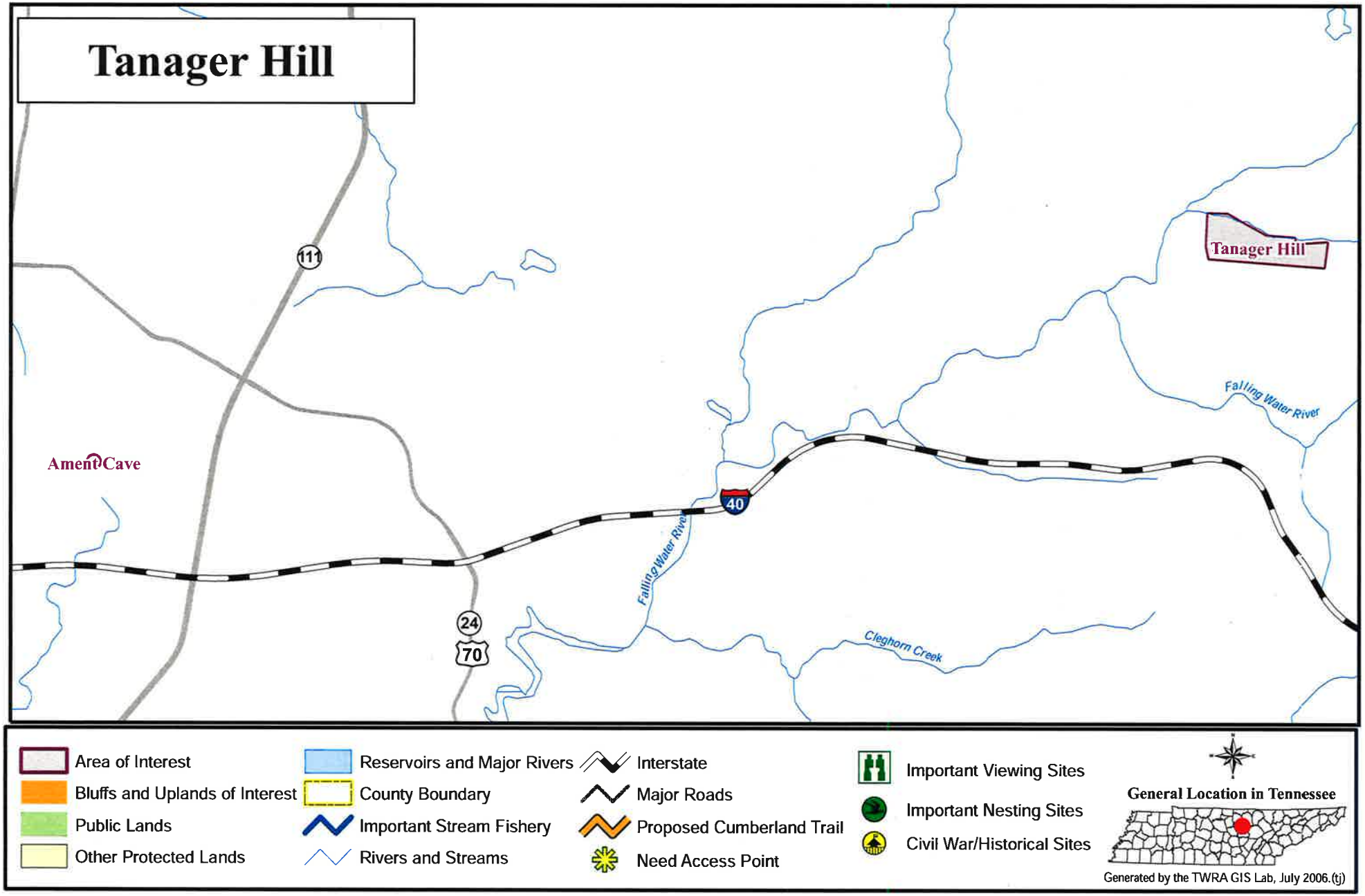
Description - Tanager Hill is the property of a naturalist in Cookeville. This area is an example of a private citizen's effort to acquire and protect a botanically significant piece of property. It is a 10 acre woodland dominated by a eastern red cedar community with other species such as persimmon, sourwood, dogwood, red maple, and tulip poplar also common.

Significance - Site Importance Moderate (B4) - Three species on the Tennessee rare plant list occur here. Each is considered as a species of special concern in Tennessee. The three rare species are the Alabama grapefern (*Botrychium alabamense*), oval ladies-tresses (*Spiranthes ovalis*) and running strawberry-bush (*Euonymus obovatus*). The population of Alabama grapefern is the largest known in Tennessee. This species has been reported from only four localities in Tennessee, but the only recently observed population is here. The difficulty in identifying this species, and the ease with which it can be overlooked, probably contributes to the few observations of this plant, but records of the DNA indicates that Alabama grapefern is a rare and disjunct plant in Tennessee.

Strategy - The protection of this area would be secured by the acquisition of the land or a donated conservation easement from the landowner. The total acreage of this project is 10 acres.

Land Protection Needs - 10 acres at an estimated cost of $13,000.

Potential Partners – TDEC.


Tanager Hill
Tanager Hill
111
Amen Cave
40
24
70
Falling Water River
Falling Water River
Cleghorn Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

TENNESSEE RIVER GORGE

Location – (N35.0979, W85.4176) The Tennessee River Gorge is located in Hamilton and Marion Counties in southeast Tennessee immediately west of the city of Chattanooga. (See Cummings Cove map)

Description - The Tennessee River Gorge is a 27,000 acre river gorge carved through the Waldens Ridge prong of the Southern Cumberland Plateau. The gorge is 27 miles long, 1.5 - 2 miles wide and averages 1,800 feet deep. It is Tennessee's largest river canyon and east of the Mississippi is exceeded in size by only five other canyons. It is little developed and is almost entirely covered by unbroken mixed hardwood forests exceeding 80 years in age. Of the 27,000 acres within the Tennessee River Gorge, 16,344 have been protected by federal and state organizations as well as private organizations including 6,942 acres protected by the Tennessee River Gorge Trust.

Significance - As stated, The Tennessee River Gorge itself is little developed considering its proximity to Chattanooga and contains many rare, threatened and endangered species of plants and animals as well as significant habitats of Natural Area quality, such as the Cedar Mountain complex. Also represented are numerous karst features and cultural and historic sites representing Native American pre-history as well as numerous historic sites connected with the Cherokee removal, frontier history and the civil war. Williams Island at the head of the Gorge is on the national register of historic sites and is a state archaeological area. The gorge's biological diversity is so unique that it has been designated a Biosphere Reserve by the U.S. Man and the Biosphere Program of UNESCO. Rare, threatened and endangered species include: the large flowered skullcap (*Scutellaria montana*), the gyandotte beauty (*Synandra hispidula*), the Price's potato bean (*Apios priceana*), the rose gentian (*Sabatia Capitata*), the white fringeless orchid (*Plantanthrea integrilabia*), Indiana bat, bald eagle, osprey, snail darter, Anthony's river snail mussel, Cumberland monkeyface mussel, dromedary pearlymussel, fine-rayed pigtoe mussel, orange-foot pimpleback mussel, pink mucket perlymussel, rough pigtoe mussel, and royal marstonia mussel.

Strategy - The site conservation plan for the Tennessee River Gorge calls for the continued acquisition of private land for inclusion with the existing protected areas.

Land Protection Needs – 5,000 acres at an estimated cost of $5,800,000

Potential Partners - Baylor School, TDA, TDEC and USFS.

TIMS FORD STATE PARK

Location – (N35.2304, W86.2494) Franklin and Moore Counties

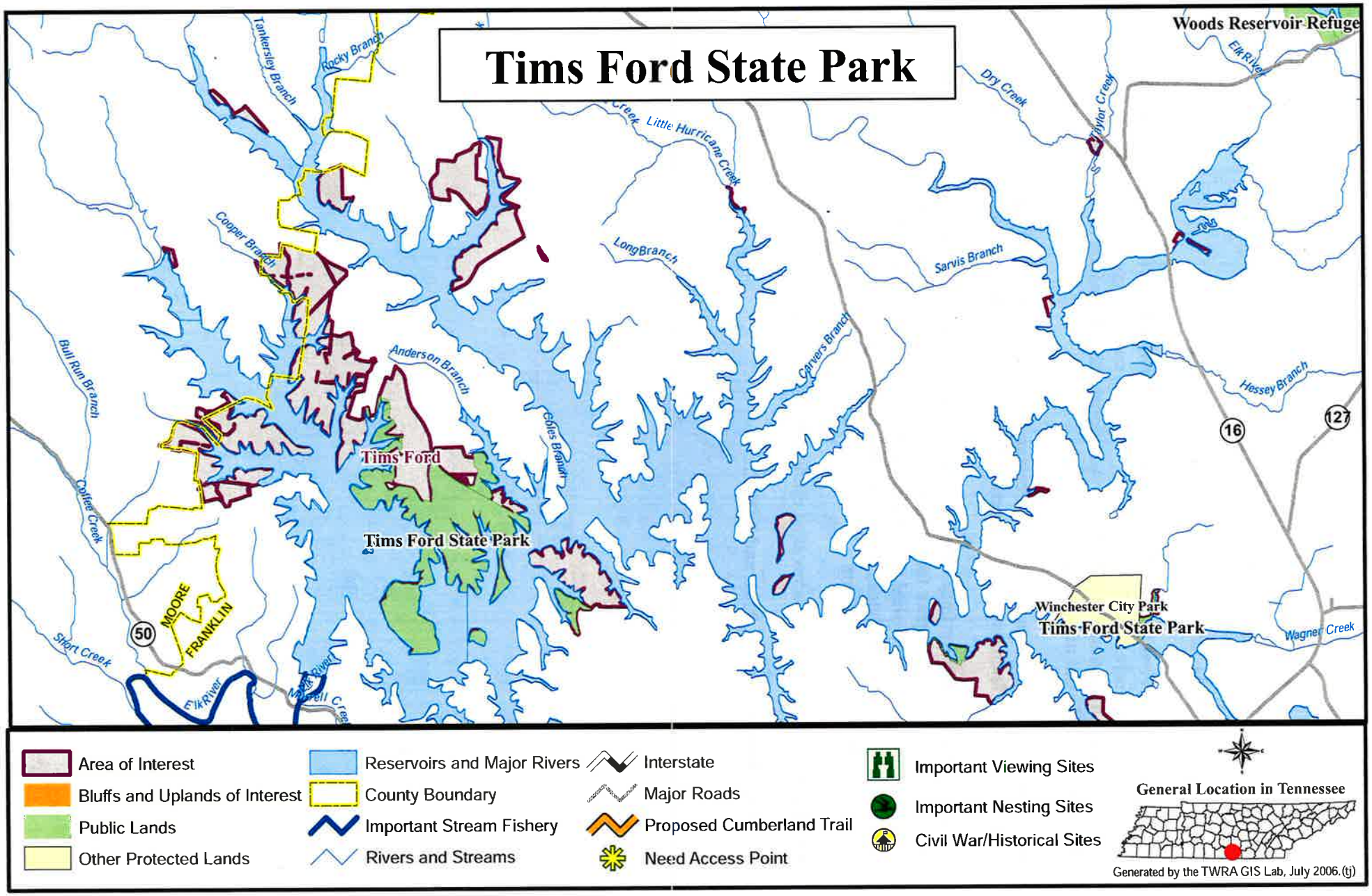
Description - Tims Ford State Park is located on the eastern edge of the Interior Plateau on the shore of the 10,680 acre Tims Ford Reservoir. The park currently contains 1,895 acres with another 53 acres to be transferred by TVA. Additional tracts that adjoin the park are critical to the proper and efficient management of the park.

Significance - Additional properties are necessary to ensure that optimum recreation opportunities are offered while still protecting the natural and cultural values of the park area.

Strategy - The strategy for future acquisitions to Tims Ford State Park is to acquire in-holdings, properties surrounding the park for access or access control or recreational development, watershed protection, view-shed protection and properties that contain representative forest cover types of the interior plateau that further the wildlife, aesthetics, interpretive, and recreation missions of the State Park System.

Land Protection Needs – 50 acres at an estimated cost of $800,000.

Potential Partners - TCF, TNC and TDEC.


Tims Ford State Park
Woods Reservoir Refuge
Tankersley Branch
Rocky Branch
Dry Creek
Taylor Creek
Elk River
Little Hurricane Creek
Cooper Branch
Long Branch
Sarvis Branch
Bull Run Branch
Anderson Branch
Carvers Branch
Hessey Branch
Tims Ford
Tims Ford State Park
Coffee Creek
16
127
MOORE
FRANKLIN
50
Winchester City Park
Tims Ford State Park
Wagner Creek
Short Creek
Elk River
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

TURKEY CREEK

Location - (N35.0144, W86.1182) This is land outside the TNC Walls of Jericho located on the Cumberland Plateau in Franklin County. It is located near Walls of Jericho off of Rowe Gap on Hwy 16. (See Carter Mountain map)

Description - The 311 acre area is adjacent to Walls of Jericho and is noted as a rich botanical and interesting geological area. It is on the western margin of the Cumberland Plateau and is a hollow with steep limestone slopes with a canopy cover of white oak, chinkapin oak, tulip tree, and beech.

Significance - Turkey Creek is significant for its rich plant diversity and rare species. It supports the globally rare limerock arrowwood (*Viburnum bracteatum*). It also other supports other rare species including Cumberland rosinweed (*Silphium brachiatum*), shining ladies-tresses (*Spiranthes lucida*), shadow-witch (*Ponthieva racemosa*), smooth false gromwell (*Onosmodium molle ssp. subsetosum*), and goldenseal (*Hydrastis canadensis*).

Strategy - The purpose is to acquire the Turkey Creek area adjacent to Walls of Jericho to protect the many rare species that occur there.

Land Protection Needs - 311 acres at an estimated cost of $300,000.

Potential Partners - TNC and TDEC.

UPPER CANEY FORK

Location – (N35.9247, W85.1933) This site consists of approximately 12.5 river miles of the Caney Fork River primarily in southwest Cumberland and White Counties from Hwy 70 downstream to the Bridgestone/Firestone Centennial Wilderness WMA. (See Scotts Gulf map)

Description – This 12.5 mile stretch of the Caney Fork River is typical of a large Cumberland Plateau stream. Much of the uplands in the area have been strip mined or converted to pine plantations. However, the water quality is fairly good. Protection of the riparian zone and buffer along this stretch of stream encompasses approximately 1,400 acres.

Significance – Site Importance Very High (B2) - This stretch of the Caney Fork River contains seven rare species including thirteen occurrences of Cumberland rosemary (*Conradina verticillata*), seven occurrences of Cumberland sandgrass (*Calamovilfa arcuata*), and five occurrences of the Caney Fork crayfish (*Cambarus pristinus*). Cumberland rosemary is federally and state threatened, and is considered very rare and local throughout its range globally (G3) and rare and uncommon within the state (S3) according Natural Heritage data. The Cumberland sandgrass is state endangered, and is considered very rare and imperiled globally (G2) and within the state (S2). The large-leaf pondweed (*Potamogeton amplifolius*) is state threatened, and is considered demonstrably secure globally (G5) but extremely rare and critically imperiled within the state (S1). The Canada lily (*Lilium canadense*) is state threatened, and is considered demonstrably secure globally (G5) but rare and uncommon within the state (S3). The water bulrush (*Scirpus subterminalis*) is state special concern, and is considered apparently to demonstrably secure globally (G4G5) but extremely rare and critically imperiled within the state (S1). The bog oat-grass (*Danthonia epilis*) is state special concern, and is considered very rare and local throughout its range to apparently secure globally (G3G4) but very rare to extremely rare and imperiled within the state (S1S2). The Caney Fork crayfish is state endangered, and is considered extremely rare and critically imperiled globally (G1) and within the state (S1). It is a state endemic species limited to the upper tributary streams of the Caney Fork watershed.

Strategy – A Recovery Land Acquisition grant(s) from the USFWS could be obtained to purchase tracts of land along this river corridor. Matching funds from the State Land Acquisition Fund would be necessary.

Land Protection Needs – 1,393 acres at an estimated cost of $875,000.

Potential Partner: – TWRA and TDEC.

UPPER CUMBERLAND MOUNTAINS

Location – (N336.2629, W84.3776) The Upper Cumberland Mountains project area is located approximately 40 miles northwest of Knoxville in Anderson, Morgan, Campbell, Claiborne, and Scott Counties adjacent to and in the vicinity of Royal Blue and Sundquist WMAs and Frozen Head State Park. The area is part of the Cumberland Trail Park as well.

Description – The dissected Cumberland Plateau is one of the most remote, least populated regions in Tennessee. Prior to settlement, the area was mostly forested. However, prairie-like openings breaking up the canopy were common attributes of the fire-produced forest. Other types of disturbance replaced disturbances by fire in the late 1800's and 1900's as mining and logging became common. Unlike much of the Plateau to the west, the dissected portion of the plateau has not seen extensive conversion of the native oak-hickory forest to monoculture pines nor has the area seen extensive conversion to agricultural uses although some agriculture does dot the landscape. Today, much of this region is still characterized by steep hills with narrow valleys, dominated by selective managed oak-hickory stands. Long linear openings, the result of extensive strip-mining activities of the past, are also very prominent on the landscape. Water quality and aquatic habitats diminished markedly in the early half of the past century due to poor mining techniques. However, reduced mining activity, reclamation of old strip mines, and more environmentally acceptable mining techniques in recent years has resulted in a marked improvement in the water quality of the major streams and many secondary streams in the area. Significant work remains to be done, however, to provide for the full restoration of the stream systems and aquatic habitats.

Significance – The upper Cumberland Mountains area is recognized as strategically important by at least five different conservation planning efforts. The Tennessee GAP Analysis Project has identified the project area as high in bio-diversity value with the potential for maintaining bio-diversity. The project area is recognized as an Important Bird Area (IBA) of global significance, providing habitat for at least 2 high priority neotropical migrant birds, the cerulean warbler and golden-winged warbler. A recent survey coordinated by the Cornell University Ornithology Laboratory identified the project area as holding the most significant population of cerulean warblers in the species' range. Likewise, recent surveys of the area indicate that the project area likely harbors the most significant breeding population of golden-winged warblers in the southeastern United States.

The area also provides important habitat for several other rare species, both terrestrial and aquatic. Rare species inhabiting the area include small mammals, such as the state listed Smoky shrew, common shrew, southeast shrew, bog lemming, woodland jumping mouse, and the federally listed Gray Bat and Indiana Bat.

Fish species are re-colonizing the stream reaches that have recovered from water quality degradation due to acid mine drainage. Several state listed fish species are again being found in the headwater streams such as the arrow darter, emerald darter, and the ashy darter. The federally listed blackside dace is also found in some of the headwater streams.

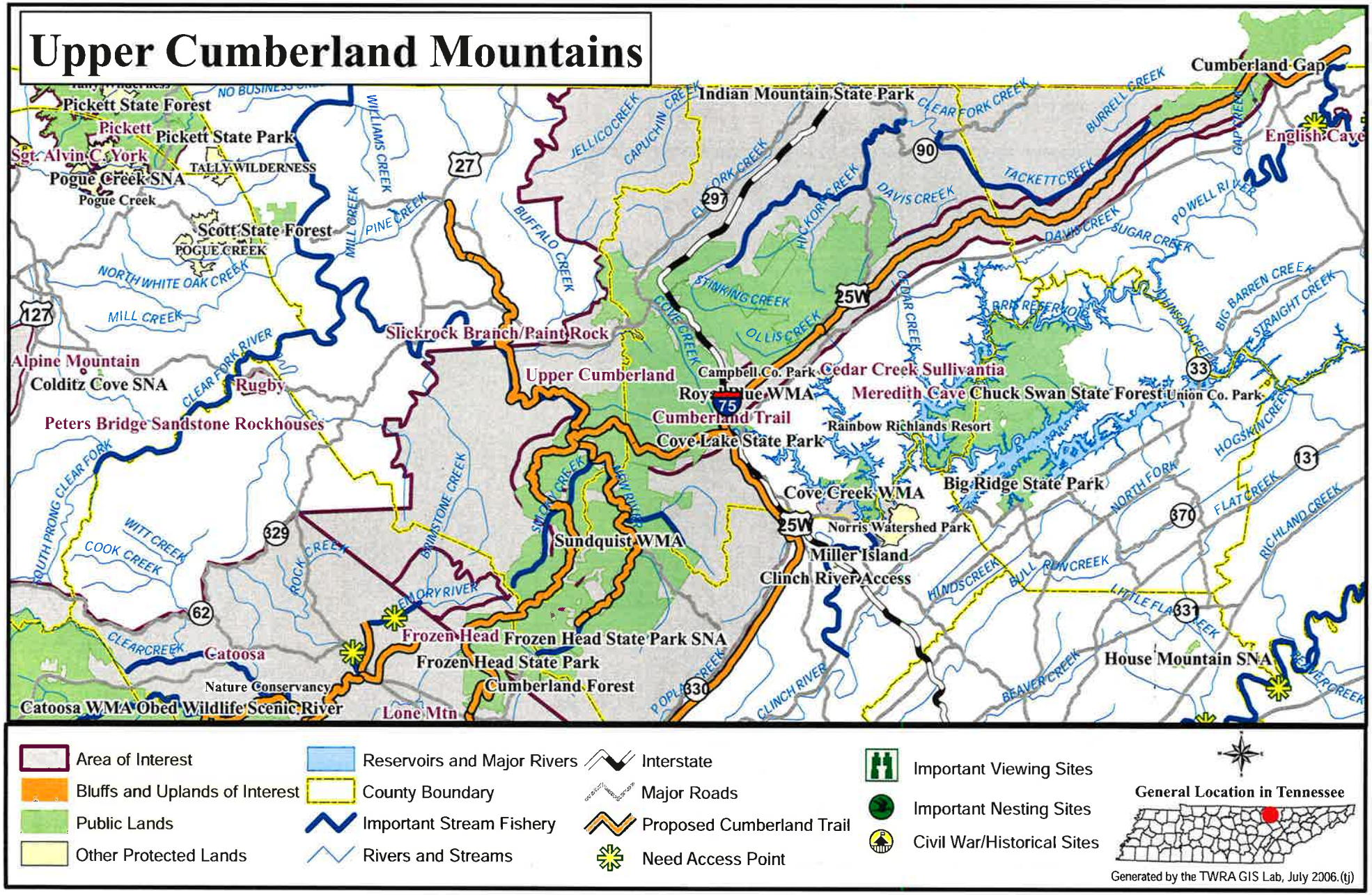
This project area is the focus of TWRA's elk restoration project, which commenced in 2000. Elk had been gone from the landscape of Tennessee for more than 135 years. The long-term objective for the elk restoration project is to establish a herd of approximately 2,000 animals on 670,000 acres in the upper Cumberland Mountains area. Additional acquisitions of property would provide key tracts of public lands in the project area, affording critical opportunities to meet the expected demand for wildlife viewing and hunting on lands in the area. In addition to elk, other potential wildlife restoration projects that could be conducted in the area include black bear, common raven, and aquatic species such as blackside dace, rosyface shiner, and arrow darter.

This area encompasses the watershed of the New River which joins with the Clear Fork River to form the Big South Fork of the Cumberland River. This river flows through the Big South Fork National River and Recreation Area and provides one of the last refuges for many of the upper Cumberland endemic fish and mussel species. Public ownership of the New River and many of its tributaries would offer additional protection to the Big South Fork of the Cumberland River and help secure its continued improvements in water quality. In addition, plans for stream mitigation activities in the area will continue to improve water quality and aquatic habitats.

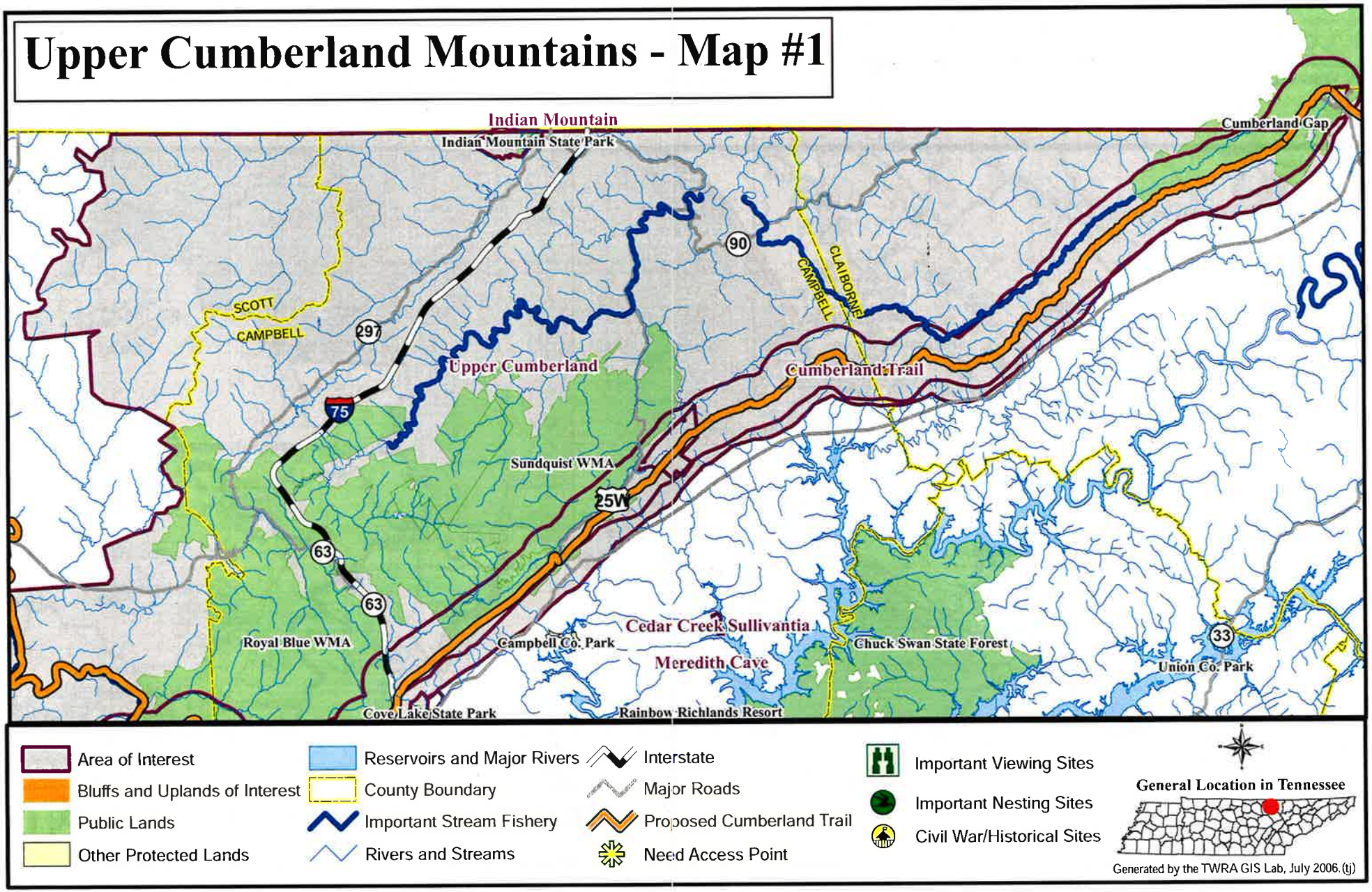
The project is strategically important to hikers using the Cumberland Trail in eastern Tennessee which runs 282 miles along the Cumberland Plateau, from Signal Point National Historic Park near Chattanooga, TN, to Cumberland Gap National Park, near Harrogate, TN. Within the Upper Cumberland Mountains area, the Cumberland Trail traverses Frozen Head SNA and Royal Blue and Sundquist WMA's.

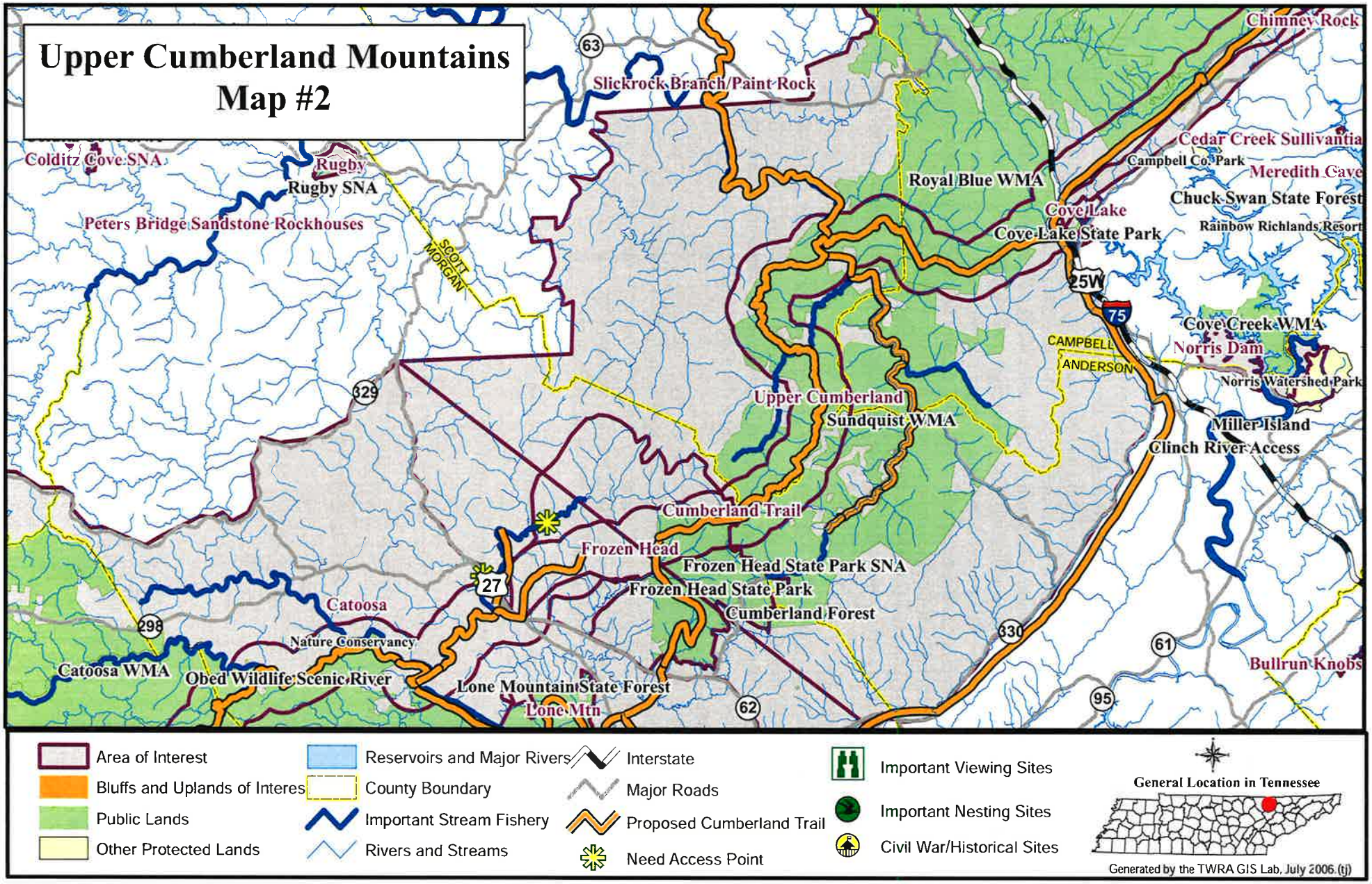
Land Protection Needs – 100,000 acres at an estimated cost of $51,000,000.

Potential Partners – Several partners were active in the recent acquisition of the Sundquist WMA in this region and many of these same groups likely will provide important partnerships in this new proposal. TNC has already indicated an interest in protecting additional lands as well as RMEF, TCF, NWTF, QU, TWRA, TDEC, and USFWS.


Upper Cumberland Mountains
Pickett State Forest
Pickett
Pickett State Park
Sgt. Alvin C. York
TALLY WILDERNESS
Pogue Creek SNA
Pogue Creek
Scott State Forest
POGUE CREEK
NO BUSINESS
WILLIAMS CREEK
MILL CREEK
PINE CREEK
NORTH WHITE OAK CREEK
MILL CREEK
Alpine Mountain
Colditz Cove SNA
CLEAR FORK RIVER
Rugby
Peters Bridge Sandstone Rockhouses
SOUTH PRONG CLEAR FORK
WITT CREEK
COOK CREEK
CLEARCREEK
Catoosa
Nature Conservancy
Catoosa WMA Obed Wildlife Scenic River
ROCK CREEK
EMORY RIVER
BRIMSTONE CREEK
Slickrock Branch/Paint Rock
Upper Cumberland
Cumberland Trail
SMOKY CREEK
NEW RIVER
Sundquist WMA
Frozen Head
Frozen Head State Park SNA
Frozen Head State Park
Cumberland Forest
Lone Mtn
POPLAR CREEK
Indian Mountain State Park
JELLICO CREEK
CAPUCHIN CREEK
ELK FORK CREEK
BUFFALO CREEK
STINKING CREEK
COVE CREEK
OLLIS CREEK
Campbell Co. Park
Roy Blue WMA
Cove Lake State Park
Cove Creek WMA
Norris Watershed Park
Miller Island
Clinch River Access
CLINCH RIVER
CLEAR FORK CREEK
HICKORY CREEK
DAVIS CREEK
TACKETT CREEK
BURRELL CREEK
Cumberland Gap
GAP CREEK
English Cave
POWELL RIVER
DAVIS CREEK
SUGAR CREEK
CEDAR CREEK
BRR RESERVOIR
Cedar Creek Sullivantia
Meredith Cave
Chuck Swan State Forest
Union Co. Park
Rainbow Richlands Resort
JOHNSON CREEK
BIG BARREN CREEK
STRAIGHT CREEK
HOGSKIN CREEK
NORTH FORK
FLAT CREEK
RICHLAND CREEK
Big Ridge State Park
HINDS CREEK
BULL RUN CREEK
LITTLE FLAT CREEK
House Mountain SNA
BEAVER CREEK
RIVER CREEK
90
27
297
25W
75
127
329
62
330
331
370
131
33
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

Upper Cumberland Mountains - Map #1




Upper Cumberland Mountains
Map #2
Chimney Rock
Slickrock Branch/Paint Rock
Colditz Cove SNA
Rugby
Rugby SNA
Peters Bridge Sandstone Rockhouses
SCOTT
MORGAN
Cedar Creek Sullivantia
Campbell Co. Park
Meredith Cave
Royal Blue WMA
Chuck Swan State Forest
Cove Lake
Cove Lake State Park
Rainbow Richlands Resort
25W
75
Cove Creek WMA
CAMPBELL
ANDERSON
Norris Dam
Norris Watershed Park
329
Upper Cumberland
Sundquist WMA
Miller Island
Clinch River Access
Cumberland Trail
Frozen Head
Frozen Head State Park SNA
27
Frozen Head State Park
Catoosa
Cumberland Forest
298
330
61
Nature Conservancy
Catoosa WMA
Obed Wildlife Scenic River
Lone Mountain State Forest
Lone Mtn
62
95
Bullrun Knobs
Area of Interest
Bluffs and Uplands of Interes
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

VIRGIN FALLS SNA

Location - (N35.8400, W85.3283) Virgin Falls is located in White County on the Cumberland Plateau southeast of Sparta.

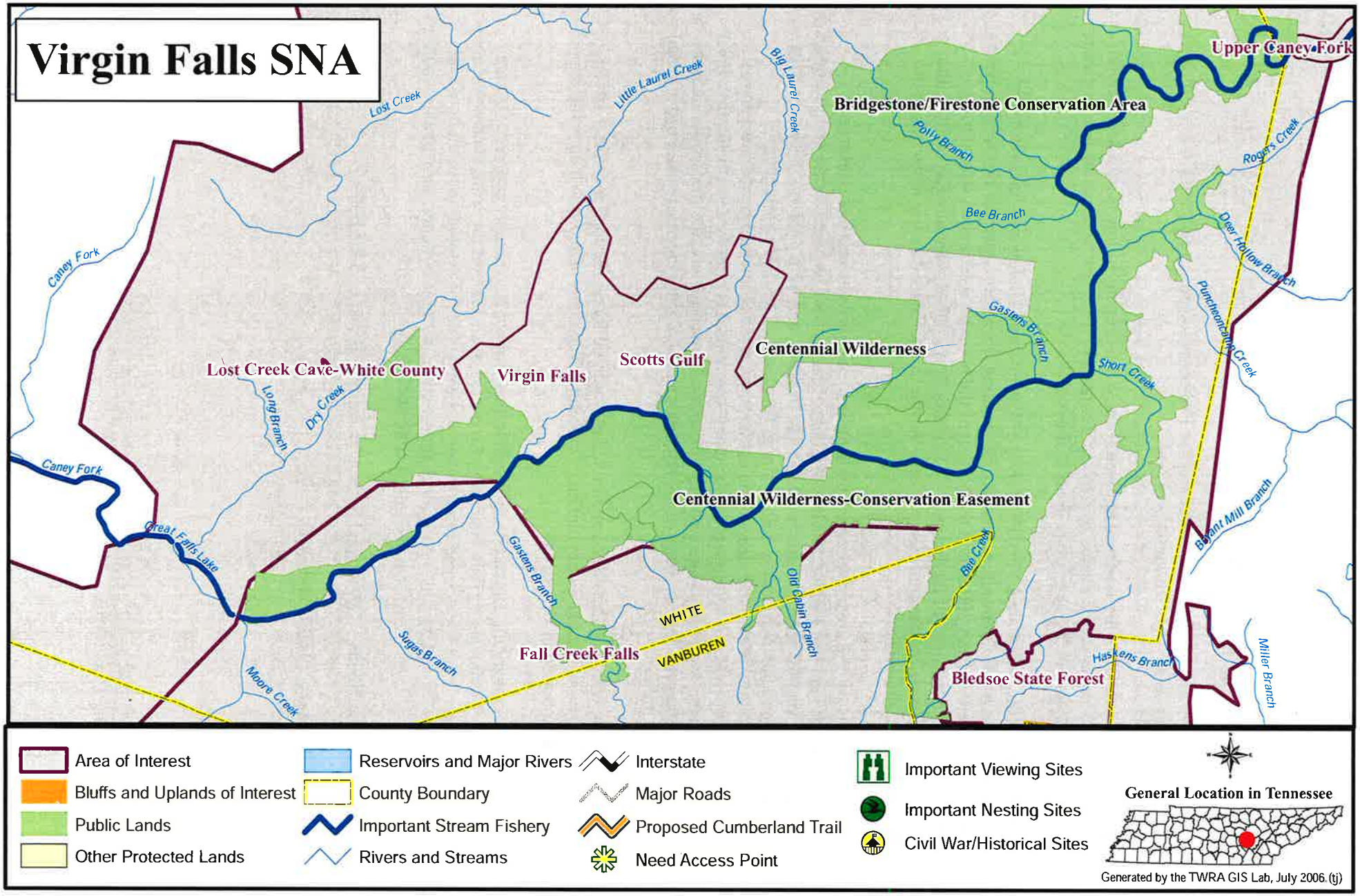
Description - Virgin Falls is currently a 317 acre privately owned SNA. It is owned by Charlie Gradner and managed by Bowater Incorporated. The natural area is named for Virgin Falls, which is formed by an underground stream that emerges from a cave that then drops over a 110 feet high cliff before disappearing into another cave at the bottom of the sink. The area is noted for its unique geological features including several other waterfalls that include Big Laurel, Sheep Cave Falls, and Big Branch Falls. Caves at Virgin Falls include Big Laurel, Sheep Cave, and Virgin Falls Cave. Sinks here include the Virgin Falls Sink and Sheep Cave Sink. Sinkholes are characteristic karst features found on the Cumberland Plateau escarpment. The Caney Fork River and its tributaries drain the area. Martha's Pretty Point provides a dramatic view of Scott's Gulf and the Caney Fork River 900 feet below. The streams are known for flash flooding, so visitors are encouraged to keep up to date on the weather conditions before hiking into the area.

Significance - Virgin Falls is located within the greater Scott's Gulf region and adjacent to the Bridgestone/Firestone Centennial Wilderness Area. The deep gorges are heavily wooded and contain ecologically diverse, various aged second growth mixed mesophytic and oak hickory forest. Much of the upland in the area surrounding the access trail is planted loblolly pine and can be restored.

Strategy - The site conservation plan for Virgin Falls includes acquisition of the natural area which is currently owned by Charlie Gradner. It also includes the remaining area that separates Virgin Falls from the TWRA-owned Bridgestone/Firestone Centennial Wilderness Area. Total acreage for this project when completed would be 3,005 acres.

Land Protection Needs - 3,005 acres at an estimated cost of $2,000,000

Potential Partners - TWRA, Bowater, and TDEC.


Virgin Falls SNA
Upper Caney Fork
Bridgestone/Firestone Conservation Area
Lost Creek
Little Laurel Creek
Big Laurel Creek
Polly Branch
Rogers Creek
Bee Branch
Deer Hollow Branch
Caney Fork
Puncheonstone Creek
Gastens Branch
Centennial Wilderness
Short Creek
Lost Creek Cave-White County
Virgin Falls
Scotts Gulf
Long Branch
Dry Creek
Caney Fork
Centennial Wilderness-Conservation Easement
Great Falls Lake
Bryant Mill Branch
Gastens Branch
Old Cabin Branch
Bee Creek
WHITE
VANBUREN
Fall Creek Falls
Sugas Branch
Moore Creek
Haskens Branch
Bledsoe State Forest
Miller Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

WASHMORGAN HOLLOW SNA

Location – (N36.3341, W85.5318) Washmorgan Hollow is located in Jackson County off Hwy 135 near Spring Creek. (See Roaring River map)

Description - Located on the Eastern Highland Rim, Washmorgan Hollow is a 73 acre natural area in Jackson County and is owned by TNC of Tennessee. This sheltered ravine has a rich and diverse flora uncommon in many other areas in the region.

Significance – Site Importance Very High (B2) – Washmorgan Hollow provides excellent habitat for plants and animals alike. The narrow winding ridges are separated by steep slopes that drop between 200 and 300 feet to the bottom of the hollow. A perennial stream tumbles over a waterfall at the head of the hollow. The stream flows out of Washmorgan Hollow into Roaring River just below the confluence where Spring Creek enters Roaring River. Both of these are state scenic rivers.

The forest in this natural area is relatively undisturbed, and birdwatchers have observed neotropical birds here that include cerulean warblers, scarlet tanagers, and worm-eating warblers. The rich slopes support red and sugar maples, large beeches, and tulip poplars. There are large sycamore trees and box elder in the hollow along the stream. The forest throughout Washmorgan Hollow is a mixed mesophytic community type as indicated by the presence of buckeye and basswood. In addition to all the many co-dominants already described, many other species of ash, oak, and hickory are a part of this forest. Unfortunately, the impact of butternut canker can be observed here as many of the butternut trees (*Juglans cinerea*) have been affected and are dead or dying.

This rich hollow with its steep slopes and mixed mesophytic forest supports a colorful spring flora. The flora includes a large population of synandra (*Synandra hispida*), which is the mint family, and uncommon in Tennessee.

Strategy - The strategy for acquisition at Washmorgan Hollow is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these of rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 229 needed acres at an estimated cost of $368,500.

Potential Partners – TDEC and TNC.

WEST MORRISON POND AND LOW WOODS

Location – (N35.6065, W85.9304) West Morrison Pond and Low Woods is located in Warren County on the northwest edge of the town of Morrison.

Description – The 42-acre site includes a natural pond surrounded by low, wet woods located on the Highland Rim of the Cumberland Plateau. There is a rich assortment of graminoids neatly zoned around the pond's margin with emergent vascular aquatic plants. Mannagrass (*Glyceria acutiflora*) grows along the margin of pond. The surrounding forest is primarily willow oak, red maple, and sweet gum. Near the wetland portion, there are some wet meadow openings which are dominated by graminoids. The surrounding forest is mature second growth with openings of scenic sedge and rush meadows.

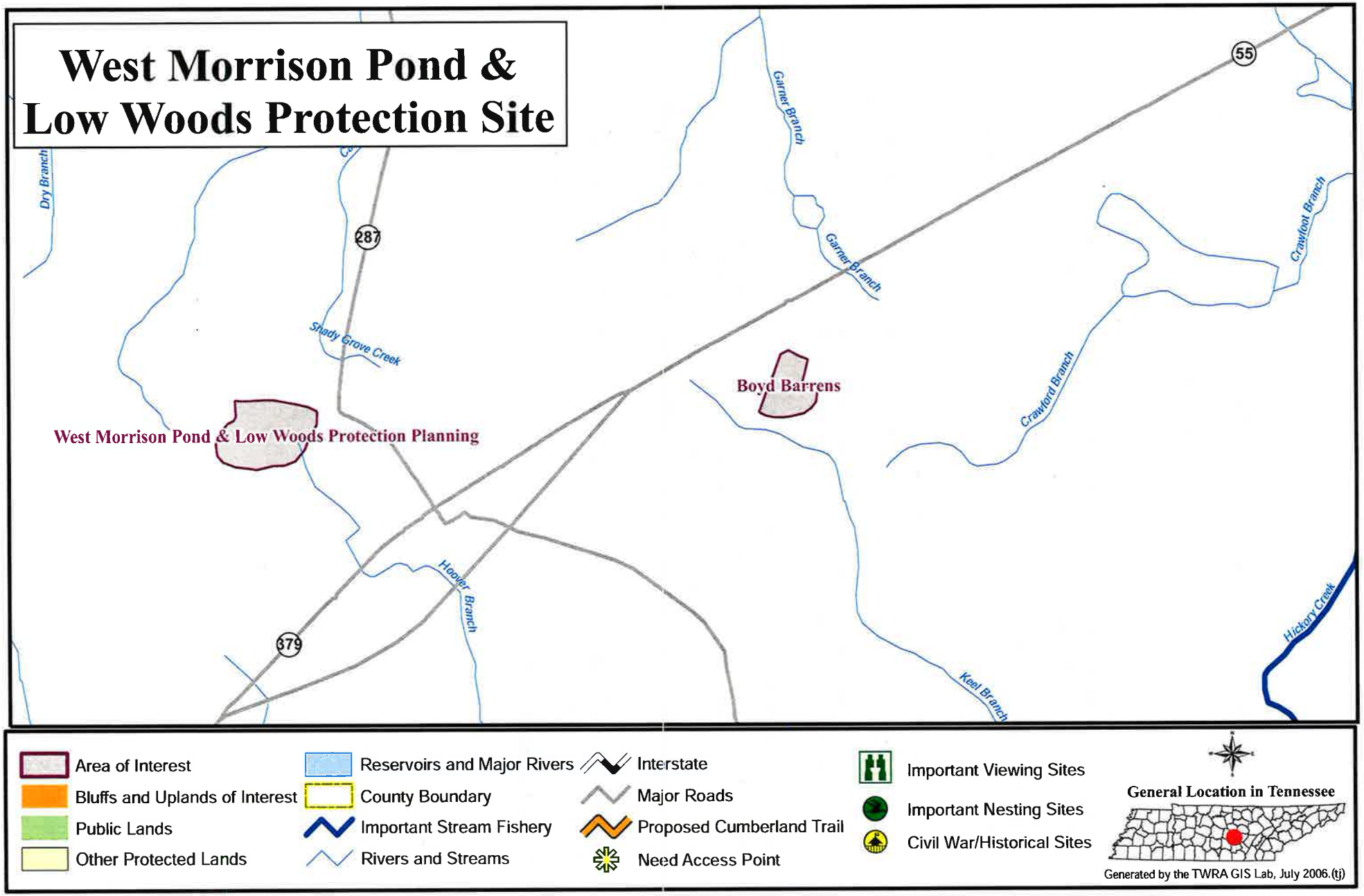
Significance – Site Importance Moderate (B4) - West Morrison Pond and Low Woods contains two state-listed plant species. Cutleaf water milfoil (*Myriophyllum pinnatum*) is listed as threatened in Tennessee and based upon the few number of occurrences is considered extremely rare and critically imperiled in the state (S1). Sharp-scaled mannagrass (*Glyceria acutiflora*) is listed as special concern and is very rare and critically imperiled (S2).

Although not currently on Tennessee's rare plant list, waterpod (*Hydrolea quadrivalvis*) was not known to occur in Tennessee until it was documented at this site. The status of this species is under review in Tennessee and it may be listed in the future. The range of waterpod includes the Atlantic and Gulf coasts of the southeastern United States, but Tennessee, where it is only known from four counties, is the only inland state where it occurs. All three species are obligate wetland plants.

Strategy – Since the meadow and forested portions are wetlands, TWRA wetland acquisition funds could be applied.

Land Protection Needs – 43 acres at an estimated cost of $57,000.

Potential Partners – TWRA, TNC, and TDEC.


West Morrison Pond &
Low Woods Protection Site
55
287
379
Dry Branch
Shady Grove Creek
Garner Branch
Garner Branch
Crawford Branch
Crawfoot Branch
Boyd Barrens
West Morrison Pond & Low Woods Protection Planning
Hoover Branch
Keel Branch
Hickory Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WHITE BUIS CAVE & COONSIES CREEK CAVE

Location: - (N36.5028, W83.4987) White Buis Cave (aka Upper Coonsies Creek Cave) is located in Claiborne County 1.6 air miles SSW of Cedar Grove Church, in a large sink adjacent to Coonsies Creek, at an elevation of 1130 feet. Coonsies Creek Cave is located approximately 0.4 miles SW of White Buis Cave, and is the likely resurgence of the stream occupying the latter (See Powell River Preserve map).

Description – The geologic horizon for these caves is Rob Camp Limestone. According to the Tennessee Cave Survey (2005), the entrance of Coonsies Creek Cave "is an eight feet high by 10 feet wide opening in the base of a small cliff. A good sized creek issues from the cave. The cave trends North 55 degrees East for 200 feet and varies from 10-20 feet wide and 6 feet high. Most of this portion of the cave is waist deep in water in normal flow. Then the cave turns South 31 degrees East for 60 feet, followed by another turn to North 61 degrees East for 250 feet. This portion of the passage is 9-14 feet wide and 3-9 feet high.

At this point the passage forks. The left fork continues as a wide, low muddy passage for 400 feet. Average width is 8 to 15 feet and the height is 2-7 feet. At the end of this passage, a narrow water filled crevice and a near siphon opens lead into a large passage and deep pool. The pool is 5 feet deep during low water. Down stream, the water siphons in a number of narrow fissures. Upstream the creek continues above a 10-foot waterfall. The passage at this point is 12 feet wide and 4-8 feet high. About 160 feet upstream the passage widens to 30 feet, then narrows to 8 feet wide and siphons in 10 feet of water.

Going downstream from the waterfall and siphon, a narrow, rocky passage heads South 65 degrees West, and meets the creek again. This passage is 4-8 feet wide and 3-4 feet high. At 120 feet from the resurgence of the creek, the passage pinches at "Turtle Siphon," a 6" air space opening that opens into the main downstream entrance passage 180 feet from the fork. The cave floods heavily during wet weather (Dunaway, 1973)".

Significance – Site Importance High (B3) - White Buis Cave contains a large gray bat (*Myotis grisescens*, S2, state and federally endangered) maternity colony, with as many as 13,400 adults and 6,800 pups observed in 1991. The most recent estimate indicates a population of 17,000 individuals (Harvey, 2002).

Strategy – White Buis Cave and Coonsies Creek Caves should be evaluated for acquisition and protection. A forested buffer should be maintained or established immediate to the cave mouths, and the sinkhole that drains to White Buis Cave should be protected to ensure water quality in both caves.

Land protection needs – 7 acres at an estimated cost of $24,000.

Potential Partners: – TDEC, TWRA, TNC, and TN Cave Survey

WHITE COUNTY WETLANDS COMPLEX

Location – (N36.0381, W85.5040) White County Wetlands complex is located in White County off Hwy 111 north of Sparta. The site is surrounded in part by John England Road, Mulligan Road, Walnut Road, and Breeding Road.

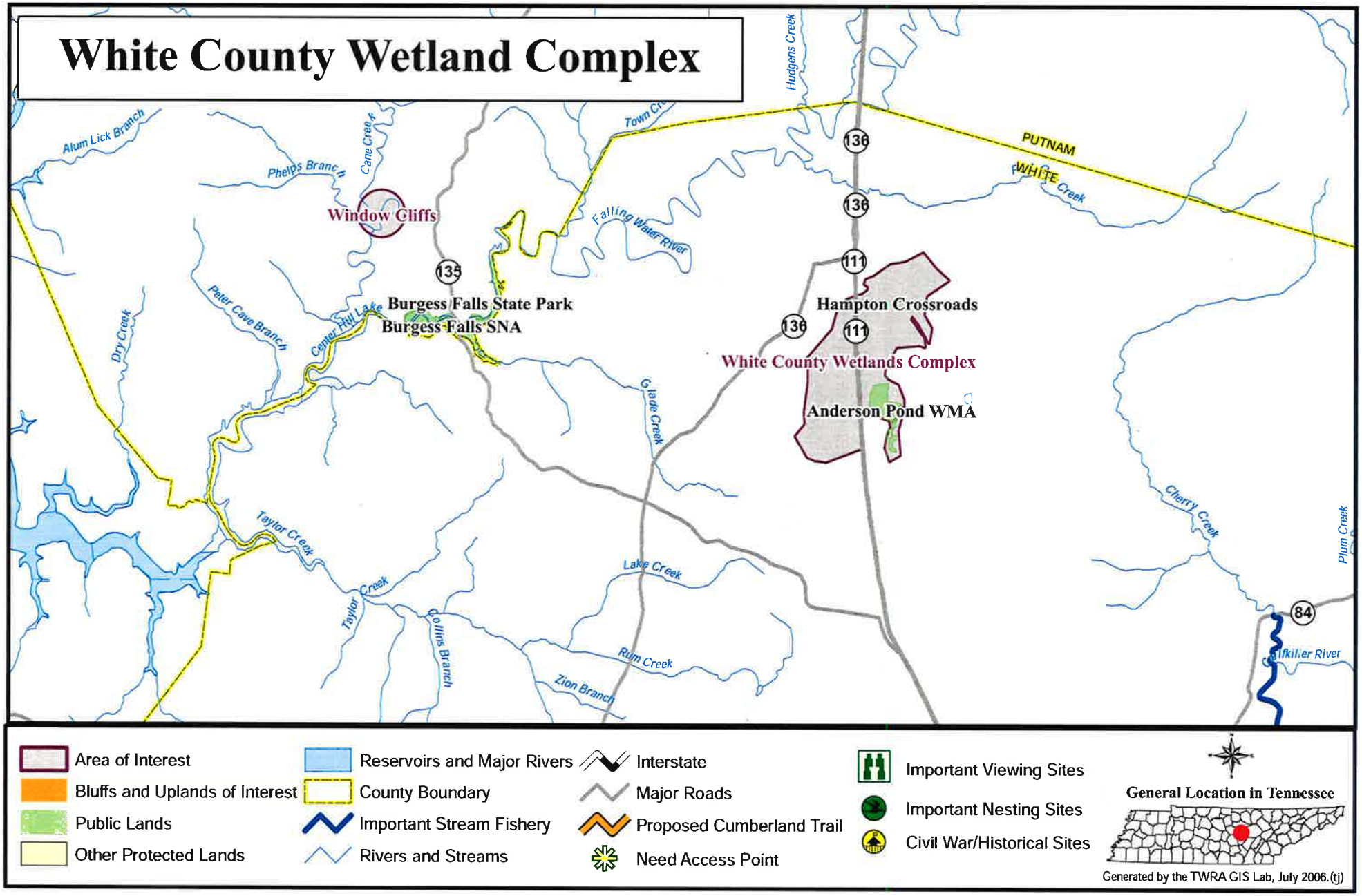
Description – This site contains a variety of wetland habitats from Eastern Highland Rim Swamp forest dominated by oaks and red maple, to open pond (Anderson Pond-TWRA) surrounded by forested wetlands, and wet meadows. Many of the rare plants which occur here are found in the wet meadow habitat that have open creeks and ditches which drain the site. Some portions (even where rare plants occur) have cattle in the stream and are disturbed. The wet meadows east of Hwy 111 and near the bend in Breeding Road contain *Xyris ambigua, X. jupicai, Eryngium integrifolia, Spirea tomentosa, Rhexia mariana, R. virginica, Mimulus ringens, Vernonia altissima, Pyrrhopappus carolinianus, Impatiens capensis, Eupatorium perfoliatum*. Amphibian searches in the forested tracts would likely yield rare species. The complex includes approximately 1,423 acres.

Significance – Site Importance High (B3) – The site is comprised of three distinctly different but hydrologically connected wetlands: Hampton Crossroads Swamp, Overcup Swamp, and Anderson Pond (owned by TWRA). At least 13 state listed species have been documented, including at least 11 S1 and S2 species. Additional inventories would likely yield more plant, animal and rare community records. Anderson Pond was proposed as a National Natural Landmark in 1982 due to its being "...one of the few relatively undisturbed, permanently wet, karst ponds remaining n the Eastern Highland Rim Subsection". Additionally, in 1979 a published report on the results of extensive core sampling provided the first record of ecological and floristic chronology since the time of glaciation for the Southeastern United States, covering the previous 20,000 years. All three wetlands together provide an exceptional wetlands complex containing numerous wetland types and rare species.

Strategy – Acquisition and restoration, where needed, of all tracts within the primary site design. Several tracts are already under varying levels of protection: one tract of 12.56 acres in Hampton Crossroads Swamp is held under a mitigation permit, one tract of 10.03 acres is under a pending mitigation permit, while another tract of approximately 10 acres is held by TDOT as a mitigation site; one tract of approximately eight acres of Overcup Swamp is a mitigation site; while 63.97 acres of Anderson Pond is held by TWRA.

Land Protection Needs: – 1,350 acres at an estimated cost of $835,000.

Potential Partners: – TWRA, NRCS, TNC, TDEC, USFWS, NAWCA, and Tennessee Tech University.


White County Wetland Complex
Alum Lick Branch
Phelps Branch
Cane Creek
Window Cliffs
Hudgens Creek
Town Cr
PUTNAM
WHITE
Creek
136
136
111
Falling Water River
135
Burgess Falls State Park
Burgess Falls SNA
Hampton Crossroads
136
111
White County Wetlands Complex
Anderson Pond WMA
Peter Cave Branch
Center Hill Lake
Dry Creek
Glade Creek
Cherry Creek
Plum Creek
Taylor Creek
Taylor Creek
Lake Creek
Collins Branch
Rum Creek
Zion Branch
84
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WHITES CREEK WATERSHED

Location – (N35.8010, W84.8070) Cumberland, Rhea and Roane Counties, approximately 20 miles south of Crossville.

Description - The Whites Creek watershed lies on the eastern escarpment of the Cumberland Plateau. The eastern escarpment is characterized by steep forested slopes and high velocity, high gradient streams. Local relief is often 1000 feet or more. Vegetation community types in the ravines and gorges include mixed oak and chestnut oak on the upper slopes , more mesic forests on the middle and lower slopes (beech-tulip poplar, sugar, maple-basswood-ash-buckeye), with hemlock along rocky streamsides and river birch along floodplain terraces

Significance - Whites Creek is one of the highest quality streams on the eastern escarpment of the Cumberland Plateau. There is virtually no development in the drainage leaving the forested slopes intact. TDEC considers Whites Creek a reference stream for water quality. Remote, rugged terrain and ownership patterns have limited wildlife survey efforts in this watershed. The Tennessee Wildlife Action Plan (TWAP) identified a diverse mix of ecological systems within the watershed (Table 1). This diversity of available habitats indicates that additional survey work would yield even higher species diversity than represented in tables 2 and 3 (especially for amphibians, reptiles, and mammals).

Lands Protection Needs – 7,000 acres at an estimated cost of $9,500,000.

Potential Partners - TWRA, TDA, TDEC, TNC

Table 1. Significant ecological systems identified by the TWAP as occurring in the Whites Creek watershed.

South-Central Interior Mesophytic Forest
Southern and Central Appalachian Cove Forest
Appalachian Hemlock-Hardwood Forest
Allegheny-Cumberland Sandstone Box Canyon and Rockhouse
South –Central Interior Small Stream and Riparian
Cumberland Seepage Forest

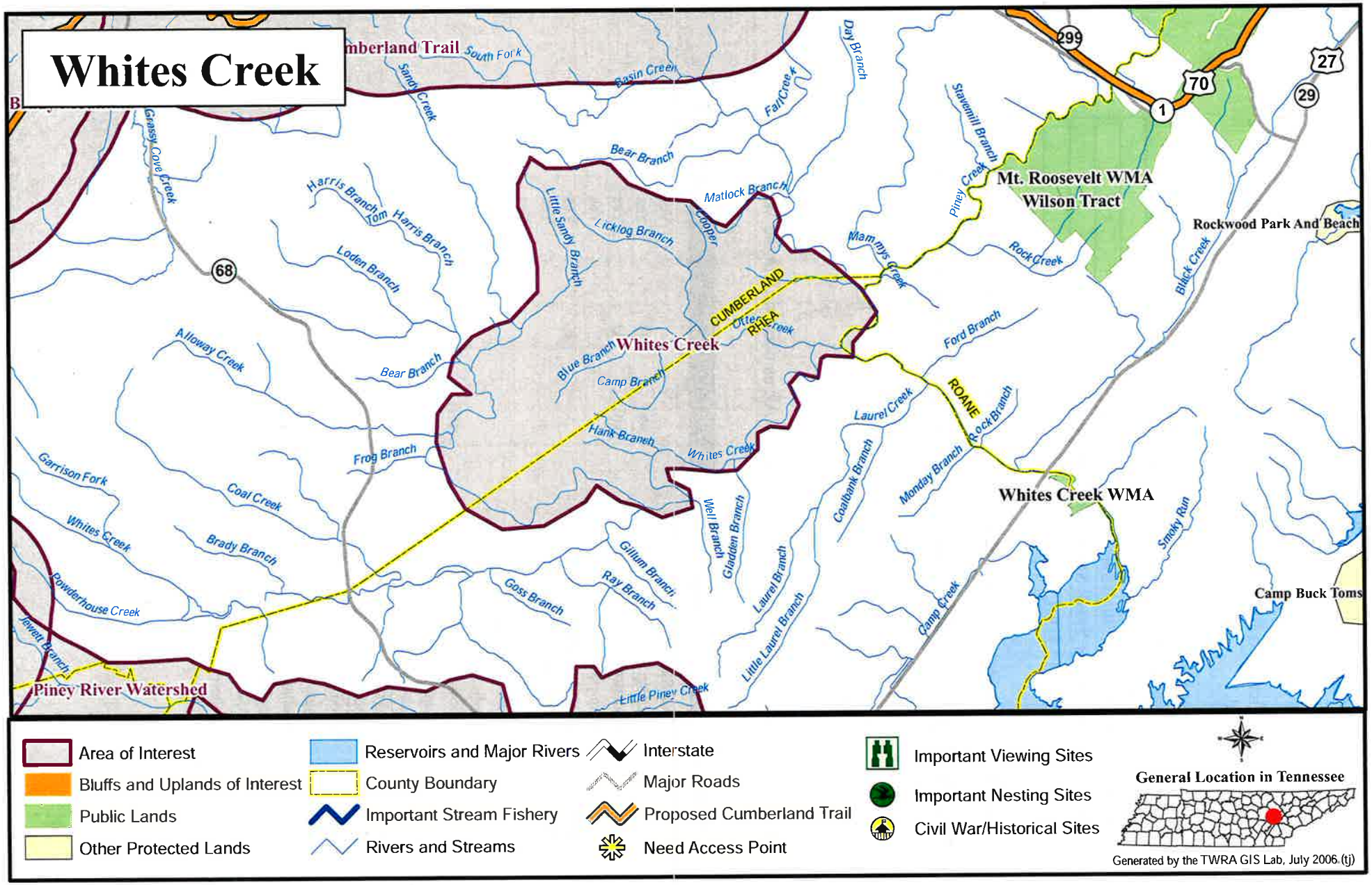
Table 2. Aquatic species identified by the TWAP as occurring in the Whites Creek watershed.

TaxaGrp	Common Name	Fed Status	State Status	GCN*
Amphibian	Black Mountain Dusky Salamander			Yes
Fish	Tangerine Darter		D	Yes
Fish	Tennessee Dace		D	Yes
Fish	Spotfin Chub	T		Yes

Table 3. Terrestrial species identified by the TWAP as occurring in the Whites Creek watershed.

TaxaGrp	Common Name	Fed Status	State Status	GCN*
Amphibian	Green Salamander			Yes
Bird	Cerulean Warbler	MC	D	Yes
Bird	Golden-winged Warbler	MC	D	Yes
Bird	Whip-poor-will			Yes
Bird	Yellow-throated Vireo			Yes
Bird	Yellow-throated Warbler			Yes
Bird	Red-headed Woodpecker			Yes
Bird	Worm-eating Warbler			Yes
Bird	American Woodcock			Yes
Bird	Yellow-billed Cuckoo	(PS)		Yes
Bird	Eastern Wood-pewee			Yes
Bird	Black-throated Green Warbler			Yes
Bird	Bald Eagle	LT	D	Yes
Bird	Hooded Warbler			Yes
Bird	Wood Thrush			Yes
Bird	Kentucky Warbler			Yes
Bird	Acadian Flycatcher			Yes
Mammal	Allegheny Woodrat		D	Yes
Mammal	Rafinesque's Big-eared Bat	MC	D	Yes
Reptile	Northern Pine Snake	MC	T	Yes

*GCN – Species of greatest conservation need


Whites Creek
mberland Trail
South Fork
Sandy Creek
Basin Creek
Fall Creek
Day Branch
299
27
70
1
29
Grassy Cove Creek
Harris Branch
Tom Harris Branch
Bear Branch
Matlock Branch
Little Sandy Branch
Licklog Branch
Cooper
Piney Creek
Stavemill Branch
Mt. Roosevelt WMA
Wilson Tract
Rockwood Park And Beach
Mammys Creek
Rock Creek
Black Creek
68
Loden Branch
CUMBERLAND
RHEA
Otter Creek
Alloway Creek
Blue Branch
Whites Creek
Ford Branch
Bear Branch
Camp Branch
ROANE
Laurel Creek
Rock Branch
Hank Branch
Whites Creek
Garrison Fork
Frog Branch
Coal Creek
Monday Branch
Coalbank Branch
Whites Creek WMA
Whites Creek
Brady Branch
Well Branch
Gladden Branch
Smoky Run
Gillum Branch
Ray Branch
Goss Branch
Laurel Branch
Powderhouse Creek
Camp Creek
Camp Buck Toms
Jewett Branch
Little Laurel Branch
Piney River Watershed
Little Piney Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WILLIAMS TRACT

Location – (N36.1235, W85.2682). The Williams Tract is located approximately ¼ mile southwest of Monterey in Putnam County, off of I-40, north of Monterey Lake. (See Alpine Mountain map)

Description – This 609 acre site is located on the western escarpment of the Cumberland Plateau. The property extends from the Plateau Rim to the base of Stamps Hollow in the Highland Rim. Plant communities vary considerably at this site. Dry upland sites are of the mixed pine-oak-hickory type while open sandstone areas are dominated by herbs such as golden aster (*Heterotheca graminifolia*), little bluestem (*Schizachyrium scoparium*), and orangegrass (*Hypericum gentianoides*). Hemlocks and white pine characterize the sheltered stream corridors along the Rim. Other significant natural features contained on this site include sandstone rock houses, waterfalls, sandstone arches, caves and a pond.

Significance – Site Importance Moderate (B4) - In addition to the dramatic escarpment vistas this site provides, it also contains habitat for three state listed species: Lucy Braun's white snakeroot (*Ageratina luciae-brauniae*), smoky shrew (*Sorex fumeus*), and southeastern shrew (*Sorex longirostris*). Lucy Braun's white snakeroot is state threatened and is considered very a rare and uncommon plant in the state (S3). Both the smoky and southeastern shrew are listed as in-need-of-management, which means additional information is needed relating to their distribution, abundance and management needs. Both species are considered secure within the state, though rare in parts of their range (S4). The presence of rock houses, caves, waterfalls, and sandstone arches further add to the significance of this site.

Strategy – Acquisition of properties within and adjacent to the site would provide watershed protection, preservation of rare species and their associated habitat, and preservation of representative communities and natural features of the Plateau Rim.

Land Protection Needs – 610 acres at an estimated cost of $500,000.

Potential Partners – TDEC and TWRA.

WINDOW CLIFFS SITE

Location – (N36.0630, W85.6079) The approximately 200 acre site is located in Putnam County one mile north of Burgess Falls SNA and 1.5 miles outside of the Center Hill Reservoir boundary. The ridge making up Window Cliffs is between meanders of Cane Creek, west of Boiling Springs School. (See White County Wetlands Complex map)

Description - The property consists of steep to sheer limestone bluffs and cliff lines. The upper exposed portions of the cliffs have window-like erosions in the narrow limestone ridge line. The ridge is in a meander of Cane Creek, upstream of Burgess Falls.

Significance - Site Importance High (B3) - The cliffs and bluffs of Window Cliffs support a hemlock mixed forest community which is rare on the Eastern Highland Rim of the Cumberland Plateau. The site is a rare scenic site given the unusual geological formations or window-like erosions in the upper limestone ridgetop. In addition to an unusual community of eastern hemlocks, a globally rare forest community known as the Appalachian Bluff White Cedar Woodland (*Thuja occidentalis/Carex eburnea-Pellea atropurpurea* woodland) has been documented from the site. A major component of the community, northern white cedar (*Thuja occidentalis*), is a state threatened and uncommon (S3) plant species. At this site it is noteworthy that a state threatened rare plant is the primary component of a forest community. The occurrence of northern white cedar at Window Cliffs is noted as the western most occurrence of its disjunct southern distribution. Window Cliffs is only the second known occurrence of northern white cedar on the Eastern Highland Rimu. Two other rare plants known from Window Cliffs are plains muhley (*Muhlenbergia cuspidata*) and the special concern listed, state imperiled (S2) mountain honeysuckle (*Lonicera dioica*). Window Cliffs is the only known site in the state for plains muhley. Because of occurrences of rare plants and rare community, Window Cliffs has a high biodiversity significance (B3), and is a significant geological and scenic site.

Strategy - The strategy for acquisition at Window Cliffs is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 147 acres at an estimated cost of $160,000.

Potential Partners – TWRA and TNC.

WOLF, FARMER & CAVE COVES

Location – (N35.0519, W86.0259) Wolf, Farmer & Cave Coves are included in the Carter Caves system which is located on the Cumberland Plateau in Franklin County. It is east of Hwy 16, and six miles south of Rowe Gap. (See Carter Mountain map)

Description - The Wolf, Farmer & Cave Coves system consists of three contiguous coves each separated by a small cradle and covers about 1,530 acres. Wolf Cove is a sink hole cut about 200 feet below the adjacent Farmer Cove. The southern portion of this site lies within Walls of Jericho. Wolf Cove is mostly undisturbed because of the steep slopes.

Significance - This is a highly significant site because of the occurrence of Tennessee cave salamander (*Gyrinophilus palleucus*) and many rare plant species. These include bristle-fern (*Trichomanes boschianum*), roundleaf fameflower (*Talinum teretifolium*), goldenseal (*Hydrastis canadensis*), and American ginseng (*Panax quiquefolius*). This site also represents unique geologic and topographic features and is considered scenic.

Strategy - The strategy is to acquire the area outside of the Walls of Jericho project area that includes the Wolf, Farmer, and Cave Cove properties.

Land Protection Needs – 1,530 acres at an estimated cost of $950,000.

Potential Partners - TNC, TWRA, and TDEC.

WOLF RIVER WHITE CEDAR SLOPES

Location – (N36.5933, W85.1058) The site is located on a northwest facing slope, south of the confluence of Wolf River and Lick Creek, about 0.5 mile north of Parker and 2 miles south of the Tennessee/Kentucky state line in Pickett County. (See Cordell Hull State Historic Park map)

Description – This 45-acre site is located on the Eastern Highland Rim of the Cumberland Plateau. A portion of the site consists of a narrow floodplain along the Wolf River. The northwest facing bluff contains a series of steep slopes carved by a large spring that originates near the top of the bluffs. The site contains stands of northern white cedar (*Thuja occidentalis*). Further inventory of this plant community could likely result in its classification as a Northern White-cedar Limestone Seepage Woodland, which are northern white cedar woodlands on cliffs, associated with seepage over limestone or dolomite.

Significance – Site Importance High (B3/B4) - Northern white cedar is listed as threatened and uncommon (S3) in Tennessee. Along the Wolf River Bluffs, it is the dominant overstory component in some stands. The occurrence of northern white cedar along the Wolf River Bluffs is noteworthy in that most of the occurrences in Tennessee occur further east in the Ridge and Valley Physiographic Province. Northern white cedar is much more common in the northeastern United States and Tennessee is near the southern end of its range.

The state-threatened spreading false foxglove (*Aureolaria patula*) occurs on the rich northwestern facing slopes and along the floodplain of the Wolf River. An additional rare plant, starflower false Solomon's seal (*Smilacina stellata*), has a broad range in the North America, but is considered extremely rare and critically imperiled (S1) in states at the southeastern edge of its distribution (Arkansas, Kentucky, Maryland, and Tennessee) and is considered rare in two other states. The species is listed as endangered in Tennessee and there are only two known occurrences from the state.

Strategy – Forest Legacy is a possible funding source for this site's protection. A portion of the site is within the reservoir boundary for Dale Hollow Lake, and partnering with the U.S. Army Corps of Engineers for additional protection should be explored.

Land Protection Needs – 46 acres at an estimated cost of $58,000

Potential Partners – TNC, USACE, and TDEC.

EAST TENNESSEE

TABLE OF CONNTENTS PAGE

EAST TENNESSEE COUNTY AND PROJECT MAP 1

IMPORTANT AQUATIC HABITAT AREAS – EAST TENNESSEE 2

ARCHAEOLOGICAL SITES - EAST TENNESSEE 4

STREAM FISHING ACCESS – EAST TENNESSEE 10

ALCOA MARSH – GREATER AND LESSER SNA 14

AMBER DARTER DESIGNATED CRITICAL HABITAT 16

AUSTIN SPRINGS 18

BIG RIDGE STATE PARK 20

BROOKS ISLAND 22

BULLRUN KNOBS 24

CHANDLER COVE FALLS 26

CLINCH STATE SCENIC RIVER 28

CONASAUGA STATE SCENIC RIVER 30

DAVY CROCKETT BIRTHPLACE STATE PARK 32

DOE MOUNTAIN 34

DOE RIVER GORGE SITE 36

FORT LOUDOUN STATE HISTORIC PARK 38

FRENCH BROAD STATE SCENIC RIVER 40

GILLILAND GLADE AND OAK FOREST 42

HAMPTON CREEK COVE SNA 44

HIWASSEE AND OCOEE RIVERS RECREATION AREAS 46

HIWASSEE REFUGE (See Smith Bend & Hiwassee Refuge)

HIWASSEE STATE SCENIC RIVER 48

HORNER CAVE 50

HOUSE MOUNTAIN SNA 52

HUNTER BOG SNA AND HUNTER MARSH 54

INDIAN CAVE 56

KELLY RIDGE CAVE (KELLY HOLE) 58

KYLES FORD WMA (CLINCH RIVER) 60

LAUREL CREEK BOG SITE 63

LICK CREEK BOTTOMS WMA 65

MARTHA SUNDQUIST STATE FOREST 67

MASCOT CEDAR GLADE 69

MEADES QUARRY CAVE 70

MORRIL'S CAVE SNA 72

MUD FLATS CAVE 74

PANTHER CREEK STATE PARK 76

PEARSON CAVE 78

RED CLAY STATE HISTORIC PARK 79

REEDY CREEK COVE 81

RIPSHIN BOG 83

ROAN MOUNTAIN STATE PARK 85

ROCKY FORK 87

SENSABAUGH CAVE 89

SMITH BEND & HIWASSEE REFUGE 91

SNAKE MOUNTAIN 94

SYCAMORE SHOALS STATE HISTORIC PARK 96

TUCKAHOE CREEK STATE SCENIC RIVER 98

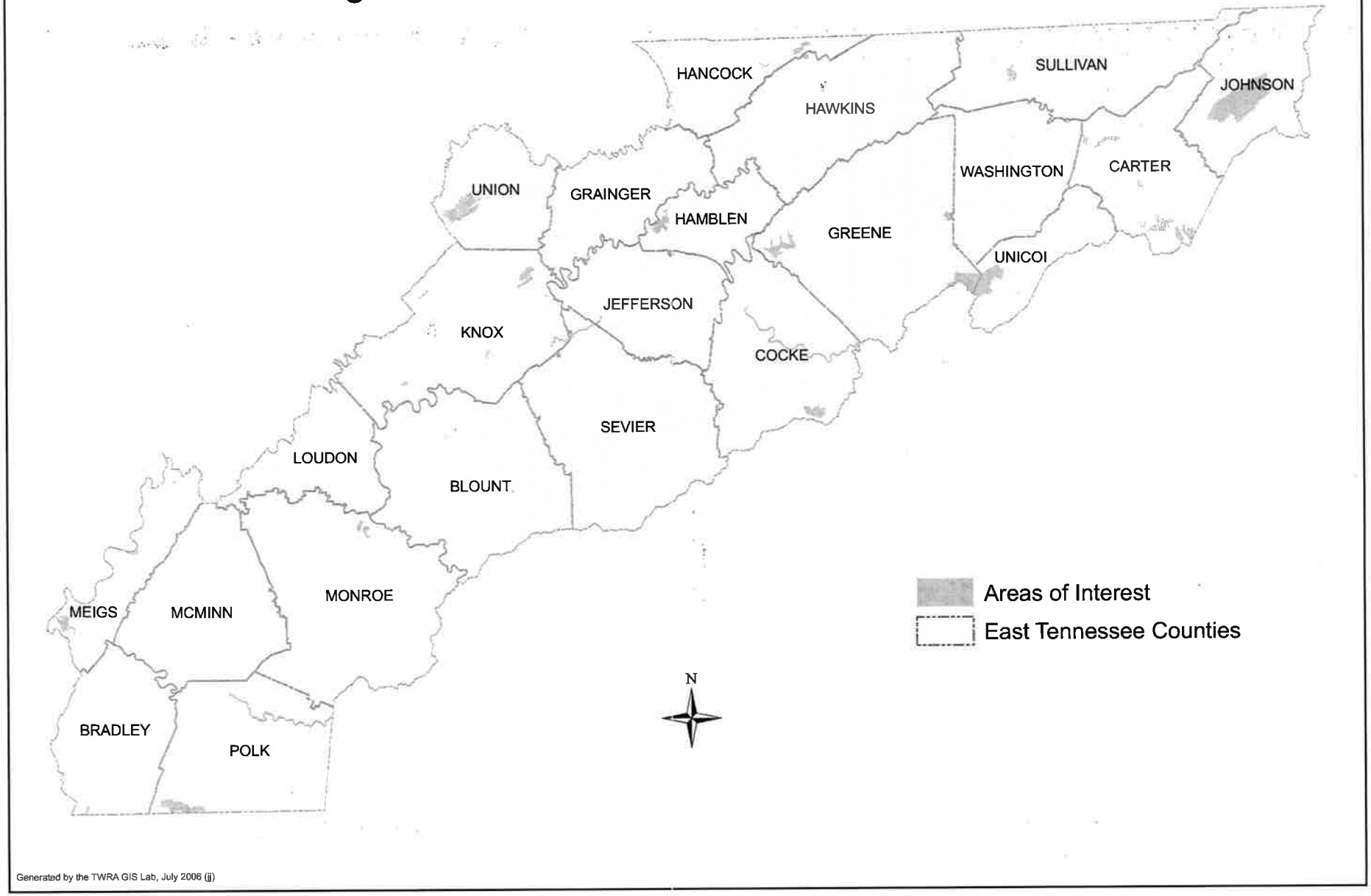
WALKERTOWN BRANCH BOG 100

WATAUGA RIVER ACCESS AND HATCHERY 102

WATAUGA RIVER BLUFFS SNA 104

WRIGHT WHITE PINE STAND REGISTERED SNA 105

East Tennessee Region



IMPORTANT AQUATIC HABITAT AREAS – EAST TENNESSEE

Locations - Important aquatic habitat areas are located in the channel and floodplains of several major rivers and smaller streams throughout East Tennessee. See map of aquatic projects on the following page

Description - Priority lands include the stream or river channel, riparian zones, and floodplains. Agriculture is the predominant land use in the lower valleys of this region. Livestock and hay and are common products, although there are several tomato farms in the Nolichucky and Pigeon river watersheds. Along the western slopes of the Appalachian Mountains there are more forested lands and more development for resort and primary housing.

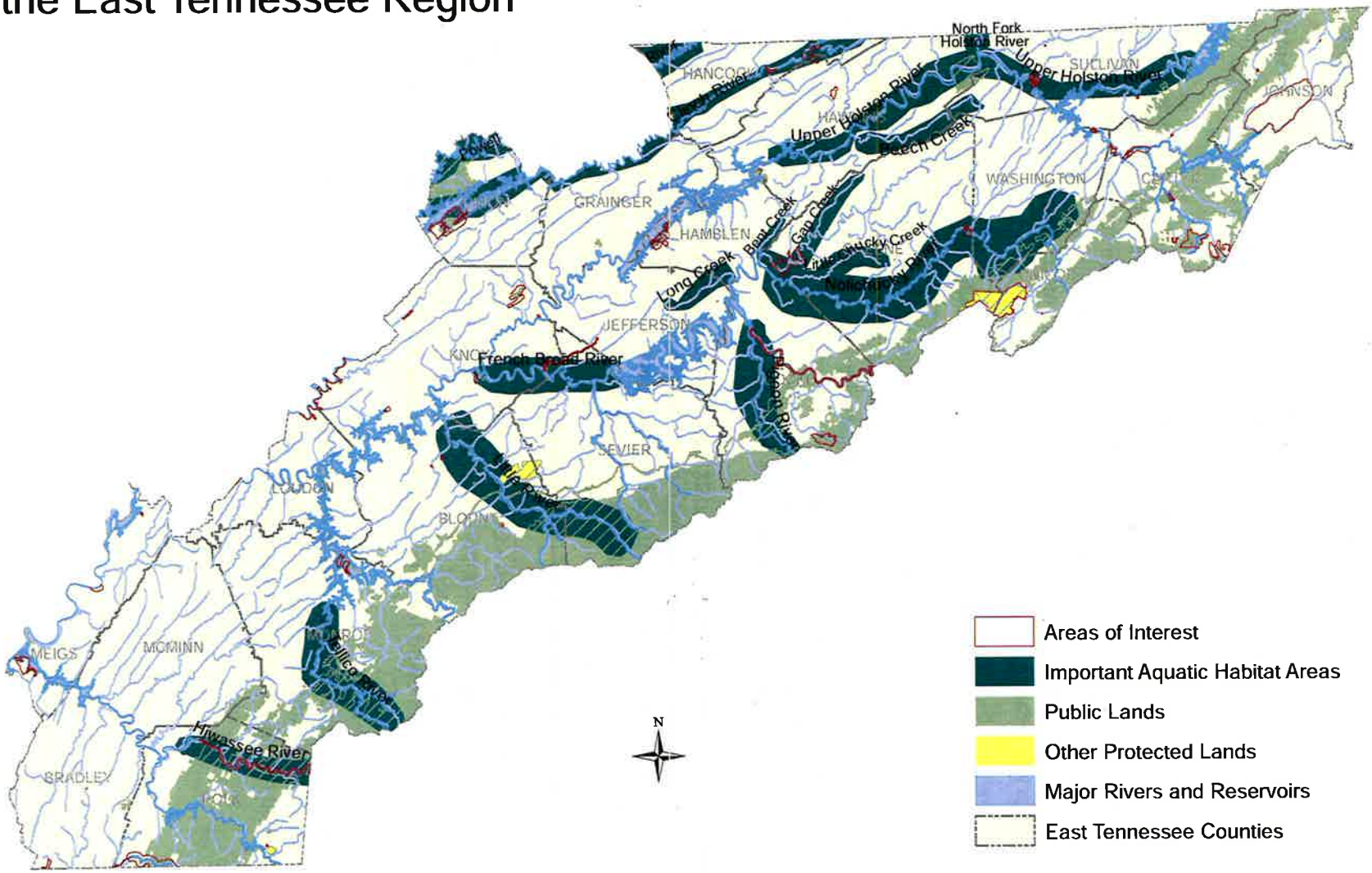
Significance - Conservation of these waterways and their adjacent lands is needed to maintain the high biodiversity of aquatic species in these rivers. For example, the Clinch, Powell, and Holston rivers are among most diverse and unique aquatic communities on the continent. These rivers have been identified by several conservation agencies (e.g. TWRA, TNC, WWF) as warranting the highest priority for conservation needs. Most of these species (fish and mussels) are endemic to this region, meaning they can be found nowhere else in the world. Several Tennessee species have been lost, and without proactive measures to protect habitat, more losses are expected.

Land Management Strategy - Biologists have identified the corridor along these waterways as critical habitats. Although rivers are threatened by stressors throughout the watershed, these lands in the floodplain have the greatest ability to protect aquatic resources. The goal of land management projects would be to establish or protect wide forested buffer zones along the river corridor. Projects would also promote the use of best management practices for farming, forestry, and construction projects.

Lands that need to be acquired - Given the large area of these waters and floodplains, it is not possible to target all the important areas for acquisition. Working with existing landowners on projects designed to improve habitats may be more effective. For example, the NRCS could focus on these areas using Farm Bill Programs to improve aquatic habitats.

Potential Partners - US Fish and Wildlife Service, Natural Resources Conservation Service, TNC, Word Wildlife Fund, Tennessee Scenic Rivers Association, and local watershed organizations.Insert map of aquatic habitats

Important Aquatic Habitat Areas for the East Tennessee Region



Generated by the TWRA GIS Lab, August 2006 (jj)

ARCHAEOLOGICAL SITES - EAST TENNESSEE

Location - Blount, Bradley, Carter, Cocke, Grainger, Greene, Hamilton, Hancock, Hawkins, Jefferson, Johnson, Knox, Loudon, McMinn, Meigs, Monroe, Polk, Sullivan, Unicoi, Union, and Washington counties.

Description - Most of the 22 counties in the THCP's East Tennessee region are in one of two physiographic regions, the Unaka Mountains and the Valley and Ridge. The major watercourse in this larger region is the east portion of the Tennessee River. Its major tributaries include the Clinch, Holston, French Broad, Little Tennessee, and Hiwassee rivers. Both prehistoric and historic-period occupation was focused on the lower elevations associated with these waterways. Especially in the mountains to the east, much of the land is federally owned, and a majority of the archaeological sites recorded in the easternmost counties of the THCP region already have protection status based on this federal ownership.

Prehistoric Sites - Prehistoric archaeological sites recorded within these two physiographic regions are classified into four major time periods: (1) Paleo-Indian, 10,000 B.C. to 8000 B.C.; (2) Archaic, 8000 B.C. to 1500 B.C.; (3) Woodland 1500 B.C. to A.D. 800; and (4) Mississippian, A.D. 900 to A.D. 1500. These sites range in size and complexity from relatively small Paleo-Indian and Archaic camps to substantial Mississippian mound centers. The prehistoric inhabitants also utilized a variety of caves to: (1) display their art (caves as portals to the underworld); (2) acquire resources, such as chert and minerals; and (3) use as seasonal living quarters. In addition to these prehistoric occupations, protohistoric Cherokee towns visited and described by early European explorers (and later settlers) are also present along select major river drainages.

As with other regions of the state, the sites included in the attached table represent significant cultural resources in danger of destruction due to a variety of man-made (agriculture, construction) and natural (erosion) forces. The THCP will provide an important means to acquire some of these non-renewable resources before they are lost forever.

For example, the McCrosky/Henderson Farm site (40SV9) in Sevier County has yielded evidence for multiple occupations, including Mississippian and Cherokee components. Pressure to develop this large site (currently in private ownership) has been mounting for years. Similarly, the Great Tellico site (40MR75) in Monroe County represents a substantial Cherokee town in private ownership that has remained relatively undisturbed. Great Tellico is the best example of a Cherokee town left in East Tennessee, but as always, is under the threat of future development.

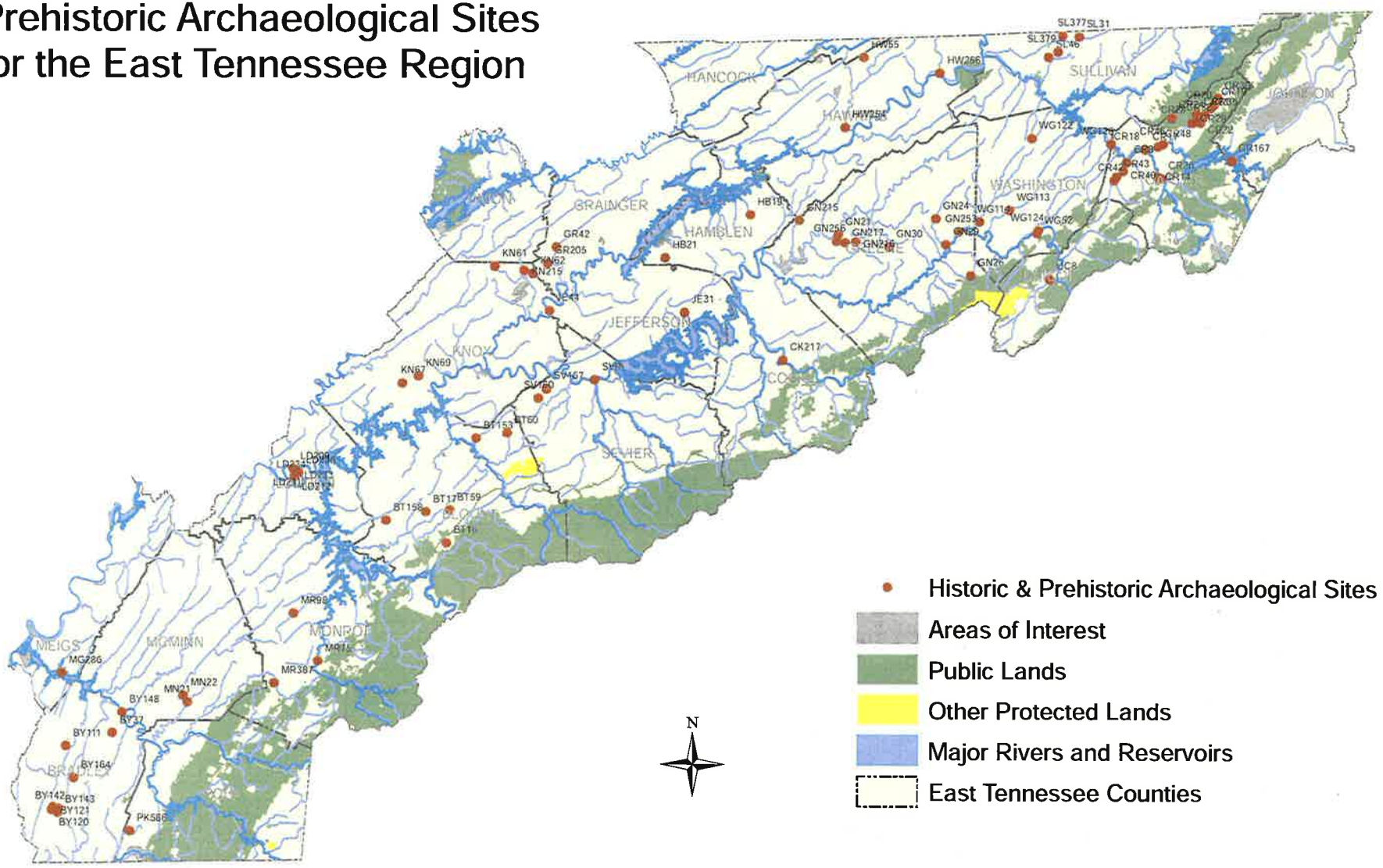
A unique entity present in Washington County is a world-class fossil deposit of late Miocene to early Pliocene age (4.5 to 7 million years ago) known as the Gray Fossil site (40WG122). Although the State of Tennessee owns much of this site, the fossil deposit extends into a tract currently in private ownership.

Historic-Period Sites - Tennessee's earliest historic-period settlement began in upper East Tennessee in the 1770s, gradually spreading to the south and west. The Cherokee retained control of lower East Tennessee until after 1800, but by the 1830s, non-Native American settlement was complete across the region. A few sites relating to this early settlement period, including several frontier stations and forts, are listed on the attached table. An important early industry in this region was the manufacture of iron, but unfortunately there has been no systematic survey of this theme for the entire region. Iron industry sites were included as part of a large-scale survey conducted several years ago in Carter County, and this particular survey makes it possible to list a number of important historic-period Carter County sites, representing a variety of cultural activities. The Civil War had a major impact on portions of East Tennessee, and past survey work concerning this theme is reflected in the substantial number of Civil War military sites shown on the table. A completed statewide survey of historic-period pottery making provides the basis for including several important sites representing this industry. Similar studies of topics such a gun making and the operation of mills, are reflected by other sites on the table.

Land Protection Needs – 1,267 acres at an estimated cost of $5,600,000.

Potential Partners – The Archaeological Conservancy, Tennessee Council for Professional Archaeology, Tennessee Wars Commission

Historic Archaeological Sites and Prehistoric Archaeological Sites for the East Tennessee Region



Generated by the TWRA GIS Lab, July 2006 (jj)

East Tennessee – Archaeological Sites

County	Site Number	Estimated Acreage	Name
Blount	40BT16	5	David L. Smith Pottery
Blount	40BT17	7	Grindstaff Pottery
Blount	40BT59	10	Samuel Keller Gun Shop
Blount	40BT60	10	Joseph Bogle Gunshop
Blount	40BT153	10	Martin's Station
Blount	40BT158	10	Samuel Henry's Station
Bradley	40BY37	100	Fort Foster
Bradley	40BY111	20	Bigsby Creek/Sharp (prehistoric)
Bradley	40BY120	20	Blue Springs # 5 (CW)
Bradley	40BY121	20	Blue Springs # 6 (CW)
Bradley	40BY142	20	Blue Springs # 27 (CW)
Bradley	40BY143	20	Blue Springs # 28 (CW)
Bradley	40BY164	5	Raht House (CW)
Bradley	40BY148	5	Henegar House (CW)
Carter	40CR3	10	Fudd Campbell (prehistoric)
Carter	40CR14	10	Ellis Mill
Carter	40CR17	15	Tipton Mills
Carter	40CR18	10	Watauga Mill
Carter	40CR19	5	Stonedam Forge
Carter	40CR20	15	Sadie Furnace
Carter	40CR21	15	Union Furnace
Carter	40CR22	15	Muddy Branch Furnace
Carter	40CR24	15	Little Stony Creek Furnace
Carter	40CR26	15	O'Brien's Furnace
Carter	40CR28	5	D. Richie Blacksmith Shop
Carter	40CR29	5	J. Richie Blacksmith Shop
Carter	40CR32	5	Lewis Cobbler Shop
Carter	40CR35	5	J. Taylor Mill
Carter	40CR36	5	Nidiffer Mill
Carter	40CR40	5	M. Patton Powder Mill
Carter	40CR42	5	Anderson Mills
Carter	40CR43	5	William-Hyder Mill
Carter	40CR46	5	Andrew Greer House
Carter	40CR48	5	Andrew Johnson House
Carter	40CR167	15	Fort Hill (CW)
Cocke	40CK217	100	McKay's Fort Complex
		0	

County	Site Number	Estimated Acreage	Name
Grainger	40GR42	15	Jarnigan Farm
Grainger	40GR205	10	Shield Station
Greene	40GN21	5	Shaffer Pottery
Greene	40GN24	5	Grim Pottery
Greene	40GN26	5	Click Pottery
Greene	40GN29	7	Ripley Pottery
Greene	40GN30	7	Vestal-Reynolds Pottery
Greene	40GN215	25	Bulls Gap (CW)
Greene	40GN216	25	Blue Springs Battlefield (CW)
Greene	40GN217	5	Burnside's Headquarters (CW)
Greene	40GN253	10	Earnest Fort House
Greene	40GN256	7	Jackson Campbell Pottery
Hamblen	40HB19	15	Hayslope (CW)
Hamblen	40HB21	15	Watkins House (CW)
Hancock		0	
Hawkins	40HW55	5	Anderson Pottery
Hawkins	40HW254	10	Thomas Amis Fort
Hawkins	40HW256	15	Patterson's Station
Jefferson	40JE31	5	Noonkesser-Potts Pottery
Jefferson	40JE44	5	Strawberry Plains (CW)
Johnson		0	
Knox	40KN61	5	Floyd-Graves Pottery
Knox	40KN62	5	Grindstaff Pottery
Knox	40KN67	10	Cavett's Station
Knox	40KN69	5	Lonas Pottery
Knox	40KN215	15	Sawyer's Station
Loudon	40LD209	20	Loudon Defenses # 1 (CW)
Loudon	40LD211	40	Loudon Defenses # 2 (CW)
Loudon	40LD212	20	Loudon Defenses # 3 (CW)
Loudon	40LD233	15	Loudon Defenses # 4 (CW)
Loudon	40LD234	15	Loudon Defenses # 5 (CW)
Loudon	40LD235	10	Loudon Defenses # 6 (CW)
McMinn	40MN21	10	T. B. Love Pottery

County	Site Number	Estimated Acreage	Name
McMinn	40MN22	10	J. M. Love Pottery
Meigs	40MG286	15	Cherokee Agency
Monroe	40MR75	75	Great Tellico (Cherokee)
Monroe	40MR98	10	Pearson-Black-Evans Pottery
Monroe	40MR387	20	Mud Glyph Cave (prehistoric)
Polk	40PK586	10	Fort Marr
Sevier	40SV9	50	McCrosky/Henderson (prehistoric)
Sevier	40SV160	10	William McGaughey's Station
Sevier	40SV167	7	Stansbury-Williams Pottery
Sullivan	40SL31	7	Cain Pottery
Sullivan	40SL46	15	Eaton's Fort
Sullivan	40SL377	10	John Robert's House/Station
Sullivan	40SL379	10	Looney's Fort
Unicoi	40UC8	5	Bean's Gunshop
Union		0	
Washington	40WG52	20	Decker Pottery
Washington	40WG113	10	Embree House
Washington	40WG114	10	Gillespie House
Washington	40WG122	20	Gray Fossil
Washington	40WG124	20	Brown's Settlement
Washington	40WG126	20	Dungan's Mill
Total		**1,267**	

[1]State ranks relate to rarity within Tennessee: S1=extremely rare and critically imperiled, S2=very rare and imperiled, S3=Rare and uncommon.
[1] Global ranks are similar to State Ranks, but relate to rarity on a global scale.
[1] Legal listing in Tennessee: E=endangered, T=threatened, D=deemed in need of management.
[1] Legal listing at the federal level: LE=endangered, LT=threatened, C=candidate for listing.

STREAM FISHING ACCESS – EAST TENNESSEE

Locations - The aquatic projects map indicates locations where access is needed on 31 important stream fisheries (yellow asterisks and yellow-lined streams).

Descriptions - There are two distinct types of property needed to provide fishing access: 1) boat access points for launching small boats, and 2) linear tracts in and adjacent to streams for wade fishing access.

A total of 29 boat access points have been identified on rivers across the region. These areas were chosen to complement existing access areas and improve the value of recreational fisheries. All areas are located adjacent to the named river. The exact location is not critical; it is possible that another parcel located within one mile could be substituted for the indicated location. Boat access points would be relatively small parcels (up to 2 acres) located in the floodplain, preferably near existing roads.

Wade fishing access is needed on 24 streams. These would provide parking for a few vehicles and provide access for anglers to walk in and along the stream for 1-3 miles. Areas adjacent to bridges would be ideal locations for small parking areas.

Recreational Significance - East Tennessee has a long tradition of providing stream and river fisheries for smallmouth bass, rock bass, trout, and catfish. Anglers must have the landowner's permission to wade and fish in streams. The task of contacting multiple landowners and getting permission can be overwhelming for many anglers, especially those that are not nearby residents. Establishing public corridors would greatly increase the recreational value of these fisheries. With the appropriate management, these streams can attract many more anglers and still provide high quality angling opportunities.

Most rivers in this region have some public access for boats or canoes, but there are still vast reaches of river that are not accessible. These access points are used by anglers and recreational paddlers. Some of the existing access areas are owned by outfitters that operate canoe rental and shuttle services. Additional public access areas would complement these enterprises by providing more launching options. More public access would allow anglers to avoid high-use paddling areas. Public areas would allow anglers access to fish even when the outfitters are closed on weekdays and in the off-season.

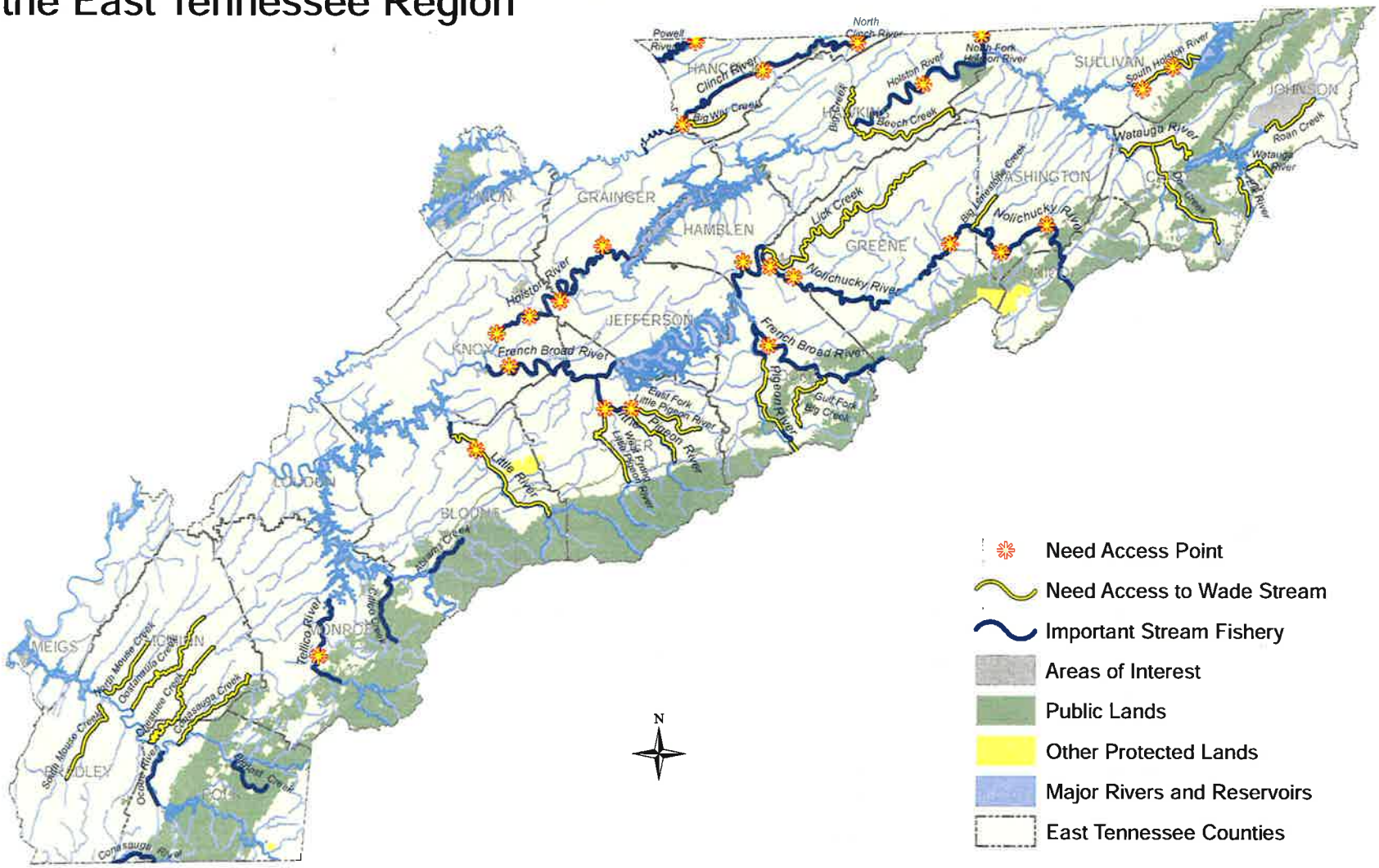
The stream corridors needed to provide wade fishing access include the stream channel and the adjacent riparian zones. Riparian and instream habitats are essential for supporting aquatic life in streams. Public ownership of these important habitats would ensure their protection and provide opportunities for enhancement.

Strategy - TWRA would establish a small, gravel parking area at all access areas, and provide a narrow gravel or concrete ramp at boat access points. TWRA would develop access areas in a manner that would minimize the footprint on the land and maximize the amount of forested riparian vegetation.

Land Protection Needs – 1,365 acres at an estimated cost of $30,982,600. See table on following page.

Potential Partners – TPGF, TWRA, TU, Tennessee Scenic Rivers Association, local tourism boards, and local watershed organizations.

Stream Fishing Access Project for the East Tennessee Region



Generated by the TWRA GIS Lab, April 2006 (jj)

Stream Fishing Access Needed in East Tennessee

Watershed	Stream	County of needed access	Boat access needed (#)	Wade access needed (miles)	Total Acres	Cost/ Acre	Land Cost	10% Survey & Closing Fees	Total Cost
Powell	Powell River	Hancock	1	0	2	31,000	62,000	6,200	68,200
Clinch	Clinch River	Grainger/Hancock	3	0	6	6,000	36,000	3,600	39,600
Clinch	Big War Creek	Hancock	0	2	36	6,000	216,000	21,600	237,600
Holston	South Holston River (Trout Section)	Sullivan	2	8	149	50,000	7,450,000	745,000	8,195,000
Holston	Holston River (Upper)	Claiborne/Hancock/Grainger	1	0	2	30,000	60,000	6,000	66,000
Holston	Holston River (Lower/Trout Section)	Grainger/Jefferson/Knox	4	0	8	30,000	240,000	24,000	264,000
Holston	North Fork Holston River	Hawkins/Sullivan	1	0	2	30,000	60,000	6,000	66,000
Holston	Big Creek	Hawkins	0	3	54	6,000	324,000	32,400	356,400
Holston	Beech Creek	Hawkins	0	3	54	6,000	324,000	32,400	356,400
Watauga	Watuaga River (Trout Section)	Carter	0	8	145	50,000	7,250,000	725,000	7,975,000
Watauga	Roan Creek	Johnson	0	3	54	6,000	324,000	32,400	356,400
Nolichucky	Nolichucky River	Cocke/Greene/Washington	6	0	12	30,000	360,000	36,000	396,000
Nolichucky	Big Limestone Creek	Washington	0	2	36	6,000	216,000	21,600	237,600
Nolichucky	Lick Creek	Greene	0	3	54	6,000	324,000	32,400	356,400
French Broad	French Broad River (Lower)	Knox/Sevier	1	0	2	30,000	60,000	6,000	66,000
French Broad	French Broad River (Upper)	Cocke	1	0	2	30,000	60,000	6,000	66,000
French Broad	Gulf Fork Big Creek	Cocke	0	3	54	6,000	324,000	32,400	356,400
French Broad	Pigeon River	Cocke	0	8	145	30,000	4,350,000	435,000	4,785,000
French Broad	Little Pigeon River	Sevier	2	3	58	30,000	1,740,000	174,000	1,914,000
French Broad	East Fork Little Pigeon River	Sevier	0	2	36	6,000	216,000	21,600	237,600
French Broad	West Prong Little Pigeon River	Sevier	0	5	90	6,000	540,000	54,000	594,000
Tennessee	Little River	Blount	1	5	92	30,000	2,760,000	276,000	3,036,000
Little Tenn	Tellico River	Monroe	1	0	2	30,000	60,000	6,000	66,000
Hiwassee	Chestuee Creek	Polk/McMinn	0	3	54	3,000	162,000	16,200	178,200
Hiwassee	Conasauga Creek	Polk/McMinn	0	3	54	3,000	162,000	16,200	178,200
Hiwassee	Oostanaula Creek	McMinn	0	3	54	3,000	162,000	16,200	178,200
Hiwassee	North Mouse Creek	McMinn	0	3	54	3,000	162,000	16,200	178,200
Hiwassee	South Mouse Creek	Bradley	0	3	54	3,000	162,000	16,200	178,200
		TOTAL	**24**	**73**	**1,365**		**$28,166,000**	**$2,816,600**	**$30,982,600**

ALCOA MARSH – GREATER AND LESSER SNA

Location – (N35.7898, W83.9606W and N35.7712, W83.9837, respectively) Greater and Lesser Alcoa Marshes are located in Blount County off Hwy 33 approximately 2 miles north of the city of Alcoa.

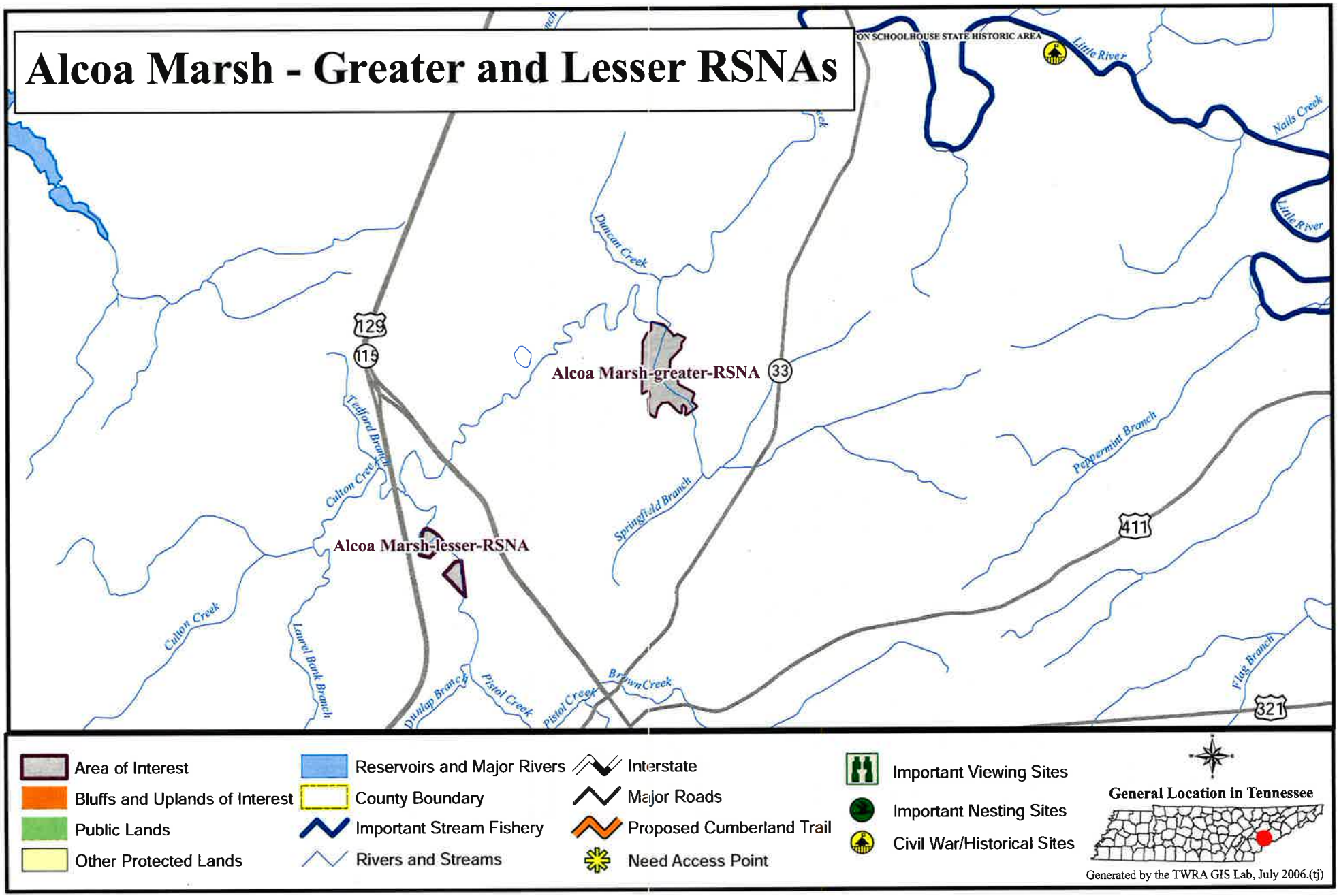
Description - Located in the Ridge and Valley province, Greater Alcoa Marsh is located within the city of Alcoa at the MacArthur Rd. crossing of Springfield Branch. The marsh is partially spring-fed and partially by Springfield Branch, which also drains the area into Pistol Creek. There are some areas of open water within the marsh. Water levels within the marsh fluctuate greatly with precipitation (5 or 6 feet). Predominant vegetation in the marsh consists of cattail, bulrush, buttonbush, willow, rose mallow, ash, and St. John's wort. As in the Lesser Alcoa Marsh, the vegetation is well interspersed creating good habitat diversity. The Lesser Alcoa Marsh is actually composed of two small marshy areas, which are separated by a hill with a fence running from the railroad to N. Calderwood Rd. Both areas are spring fed and drain into the Pistol Creek and have small areas of open water. The two areas are broken into two fields by the ALCOA management. The southern most field is the 2A field and the northern most is the 2B field.

Significance – Site Importance Moderate (B4) – Rare bird elements include: king rail, least bittern, yellow-crowned night-heron, and Virginia rail. One fish element, the flame chub, is also present.

Strategy - The strategy for acquisition at Alcoa Marshes is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 91 needed acres at an estimated cost of $550,000.

Potential Partners – TDEC and the City of Alcoa.


Alcoa Marsh - Greater and Lesser RSNAs
ON SCHOOLHOUSE STATE HISTORIC AREA
Little River
Natls Creek
Little River
Duncan Creek
129
115
Alcoa Marsh-greater-RSNA
33
Tedford Branch
Culton Creek
Springfield Branch
Peppermint Branch
Alcoa Marsh-lesser-RSNA
411
Culton Creek
Laurel Bank Branch
Dunlap Branch
Pistol Creek
Pistol Creek
Brown Creek
Flag Branch
321
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

AMBER DARTER DESIGNATED CRITICAL HABITAT

Location - (N34.9978, W84.7564) The Tennessee portion of the Amber Darter Designated Critical Habitat (DCH) is located in Polk and Bradley and includes the Conasauga River from the Hwy 411 bridge in Polk County downstream approximately 3.6 miles to the state line. The balance of the DCH includes approximately 30 miles of the Conasauga River from the state line downstream into Murray and Whitfield counties, Georgia. (See Conasauga State Scenic River map)

Description - The Amber Darter DCH includes this free-flowing portion of the Conasauga River and a 50-meter buffer on both sides of the river, most of which is floodplain. This also incorporates the confluences of several small tributaries in this river reach. The upstream terminus of the DCH abuts the downstream terminus of the Conasauga State Scenic River. According to TDEC-WPC, many streams in the Tennessee portion of the Conasauga River do not meet their "designated uses due to elevated nutrients and pathogens. Pasture {riparian} grazing and septic tanks are the main source of the pollution in this rural district." (TDEC, 305(b) Report, 2002)

Significance - This segment of the Conasauga River contains numerous rare species listed either at the state or federal level, including the imperiled amber darter (*Percina antesella*). Many are endemic to the Conasauga (Coosa) River drainage, and as such, have an extremely limited distribution in Tennessee. The entire segment also is listed as Designated Critical Habitat for the Conasauga logperch (*Percina jenkinsi*).

The following species are noted from this segment:

SCIENTIFIC NAME	COMMON NAME	STATE RANK[i]	GLOBAL RANK[ii]	STATE STATUS[iii]	FED STATUS[iv]
Cyprinella caerulea	Blue Shiner	S1	G2	E	LT
Epioblasma metastriata	Upland Combshell	SH	GH	E	LE
Etheostoma brevirostrum	Holiday (=ellijay) Darter	S1	G2	T	
Etheostoma ditrema	Coldwater Darter	S1	G1G2	T	
Etheostoma trisella	Trispot Darter	S1	G1	T	
Gomphus consanguis	Cherokee Clubtail Dragonfly	S1	G2G3		
Ichthyomyzon gagei	Southern Brook Lamprey	S1	G5	D	
Lampsilis altilis	Fine-lined Pocketbook	S1S2	G2	T	LT
Macrhybopsis sp. 1	Cf. M. Aestivalis	S1	G3G4		
Medionidus acutissimus	Alabama Mocassinshell	S1	G2	T	LT
Medionidus parvulus	Coosa Moccasinshell	S1	G1	E	LE
Noturus munitus	Frecklebelly Madtom	S1	G3	T	
Ophiogomphus alleghaniensis	Alleghany Snaketail Dragonfly	S1	G3Q		
Ophiogomphus edmundo	Edmund's Snaketail	S1	G1G2		
Percina antesella	Amber Darter	S1	G1G2	E	LE
Percina jenkinsi	Conasauga (=reticulate) Logperch	S1	G1	E	LE
Pleurobema chattanoogaense	Painted Clubshell	S1?	G1Q		
Pleurobema georgianum	Southern Pigtoe	S1	G1	E	LE
Pleurobema perovatum	Ovate Clubshell	SH	G1	E	LE
Pleurobema troschelianum	Alabama Clubshell	S1	G1Q		

Ptychobranchus greenii	Triangular Kidneyshell	S1	G1	E	LE
Strophitus connasaugaensis	Alabama Creekmussel	S1	G3		
Villosa vibex	Southern Rainbow	S2	G4Q		

Strategy - Most of the above species are negatively impacted by excessive sedimentation, fertilizer, pesticides, animal waste, chemical spills, and agricultural & silvicultural runoff. A primary goal for maintaining sensitive aquatic communities is to limit to the greatest extent possible the contributing pollutants in the drainage area supporting their habitats. This segment of the Conasauga River can be protected through various means, including but not limited to the implementation of proper agricultural and silvicultural BMP's. The core stream buffer (and subsequent expansions) may be protected through binding conservation easements with willing landowners or fee simple ownership. Three public highways cross this segment of the Conasauga River. Drainage patterns from each ROW should be evaluated and enhanced with active and passive storm water controls, as needed.

Land Protection Needs - 150 acres (core area of the Amber Darter DCH in Tennessee, including the river and a 50-meter buffer on each side) at an estimated cost of $1,000,000.

Potential Partners - USFWS, TWRA, TDEC, NRCS, TVA, TNC, Conservation Fisheries, Inc.

AUSTIN SPRINGS

Location - (N36.3960, W82.3378) Austin Springs is located in Washington County approximately 5 miles north of Johnson City. It is located on both sides of the Watauga River/Boon Lake at river mile 14.5, just upstream (east) of Austin Springs Road bridge.

Description - Austin Springs is a 190-acre site divided by Watauga River, at the upper end of Watauga Lake. A mix of habitats is attractive to a good number birds. The floodplain of the Watauga River is the primary habitat, but the north side of the river contains vegetated bluffs which are likely more significant in terms of flora and plant communities. Habitats include open lake and seasonal muddy shoreline, short-grass pasture, old fields, thickets, seasonal marsh and woodlands.

Significance - The site serves as an important stopover site for many migrating birds, plus a home for a few locally rare breeding birds. Fall bird banding took place from 1980- 1992 with over 85 species banded. Three listed bird species have been documented from the site including the great egret, common barn owl, and bald eagle. Although not listed, the Virginia rail is considered rare and uncommon in Tennessee and has been observed at the site. The great egret is listed as in-need-of-management because of its past declining numbers and threats to wetland habitats. The Virginia rail utilizes emergent vegetation in marshes for nesting and Austin Springs provides such habitat. In the past, the barn owl used the site for feeding and may have nested there. Other rare birds including peregrine falcon, least bittern, vesper sparrow, and sharp shinned hawk have been observed there too[1].

The bluffs above the Watauga River just east of the current site design contain two rare plant species, Carolina pink (*Silene caroliniana* spp. *pensylvanica*) and branching whitlow-grass (*Draba ramosissima*). It is possible that these two species and perhaps other rare species could be found within the site design, or the conservation planning could result in reconfiguration of this site's boundaries to include these species.

Strategy - Members of the Tennessee Ornithological Society (TOS) should be contacted for additional bird data from the site. The current landownership information needs to be determined.

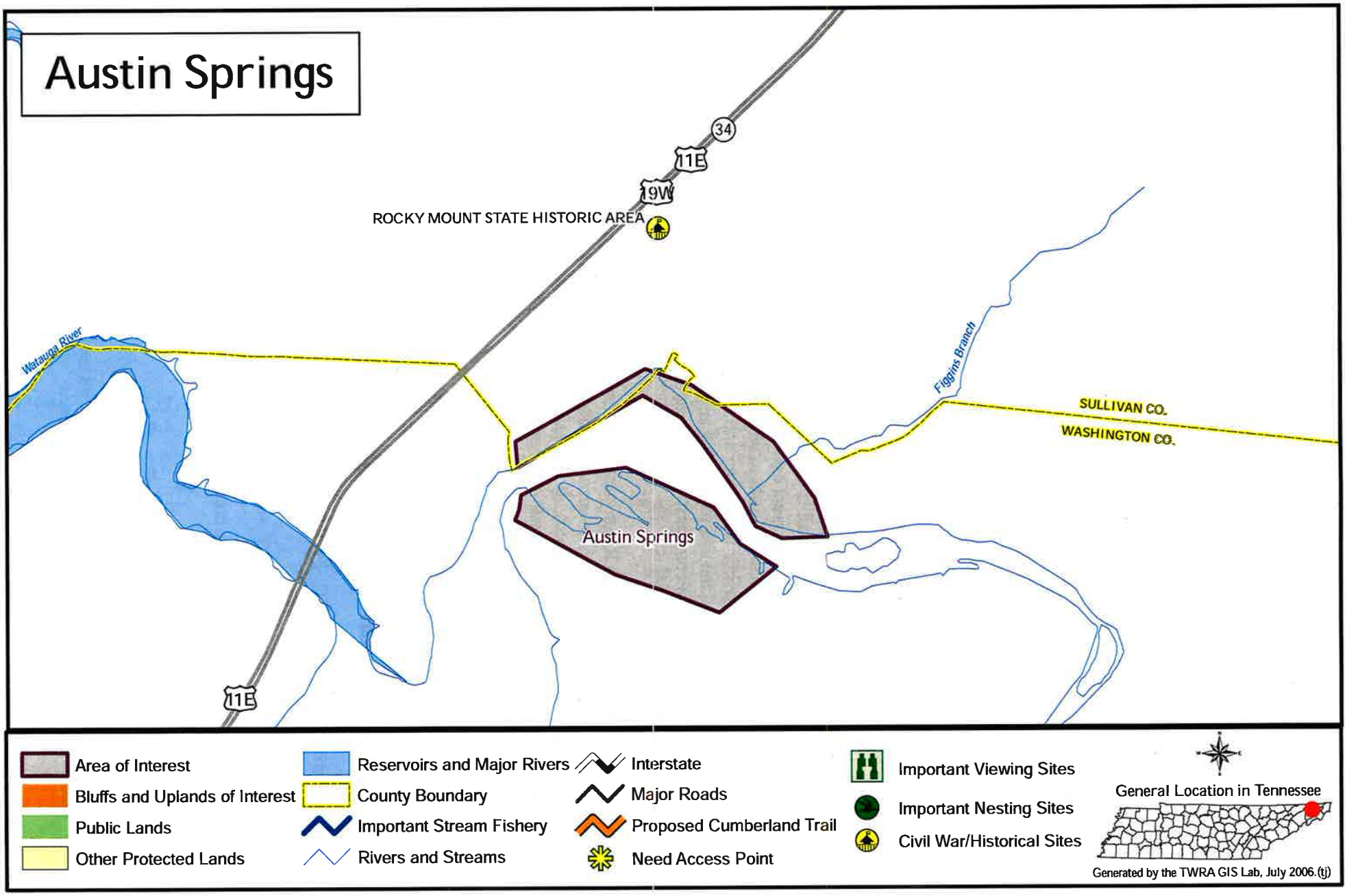
Land Protection Needs – 190 acres at an estimated cost of $600,000.

Potential Partners - TDEC, TWRA, TNC and TOS.

Reference:

Nicholson, C.P. 1997. Atlas of the breeding birds of Tennessee. The University of Tennessee Press. 426 pp.

[1] Although these birds are rare, records for the species have not been mapped by the Tennessee Division of Natural Areas, for they are not breeding or nesting records.


Austin Springs
34
11E
19W
ROCKY MOUNT STATE HISTORIC AREA
Watauga River
Figgins Branch
SULLIVAN CO.
WASHINGTON CO.
Austin Springs
11E
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BIG RIDGE STATE PARK

Location – (N36.2544, W83.9240) Big Ridge State Park is located between the cities of Andersonville and Maynardville in Union County on the southern shore of TVA's Norris Reservoir approximately 25 miles north of Knoxville.

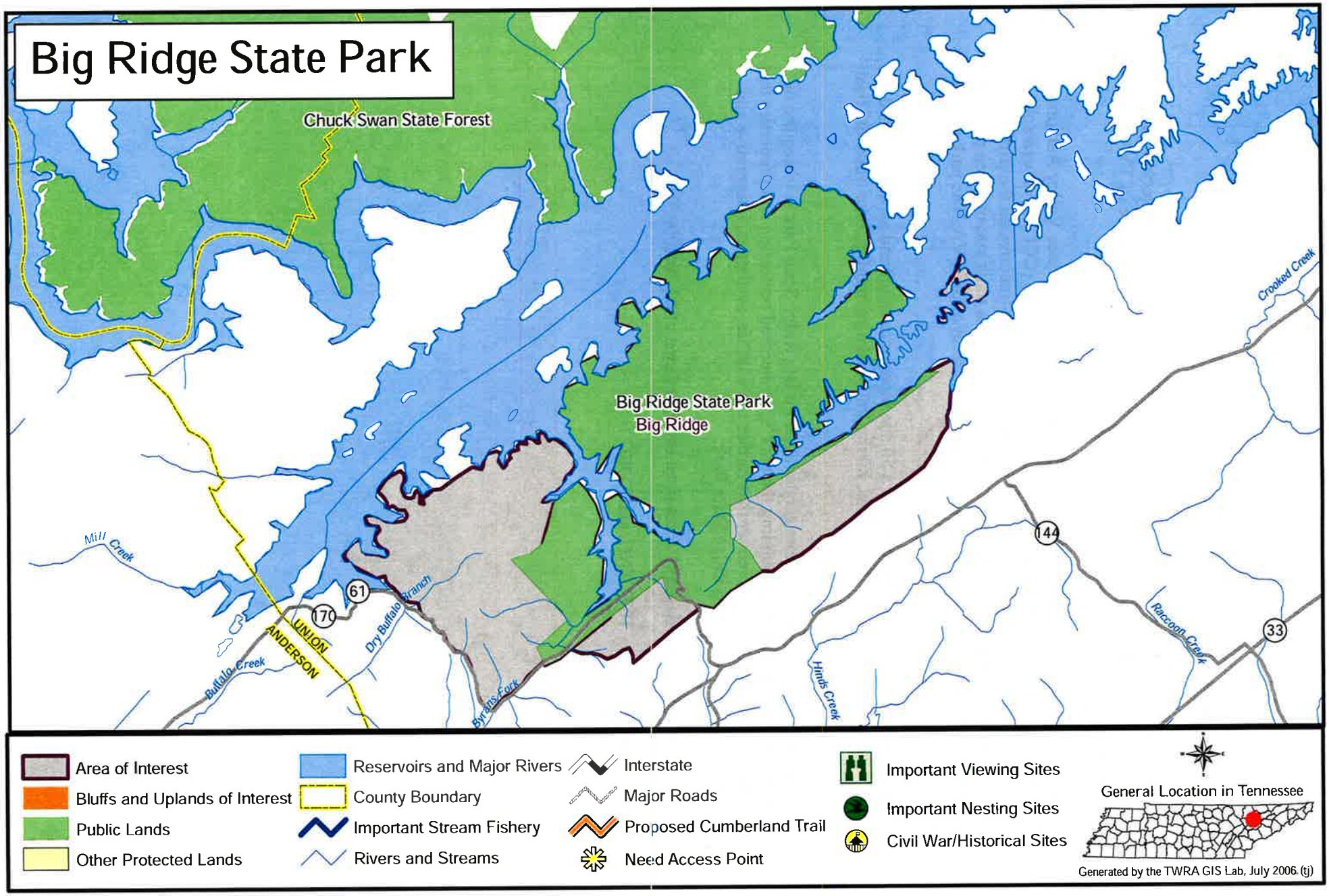
Description - Big Ridge State Park was developed by the Tennessee Valley Authority in cooperation with the NPS and the Civilian Conservation Corps (CCC) as an example of public recreation development along TVA lakeshores. The structures on the park reflect the craftsmanship and stonework of the CCC, and along the trails you may see remnants of the homes and farms that existed here prior to the birth of the TVA. The park contains 3,687 acres.

The park contains 19 rustic cabins and a 50 site modern campground as well as a 120 capacity group camp with picnic areas, hiking trails, lake swimming, bike trails and boat rentals.

Strategy - The strategy for future acquisitions for Big Ridge State Park is to acquire in holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover that further the wildlife, aesthetics, interpretive and recreation missions of Big Ridge State Park.

Land Protection Needs – 891 acres at an estimated cost of $2,200,000.

Potential Partners - TCF, TNC, and TDEC.


Big Ridge State Park
Chuck Swan State Forest
Big Ridge State Park
Big Ridge
Crooked Creek
Mill Creek
61
170
144
33
UNION
ANDERSON
Buffalo Creek
Dry Buffalo Branch
Byrams Fork
Hinds Creek
Raccoon Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

BROOKS ISLAND

Location - (N35.7597, W84.4519) Brooks Island is located in Hancock County between Clinch River Mile 182.5 and 184.5.

Description - Brooks Island is within a meander in the Clinch River containing significant mussel shoals and many rare species.

Significance - Site Importance Outstanding (B1) – Brooks Island is one of three priority mussel shoals (Brooks Island, Kyles Ford, Wallens Bend). This area not only contains numerous rare aquatic species, but they occur in several beds within this stretch of river. Known rare species include:

SCIENTIFIC NAME	COMMON NAME	STATE RANK[2]	GLOBAL RANK[3]	STATE STATUS[4]	FED STATUS[5]
Conradilla caelata	Birdwing Pearlymussel	S1	G1	E	LE
Cumberlandia monodonta	Spectaclecase	S2S3	G2G3		C
Cyprogenia irrorata	Eastern Fanshell Pearly Mussel	S1	G1	E	LE
Dromus dromas	Dromedary Pearlymussel	S1	G1	E	LE
Epioblasma brevidens	Cumberlandian Combshell	S1	G1	E	LE
Epioblasma capsaeformis	Oyster Mussel	S1	G1	E	LE
Epioblasma triquetra	Snuffbox	S3	G3		
Erimystax cahni	Slender Chub	S1	G1	T	LT
Etheostoma denoncourti	Golden Darter	S2	G2		
Fusconaia cuneolus	Fine-rayed Pigtoe	S1	G1	E	LE
Fusconaia edgariana	Shiny Pigtoe	S1	G1	E	LE
Io fluvialis	Spiny Riversnail	S2	G2		
Noturus stanauli	Pygmy Madtom	S1	G1	E	LE
Percina aurantiaca	Tangerine Darter	S3	G4	D	
Pleurobema oviforme	Tennessee Clubshell	S2S3	G2G3		
Pleurobema plenum	Rough Pigtoe	S1	G1	E	LE
Ptychobranchus subtentum	Fluted Kidneyshell	S2S3	G2		C
Quadrula cylindrica strigillata	Rough Rabbitsfoot Pearly Mussel	S2	G3T2	E	LE

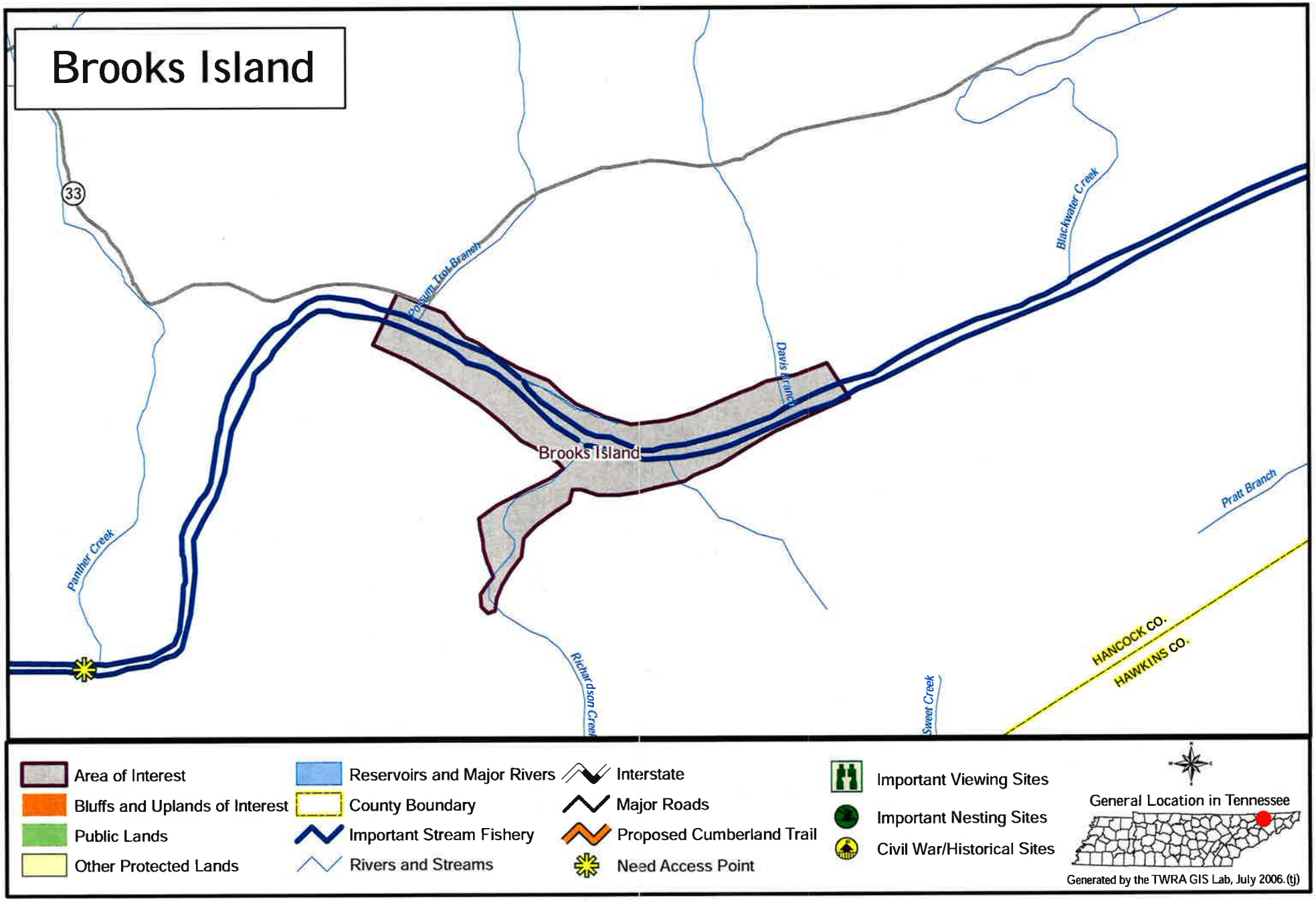
Strategy - Streambank stabilization around and upstream from the shoals, streambank fencing to keep livestock off the priority shoal areas, other BMPs along Davis Branch above the shoals.

Land Protection Needs - 241 acres at an estimated cost of $500,000 (ideally agreement would be reached with surrounding landowners for this globally important site).

Potential Partners USFWS, TDEC, TWRA, TNC, TVA, NRCS

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[2]State ranks relate to rarity within Tennessee: S1=extremely rare and critically imperiled, S2=very rare and imperiled, S3=Rare and uncommon.
[3] Global ranks are similar to State Ranks, but relate to rarity on a global scale.
[4] Legal listing in Tennessee: E=endangered, T=threatened, D=deemed in need of management.
[5] Legal listing at the federal level: LE=endangered, LT=threatened, C=candidate for listing.


Brooks Island
33
Possum Trot Branch
Blackwater Creek
Davis Branch
Brooks Island
Pratt Branch
Panther Creek
Richardson Creek
Sweet Creek
HANCOCK CO.
HAWKINS CO.
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

BULLRUN KNOBS

Location - (N36.0751, W84.0337) Bullrun Knobs is located in Knox County on the northwest facing slopes of Bullrun Creek between Heiskell and Conner Roads. The area is approximately 10 miles northwest of downtown Knoxville.

Description - For several decades, University of Tennessee botanists have taken an interest in the site. Ed Clebsch, retired botanist from UTK wrote "It is a real jewel of a locale." The 190-acre site consists of the forested floodplain of Bull Run Creek, rich coves and dissected uplands. The site contains several stands of eastern hemlock, with rhododendron present as an understory species. The hemlock forests of the eastern United States are under attack from the hemlock wooly adelgid, a small aphid-like insect from Asia.

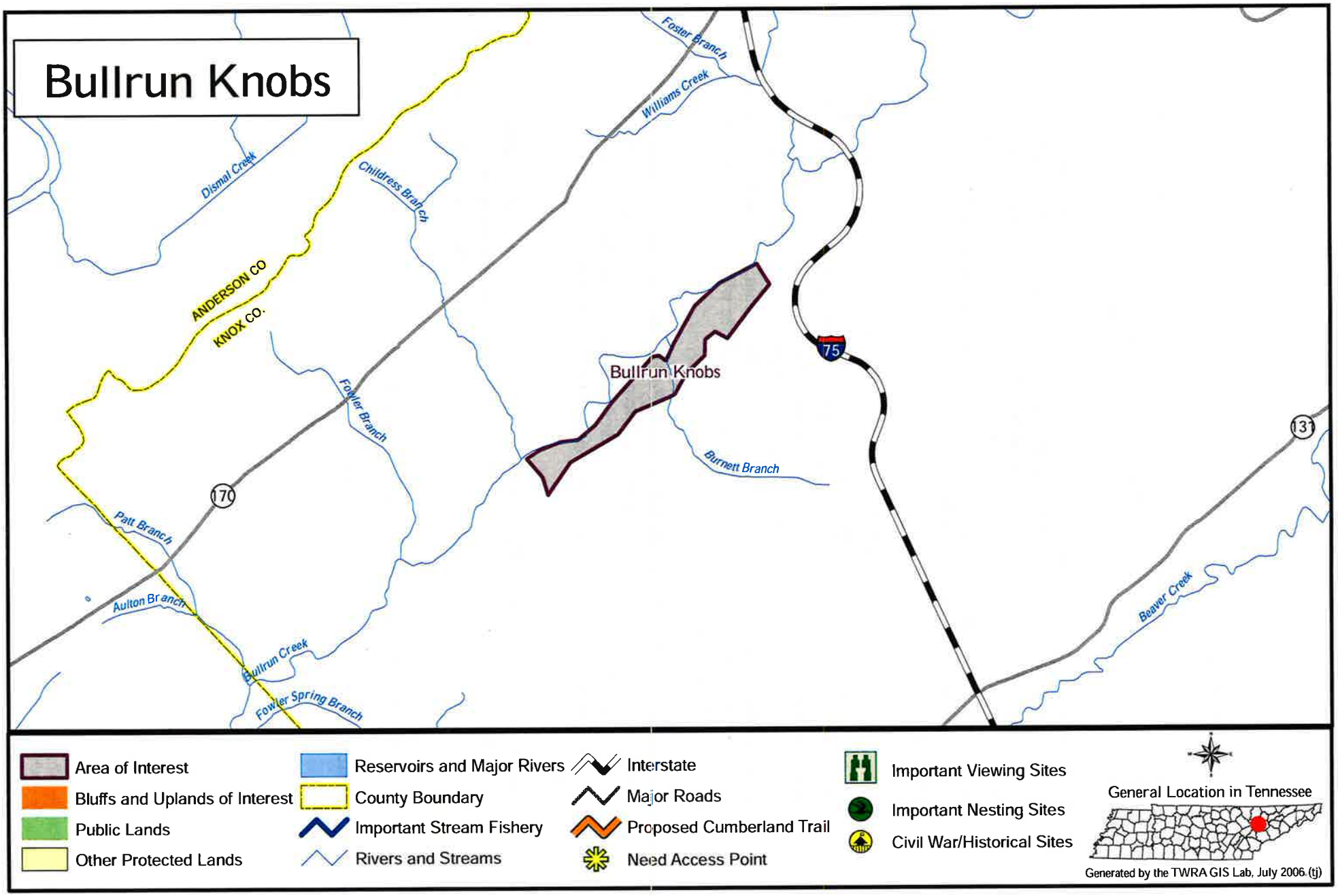
Significance - Comprising part of the diverse flora of Bullrun Knobs are five state-listed plant species including Appalachian bugbane (*Cimicifuga rubifolia*) and yellow water-crowfoot (*Ranunculus flabellaris*). Occurring in only six states, *C. rubifolia* grows in rich woods and is listed as state threatened and considered rare and uncommon both in Tennessee and globally. *R. flabellaris* occurs in a variety of wetland habitats and at Bullrun Knobs it grows at the base of a toe slope near the stream. Although the species is common globally it is threatened and imperiled in Tennessee with only eleven extant occurrences in the state.

Additional rare plants at the site include ginseng (*Panax quinquefolius*), goldenseal (*Hydrastis canadensis*), and white walnut or butternut (*Juglans cinerea*). All three species occur in rich woods. Butternut is tracked because of its decline caused by the butternut canker, while ginseng and goldenseal are tracked because of commercial harvests.

Strategy - Since the site is not far from Knoxville, local governments may be interested in its protection as a nature preserve. Allen Sweetser owns at least a portion of the site and is the source for many of the rare plant records. Any conservation plan must involve him.

Land Protection Needs – 190 acres at an estimated cost of $600,000.

Potential Partners - TDEC, TNC, and Knox County.


Bullrun Knobs
Foster Branch
Williams Creek
Dismal Creek
Childress Branch
ANDERSON CO
KNOX CO.
Bullrun Knobs
75
Fowler Branch
Burnett Branch
131
170
Patt Branch
Aulton Branch
Bullrun Creek
Fowler Spring Branch
Beaver Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

CHANDLER COVE FALLS

Location – (N36.0375, W82.4833) Chandler Cove Falls (Lower Spivey Falls) is located in Unicoi County. This site is approximately 10 miles south from Erwin on Hwy. 36/9W, just south of the highway near Chandler Cove Road.

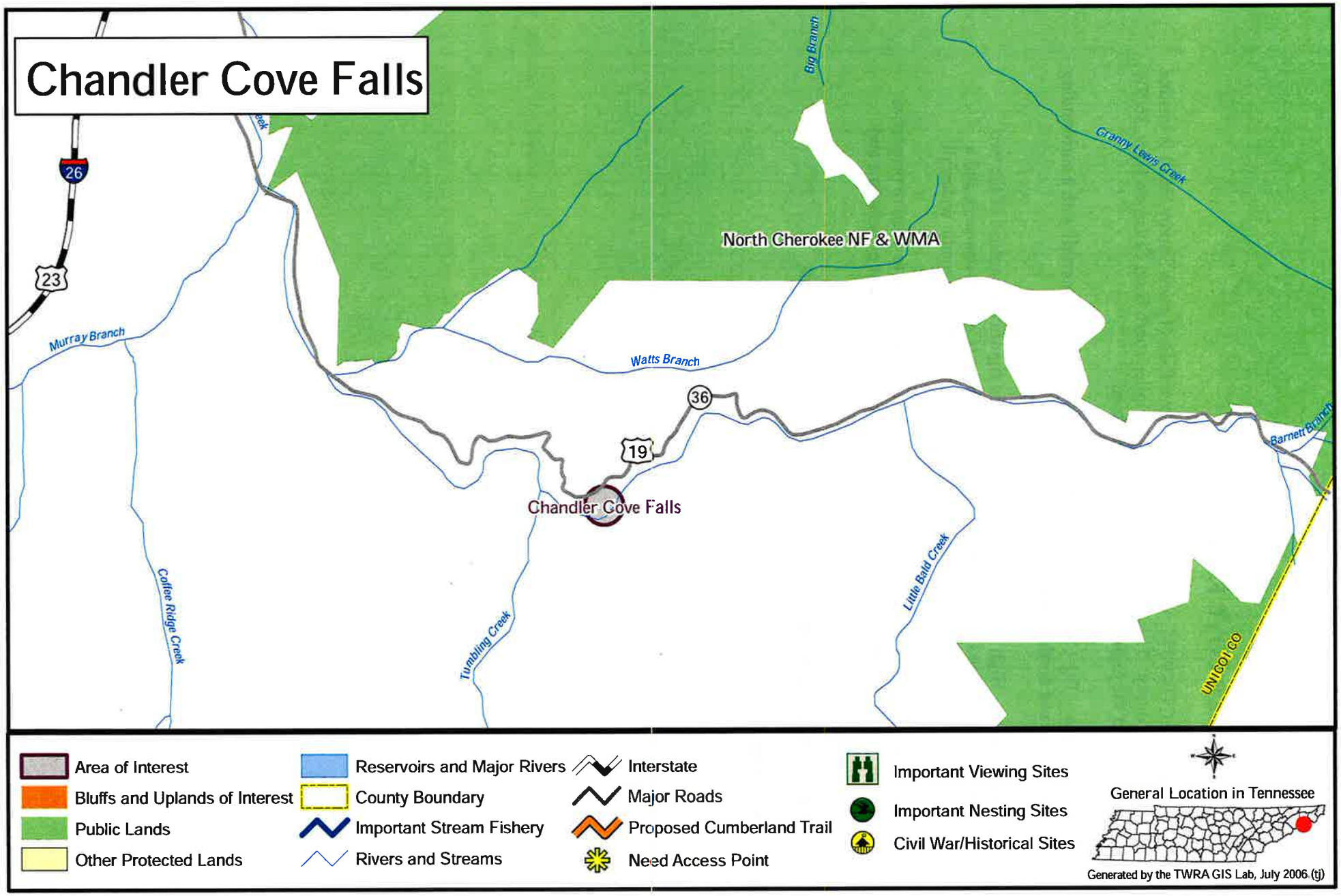
Description – The Chandler Cove Falls is a scenic 40-50 ft. waterfall with a surrounding forest of mixed northern hardwoods.

Significance – High Significance (B3) – The site is significant because of the two populations of state listed plants Roan Mountain sedge (*Carex roanensis*), and a population of the climbing fumitory (*Adlumia fungosa*), and the scenic waterfall.

Strategy - The strategy for acquisition at Chandler Cove Falls is to acquire properties within the site design (site boundary) for preservation of the plant populations and associated habitat and waterfall.

Land Protection Needs – 8 acres at an estimated cost of $85,000.

Potential Partners – TDEC, USFS.


Chandler Cove Falls
North Cherokee NF & WMA
Big Branch
Granny Lewis Creek
Murray Branch
Watts Branch
Barnett Branch
Chandler Cove Falls
Coffee Ridge Creek
Tumbling Creek
Little Bald Creek
UNICOI CO
26
23
36
19
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

CLINCH STATE SCENIC RIVER

Location – (N35.9344, W84.2339) The Clinch River watershed contains parts of Anderson, Knox, Loudon, Morgan, Roane and Union Counties and drains 628 square miles before emptying into Watts Bar Reservoir. Approximately 20 miles of the river, from Melton Hill Dam upstream to the Pellissippi Parkway (State Highway 62) at Solway Bend, was designated as a Class III Partially Developed State Scenic River in 1996.

Description - The Clinch State Scenic River is the only scenic river in Tennessee that lies completely within a TVA impoundment – Melton Hill Reservoir. Although impounded, the Clinch maintains the feeling of a free-flowing river because of its relative narrowness. The widest point, at Gallaher Bend, is only 4,000 feet across. At a pool elevation of 795 feet above mean sea level there are 140 miles of shoreline around the reservoir, which extends 44 miles upstream from the dam at full pool. Much of the river is bordered by the land of the Oak Ridge Reservation owned by the USDOE.

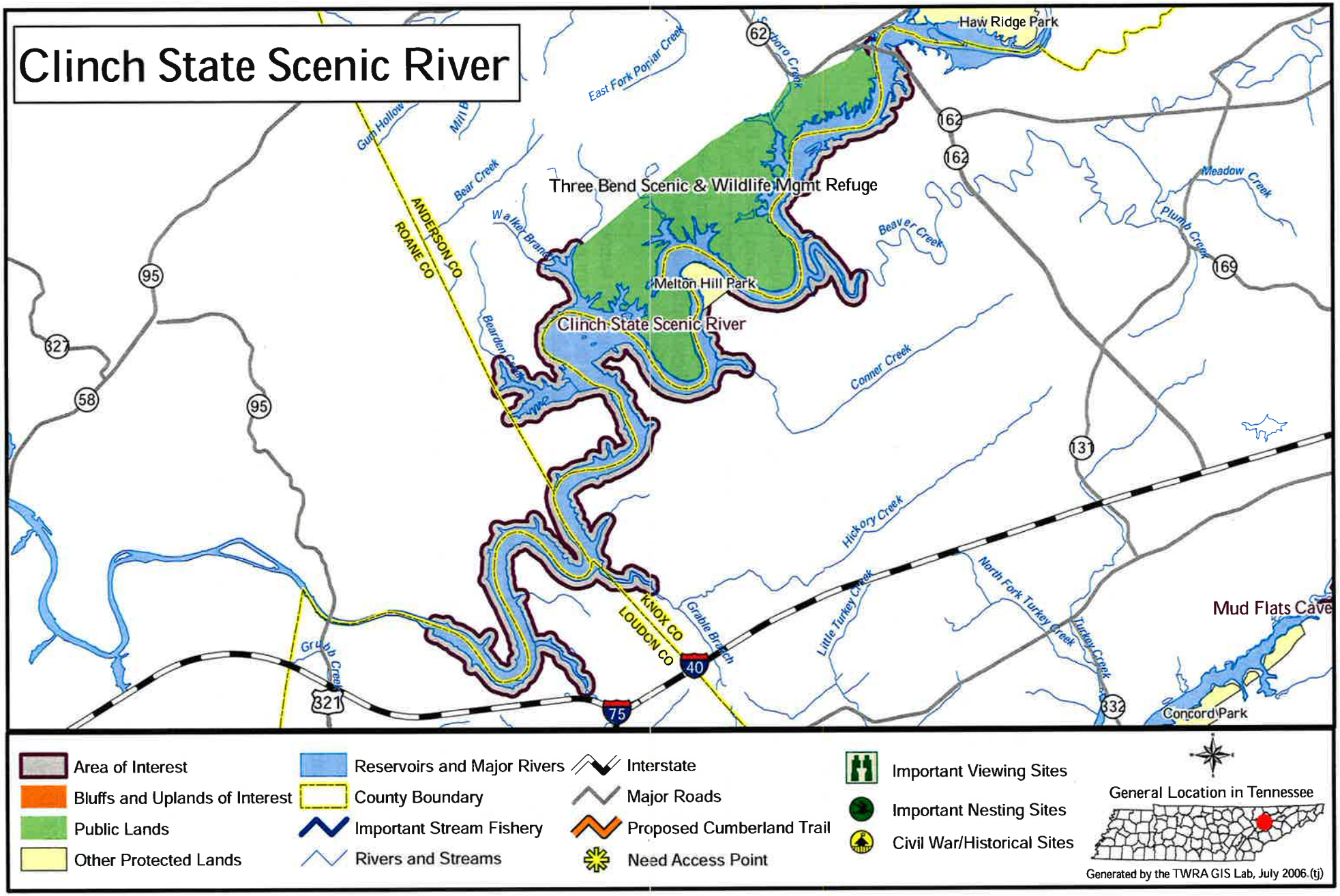
Significance - The Clinch River was designated as a Class III Developed State Scenic River because of its scenic qualities. The river provides boaters, fishermen, and picnickers with ample opportunities for enjoyment. The area is replete with public access, and camping is available at the Melton Hill Dam Reservation. The river flows through the Ridge and Valley Physiographic Province and bisects karst terrain. Boaters on the Clinch will see oak-hickory/eastern red cedar forests along the banks, slopes, and bluffs, which are indicators of limestone geology. These bluffs and forests are dispersed through productive farms in the valleys bordering the river.

Fishing is considered only fair in most years. Fluctuating water temperatures due to cold tailwater releases from Norris Reservoir upstream are thought to possibly affect reproductive success and growth rates of warm-water fish species in the Clinch. Nonetheless, fishermen will find a diverse fishery in the river, with principle game fish species including blue and channel catfish, white bass, yellow bass, striped bass and hybrids, rock bass, largemouth bass, bream, sauger, and trout. TWRA is also attempting to establish a viable muskellunge fishery in the Clinch. Fishermen are advised not to eat catfish from the river due to contamination from PCBs and chlordane.

Strategy - The site conservation plan for the Clinch State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 450 feet from the usual banks of the river on either side. Additionally, connecting contiguous protected areas to state and other publicly owned lands along the entire river corridor are a major approach toward protecting the river and making it a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, and landowner assistance programs. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river.

Land Protection Needs – 500 acres at an estimated cost of $2,000,000

Potential Partners - TDEC, TWRA, TNC, USFWS, USFS, USACE, County Governments, Private Corporations, Foundations, and Individual Donors.


Clinch State Scenic River
Haw Ridge Park
Three Bend Scenic & Wildlife Mgmt Refuge
Melton Hill Park
Clinch State Scenic River
Mud Flats Cave
Concord Park
East Fork Poplar Creek
Bear Creek
Walker Branch
Beaver Creek
Meadow Creek
Plumb Creek
Conner Creek
Hickory Creek
Grubb Creek
Grable Branch
Little Turkey Creek
North Fork Turkey Creek
Turkey Creek
ANDERSON CO
ROANE CO
KNOX CO
LOUDON CO
62
162
95
58
327
131
169
40
75
321
332
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

CONASAUGA STATE SCENIC RIVER

Location – (N35.0036, W84.6863) The Conasauga River watershed includes parts of Bradley and Polk Counties and drains 124 square miles before crossing into Georgia. Approximately 8.3 miles of the river in Polk County upstream of Hwy 411 was designated as a Class I State Scenic River in 1969.

Description -The Conasauga River originates in the north Georgia mountains of the Chattahoochee National Forest and flows northwest into Tennessee and the Cherokee National Forest. Because it does not drain to the Mississippi, as do the other streams in Tennessee, it provides habitat for aquatic species not commonly found in Tennessee. It is one of the most pristine, beautiful, and biologically rich rivers in the Southeast. Its water quality is excellent and it has no dams to block fish movement or disturb the natural river flow.

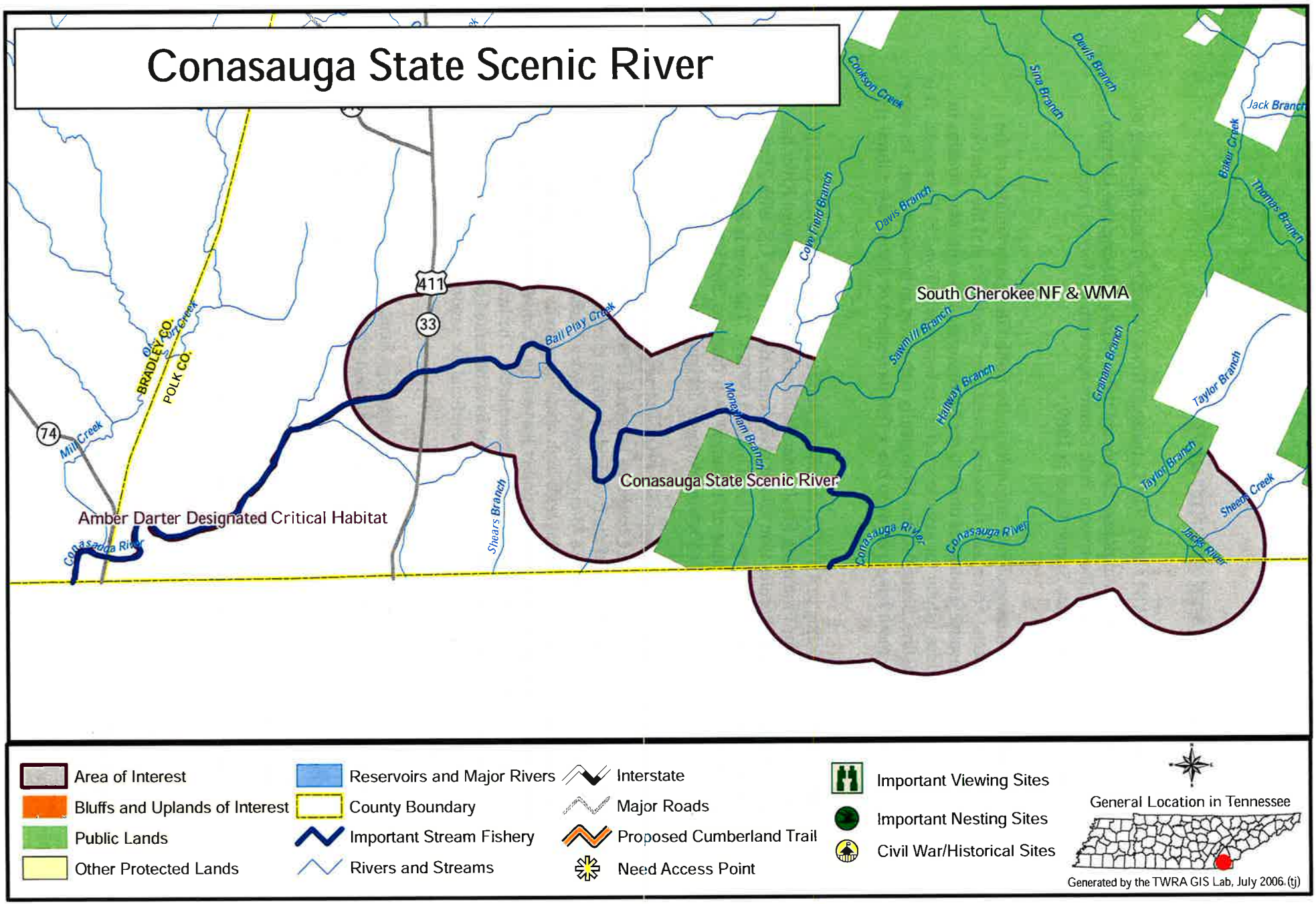
Significance - According to a TNC/NatureServe publication entitled, Rivers of Life: Critical Watersheds for Protecting Freshwater Biodiversity, the Conasauga River has more imperiled aquatic species than all but seven other rivers in the US, with 21 at-risk fish and mussel species including 10 listed by the USFWS. The river is included in the State Scenic River System because of its natural river qualities, and is the region's only Underwater Watchable Wildlife Viewing Area, as designated by the TWRA.

The Conasauga supports over 90 species of fish and 24 species of mussels, with more than 20 of these being rare. The Conasauga logperch (*Percina antesella*), for example, is found within a 15-mile stretch of the river and nowhere else in the world. The upper section of the river is designated a Management Category 5 area by the Cherokee National Forest. This protects areas with high visual sensitivity and a high degree of public interest and generally prohibits timber harvesting. Consequently, the upper section of the river flows through heavily forested hills. The lower sections of the river are surrounded by well managed farmlands that have benefited both the river and the surrounding community. The clean water is beneficial for canoeing, fishing, agriculture and industry.

Strategy - The site conservation plan for the Conasauga State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 3,000 feet from the center on each side of the river. Additionally, connecting contiguous protected areas to state and other publicly owned lands along the entire river corridor are a major approach toward protecting the Conasauga River and making it a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, and landowner assistance programs. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river. Acquisition of key tracts for public access and use will be strategically targeted.

Land Protection Needs – 500 acres at an estimated cost of $550,000

Potential Partners - TDEC, TWRA, TNC, USFWS, USFS, USACE, County Governments, Private Corporations, Foundations, Individual Donors.


Conasauga State Scenic River
South Cherokee NF & WMA
Conasauga State Scenic River
Amber Darter Designated Critical Habitat
BRADLEY CO.
POLK CO.
411
33
74
Mill Creek
Ball Play Creek
Shears Branch
Conasauga River
Cookson Creek
Sina Branch
Devils Branch
Jack Branch
Baker Creek
Thomas Branch
Cow Field Branch
Davis Branch
Sawmill Branch
Hallway Branch
Graham Branch
Taylor Branch
Sheeds Creek
Jacks River
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DAVY CROCKETT BIRTHPLACE STATE PARK

Location – (N36.2053, W82.6562) Davy Crockett Birthplace State Park is located at the confluence of the Nolichucky River and Limestone Creek in Greene County.

Significance - This 105 acre park commemorates the birthplace of Davy Crockett.

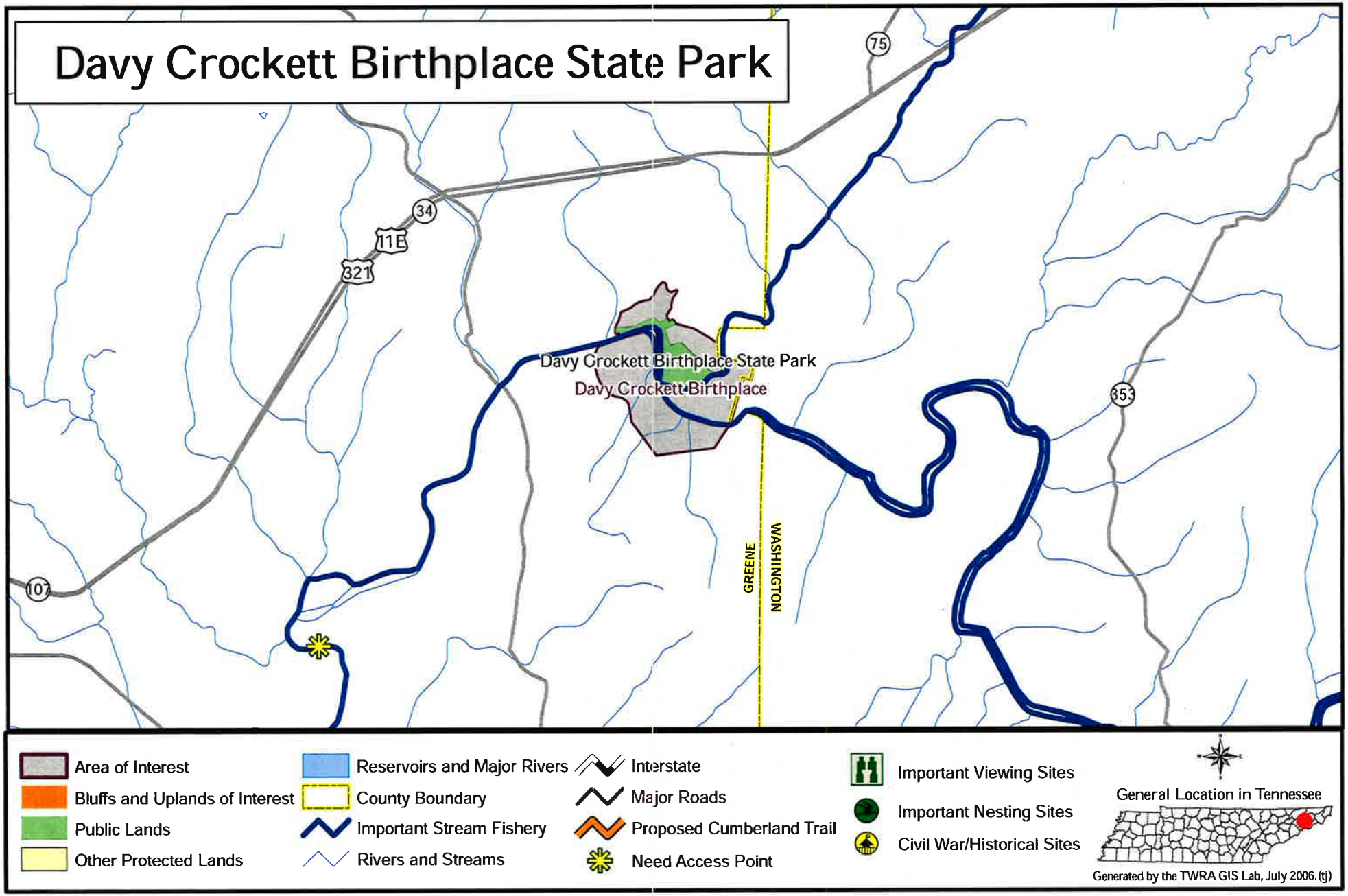
The park includes a replica of the log cabin in which he was born and a museum dedicated to Crockett. Though small, the park provides a wonderful diversity of natural settings ranging from forested limestone bluffs to meadows and tree lined streams: all providing exceptional bird and other wildlife viewing opportunites.

The park includes an 88 improved site modern campground with water, electric and sewer hook-ups. The campground also includes 18 primitive tent campsites. There is a swimming pool open to the public.

Strategy - The strategy for future acquisitions for Davy Crockett Birthplace State Park is to acquire in holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover that further the wildlife, aesthetics, interpretive and recreation missions of Davy Crockett Birthplace State Park.

Land Protection Needs – 210 acres at an estimated cost of 825,000.

Potential Partners TCF, TNC, and TDEC.


Davy Crockett Birthplace State Park
75
34
11E
321
Davy Crockett Birthplace State Park
Davy Crockett Birthplace
353
GREENE
WASHINGTON
107
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

DOE MOUNTAIN

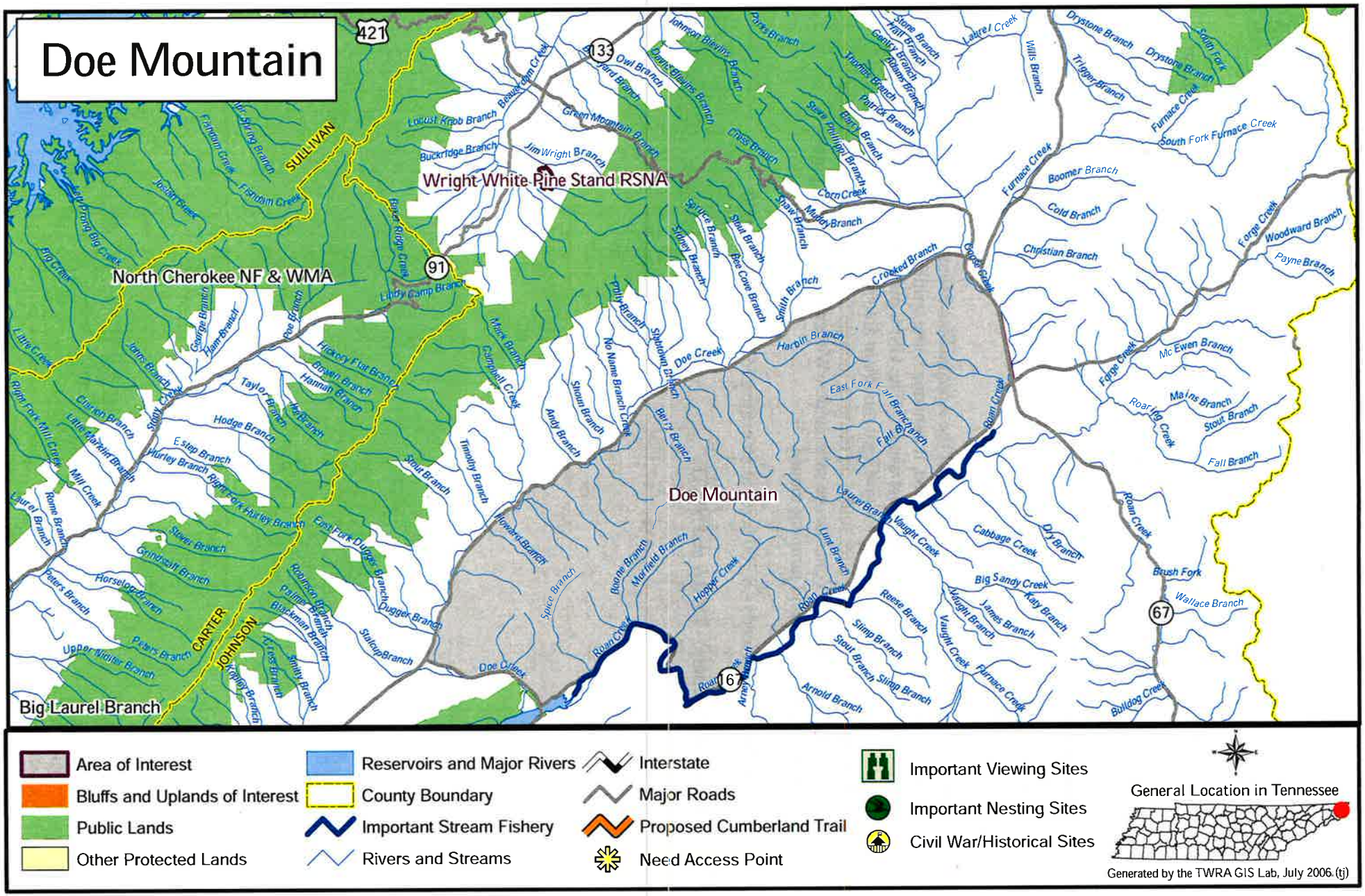
Location – (N36.4230, W81.8768) The Doe Mountain project area is located in Johnson County in the extreme northeast corner of Tennessee. The property starts as the southern edge of Mountain City, Tennessee and runs southwest to about one mile north of Butler, Tennessee.

Description - The area is mountainous and consists of one main mountain ridge with associated drainages on each side. The slopes are steep and generally covered by oak/hickory hardwood forests. Elevations range from near 2,150 feet near Butler to slightly above 3,800 feet at the highest point.

Significance - This is a significant area of the Appalachian Mountain chain. Due to its location in extreme northeast Tennessee, it contains some wildlife species found in only a few places in the state such as the least weasel. The USFS owns much of the surrounding mountains, but Doe Mountain is a significant mountain area subject to development. Other important wildlife species found on the area include the saw-whet owl, cerulean warbler, alder flycatcher, Yonahlossee salamander, Weller's salamander, pigmy salamander, and woodland jumping mouse.

Land Protection Needs - 8,300 acres at an estimated cost of $8,545,000.

Potential Partners – TWRA and NWTF.


Doe Mountain
421
133
91
67
6
SULLIVAN
CARTER
JOHNSON
Wright White Pine Stand RSNA
North Cherokee NF & WMA
Doe Mountain
Big Laurel Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

DOE RIVER GORGE SITE

Location – (N36.5631, W83.0437) The Doe River Gorge Site is located in Carter County just south of Hampton. The steep river gorge is located upstream of the Doe River bridge crossing on Hwy 19E and flows between Fork Mountain and Cedar Mountain.

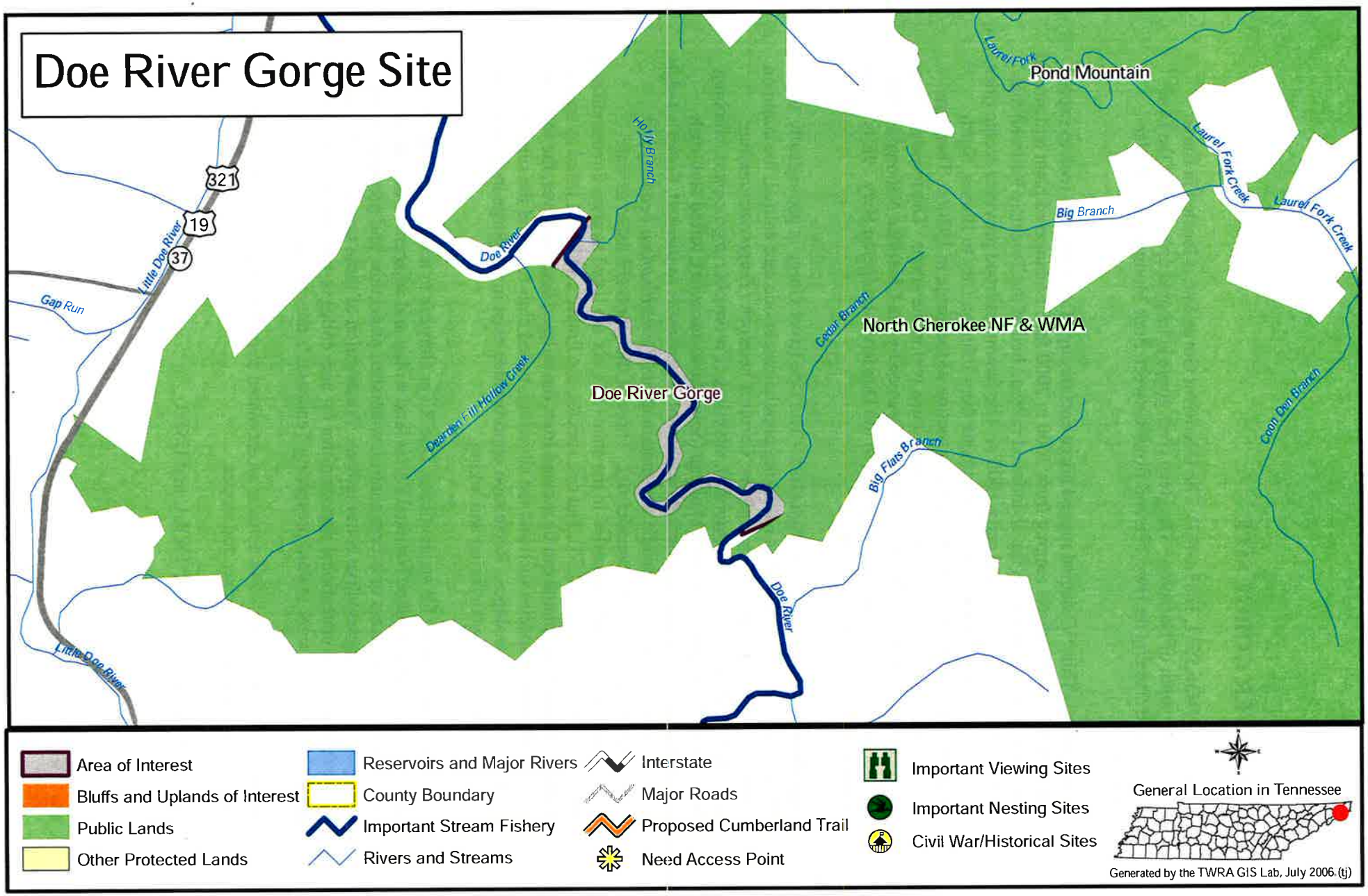
Description – This "V"shaped rugged gorge cuts through Cambrian age rock to expose steep cliffs with elevations ranging from 3600 to 2000 feet. Endangered plant and animal species are present as well as the abandoned railroad bed of the Tweetsie Railroad that operated in the late 1800's and early 1900's. The famous railroad provided scenic rides as well as freight loads through the mountains from Johnson City to Boone, North Carolina and ceased operation through this section of the gorge in 1930's. There are several railroad tunnels cut through the mountains within the gorge. The forested slopes and rocky cliffs on both sides of the gorge are owned by the Cherokee National Forest. The gorge area downstream of the site up to the Doe River bridge on Hwy 19E is owned by the Doe River Christian Camp.

Significance – Site Importance High (B2) – The Doe River Gorge is geologically and historically significant as well as harboring populations of one rare animal, the common raven (*Corvus corax*), and ten rare plants: Carolina hemlock (*Tsuga caroliniana*), roundleaf sundew (*Drosera rotundifolia*), silverling (*Paronychia argrocoma*), climbing fumitory (*Adlumia fungosa*), rock skullcap (*Scutellaria saxatilis*), tufted club-rush (*Trichophorum cespitosum*), mountain snakeroot (*Prenanthes roanensis*), Fraser's sedge (*Cymophyllus fraserianus*), Beadle's mountain mint (*Pycnanthemum beadlei*) and Canada burnet (*Sanguisorba canadensis*). Three of the plants are listed as state endangered and critically imperiled in the state (S1), six are listed as state threatened and very rare in the state (S2 and S3), and one species, the Fraser's sedge, is listed as special concern. Most of the plants can be viewed from the railroad bed, however, the rock and seepage dependent species such and the silverling, tufted club-rush and the sundew are restricted to the steep slopes. Recreation opportunities exist in the gorge including white-water rafting, canoeing/kayaking and hiking.

Strategy - The strategy for acquisition at Doe River Gorge is to acquire the gorge area surrounded by the Cherokee National Forest land within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare plant and animal species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 244 acres at an estimated cost of $335,000 which includes approximately 3 miles of river and slopes

Potential Partners – TDEC, TWRA, and USFS.


Doe River Gorge Site
Pond Mountain
Laurel Fork
Laurel Fork Creek
Holly Branch
Big Branch
321
19
37
Little Doe River
Doe River
Gap Run
Cedar Branch
North Cherokee NF & WMA
Dearden Fill Hollow Creek
Doe River Gorge
Big Flats Branch
Coon Den Branch
Doe River
Little Doe River
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

FORT LOUDOUN STATE HISTORIC PARK

Location – (N35.5884, W84.2143) Fort Loudoun State Historic Park is located in Monroe County, near the city of Vonore.

Description – This is a 1200-acre historic area and day use park located on the shores of Tellico Lake. It is dedicated to preserving the history of Fort Loudoun and the role it played in the French and Indian War. The Fort Loudoun Visitors Center houses an exhibit area with artifacts from the French an Indian War. There is an auditorium that features "The Fort Loudoun Story", --an award winning 15-minute video on the history of the site.

Significance - During the French and Indian War, the British colony of South Carolina felt threatened by French activities in the Mississippi River valley. To counter this threat the colony sent the Independent Company of South Carolina to construct and garrison what became Fort Loudoun. This move helped to ally the powerful Overhill Cherokee Nation in the fight against the French and guaranteed that trade would continue between the Cherokees and South Carolina.

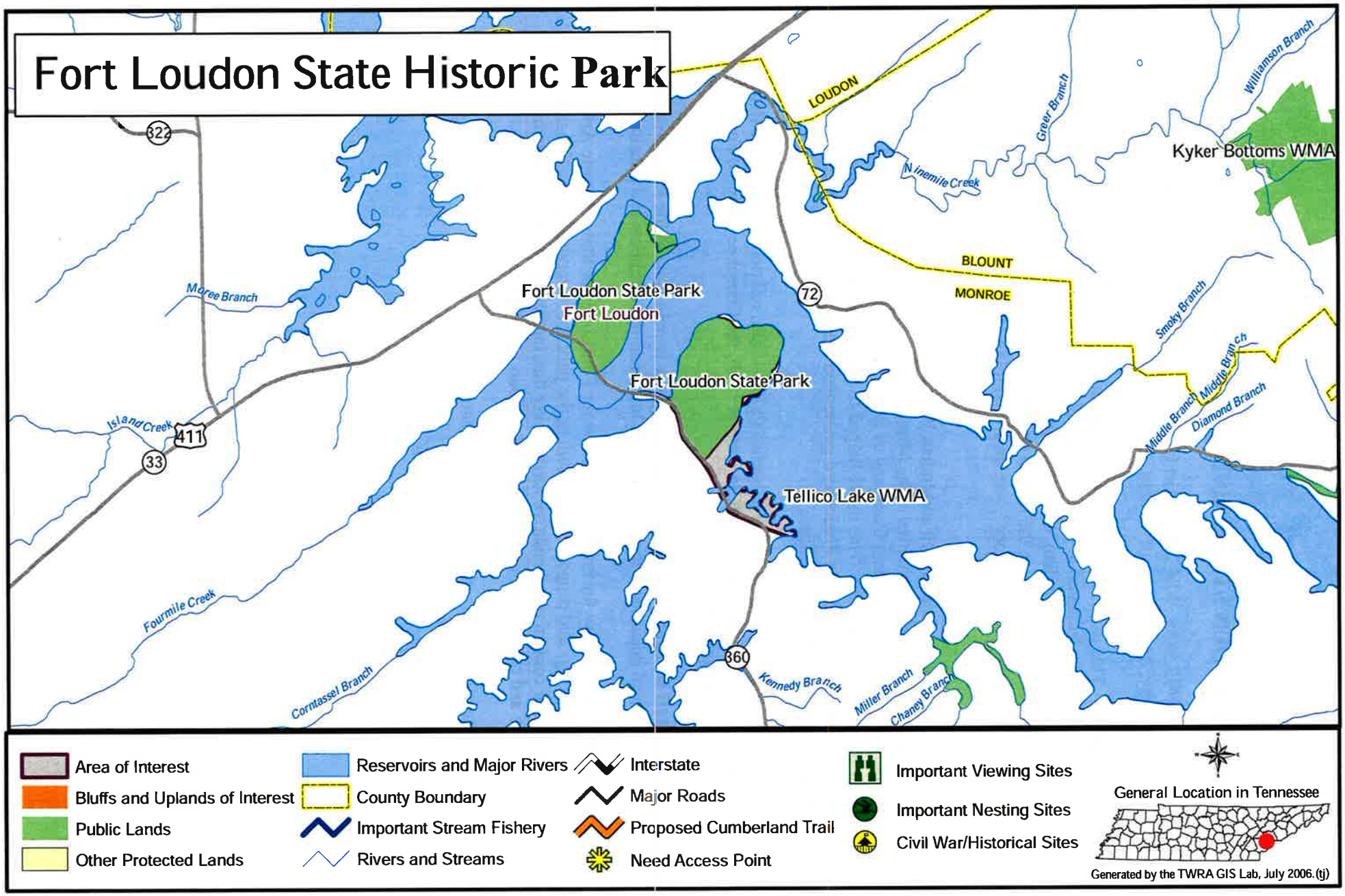
In the course of the fort's four-year existence (1756-1760), relations between the British and the Cherokee nation broke down. In August 1760, the Cherokee captured Fort Loudoun and its garrison.

The park staff is always in the process of adding new components to the reconstructed fort on historical documents and is the site for historical reenactments and encampments.

Strategy - The strategy for future acquisitions for Fort Loudoun State Historic Area is to acquire in holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover that further the wildlife, aesthetics, interpretive and recreation missions of Fort Loudoun State Historic Area.

Land Protection Needs – 63 acres at an estimated cost of $704,000.

Potential Partners – TCF, TNC, and TDEC.


Fort Loudon State Historic Park
322
LOUDON
Greer Branch
Williamson Branch
Kyker Bottoms WMA
N Inemile Creek
BLOUNT
MONROE
Moree Branch
Fort Loudon State Park
Fort Loudon
72
Smoky Branch
Middle Branch
Middle Branch
Diamond Branch
Fort Loudon State Park
Island Creek
411
33
Tellico Lake WMA
Fourmile Creek
360
Kennedy Branch
Miller Branch
Chaney Branch
Corntassel Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

FRENCH BROAD STATE SCENIC RIVER

Location – (N35.9393, W83.0458) The Upper French Broad River watershed contains parts of Cocke and Greene Counties and drains 215 square miles before joining the Pigeon River at Douglas Reservoir. Approximately 33 river miles of this river in Cocke County from the state line with North Carolina to the confluence with Douglas Lake were designated as a State Scenic River in 1968.

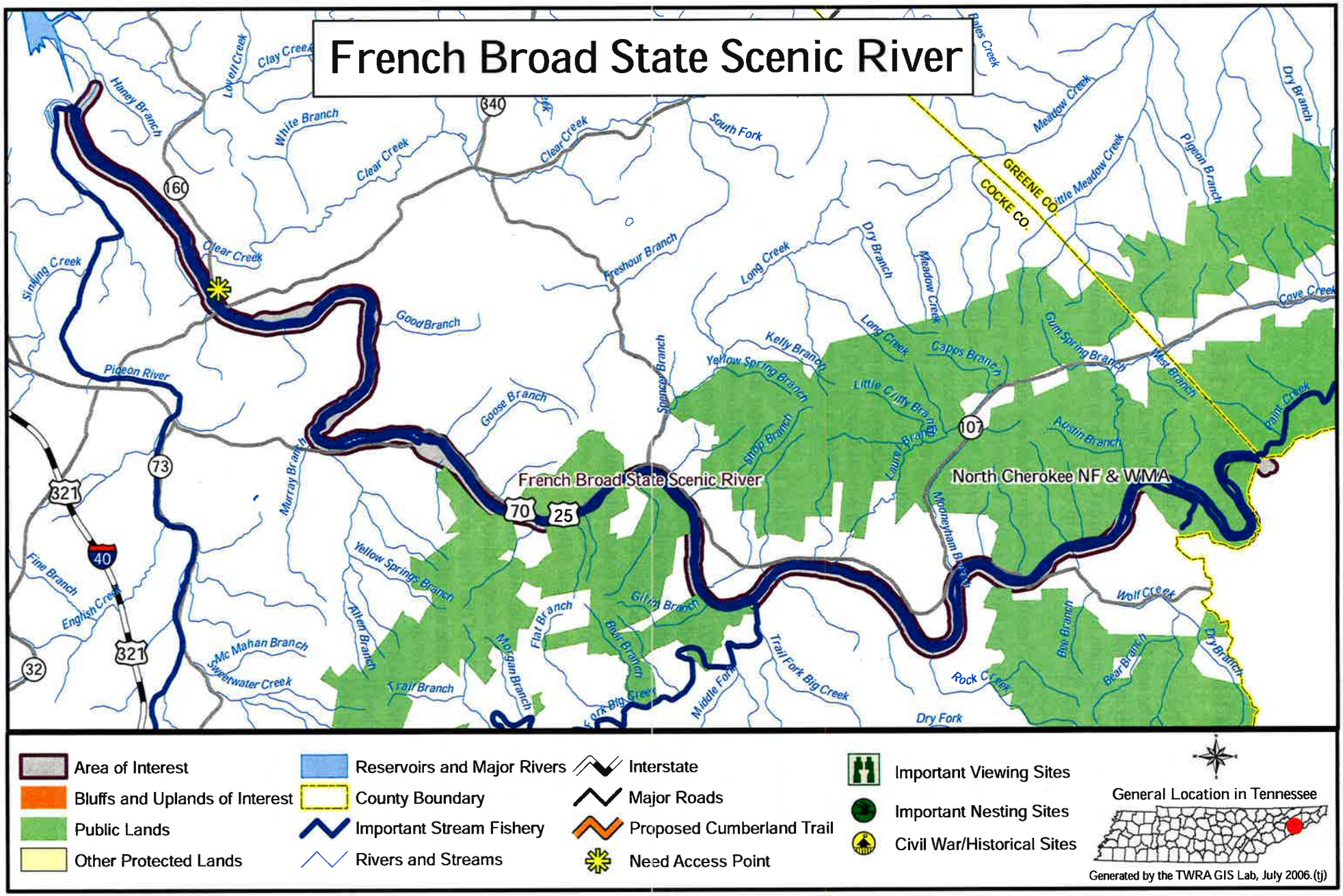
Description - The Cherokee gave more than one name to the French Broad, calling it "Long Man," who was fed by mighty tributaries like the Pigeon and the Nolichuchy - his "Chattering Children." And they called it "Agiqua." And in the steep gorges above where it flows into Tennessee, they called it "Tahkeyostee," meaning "Where they race." When the first long hunters came from the east in the 1670's, climbed the last blue ridge of the English territory, and gazed at the new river they had found, they called it the French Broad, for it flowed toward the lands and rivers owned by France. Ginseng has also played an important role in area's local history. In the 1700's and 1800's, it is said that "bales" of this herb were shipped to China and Korea.

Significance - Recreation opportunities abound on the French Broad and in the surrounding land. The river flows through or near the Cherokee National Forest and the Great Smoky Mountains National Park. Roan Mountain State Park is not far away to the north in Carter County. The flora within the French Broad Scenic River area reflects the great variety and distribution of plant life. The flood plain includes tree species such as sycamore, beech, birch, black willow, sugar maple and hornbeam. The transition from flood plain to uplands includes white oak and oak-hickory forest. The waters of the French Broad support warm water fishes such as largemouth bass, bluegill, crappie, suckers and carp. Cool water species include small-mouth bass, rock bass, and sauger. Some tributaries support trout fisheries. Wildlife is also abundant in the area.

Strategy - The site conservation plan for the French Broad State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 450 feet from the usual banks of the river on each side. Additionally, connecting contiguous protected areas to state and other publicly owned lands along the entire river corridor are a major approach toward protecting the French Broad River and making it a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, and landowner assistance programs. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river. Acquisition of key tracts for public access and use will be strategically targeted.

Land Protection Needs – 500 acres at an estimated cost of $550,000

Potential Partners - TDEC, TWRA, TNC, USFWS, USFS, USACE, County Governments, Private Corporations, Foundations, Individual Donors.


French Broad State Scenic River
French Broad State Scenic River
North Cherokee NF & WMA
GREENE CO.
COCKE CO.
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

GILLILAND GLADE AND OAK FOREST

Location - (N35.1464, W84.8389) Gilliland Glade and Oak Forest is located in Bradley County south of Hwy 64 and north of Bates Pike, approximately 0.6 miles east of cloverleaf interchange, just east of Cleveland.

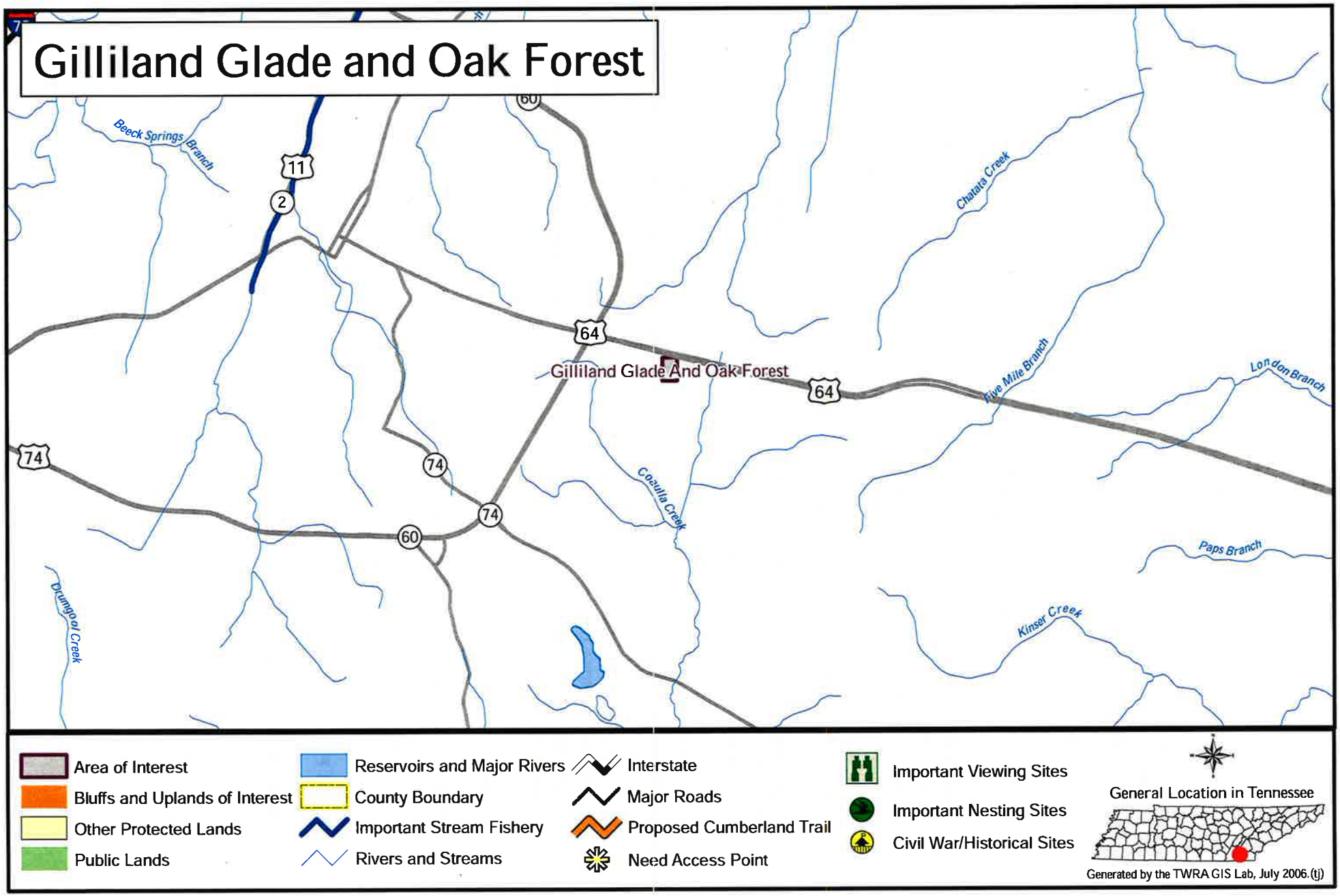
Description - This 9.25 acre site is relatively flat at an elevation of 900 feet in the Ridge and Valley Physiographic Province just south of the Tennessee Valley Divide. It has exposed areas of limestone and the area has been mapped as Conasauga shale. The limestone at the site weathers to a shallow soil and is believed to be almost pure calcium carbonate. This site includes an oak forest and cedar glades which do not usually occur in the Ridge and Valley Province. The mesic forest is dominated by white oak but transitions to a forest near the creek which is dominated by willow oak. In the transition area several species occur including southern red oak, short leaf pine, Carolina hickory, loblolly pine, white ash, American elm, sugar maple, mockernut hickory, eastern red cedar, and red maple. The glades, because of the composition of the surrounding forest, would more accurately be called cedar-pine glades.

Significance - This site is of the Ridge and Valley Calcareous Valley Bottom Glade and Woodland ecological system type. Very few examples of this type of community exist in Tennessee. No tracked rare plants are known to occur here but there are several uncommon plants which are more typical of the Central Basin cedar glades. Plants present that are more typical of cedar glades in Middle Tennessee include *Sedum pulchellum*, *Isanthus brachiatus*, *Nothoscordum bivalve*, *Hypoxis hirsuta* and *Asclepias verticillata*. The most uncommon plant that occurs at this site is *Leavenworthia torulosa*. This plant is no longer tracked by the Natural Heritage Program but is known only from Meigs and Bradley Counties in the Ridge and Valley Province. The presence of uncommon species such as *L. torulosa*, in association with cedars and pines indicates the rarity of this plant community type.

Strategy - The area surrounding the site is developed to an extent such that few open spaces remain. If the land is not acquired this site would be a prime tract for development should the current owner decide to sell to a commercial interest. Several Universities and Colleges are located nearby and it would be advantageous to have this site available for botanical education. Protection of the plant community would be achieved with additional benefits to the local community.

Land Protection Needs - 9.21 acres for forest and glades at a cost of $50,000.

Potential Partners - Mr. John Gilliland, TDEC, and TNC


Gilliland Glade and Oak Forest
Beeck Springs Branch
11
2
60
64
Gilliland Glade And Oak Forest
64
Chatata Creek
Five Mile Branch
London Branch
74
74
74
60
Coaulla Creek
Paps Branch
Kinser Creek
Drungool Creek
Area of Interest
Bluffs and Uplands of Interest
Other Protected Lands
Public Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HAMPTON CREEK COVE SNA

Location – (N36.0830, W82.0240) Hampton Creek Cove is a 693-acre natural area located in Carter County outside the town of Roan Mountain near Roan Mountain State Park.

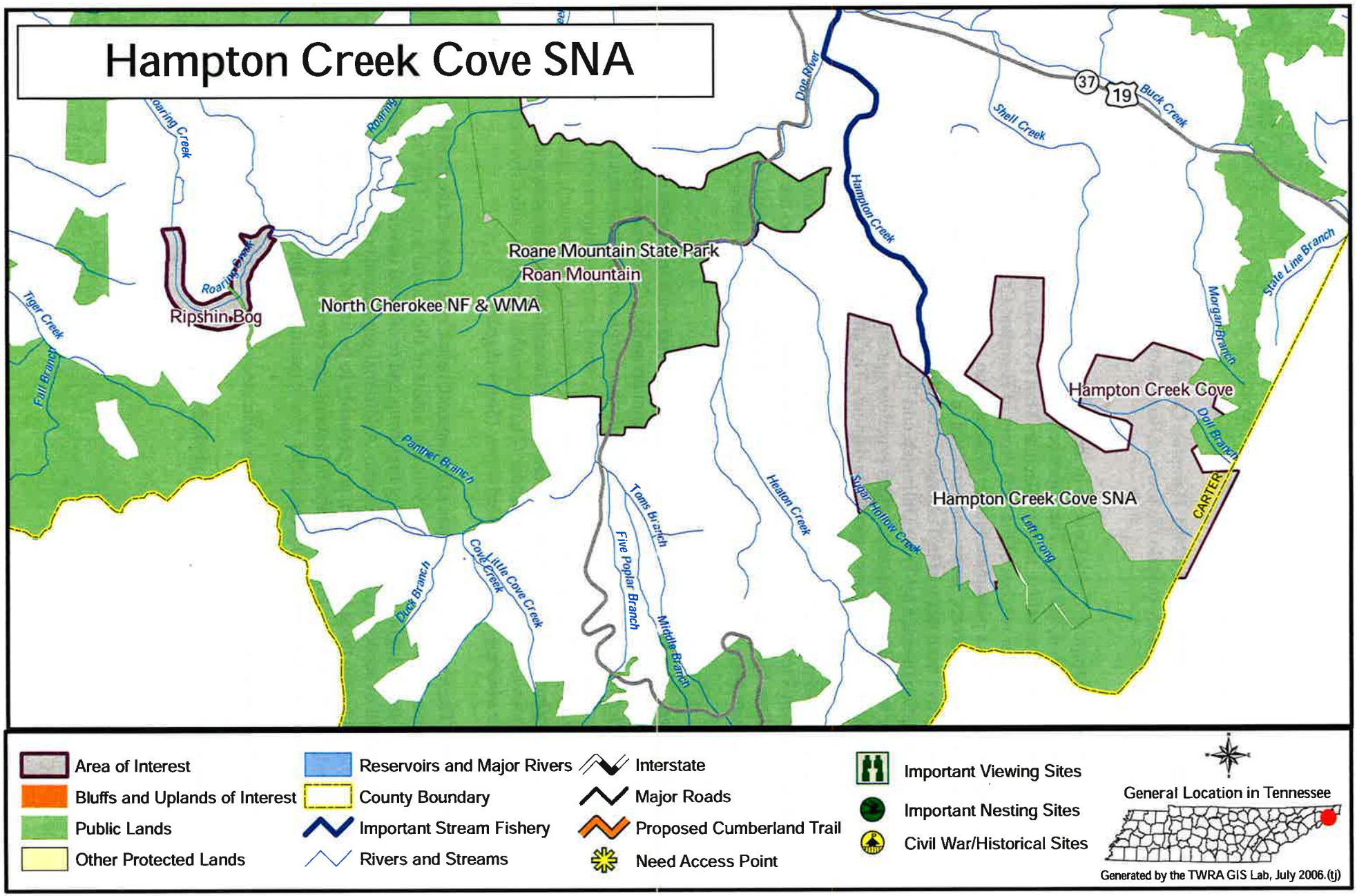
Description - Hampton Creek Cove is in the Southern Appalachian Mountains at an elevation of 3,000 - 4,700 feet. The upper boundary is contiguous to the Cherokee National Forest below where the Appalachian Trail (AT) crosses Little Hump and Hump Mountain. The upper reaches of the Left Prong of Hampton Creek originate on these slopes. The creek is a prominent feature bisecting the length of the natural area draining young and mature forests, seeps, and farmland in the cove and is considered one of the most productive trout streams in Tennessee, even though it is presently undergoing brook trout restoration directed by Trout Unlimited and TWRA. The old field/forest succession at the lower mountain elevation provides excellent nesting habitat for the golden- winged warbler, a neo-tropical migrant species in decline. The area is so important to the health of the golden-winged warbler that it was designated an "Important Bird Area" by the National Audubon Society. In partnership with the National Park Service and the Overmountain Victory Trail Association, work is underway to connect the Birchfield Trail to Yellow Mountain Gap at the AT, to retrace and protect the historic route of the Overmountain Men in their march to the Revolutionary War's 1780 Battle of King's Mountain.

Significance - The natural area is host to a plethora of rare native species including: small white leek (*Allium tricoccum*), Roan Mountain sedge (*Carex roanensis*), bent avens (*Geum geniculatum*), John's cabbage (*Hydrophyllum virginianum*), butternut (*Juglans cinerea*), American ginseng (*Panax quinquefolius*), small purple-fringe orchid (*Platanthera psycodes*), mountain rattlesnake root (*Prenanthes roanensis*), choke cherry (*Prunus virginiana*), rosy twisted-stalk (*Streptopus lanceolatus*), American speedwell (*Veronica americana*), pygmy salamander (*Desmognathus wrightii*), alder flycatcher (*Empidonax alnorum*), and short tailed shrew (*Sorex dispar*).

Strategy - The view from the slopes of Hampton Creek Cove is one of the most bucolic in Appalachia and is one of the most valuable assets of the natural area. The view from the natural area is highly threatened by timbering and residential development, including development of second homes and resorts. Additional populations of rare plants and animals, including those listed above, are probably to be found in adjacent properties that are and may be for sale. Protecting the mountains and coves adjacent to the natural area will protect these rare species and the stellar scenic qualities of the area.

Land Protection Needs - 1,581 acres at an estimated cost of $4,100,000.

Potential Partners - TDEC, Southern Appalachian Highlands Conservancy, TWRA, and USFS.


Hampton Creek Cove SNA
Roaring Creek
Roaring Branch
Doe River
Shell Creek
37
19
Buck Creek
Hampton Creek
Roane Mountain State Park
Roan Mountain
North Cherokee NF & WMA
Ripshin Bog
Roaring Creek
Tiger Creek
Full Branch
Panther Branch
Morgan Branch
State Line Branch
Hampton Creek Cove
Doll Branch
Hampton Creek Cove SNA
CARTER
Sugar Hollow Creek
Lost Prong
Heaton Creek
Toms Branch
Five Poplar Branch
Middle Branch
Cove Creek
Little Cove Creek
Buck Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HIWASSEE AND OCOEE RIVERS RECREATION AREAS

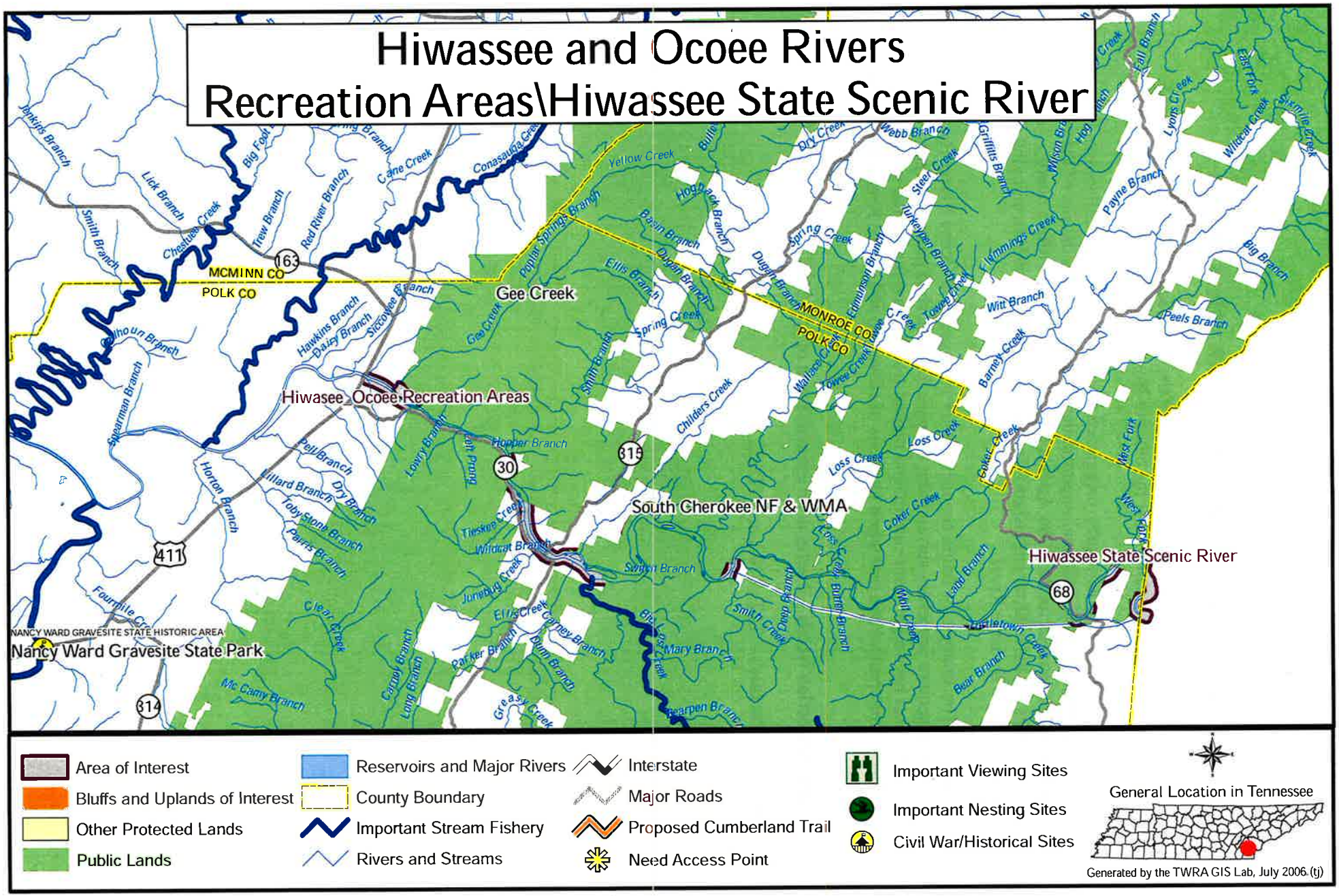
Location - This area is located along the banks of the Hiwassee State Scenic River and the Ocoee River in Polk County, near the cities of Benton and Copper Hill.

Significance - These internationally-recognized white water sites are well known for their scenic beauty and recreational opportunities. The Ocoee was the site of the canoe and kayak slalom races for the 1996 Atlanta Olympics. This park offers many opportunities for the outdoor enthusiast from rafting along the Ocoee to enjoying fishing for trout in the Hiwassee River.

Strategy - The strategy for future acquisitions for Hiwassee and Ocoee Rivers Recreation Areas is to acquire properties surrounding the park for watershed protection and properties that have significant cultural and natural features that further the wildlife, aesthetics, interpretive and recreation missions of Hiwassee and Ocoee Rivers Recreation Areas.

Land Protection Needs – 2 acres at an estimated cost of $50,000.

Potential Partners – TCF, TNC, and TDEC.


Hiwassee and Ocoee Rivers
Recreation Areas\Hiwassee State Scenic River
MCMINN CO
POLK CO
MONROE CO
POLK CO
Gee Creek
Hiwasee Ocoee Recreation Areas
South Cherokee NF & WMA
Hiwassee State Scenic River
NANCY WARD GRAVESITE STATE HISTORIC AREA
Nancy Ward Gravesite State Park
163
30
315
411
68
314
Area of Interest
Bluffs and Uplands of Interest
Other Protected Lands
Public Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

HIWASSEE STATE SCENIC RIVER

Location – (N35.1811, W84.4090) The Hiwassee River watershed includes parts of Bradley, Meigs, McMinn, Monroe and Polk Counties and drains 1011 square miles before emptying into Chicakamauga Reservoir (Tennessee River). In 1968 approximately 23 miles of the river from U.S. Highway 411 bridge upstream to the North Carolina line in northern Polk County was designated as Class III State Scenic River. (See Hiwassee and Ocoee Rivers Recreation Areas for map)

Description - The Hiwassee River was the first river managed in the State's Scenic River Program. Its name is taken from the Cherokee word "Ayuwasi" meaning a savannah or meadow place at the foot of the hills. The river has a long history of habitation, with at least 15 archeological sites ranging from Paleo-Indian to the more recent Cherokee. The river is a classic Southern Appalachian Mountain stream surrounded by forested hills. It is a high water quality watershed despite having its flow regulated by a dam and powerhouse.

Significance - The Hiwassee State Scenic River contains populations of several rare fish, mollusks, amphibians, and plants of state and federal concern. According to a TNC/NatureServe publication entitled "Rivers of Life: Critical Watersheds for Protecting Freshwater Biodiversity", the Hiwassee River has the 31st highest number of imperiled aquatic species in the United States, with 15 at risk fish and mussel species including two listed by the USFWS.

Recreational use of the river includes canoeing, rafting, fishing, hiking and nature photography. There are numerous public access sites including boat launching ramps, picnic areas, Tennessee State Park's Gee Creek campground and the National Forest's Quinn Springs campground. The scenic John Muir Trail winds through the gorge following the river from Reliance to Hwy 68. The Hiwassee River is a coldwater tailrace that offers some of Tennessee's finest fishing for rainbow and brown trout. Striped bass, smallmouth bass and other panfish are taken with more regularity the further downstream one travels.

Exceptional scenery makes the Hiwassee River a favorite for paddlers with varying levels of expertise. The upper 13 mile section of the river between the powerhouse and the dam does not have sufficient flow for boating, however, it can be negotiated after heavy rains. This section contains a continuous series of rapids with a fall of about 17 feet per mile producing Class III and IV rapids. The lower 10-mile segment below the dam is alive with canoeists, tubers and rafters after a dam release. The rapids here are rated as Class I to III with a swift current. Scenery along this stretch of the river is spectacular. Note that the dam releases from deep within the impoundment make this a cold river.

Strategy - The site conservation plan for the Hiwassee State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 450 feet from the usual banks of the river on each side. Additionally, connecting contiguous protected areas to state and other publicly owned lands along the entire river corridor are

a major approach toward protecting the Hiwassee River and making it a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, landowner assistance programs, and conservation buyers. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river. Acquisition of key tracts for public access and use will be strategically targeted.

Land Protection Needs – 500 acres at an estimated cost of $550,000

Potential Partners TDEC, TWRA, TNC, USFWS, USFS, TVA, USACE, County Governments, Private Corporations, Foundations, Individual Donors.

HORNER CAVE

Location – (N36.4893, W82.9723) Horner Cave is located in Hawkins County. The mouth is found in a large sink on the west side of Hickory Cove, 0.6 mile east of Hickory Cove Church, at an elevation of 1,270 feet.

Description - According to Barr (1961): "The entrance is 15 feet wide and 8 feet high and opens into a passage 20 feet wide and 10 feet high. A fork branches off to the left 200 feet inside the cave, but the main passage continues along a high, narrow stream canyon which trends westward and southwestward. The stream that flows into the cave from the exterior sinks outside the mouth and reappears inside the cave. In places the-stream is ponded in deep pools by rimstone dams, and these pools may be waded or circumvented by chimneying. The width of the bottom of the canyon is variable and in places is so narrow that it is necessary to climb up near the ceiling and descend on the far side of the obstruction. A number of small but rather attractive formations may be seen in this branch. The left fork of the cave, near the mouth, consists of a series of crawlways, narrow crevices occupied by small streams, and a few rooms 20 to 25 feet long. The most easily penetrable part of this fork runs westward for 185 feet. Near the end are two rooms, which are reached by climbing upward to the left for 50 feet."

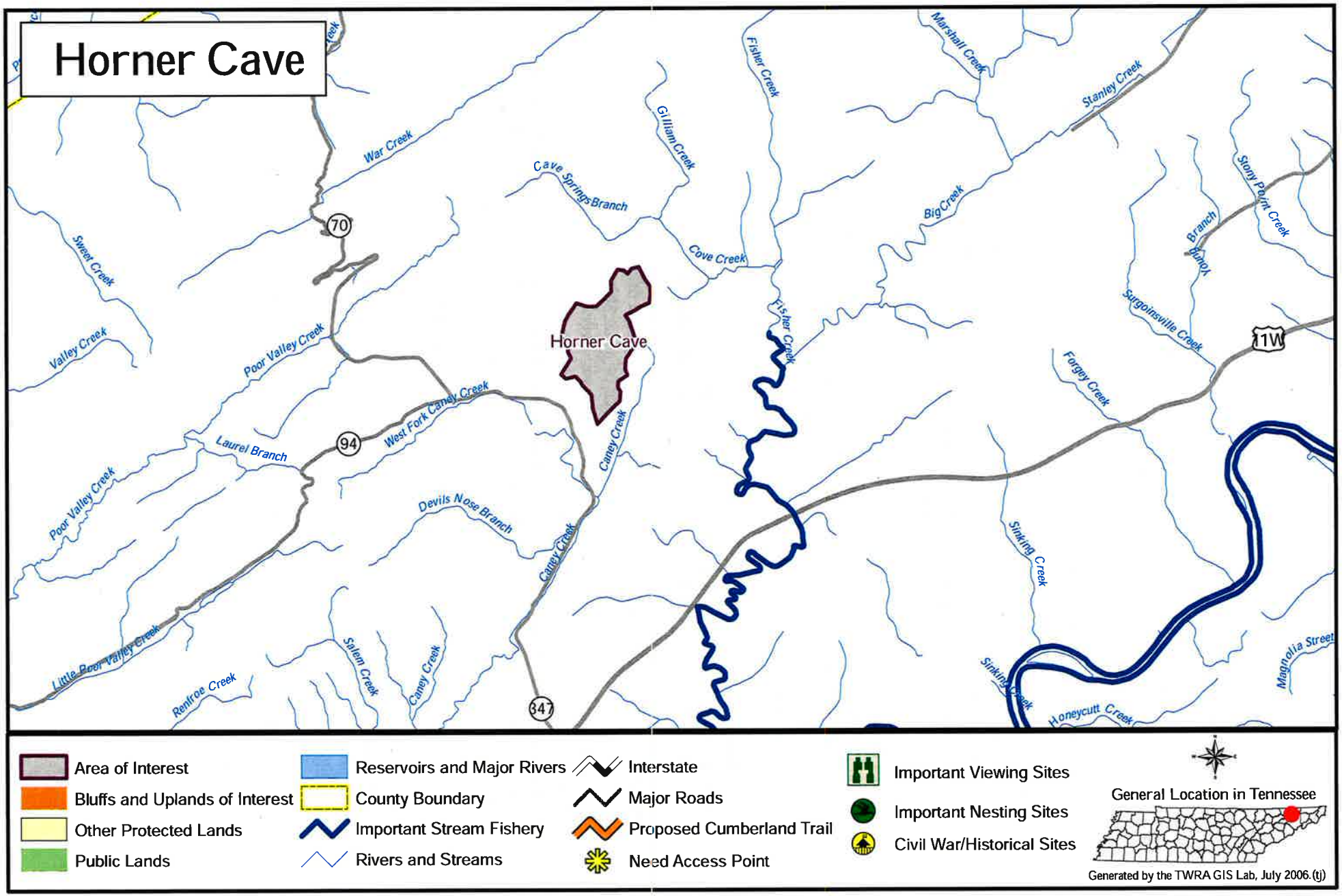
Significance - Horner Cave is home to a modestly sized colony of the state and federally endangered gray bat (*Myotis grisescens*). The summer roost was estimated to contain as many as 1,000 gray bats in 1999 and 2002 (Harvey & Britzke, 2002).

Strategy - As with any inflow cave, protecting the watershed draining into it is key to maintaining the integrity of the cave. The presence of a sizeable bat colony often implies an accompanying complex of dependent cave-obligate invertebrates, though this has not yet been determined for Horner Cave. Key to maintaining the bat roost, however, is proper control of human access to the cave at certain times of year, and establishment and management of a large forested buffer at the cave entrance. In the short term, a relatively few acres can be protected surrounding the mouth of the cave, and maintained in native hardwoods, as appropriate. The core area (and subsequent expansions) may be protected through binding conservation easements or fee simple ownership.

Aquatic cave animals likely are subject to negative impacts from excessive sedimentation, fertilizer, pesticides, animal waste, chemical spills, and agricultural & silvicultural runoff. A primary goal for any population is to control to the greatest extent possible the contributing sources in the recharge area supporting their cave habitats. The balance of the drainage should likewise be protected through various means, including but not limited to the implementation of proper agricultural and silvicultural BMP's.

Land Protection Needs – 530 acres (core area of 30 acres will protect the cave entrance and bat colony, plus an additional 500 acres will protect the recharge area of the cave) at an estimate cost of $600,000.

Potential Partners TNC, TWRA, USFWS, TDEC, NRCS.


Horner Cave
War Creek
Cave Springs Branch
Gilliam Creek
Fisher Creek
Marshall Creek
Stanley Creek
Big Creek
Stony Point Creek
Branch
Sweet Creek
Cove Creek
Fisher Creek
Surgoinsville Creek
11W
Valley Creek
Poor Valley Creek
Horner Cave
Forgey Creek
West Fork Caney Creek
Laurel Branch
94
Caney Creek
Devils Nose Branch
Poor Valley Creek
Caney Creek
Sinking Creek
Little Poor Valley Creek
Salem Creek
Caney Creek
Renfroe Creek
347
Sinking Creek
Honeycutt Creek
Magnolia Street
Area of Interest
Bluffs and Uplands of Interest
Other Protected Lands
Public Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HOUSE MOUNTAIN SNA

Location – (N36.0727,W83.4526) House Mountain is a 500-acre natural area located in Knox County approximately eight miles northeast of downtown Knoxville near John Sevier Hwy.

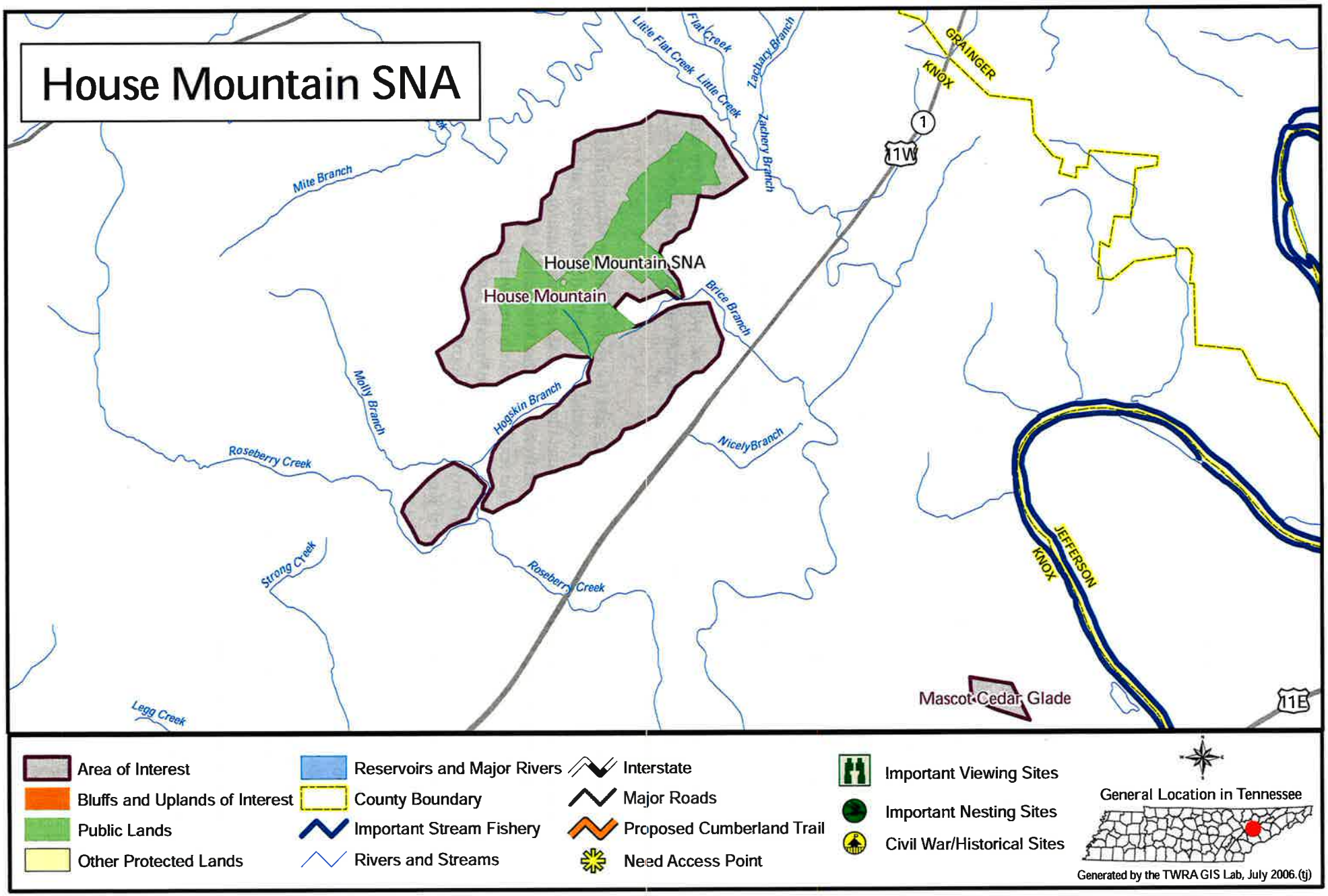
Description - The 2,100-foot crest of House Mountain provides significant vistas where visitors may scan the parallel ranges of the Unakas and Cumberlands some 30 miles away, or look northeast at the adjacent Clinch Mountain and across the valley where the Trail of the Lonesome Pine may some day lead north into Virginia. House Mountain provides a unique, nearly wilderness type of experience less than 10 miles from a major metropolitan city in Tennessee. The public uses House Mountain heavily and activities there receive much attention from the local press.

Significance - The exposed rock faces and boulders atop House Mountain are said to be the best opportunity to view the geological forces that shaped the Ridge and Valley physiographic province of East Tennessee. House Mountain joined its parent mountain, the Clinch, whose base lies approximately 2.5 miles away to the northeast. The steep slopes of House Mountain are heavily wooded and possess a unique combination of scenic views, rock outcrops, and a variety of bird and plant life. Great sandstone boulders, encrusted with lichens, crown the western rim where rock outcropping support chestnut oak and Virginia, pitch, and table mountain pine, which represent a fire-adapted forest. This is a rare combination of scenic and ecological values near a major U.S. metropolitan area.

Strategy - Protecting the view from the slopes and the crest of House Mountain is the priority for acquisition at this natural area. Located in a rapidly developing part of Knox County, the wildlife habitats and scenic vistas that these slopes and summit provide are gravely threatened. Lying immediately in front of House Mountain is McAnnally Ridge, the predominant part of the vista from the southeast, south and west aspects of the mountain. Though not as tall as House Mountain, McAnnally nonetheless dominates all southward views and is itself an impressive geologic formation, being a ridge that runs southwest all the way into the City of Knoxville. McAnnally Ridge is privately owned in several large and smaller tracts, and a prime candidate for acquisition and inclusion in the natural area should land become available. From the crest all the way down its north slopes, the property is privately owned and also potentially threatened by road development and timbering of its slopes. Recent land sales on the northeast end may provide us with our first acquisitions on the north side of the mountain. Conservation-minded landowners own many large tracts lying near the end of Clinch Mountain and they would be a good starting point to approach for conservation easements.

Land Protection Needs - 1,228 acres at an estimated cost of $3,700,000.

Potential Partners – TDEC and Knox County Government


House Mountain SNA
House Mountain SNA
House Mountain
Little Flat Creek
Flat Creek
Little Creek
Zachary Branch
Zachery Branch
Mite Branch
GRAINGER
KNOX
1
11W
Brice Branch
Molly Branch
Hogskin Branch
Roseberry Creek
NicelyBranch
Strong Creek
Roseberry Creek
JEFFERSON
KNOX
Mascot Cedar Glade
11E
Legg Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

HUNTER BOG SNA AND HUNTER MARSH

Location – (N36.3799, W82.1470 and N36.3812, W82.1481W, respectively) Hunter Bog SNA and Hunter Marsh are located in Carter County adjacent to Hwy 91 approximately 3/4 mile northeast of the Hunter community.

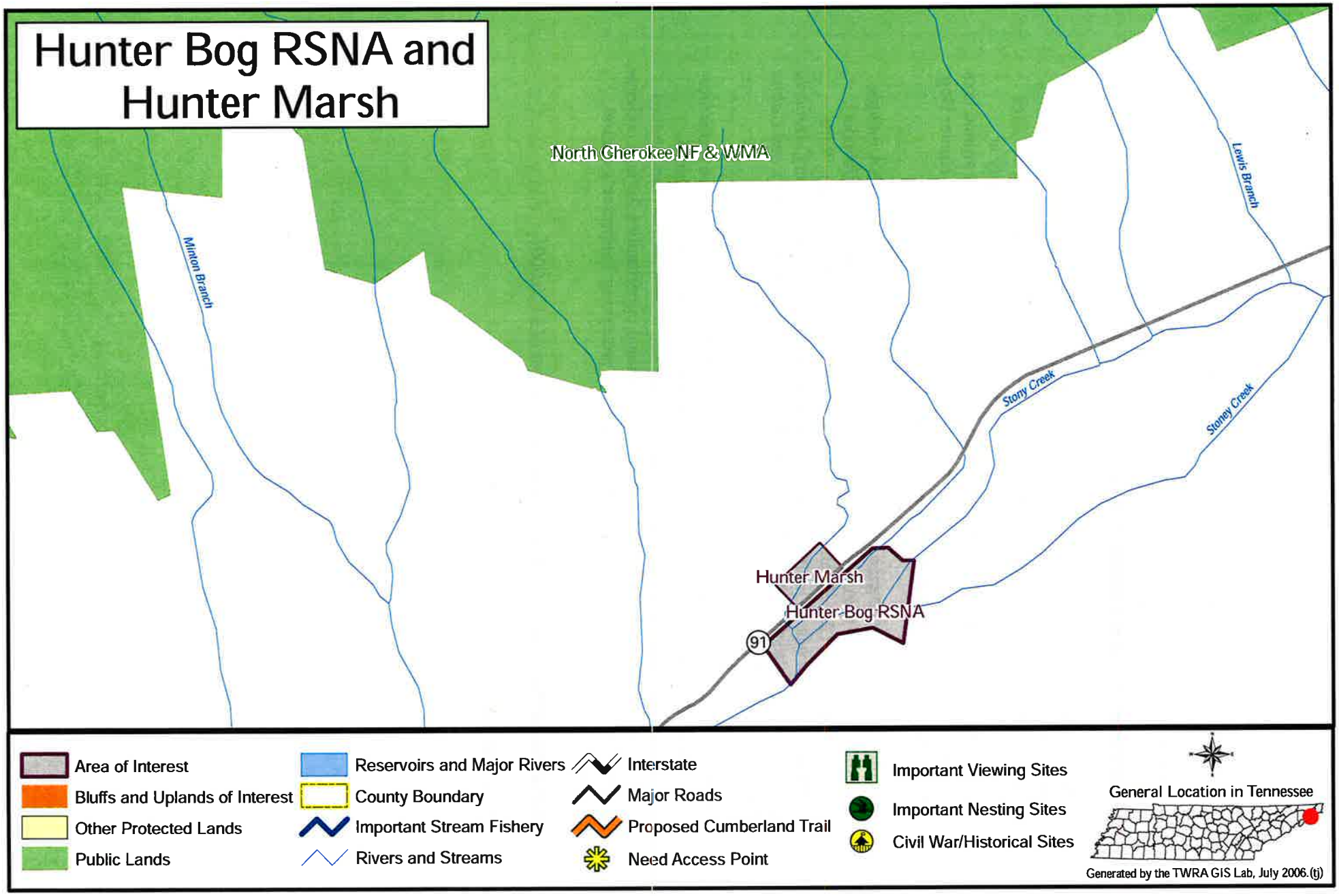
Description - Located on the Ridge and Valley, Hunter Bog SNA remains wet throughout the year due to Stoney Creek which drains Watauga Valley. Although bogs were once much more common in portions on northeast Tennessee most of these sites have been drained to make them suitable for agriculture. This bog community is especially significant due to the co-occurrence of several restricted plant and animal taxa for Tennessee. Hunter Marsh lies to the northwest across the highway from Hunter Bog. The site has been ditched and includes several houses.

Significance – Site Importance High (B3) – Rare species at Hunter Bog RSNA include *Symplocarpus foetidus* (Skunk Cabbage), *Cryptobranchus alleganiensis* (hellbender), *Panax quinquefolius* (American ginseng), *Caltha palustris* (marsh marigold). Rare elements at Hunter Marsh include: *Campanula aparinoides* (marsh bellflower), *Arenaria godfreyi* (Godfrey's stitchwort), *Hypericum ellipticum* (pale St.-John's wort), and *Caltha palustris* (marsh marigold).

Strategy - The strategy for acquisition at Hunter Bog and Marsh is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 33 acres at an estimated cost of $120,000.

Potential Partners – TDEC.


Hunter Bog RSNA and Hunter Marsh
North Cherokee NF & WMA
Minton Branch
Lewis Branch
Stony Creek
Stoney Creek
Hunter Marsh
Hunter Bog RSNA
91
Area of Interest
Bluffs and Uplands of Interest
Other Protected Lands
Public Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

INDIAN CAVE

Location – (N36.1611, W83.6006) Indian Cave is located in Grainger County. The mouth is found at the southeast end of Indian Ridge, on the west side of the Holston River, at an elevation of 950 feet.

Description According to Barr (1961): "Indian Cave has been developed commercially and is electrically lighted. According to Moneymaker (1929), it was opened to the public May 30, 1924, and was developed by the Indian Cave Park Association, although it had been known for many years prior to this date. A Cherokee village is said to have existed just west of the mouth.

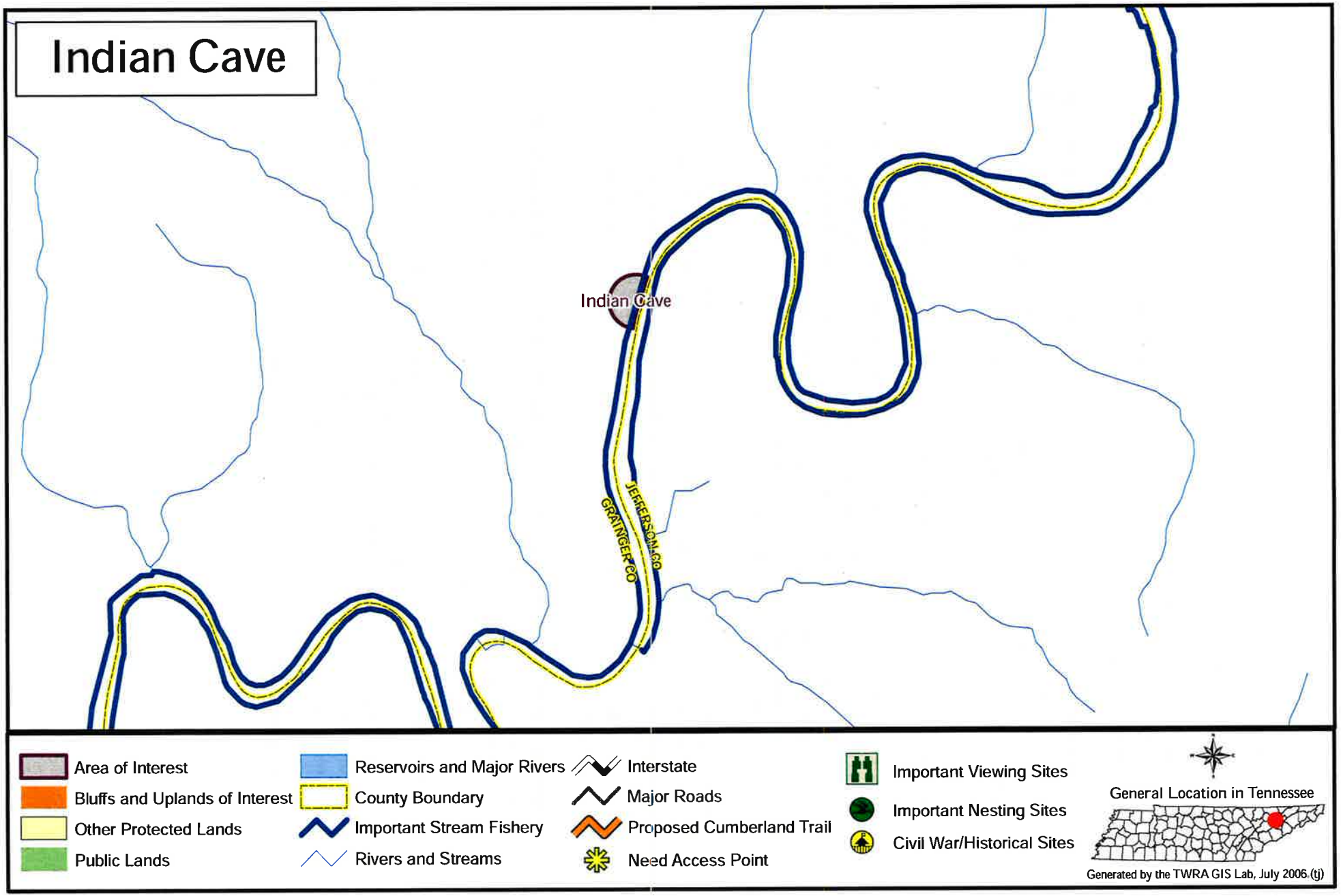
A metal gate bars the 30-foot arch of the main entrance, which opens in a bluff along the river. The cave stream issues from a lower opening. Indian Cave essentially consists of a single gallery 4,865 feet in length, 40 to 135 feet wide (average width 56 feet), and 5 to 50 feet (average 21 feet) high (Moneymaker, 1929). The cave extends northwestward and is under the control of two perpendicular joint sets. Indian River runs through the cave and is bridged at several places by walkways. Drip stone decorations are numerous but occur sporadically and are not especially large." According to the Tennessee Cave Survey, the cave is over 2.5 miles long (TCS, 2003).

Significance Indian Cave is home to at least two imperiled species, the gray bat (*Myotis grisescens*, state/federal endangered) and a cave-obligate spider (*Nesticus tennesseensis*). For the latter, Indian Cave represents only 1 of 3 known locations in the state. The gray bat colony exists as a summer roost, varying from an estimated 510-5100 bats between 1999 and 2002. Gray bat summer roosts frequently support a diverse assemblage of cave invertebrates.

Strategy Following verification of the population of *N. tennesseensis*, the mouth of the cave may need to be secured to prevent vandalism and permit continued use by gray bats. The condition of the historic commercial gate is unknown. Additional surveys are needed to determine the presence of other rare cave species.

Land Protection Needs – 14 acres at an estimated cost of $20,000. Ideally, the entire recharge area for the cave can be acquired or protected. However, because the recharge area is not evident from the topographic map, the initial goal is to protect a minimum 14-acre tract surrounding the mouth of the cave. Maintaining this as a forested corridor to the Holston River will benefit the gray bat colony.

Potential Partners TNC, USFWS, TWRA, TVA, TDEC


Indian Cave
Indian Cave
GRAINGER CO
JEFFERSON CO
Area of Interest
Bluffs and Uplands of Interest
Other Protected Lands
Public Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

KELLY RIDGE CAVE (KELLY HOLE)

Location - (N35.6539, W83.8153) Kelly Ridge Cave is located in Blount County. The mouth is found at the junction of Kelly Ridge and Rich Mountain, 1200 feet WSW of Fry Fields, approximately 0.14 mile NW of the border of Great Smoky Mountains National Park (GSMNP).

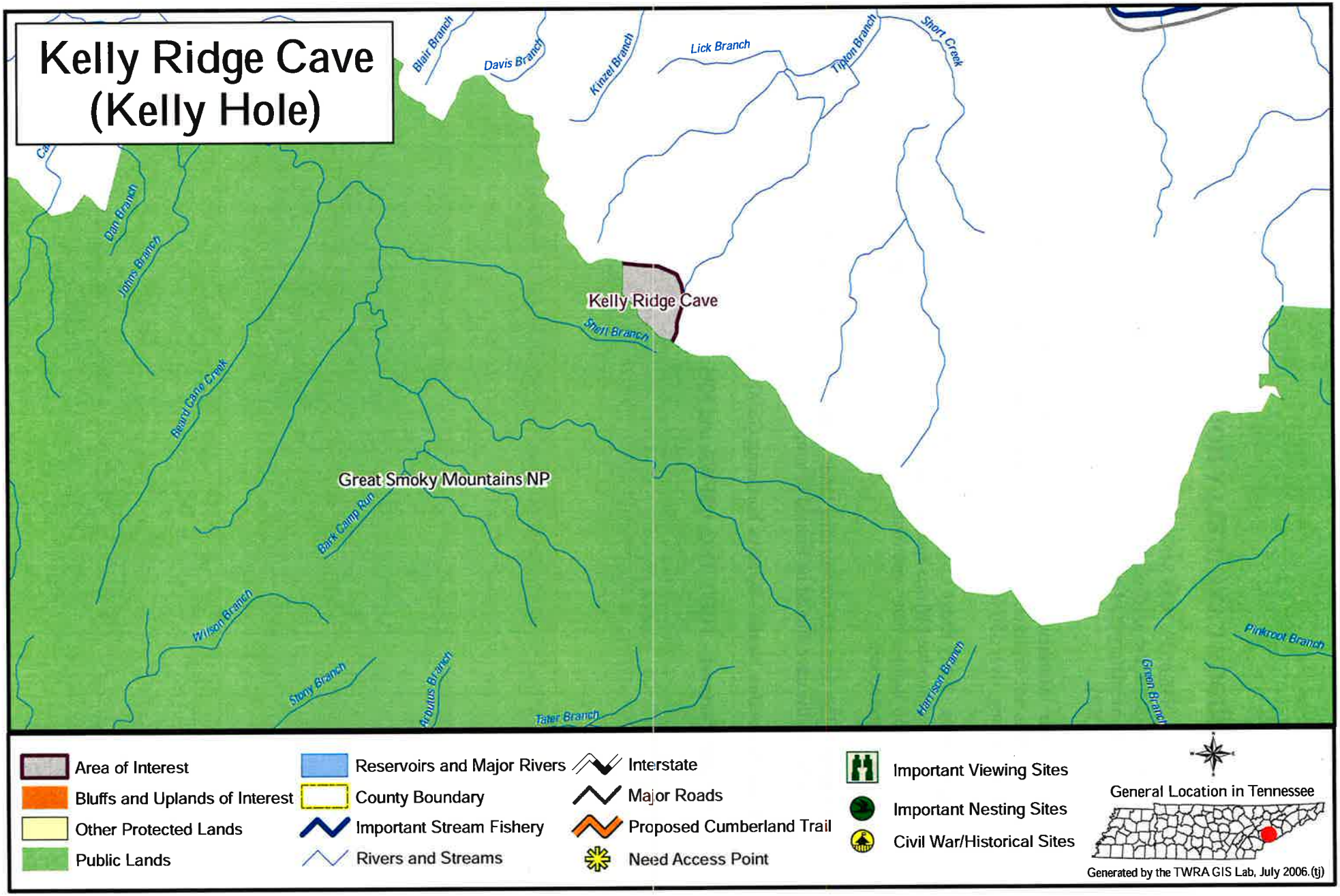
Description - Matthews (1971) notes that a walk-in entrance leads to a 50-foot drop, but that this was not explored. According to the Tennessee Cave Survey the cave is over 4400 feet long, over 550 feet in vertical extent, and contains 3 pits (TCS, 2003).

Significance - Kelly Ridge Cave supports a small but significant winter roost of the imperiled Indiana bat (*Myotis sodalis*, state/federal endangered). During the winter of 2001-02, 360 Indiana bats were found in the cave. Even this apparently small number is worthy of protection.

Strategy - The cave and surrounding lands should be acquired and added to the GSMNP. Entrance to the cave should be limited to summer months only.

Land Protection Needs - 80 acres bordering GSMNP at an estimated cost of $350,000.

Potential Partners - TDEC, TNC, USFWS, and NPS.


Kelly Ridge Cave
(Kelly Hole)
Blair Branch
Davis Branch
Kinzel Branch
Lick Branch
Tipton Branch
Short Creek
Dan Branch
John's Branch
Kelly Ridge Cave
Sheri Branch
Beard Camp Creek
Great Smoky Mountains NP
Bark Camp Run
Wilson Branch
Stony Branch
Arbutus Branch
Tater Branch
Harrison Branch
Green Branch
Pinkroot Branch
Area of Interest
Bluffs and Uplands of Interest
Other Protected Lands
Public Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

KYLES FORD WMA (CLINCH RIVER)

Location – (N36.3561, W83.0437) The Kyles Ford project area is located along the Clinch River floodplain in Hancock County, approximately 15 miles from the town of Sneedville, Tennessee in the Kyles Ford community off U. S. Highway 70 West.

Description - The project is adjacent to the Clinch River with fragmented forested ridges, hay and agricultural fields. The upland areas are in some places steep with bluffs. The fields are in agricultural production. TWRA currently owns 850 acres.

Significance - The Kyles Ford WMA presents several management opportunities for a variety of aquatic and terrestrial wildlife. The Clinch River contains the most diverse aquatic fauna in North America. The occurrence of listed and special concern species is unprecedented in the southeast. The recreational fisheries provided by the river are in the top three in the region in terms opportunity and aesthetics. With the acquisition of this tract the TWRA has the opportunity to capitalize on the existing attributes of the river and provide needed mitigation for identified "problem" areas associated with the property.

The Clinch River watershed of east Tennessee serves as secondary migration corridor for waterfowl, neo-tropical migratory birds, shorebirds, waterbirds, and other migratory and non-migratory bird species for the Ridge and Valley Physiographic Province. This project will be managed to protect critical wetlands and wetland-associated habitats, meet the habitat needs for waterfowl in east Tennessee along the Clinch River, as identified by the TWRA Strategic Plan for Waterfowl, and to provide important habitat benefits for priority waterfowl, neo-tropical migratory birds, shorebirds, waterbirds, and other migratory and non-migratory bird species for the Central Hardwoods Bird Conservation Region.

These areas fall within the geographic area covered by the Partners in Flight Cumberland Mountains& Ridge and Valley Plan and the Central Hardwoods BCR Implementation Plan. Wetland and grassland restoration on these properties will help meet habitat objectives for a number of priority species identified in these plans including American woodcock, Acadian flycatcher, Louisiana waterthrush, red-headed woodpecker, prothonotary warbler, worm-eating warbler, Kentucky warbler, prairie warbler, loggerhead shrike, field sparrow, grasshopper sparrow, eastern meadowlark and northern bobwhite quail.

Five state-listed plant taxa are found on Kyles Ford WMA. Similar habitats exist on the adjoining lands and therefore should provide suitable habitat for these listed species that include northern white cedar (*Thuja occidentalis*), Appalachian Bugbane(*Cimicifuga rubifolia*), Goldenseal (*Hydrastis canadensis*), Heartleaf Meehania (*Meehania cordata*), and Round-leaf Watercress (*Cardamine rotundifolia*).

Endangered or threatened wildlife found at Kyles Ford WMA

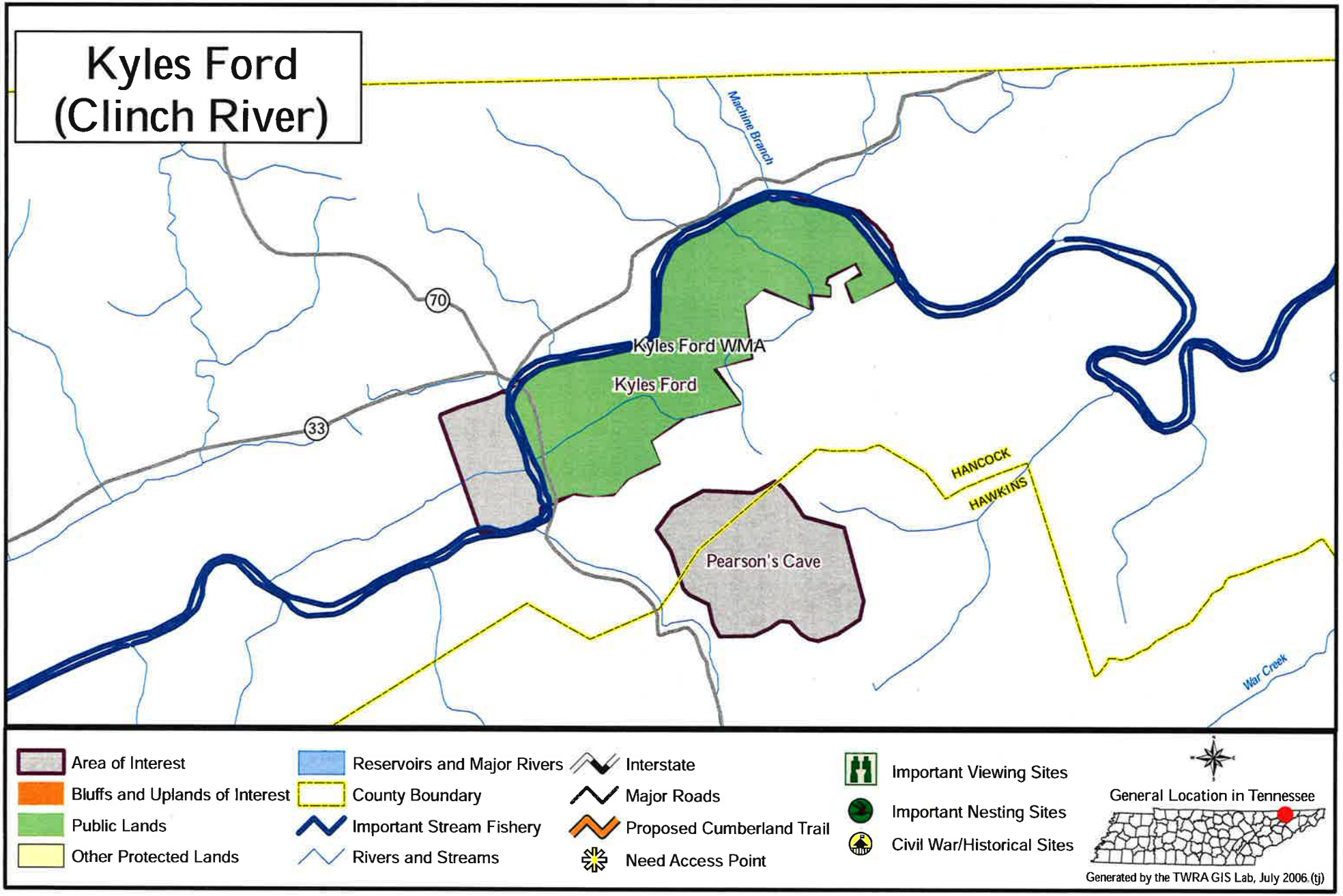
Fish	Tangerine Darter*	*Percina aurantica*
	Golden Darter	*Etheostoma denoncourti*
	Slender Chub**	*Erimystax cahni*
	Pygmy Madtom**	*Noturus stanauli*
Mammals	Indiana Bat**	*Myotis sodalis*
	Gray Bat**	*Myotis grisescens*
	Allegheny Woodrat	*Neotoma magister*
	Eastern Big-eared Bat*	*Corynorhinus rafinesquii*
Mollusks	Spiny Riversnail	*Io fluvialis*
	Cumberland Moccasinshell	*Medionidus conradicus*
	Cracking Pearlymussel**	*Hemistena lata*
	Shiny Pigtoe**	*Fusconaia edgariana*
	Fine-rayed Pigtoe**	*Fusconaia cuneolus*
	Purple Bean**	*Villosa perpurpurea*
	Rough Rabbitsfoot Pearly Mussel**	*Quadrula cylindrica strigillata*
	Fluted Kidneyshell**	*Ptychobranchus subtentum*
	Tennessee Clubshell	*Pleurobema oviforme*
	Spectaclecase	*Cumberlandia monodonta*
	Dromedary Pearlymussel**	*Dromus dromas*
	Eastern Fanshell Pearly Mussel **	*Cyprogenia irrorata*
	Birdwing Pearlymussel**	*Condradilla caelata*
	Cumberlandian Combshell**	*Epioblasma brevidens*
	Oyster Mussel**	*Epioblasma capsaeformis*
	Snuffbox	*Epioblasma triquetra*
	Green-blossom**	*Epioblasma torulosa gubernaculums*
	Yellow-blossom**	*Epioblasma florentina florentina*
	Slabside Pearlymussel**	*Lexingtonia dolabelloides*
	Pink Mucket**	*Lampsilis abrupta*
	Pyramid Pigtoe	*Pleurobema rubrum*
	Rough Pigtoe**	*Pleurobema plenum*
Insects	Long-headed Cave Beetle	*Pseudanophthalmus longiceps*

*- Protected in TN
**- Federally protected

(Quarter Quad Index- TDEC 2004)

Land Protection Needs – 1,550 acres at a cost of $2,775,500.

Potential Partners – TWRA, TNC, USFWS, TNC, NRCS, and TCF.


Kyles Ford
(Clinch River)
Machine Branch
70
33
Kyles Ford WMA
Kyles Ford
HANCOCK
HAWKINS
Pearson's Cave
War Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LAUREL CREEK BOG SITE

Location – (N36.5504N, W81.7726) Laurel Creek Bog Site (formerly called Shingletown Branch) is located in Johnson County. The site is located approximately 0.3 miles south of Eureka on the east side of Hwy 91. There are two distinct sites on two privately owned tracts, one is a cool wet seep in a pasture/yard owned by Sam Taylor and the other is a bog remnant at the base of a steep hill in the back of the property owned by Morrison.

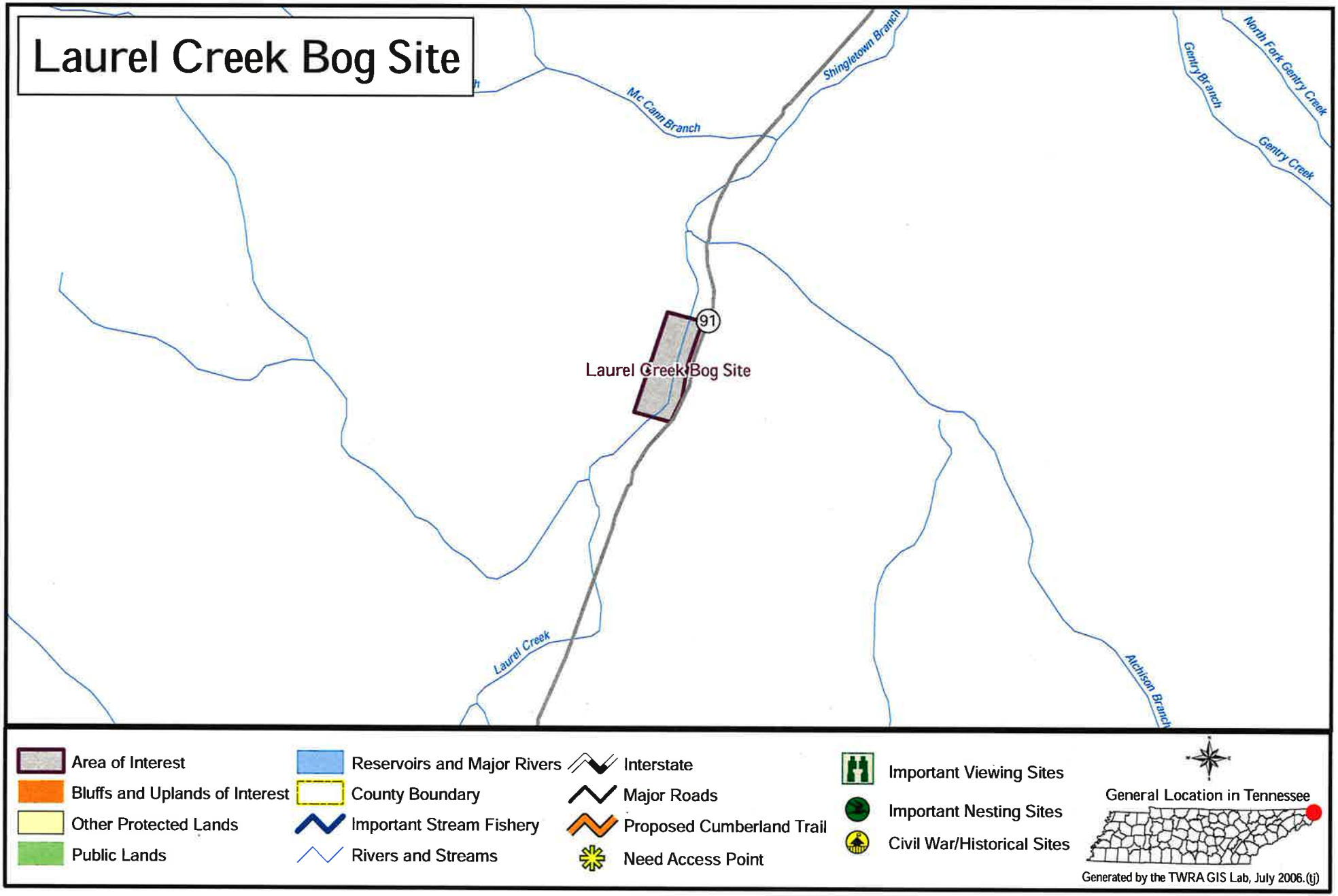
Description – The Taylor property contains a boggy pasture that lies along Laurel Creek, a spring fed creek near the front of the property parallel to SR 91. The wet "ditch" or seep harbors a population of Godfrey's sandwort and marsh bedstraw. The adjacent Morrison property contains a remnant bog community at the base of steep hill on flat land about 50 yards from the highway. A fence that is adjacent to the bog separates the bog on the Morrison property from the wet pasture on the Taylor property. The rare plants in the bog are skunk cabbage and crested shield fern. Cattle are allowed to graze the pasture only and they appear to be benefiting the sandwort population by reducing competition. And old elevated train bed transverses the properties parallel to the highway.

Significance – Site Importance High (B3) – The Laurel Creek site is most important for its thriving population of the state-endangered and extremely rare and critically imperiled (G1, S1) Godfrey's sandwort (*Arenaria godfreyi)*. Other significant rare plant species at the site are skunk cabbage (*Symplocarpus foetidus*), state listed as endangered and extremely rare and critically imperiled in the state (S1), marsh bedstraw (*Galium palustre*), state listed as special concern and extremely rare and critically imperiled in the state (S1), and, crested shield fern (*Dryopteris cristata*) state listed as threatened and very rare in the state (S2). The sandwort grows in the moist sunny boggy pasture, the skunk cabbage and the shield fern grow in the moist shady areas of the bog site where no grazing occurs.

Strategy - The strategy for acquisition at Laurel Creek Bog Site is to acquire the two properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare plant species will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 20 acres at a cost of $125,000.

Potential Partners – TDEC and TNC.


Laurel Creek Bog Site
Mc Cann Branch
Shingletown Branch
Gentry Branch
North Fork Gentry Creek
Gentry Creek
91
Laurel Creek Bog Site
Laurel Creek
Atchison Branch
Area of Interest
Bluffs and Uplands of Interest
Other Protected Lands
Public Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

LICK CREEK BOTTOMS WMA

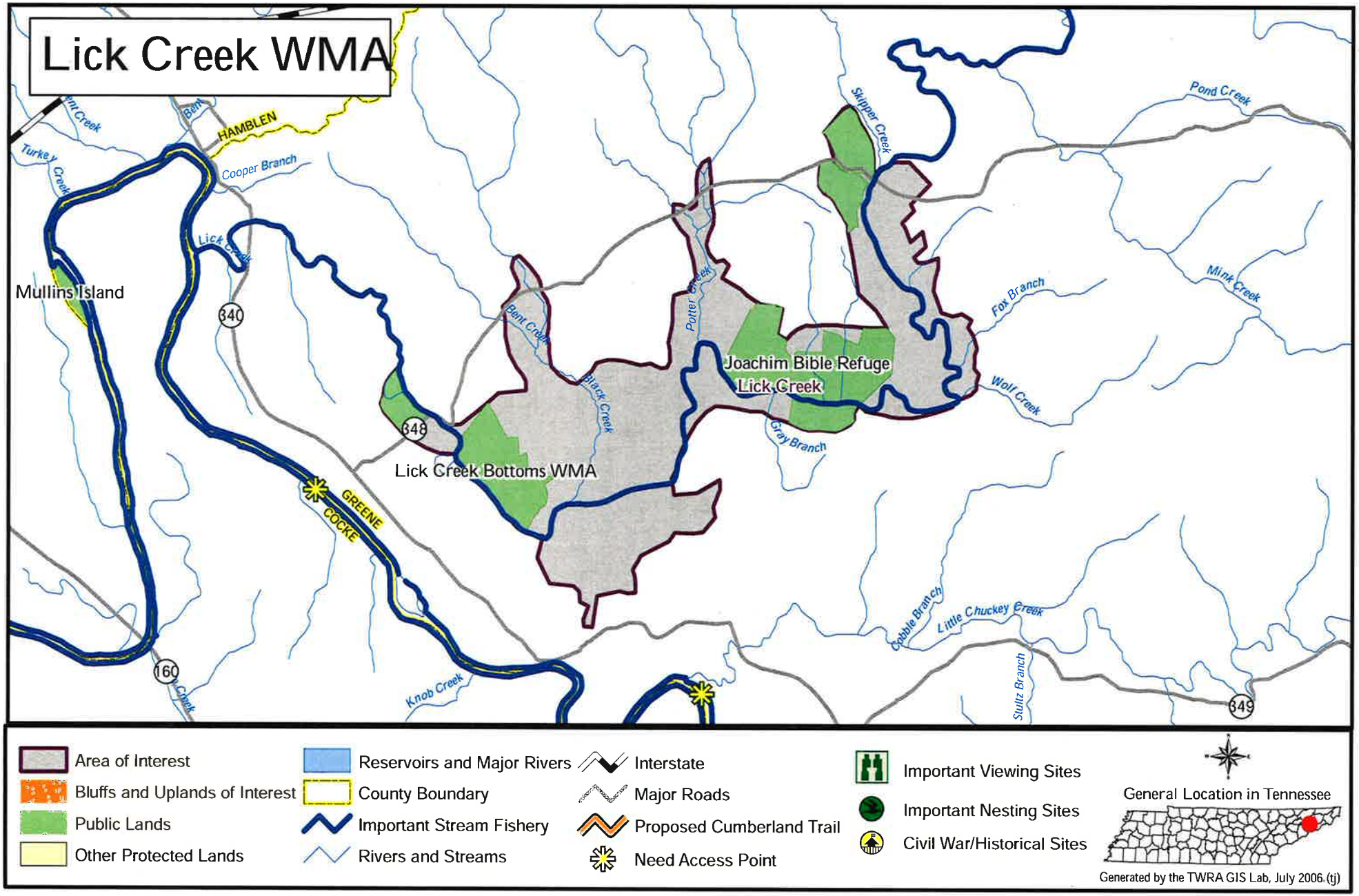
Location – (N36.1577, W83.0931) The Lick Creek project area is located along Lick Creek, a tributary to the Nolichucky River in Greene County. The area is approximately 75 miles northeast of Knoxville and 15 miles southwest of Greeneville.

Description – This project is comprised of wetlands and remnant bottomland hardwoods along an unchannelized stream. For the Ridge and Valley physiographic province, this area is moderately wide and is part of a larger wetland complex that has undergone significant alteration. Much of this area has been cleared, tiled or drained, and converted to agriculture for more than 100 years.

Significance – The Lick Creek project has been identified as the highest priority wetland protection and restoration project in the upper east Tennessee region by both TWRA and the USFWS. This project has potential to be the most significant wintering waterfowl area in east Tennessee. Acquisition and restoration will result in significant benefits to various waterfowl species such as the black duck, wood duck, mallard, and Canada Goose. The restoration of even a small amount of habitat will have significant impacts on shorebirds such as the western sandpiper, sanderling, solitary sandpiper, lesser yellowlegs, and others. Additionally, the restoration of bottomland hardwood habitats and riparian zones will impact such species as Louisiana waterthrush, Kentucky warbler, Acadian and willow flycatcher, hooded warbler, yellow-throated warbler, American woodcock, and many other migratory species.

Land Protection Needs - 1,700 acres at an estimated cost of $4,534,750.

Potential Partners – TWRA, USFWS, DU, and the East Tennessee Waterfowl Hunters Association.


Lick Creek WMA
HAMBLEN
Cooper Branch
Turkey Creek
Lick Creek
Mullins Island
340
348
Joachim Bible Refuge
Lick Creek
Lick Creek Bottoms WMA
Bent Creek
Black Creek
Potter Creek
Skipper Creek
Pond Creek
Fox Branch
Mink Creek
Wolf Creek
Gray Branch
GREENE
COCKE
160
Knob Creek
Cobble Branch
Little Chuckey Creek
Stultz Branch
349
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
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MARTHA SUNDQUIST STATE FOREST

Location – (N35.8027, W83.0205) Martha Sundquist State Forest is located in the southeastern part of Cocke County near the Tennessee/North Carolina state line, just north of I-40.

Description – Martha Sundquist State Forest is approximately 2,000 acres in size and was purchased in 2001 as part of 6,500 acres sold to the State and the USFS. The forest is situated on the lower slopes of the Appalachian Mountains encompassing a large part of the Big Creek watershed. Rich cove hardwood forests along with eastern and Carolina hemlock (*Tsuga canadensis* and *T. caroliniana*) groves can be found on the forest. The forest has been well-managed for over 75 years for timber production. It is also adjacent to the Appalachian Trail with over three-fourths of the forest surrounded by the Cherokee National Forest

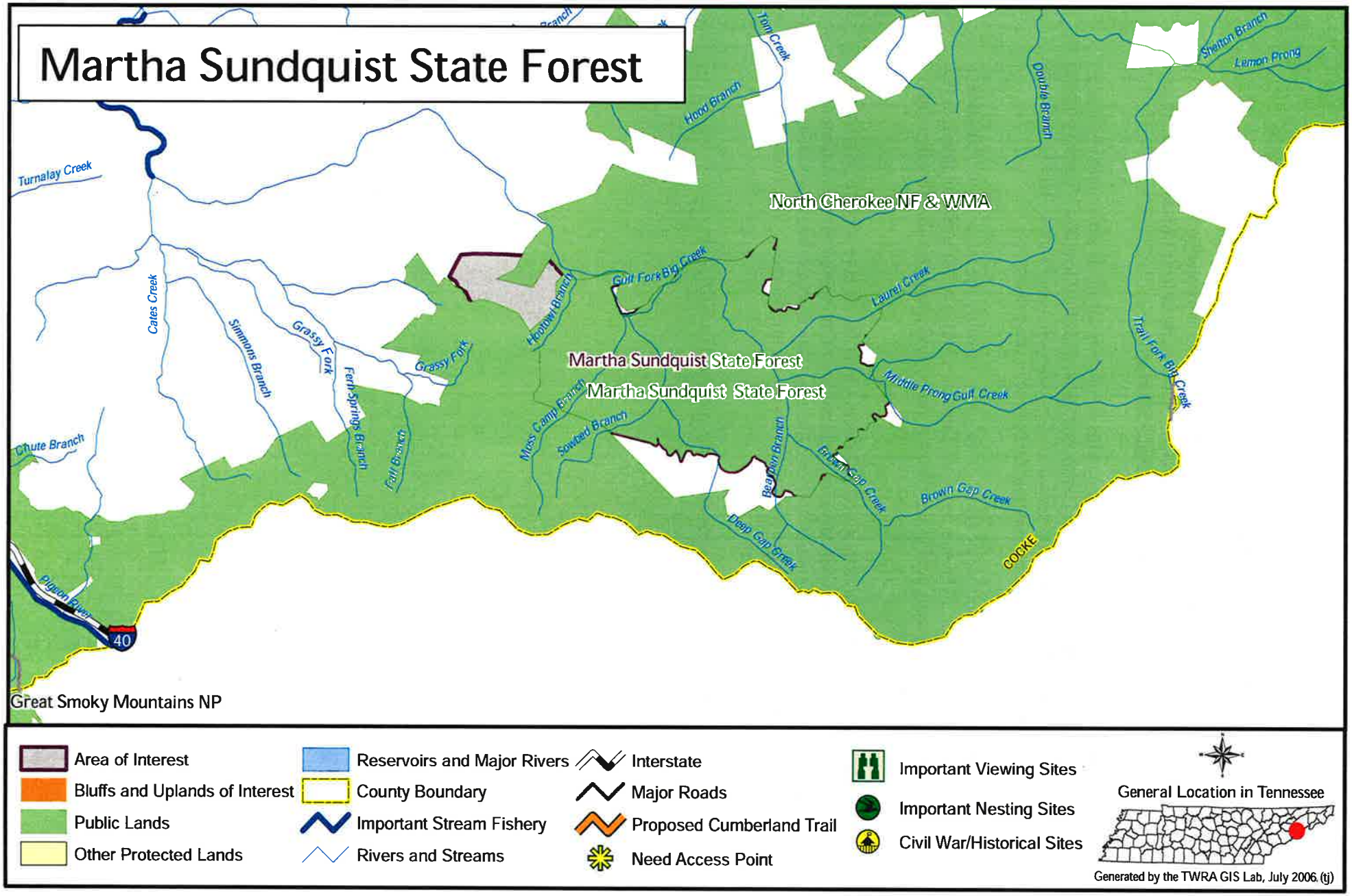
Significance – Martha Sundquist is the only State Forest in the Appalachian Hardwood forest type. Local community traditional uses and care for this area have endured for decades even through various ownerships. The cultural history of this area is rich with communities that where once found on the forest and regional mountain lore. The bond of the community to this parcel of land, better known as "The Gulf Tract", is somewhat unique to the State Forest System.

Timber production, hunting and fishing have long been the traditional uses of the forest with hiking and horseback riding growing in popularity.

Strategy – Recent announcements about a potential development project along the west boundary have caused concern regarding the protection of the scenery and traditional uses of the forest. Protecting the view shed and access to the forest is the primary acquisition criteria.

Land Protection Needs – 215 acres at an estimated cost of $297,800.

Potential Partners – TDA and Forest Legacy.


Martha Sundquist State Forest
Turnalay Creek
Cates Creek
Simmons Branch
Grassy Fork
Fern Springs Branch
Fall Branch
Chute Branch
Pigeon River
40
Great Smoky Mountains NP
Hood Branch
Tom Creek
Double Branch
Shelton Branch
Lemon Prong
North Cherokee NF & WMA
Gulf Fork Big Creek
Hazelnut Branch
Laurel Creek
Trail Fork Big Creek
Martha Sundquist State Forest
Martha Sundquist State Forest
Middle Prong Gulf Creek
Moss Camp Branch
Sawdad Branch
Bearpen Branch
Green Gap Creek
Brown Gap Creek
Deep Gap Creek
COCKE
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

MASCOT CEDAR GLADE

Location – (N36.0678, W83.7167) Mascot Cedar Glade is located in Knox County approximately 12 miles northeast of Knoxville on the north side of Mascot Road. (See House Mountain Class I Scenic Recreational SNA map)

Description – The Mascot Glade site contains an open cedar glade surrounded by a red cedar dominated forest with post and chinkapin oaks, and short leaf and Virginia pines as associates. The red cedar forest is surrounded by oak-dominated forest. Unlike the cedar glades of Middle Tennessee, no endemic plant species are present.

Significance – High Significance (B3) – This site is possibly the largest and best-known glade in East Tennessee. The site was nominated as a National Natural Landmark in the early 1970's. The adjacent land to the east is a quarry and could possibly threaten the persistence of the site.

Strategy - The strategy for acquisition at Mascot Cedar Glade is to acquire properties within the site design (site boundary) for preservation of the representative communities. Preservation of these communities will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 45 acres at an estimated cost of $220,000

Potential Partners – TDEC.

MEADES QUARRY CAVE

Location - (N35.9519, W83.8678) Meades Quarry Cave is located in Knox County on the Knoxville and Shooks Gap USGS topographic quadrangles. The mouth is found in Meade Quarry, 0.4 miles southwest of the Tennessee River and 0.35 miles south of Island Home.

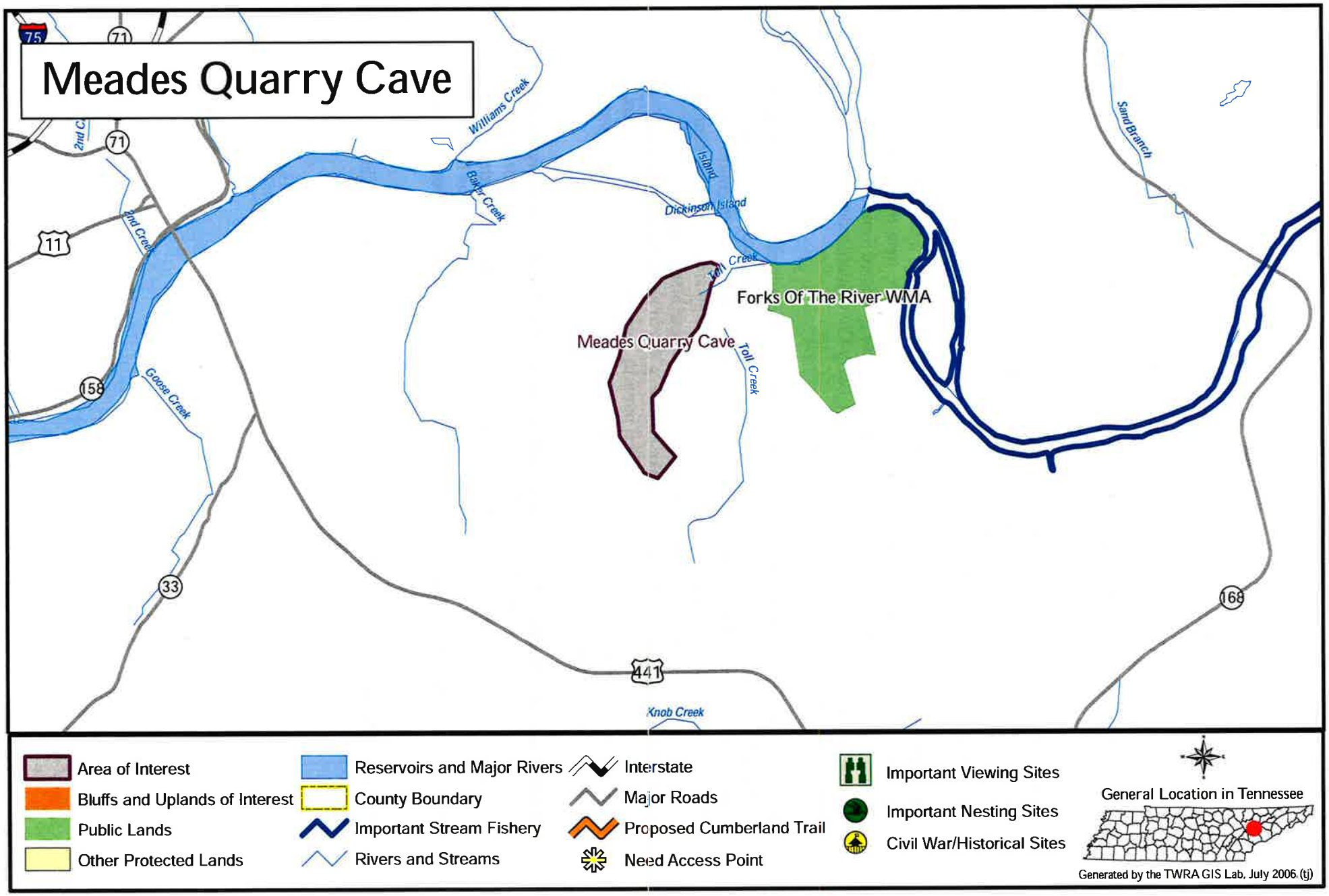
Description - Meades Quarry Cave is reported by the Tennessee Cave Survey (TCS) as containing 6,000 feet of passage (TCS, 2003). It is likely connected to at least 5 other caves or cave entrances along the same NE-SW trending strike. Extensive sinkholes are visible on the topographic map.

Significance - Meades Quarry Cave contains a stream that supports a large population of the imperiled Berry Cave salamander (*Gyrinophilus gulolineatus*, state-threatened), a species recently split from the closely related and likewise protected Tennessee cave salamander (*Gyrinophilus palleucus*). In 2004, 11 Berry Cave salamanders were observed in this cave (Miller & Niemiller, 2006).

Strategy - Members of the genus *Gyrinophilus* and their food animals are likely subject to negative impacts from excessive sedimentation, fertilizer, pesticides, animal waste, chemical spills, and urban runoff. A primary goal for any population is to control to the greatest extent possible the contributing sources in the recharge area supporting their cave habitats. Whereas excessive human access to these caves can also be problematic, *Gyrinophilus* specimens are thought to make extensive use of channels too small for human passage. As such, protecting watershed integrity must be a higher priority than limiting cave access. Regular water quality monitoring within the cave should be part of the site's management.

Land Protection Needs - 207 acres at an estimated cost of $650,000. The represent the undeveloped portions of the drainage that should be protected by acquisition or purchase of conservation easements. The remaining areas should be protected by entering into binding management agreements with willing landowners. Drainage patterns from ROWs should be evaluated and enhanced with active and passive storm water controls, as needed.

Potential Partners - TDEC, TWRA, TNC, USFWS, Knox County, and the City of Knoxville


Meades Quarry Cave
Williams Creek
Bailey Creek
Dickinson Island
Island
Sand Branch
2nd Creek
Toll Creek
Forks Of The River WMA
Meades Quarry Cave
Goose Creek
Knob Creek
75
71
11
158
33
441
168
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

MORRIL'S CAVE SNA

Location – (N36.2738, W82.1342) Morril's Cave is in the Ridge and Valley located in Sullivan County approximately 2.6 miles east of Bluff City.

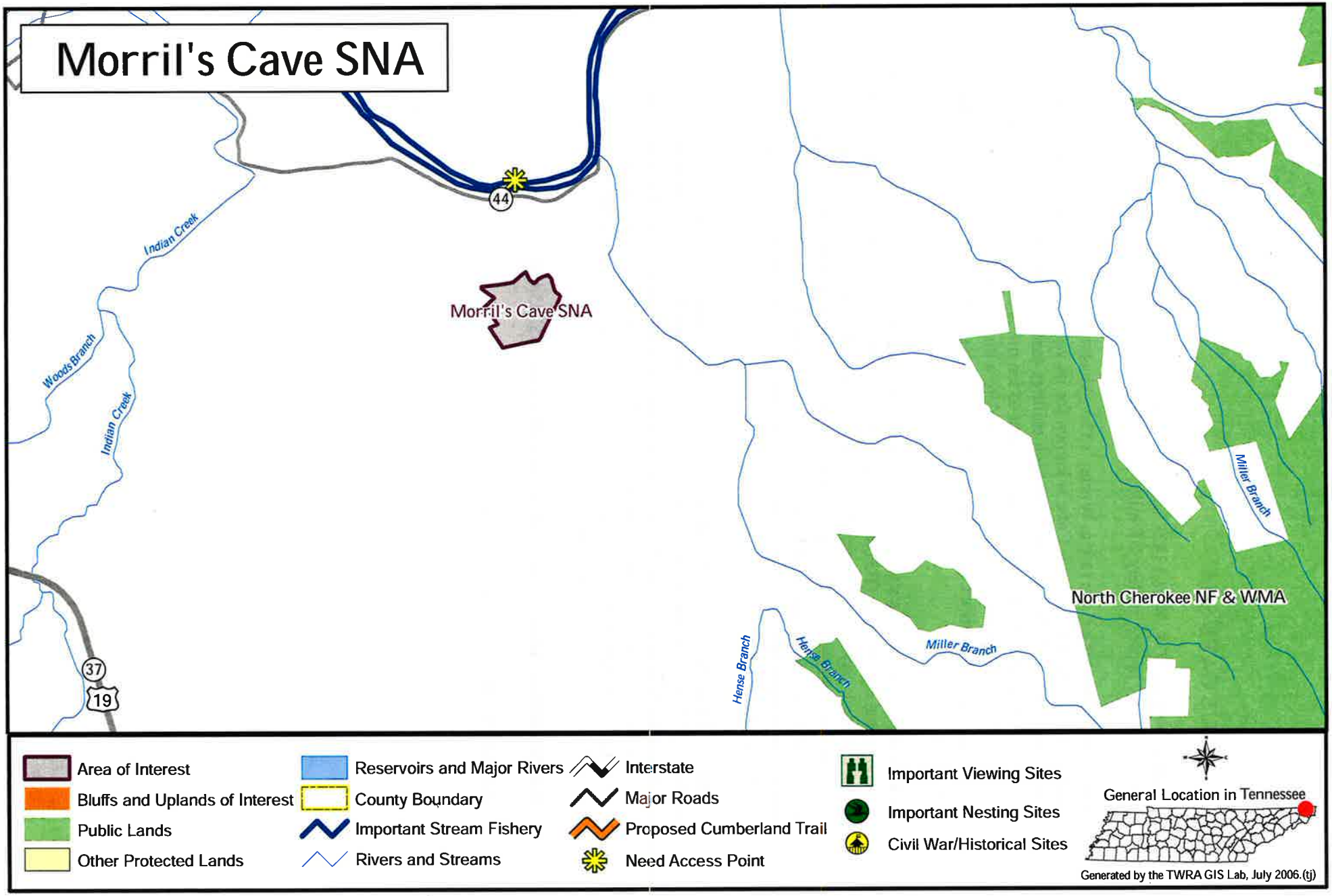
Description - Morril's Cave (a.k.a. Worley's Cave) has more than 37,000 feet of mapped passages on two levels. Morril's Cave is known for its voluminous size with rooms more than 75 feet wide and 250 feet long with high ceilings that often exceeds 100 feet. It is noted for its beautiful formations within its eight to ten miles of passages. The lower level of the cave contains a perennial creek complete with various fishes, white crayfish, and salamanders. Morril's Cave is gated to protect the bat population that uses the cave seasonally.

Significance - The cave is significant as being one of the largest caverns in Tennessee. It has ecological significance (B3) as a home to the gray bat (*Myotis griscesens*) and a cave spider (*Nesticus paynei*). Historically, the cave has been known since the earliest settlement of Sullivan County and was used for saltpeter mining during the Civil War, with many historical elements of the mine remaining within the cavern. The cave has some of the largest rooms of any known cave in Tennessee and is heavily utilized by the public for recreation.

Strategy - Presently, Morril's Cave lies beneath private property even though it is a designated SNA. The landowner lives in North Carolina and her son lives at the site. The tract of land is approximately 50 acres. Should the property come on the market in the future, the State should consider purchase at that time in order to attain more control over potential threats to the cave. Benefits of property ownership should be weighed against the need for on-site presence.

Land Protection Needs - 61 acres at an estimated cost of $225,000.

Potential Partners – TDEC and TNC.


Morril's Cave SNA
Morril's Cave SNA
Indian Creek
Woods Branch
Indian Creek
44
37
19
Hense Branch
Hense Branch
Miller Branch
Miller Branch
North Cherokee NF & WMA
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

MUD FLATS CAVE

Location - (N35.8858; W84.0925) Mud Flats Cave is located in Knox County. The mouth is found 400 feet south of Fort Loudoun Lake and 0.45 mile northwest of West Emory, at an elevation of 870 feet.

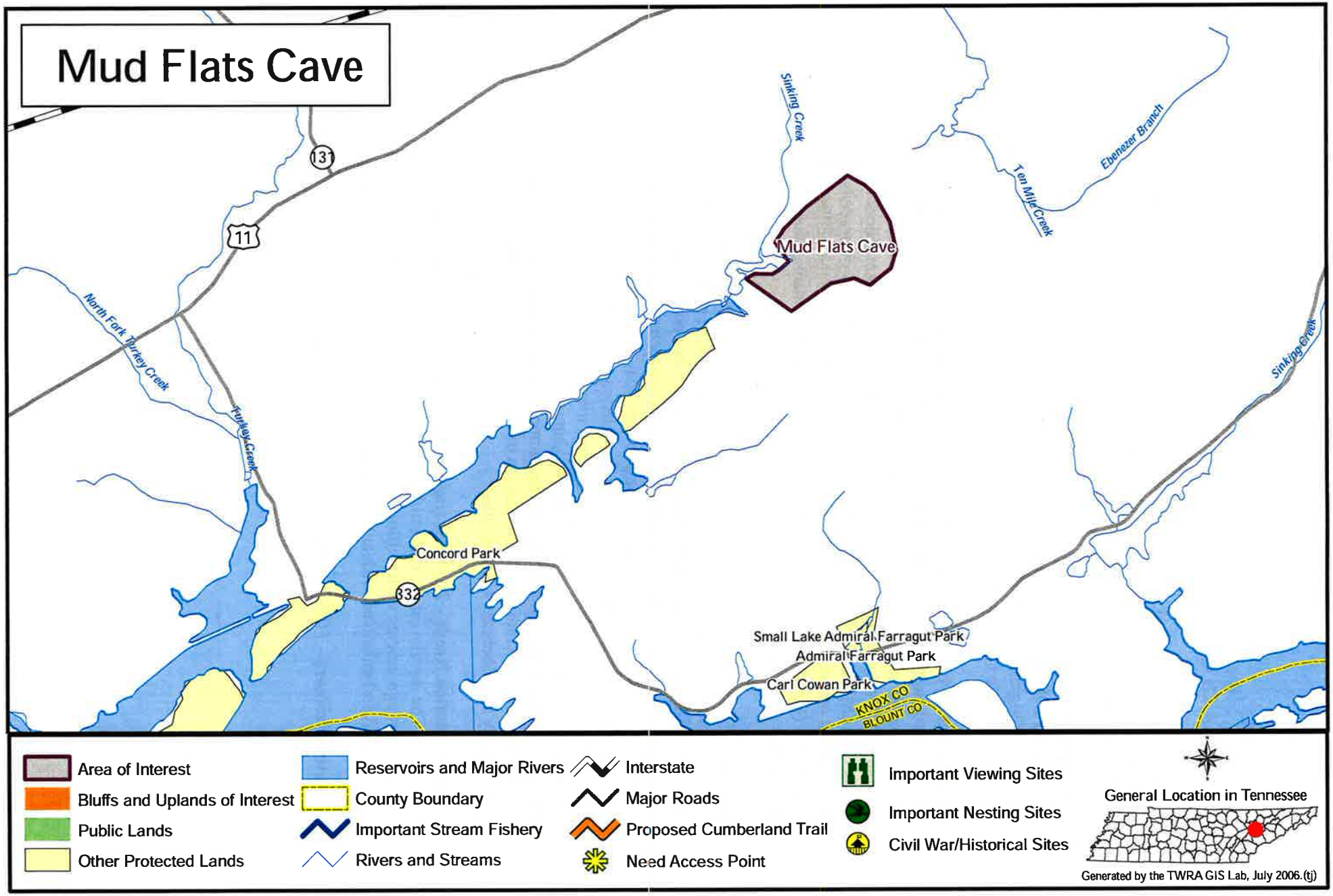
Description - According to Matthews (1971): "A large passage extends west from the entrance for 200 feet, then drops to a stream passage and trends east for 500 feet." It is likely hydrologically connected to several sinkholes in the vicinity, including the Fox Bone-Three Hole Cave system.

Significance - Mud Flats Cave contains a stream that supports a significant population of the imperiled Berry Cave salamander (*Gyrinophilus gulolineatus*, state-threatened), a species recently split from the closely related and likewise protected Tennessee cave salamander (*Gyrinophilus palleucus*). In 2004, 5 Berry Cave salamanders were observed in this cave (Miller & Niemiller, 2006). A small gray bat (*Myotis grisescens*, state/federal endangered) colony was reported in the 1970's, and the hellbender salamander (*Cryptobranchus alleganiensis*, state "in-need-of-management") was found in the outflow of an adjacent cave.

Strategy - Members of the genus *Gyrinophilus* and their food animals are likely subject to negative impacts from excessive sedimentation, fertilizer, pesticides, animal waste, chemical spills, and urban runoff. A primary goal for any population is to control to the greatest extent possible the contributing sources in the recharge area supporting their cave habitats. Whereas excessive human access to these caves can also be problematic, *Gyrinophilus* specimens are thought to make extensive use of channels too small for human passage. As such, protecting watershed integrity must be a higher priority than limiting cave access. Regular water quality monitoring within the cave should be part of the site's management. Dye tracing is recommended to further refine the boundaries of the recharge area, including an examination of additional sinking streams in the nearby Echo Valley and Ebenezer communities.

Land Protection Needs - 216 acres (immediate recharge area) at an estimated cost of $750,000. The developed areas should be protected by entering into binding management agreements with willing landowners. Drainage patterns from ROWs should be evaluated and enhanced with active and passive storm water controls, as needed.

Potential Partners - TDEC, TWRA, TNC, USFWS, Knox County


Mud Flats Cave
Mud Flats Cave
Sinking Creek
Ten Mile Creek
Ebenezer Branch
North Fork Turkey Creek
Turkey Creek
Sinking Creek
Concord Park
131
11
332
Small Lake Admiral Farragut Park
Admiral Farragut Park
Carl Cowan Park
KNOX CO
BLOUNT CO
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

PANTHER CREEK STATE PARK

Location – (N36.2189, W83.3970) Panther Creek State Park is located near Morristown in Hamblen County on the banks of Cherokee Lake.

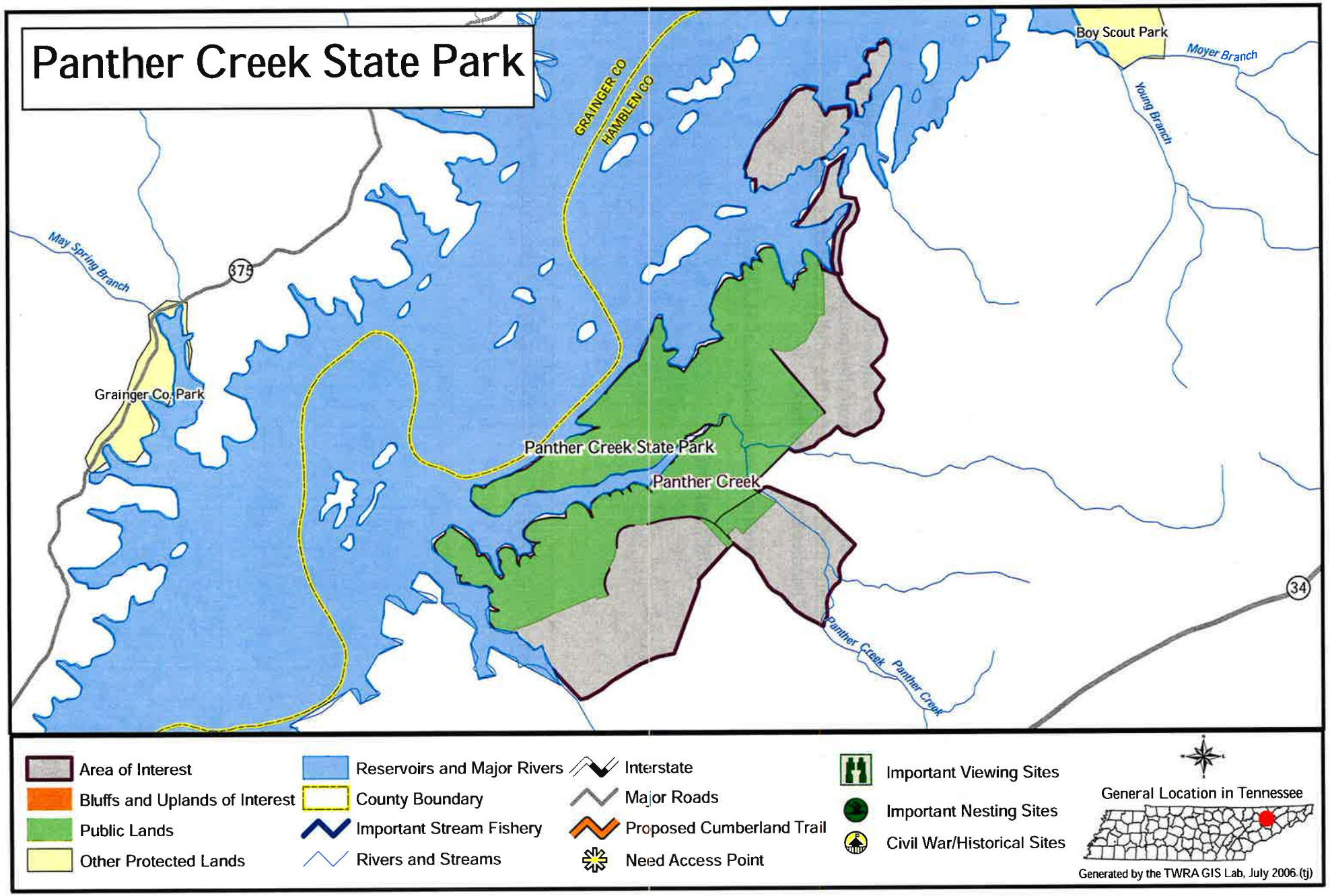
Significance - The park covers approximately 1,435 acres on the shore of Cherokee Lake and offers a variety of recreational opportunities including camping, fishing, boating, swimming, picnicking, hiking, biking and horseback riding.

Pioneers from North Carolina and the older Watauga Settlement in East Tennessee arrived in this area around 1785. Panther Springs, at one time, was the first stop on the stagecoach route out of Knoxville on the way to Abingdon, Virginia. Prior to that time, the Cherokee Indians were the most prominent Native American tribe in the area.

Strategy - The strategy for future acquisitions for Panther Creek State Park is to acquire properties surrounding the park for watershed protection and properties that have significant cultural and natural features that further the wildlife, aesthetics, interpretive and recreation missions of Panther Creek State Park.

Land Protection Needs – 390 acres at an estimated cost of $1,430,000.

Potential Partners – TCF, TDEC, and TNC.


Panther Creek State Park
Boy Scout Park
Moyer Branch
Young Branch
GRAINGER CO
HAMBLEN CO
May Spring Branch
375
Grainger Co. Park
Panther Creek State Park
Panther Creek
34
Panther Creek
Panther Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

PEARSON CAVE

Location - (N36.5525, W83.0166) Pearson Cave is located in Hawkins County. The mouth is 0.5 miles northeast of Lonesome Pine School, in the floor of Kyle Valley, 100 feet north of the Valley Road, in a large sinkhole, at an elevation of 1,420 feet. (See Kyles Ford map)

Description - According to Barr (1961): "A narrow slot and a 50-foot drop both open into the entrance room -a large chamber 60 feet wide, 50 feet high, and 150 feet long, which trends west. At the west end are three forks. The left fork, which is the main cave, contains a stream. It continues west beyond the entrance room for 100 feet, then bends N. 30° W. for an additional 120 feet, and terminates in a siphon. This passage averages 12 feet high and 8 feet wide. The middle fork is of similar dimensions and extends N. 65 ° W. for 90 feet. The right fork is a sinuous slot which runs northeast for 135 feet." The Tennessee Cave Survey (TCS) indicates that Pearson Cave includes 4,000 feet of mapped passages (TCS, 2003).

Significance - Pearson Cave is one of the highest priority gray bat (*Myotis grisescens*, state and federally endangered) caves in Tennessee, containing an estimated 18,500 and 365,841 bats in summer and winter roosts, respectively (Harvey & Britzke, 2002). Pearson Cave supports twice as many gray bats in winter as any other cave in Tennessee. The cave historically supported a winter roost of 5000 Indiana bats (*Myotis sodalis*, state/federal endangered), though none were observed during the winter of 2001-02 (Harvey & Britzke, 2002). The cave also contains a winter roost of the eastern big-eared bat (*Corynorhinus rafinesquii*, deemed in-need-of-management).

Strategy - As with any inflow cave, protecting the watershed draining into it is key to maintaining the integrity of the cave. The presence of any large bat colony often implies an accompanying complex of dependent cave-obligate invertebrates, though this has not yet been determined for Pearson Cave. Key to maintaining the bat roosts, however, is proper control of human access to the cave at certain times of year, and establishment and management of a large forested buffer at the cave entrance. Establishment of a forested buffer to the nearby Clinch River also is prudent. In the short term, a relatively few acres can be protected surrounding the mouth of the cave, and reforested in native hardwoods, as appropriate.

Aquatic cave animals are subject to negative impacts from excessive sedimentation, fertilizer, pesticides, animal waste, chemical spills, and agricultural and silvicultural runoff. A primary goal for any population is to control to the greatest extent possible the contributing sources in the recharge area supporting their cave habitats. The balance of the recharge area should be likewise protected through various means, including but not limited to the implementation of proper agricultural and silvicultural BMP's.

Land Protection Needs – 450 acres (core of 20 acres plus 430 acres to protect the recharge area) at an estimated cost of $1,000,000.

Potential Partners - USFWS, TWRA, TNC, TDEC, and NRCS.

RED CLAY STATE HISTORIC PARK

Location – (N334.9901, W84.9454) Located in southeast Tennessee on the Tennessee Georgia border in Bradley County.

Significance - Red Clay Historic Area encompasses 260 acres of forested ridges and narrow valleys formerly used as cotton and pasture land.

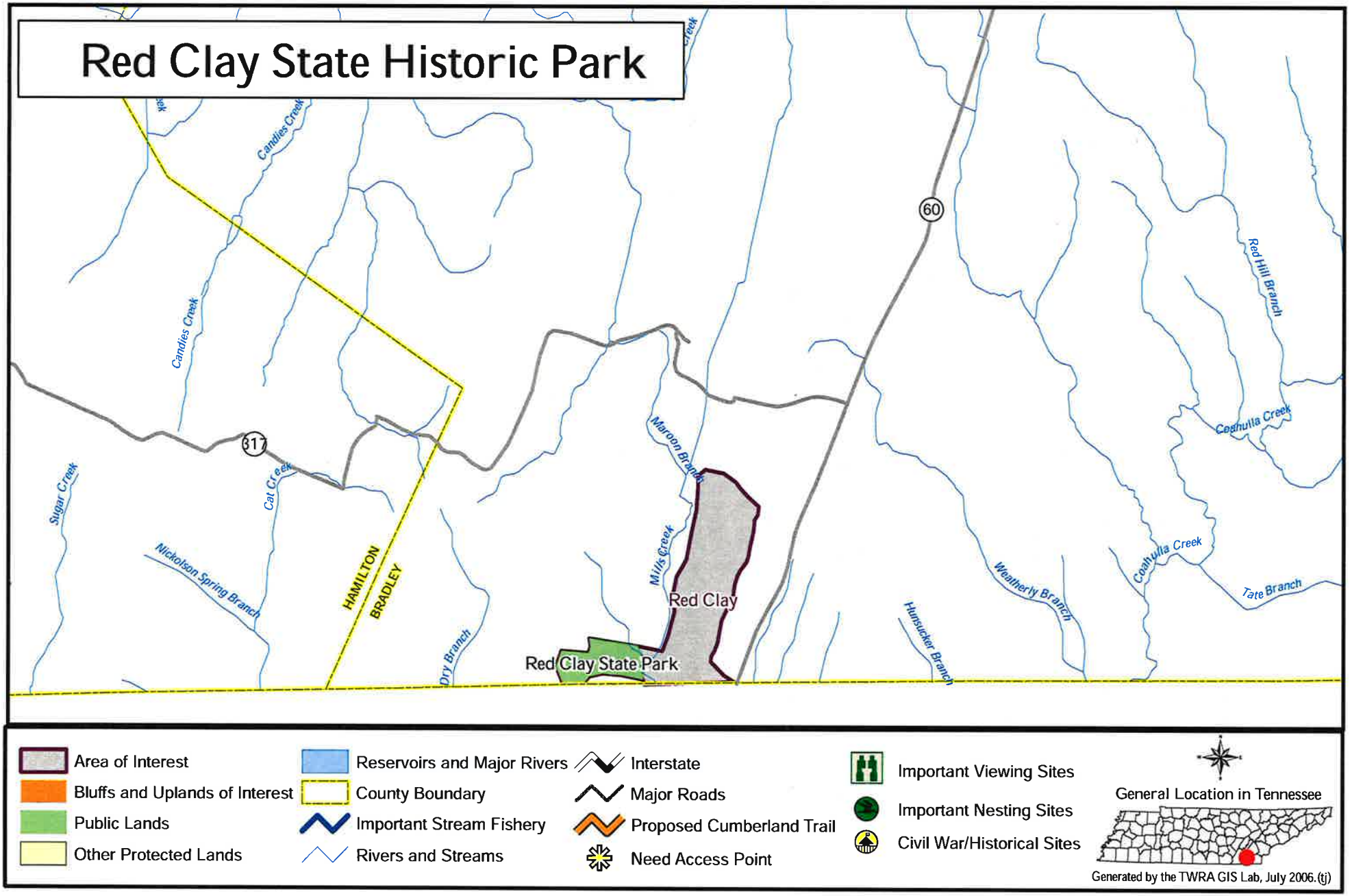
Red Clay served as the seat of Cherokee government from 1832 until the forced removal of the Cherokee in 1838. By 1832, the State of Georgia had stripped the Cherokee of their political sovereignty, and had banned all political activity in Georgia. As a result, the Cherokee capital was moved from New Echota, Georgia, to Red Clay, Tennessee. At Red Clay the Trail of Tears really began, for here the Cherokee learned that they had lost their mountains, streams and valleys forever.

Council Spring contains an undescribed and presumably rare aquatic snail (Hydrobiidae) that would benefit from additional land protection.

Strategy - The strategy for future acquisitions for Red Clay State Historic Park is to acquire in holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover that further the wildlife, aesthetics, interpretive and recreation missions of Red Clay State Historic Park.

Land Protection Needs – 190 acres at an estimated cost of $440,000.

Potential Partners - TCF, TNC, and TDEC.


Red Clay State Historic Park
Candies Creek
Candies Creek
60
Red Hill Branch
Coahulla Creek
317
Sugar Creek
Cat Creek
Maroon Branch
Mills Creek
Red Clay
Red Clay State Park
HAMILTON
BRADLEY
Nickolson Spring Branch
Dry Branch
Weatherly Branch
Coahulla Creek
Tate Branch
Hunsucker Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

REEDY CREEK COVE

Location - (N36.5656, W82.4489) Reedy Creek Cove is located in Sullivan County on the south side of Hwy 11W (Lee Highway), 7.3 miles northeast of Hwy 93.

Description - This 22.5 acre site is within the Ridge and Valley Physiographic Province and primarily consists of a slope forest above the floodplain of Reedy Creek. The south part of the cove is part of a north-facing slope that runs along the creek, and the cove is formed by a spur ridge descending to the west. The flora is rich for a small area with over 170 species of vascular plants present, including many showy spring wildflowers.

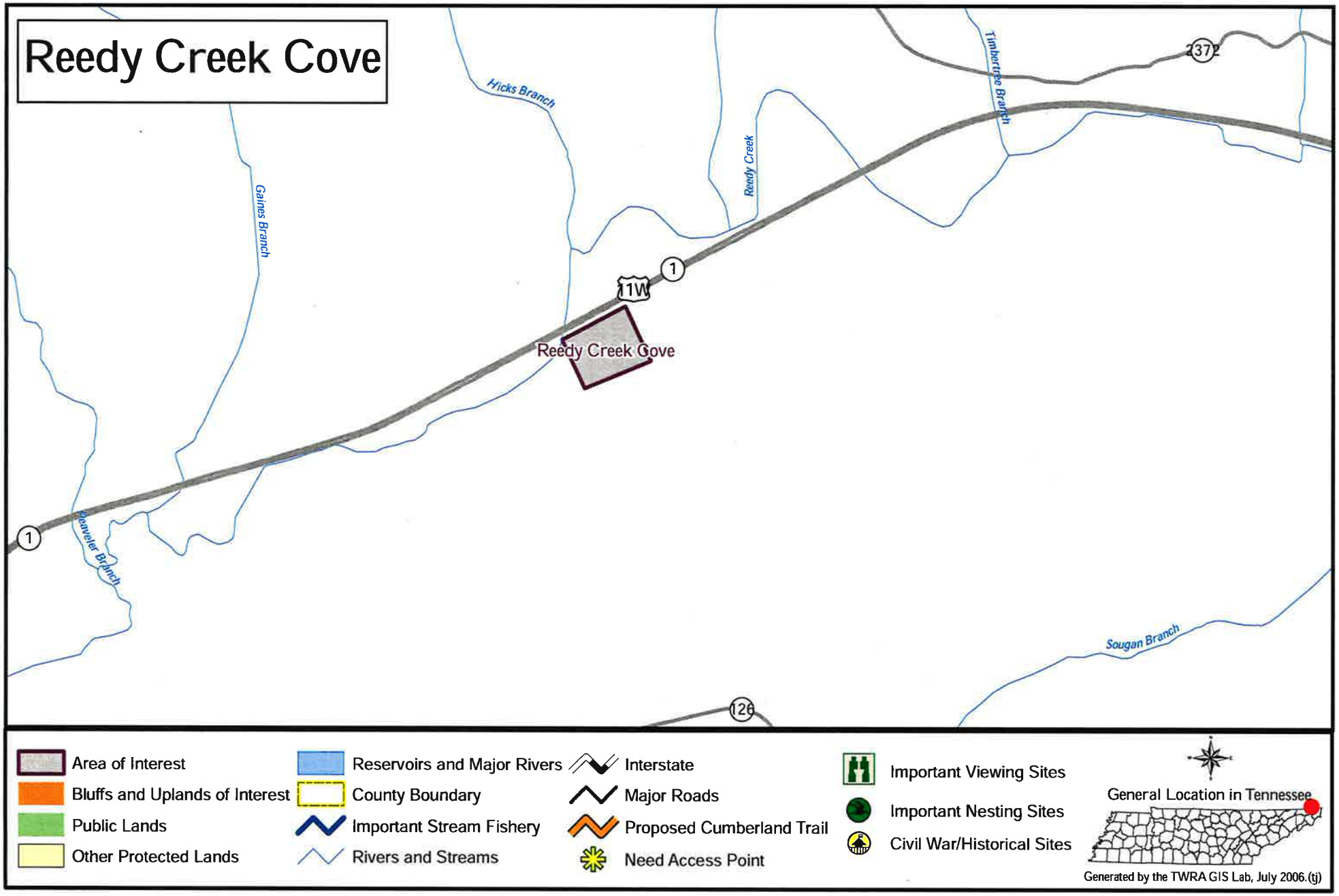
The sheltered portion of the cove possesses mixed mesophytic forest of red oak, basswood, yellow buckeye, and cucumber magnolia. Black maple, chinkapin oak, red cedar, and redbud are present on the slopes over the thinner limestone-derived soils.

Significance - Included in the diverse flora at Reedy Creek Cove are four state-listed plant species. The two most significant are *Cimicifuga rubifolia* (Appalachian bugbane) and *Hydrophyllum virginianum* (Appalachian waterleaf). Both species occur in rich woods, are listed as state threatened and are considered rare and uncommon in Tennessee. *C. rubifoia* is considered rare and uncommon globally and occurs only in six states.

Strategy - Past documentation has indicated the site was considered for development, and the current landowner has been cited for some water quality violations. However, a 2006 site visit determined that the site is still intact and has conservation value. Prior to any conservation action, the site should again be evaluated to determine the extent and numbers of the rare species present.

Land Protection Needs – 22.5 acres at an estimated cost of $70,000.

Potential Partners - TDEC and TNC.


Reedy Creek Cove
Hicks Branch
Reedy Creek
Timbertree Branch
237
Gaines Branch
1
11W
Reedy Creek Cove
1
Beaveler Branch
Sougan Branch
126
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

RIPSHIN BOG

Location – (N36.1662, W82.1507) Ripshin bog is located southwest of the city of Roan Mountain and approximately 2.0 miles west of Roan Mountain State Park in Carter County. The bog is adjacent to Ripshin Lake and along Roaring Creek Road.

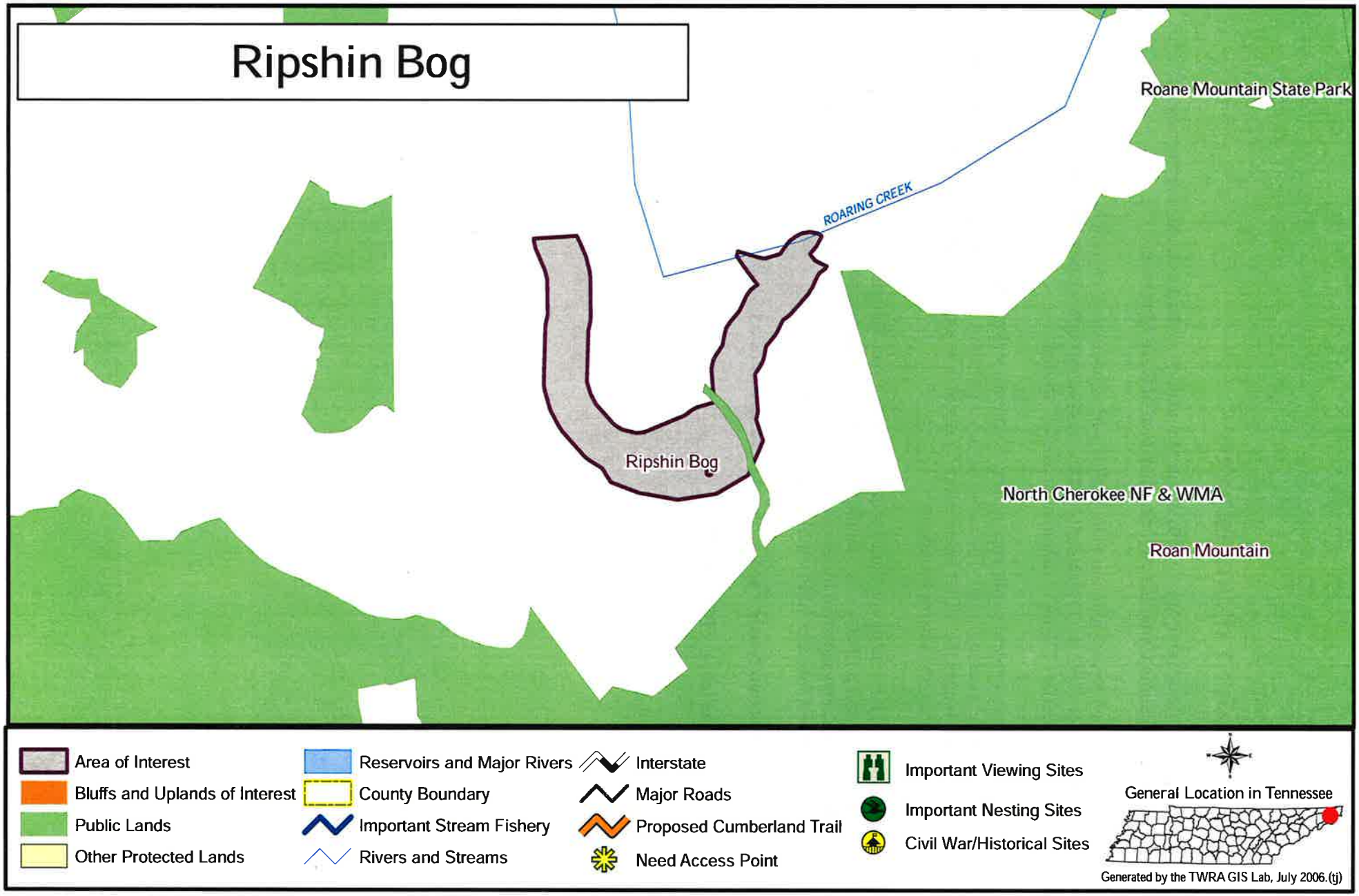
Description - This 534 acre site is at an elevation of 3,580 feet in the Blue Ridge Mountains physiographic province southwest of Roan Mountain. The site is a private in-holding within Cherokee National Forest. It is located at the upper end of the Roaring Creek drainage. It is a relatively undisturbed wetland situated in a valley between Roan Mountain and Ripshin Ridge. The upper section of the wetland is more open with fewer woody plants, while the lower section has dense shrubs. The lower portion of the bog between the upper end of Ripshin Lake and the St. John's home is wetter and less disturbed than the upper section adjacent to a pasture which has impacted the site.

Significance - This site is of the Southern and Central Appalachian Bog and Fern ecological system type. This type of wetland habitat is extremely rare in Tennessee and provides critical habitat for the southern bog turtle (*Clemmys muhlenbergii*) a globally rare species. A very high degree of biodiversity can be found at Ripshin Bog. Plants found at this site include spinulose shield fern (*Dryopteris carthusiana*, G5/S1), crested shield fern (*D. cristata,* G5/S2), round-leaved watercress (*Cardamine rotundifolia,* G4/S2S3), hairy willow-herb (*Epilobium ciliatum,* G5/S1), linear-leaved willow-herb (*Epilobium leptophyllum,* G5/S1), marsh bellflower (*Campanula aparinoides*, G5/S2), longleaf stichwort (*Stellaria longifolia*, G5/S1), trailing stitchwort (*S. alsine*, G5/S1), long-bracted green orchis (*Coeloglossum viride* var. *virescens*, G5T5/S1) and fowl bluegrass (*Poa palustris*, G5/S1). A reintroduced population of southern bog turtle, a threatened species (S1/G3) also occurs at this site and is monitored by the Knoxville Zoo. The turtles are surviving and breeding but are just reaching reproductive age. The wetland flora of this site is diverse including many sedges, rushes and grasses. The woody taxa are more typical of northern areas of the US. Many of the plants here are at the southern limits of their range. The lake was built in 1947 and has since become a stopover for migratory birds including Bonapartes gull, pied-billed grebe, horned grebe, double-crested cormorant, and common loon.

Strategy - A cooperative management agreement has existed at this site for many years between TNC, TWRA, the Knoxville Zoo and the St. John family. Mr. St. John passed away in the past year or two and the children of the family have not decided what to do with the property. The fact that 10 state-listed plants and a globally rare turtle occur at this one site creates a unique opportunity to put in place some type of permanent protection for these rare elements. The fact that it is near a State Park and borders a National Forest should make management and planning activities much less burdensome.

Land Protection Needs - 156 acres for primary wetland area at a cost of $300,000 or 534 acres for the entire site at a cost of $1,500,000.

Potential Partners - St. John family, TNC, TWRA, Knoxville Zoo, and USFS.


Ripshin Bog
Roane Mountain State Park
ROARING CREEK
Ripshin Bog
North Cherokee NF & WMA
Roan Mountain
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

ROAN MOUNTAIN STATE PARK

Location – (N36.1629, W82.1199) Roan Mountain State Park is located at the base of Roan Mountain in Carter County, near the town of Roan Mountain.

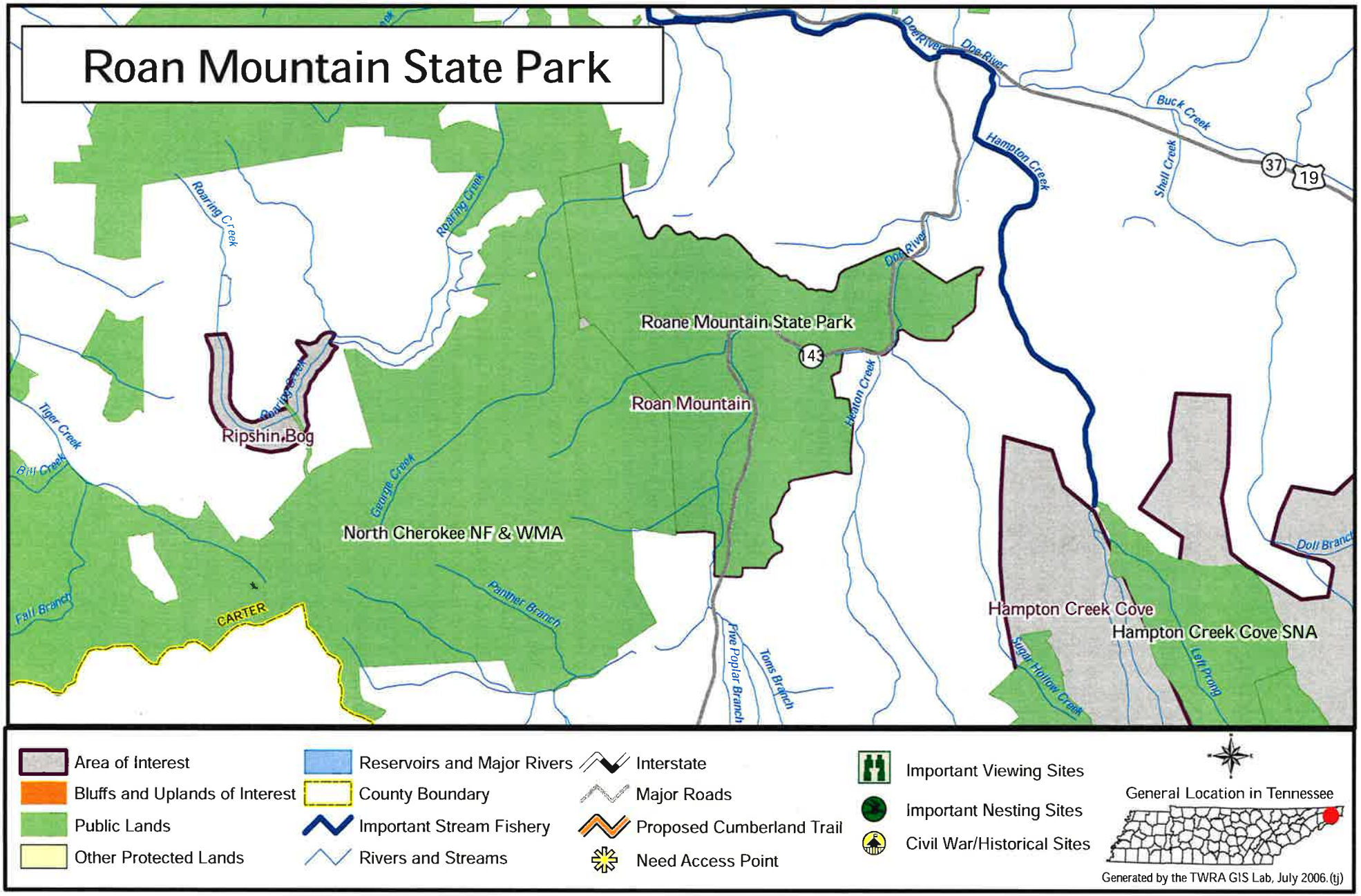
Significance - Roan Mountain State Park is part of an area that is rich in cultural history. In September 1780, the Overmountain Men trekked through what is now the park on their way to the Battle of King's Mountain in South Carolina.

The park has a modern conference center, 30 cabins, swimming pool, picnic areas, and an 87 site modern campground. The park also has a gift shop, museum and hiking trails. The park also manages the Miller Homestead. This site is an existing early 20th century farmstead atop Strawberry Mountain.

Strategy - The strategy for future acquisitions for Roan Mountain State Park is to acquire in holdings and properties surrounding the park for watershed protection and properties that contain representative forest cover that further the wildlife, aesthetics, interpretive and recreation missions of Roan Mountain State Park.

Land Protection Needs – 468 acres at an estimated cost of $1,220,000.

Potential Partners – TCF and TNC.


Roan Mountain State Park
Doe River
Buck Creek
Hampton Creek
Shell Creek
37
19
Roaring Creek
Roaring Creek
Doe River
Roane Mountain State Park
143
Roan Mountain
Elkton Creek
Ripshin Bog
Roaring Creek
Tiger Creek
Bill Creek
George Creek
North Cherokee NF & WMA
Panther Branch
Fall Branch
CARTER
Five Poplar Branch
Toms Branch
Hampton Creek Cove
Hampton Creek Cove SNA
Sugar Hollow Creek
Left Prong
Doll Branch
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

ROCKY FORK

Location – (N36.0613, W82.5843) The Rocky Fork project area is located seven miles east of Erwin on old Hwy 23 in Greene and Unicoi Counties.

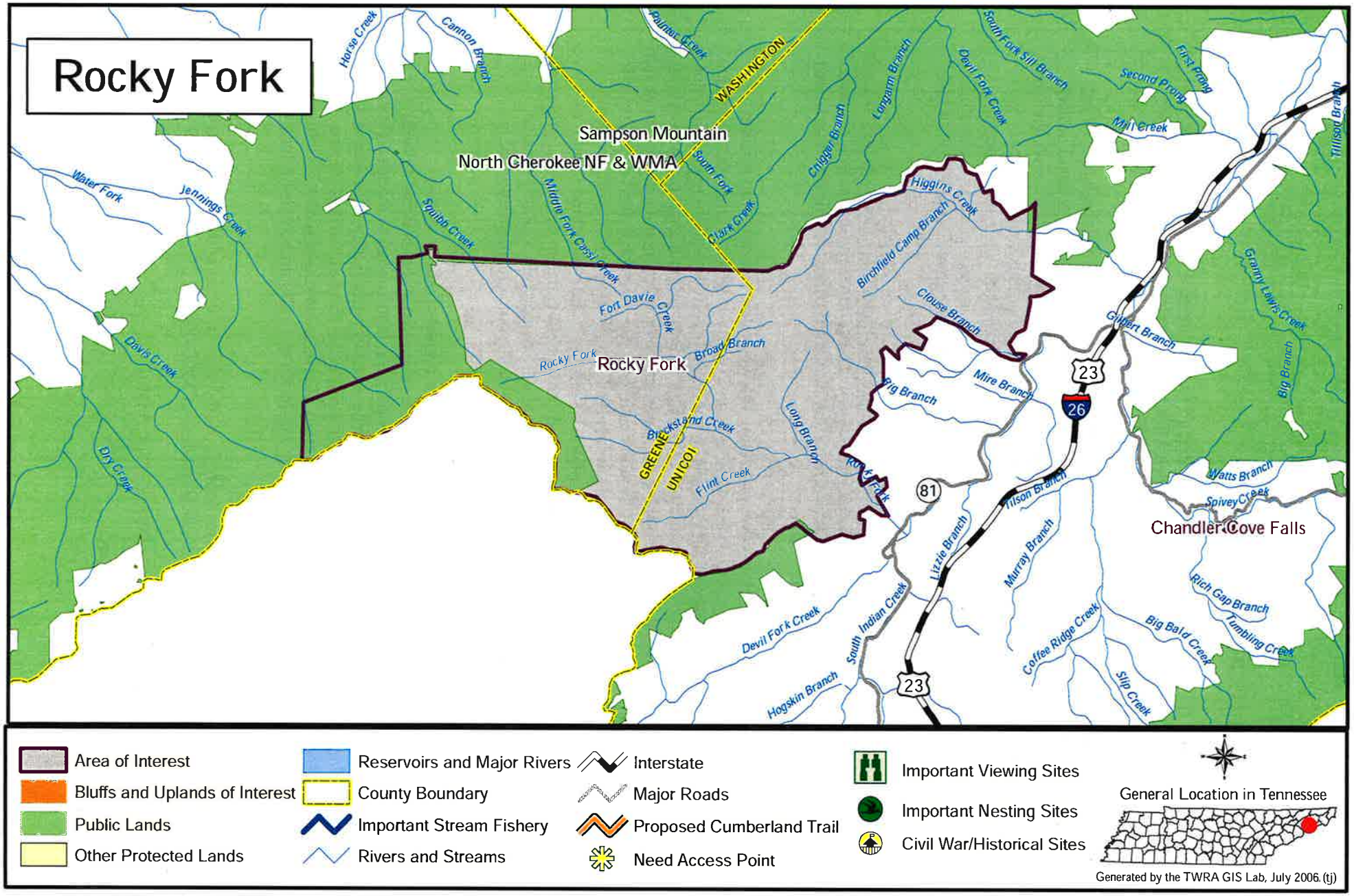
Description - The Rocky Fork tract is one of the largest unprotected but undeveloped and pristine forested areas remaining in the rugged chain of the Appalachian Mountains. Rocky Fork harbors miles of native brook trout fisheries and the area has rugged outcroppings and ridgelines featuring breathtaking views of distant mountain ranges and valleys including the Nolichucky River Valley in Unicoi and Greene Counties. The area is critical wildlife habitat for black bear, white-tailed deer, wild turkey, peregrine falcon and many other species. Much of its boundary adjoins National Forest lands, including the Sampson Mountain Wilderness. The Appalachian Trail, a National Scenic Trail, is situated along the western boundary of Rocky Fork. Acquisition of Rocky Fork would close a substantial gap in public lands along the new scenic Hwy. 23 Corridor (soon to be designated I-26), enhance protection to the Appalachian Trail and Sampson Mountain Wilderness, preserve a large expanse of critical watershed, wildlife habitat and aesthetic beauty while expanding recreational opportunities, such as hiking, mountain biking, hunting and fishing.

The tract's northern boundary lies along the crest of Rich Mountain adjoining the Sampson Mountain Wilderness and features stunning views of distant mountain ranges and valleys in Tennessee, North Carolina and Virginia. Elevations of this tract range from 2,200 feet in the valleys to 4,400 feet on Higgins Ridge at Frozen Knob. Ridgetops, rugged terrain, abundance of water and a mixture of hardwoods and evergreens provide excellent critical habitat for a variety of native fish and wildlife.

The Forest Service has sought the acquisition of Rocky Fork for many years, but since the development of the Hwy. 23 corridor, ownership of this large private holding has changed twice within the last four years. Thus far, purchasers have not brought development to this wild area. With each transaction, combined with the expected completion of the Hwy. 23 Corridor linking the Tri-Cities in Tennessee to Asheville in North Carolina, development of Rocky Fork becomes an increasing possibility. Should this happen, an opportunity to preserve such a magnificent mountainous area will be lost forever.

Land Protection Needs – 9,925 acres in one tract at an estimated cost of $30,000,000.

Potential Partners – TNC, TCF, TWRA, USFS, TWF, the State Historian, the Southern Appalachian Highlands Conservancy, Southern Appalachian Forest Coalition, Southern Environmental Law Center, Partners of Cherokee National Forest, East Tennessee Sportsmen's Federation, Outdoorsmen, Inc., Cherokee Road and Gun Club, NE Tennessee Mountain Bike Association, Cherokee Chapter Trout Unlimited, Greene County Fishing and Hunting Club, and the Appalachian Trail Conference (ATC) and its associated Tennessee hiking clubs, the Tennessee Eastman Hiking Club and Smoky Mountains Hiking Club.


Rocky Fork
Sampson Mountain
North Cherokee NF & WMA
Rocky Fork
Chandler Cove Falls
WASHINGTON
GREENE
UNICOI
Horse Creek
Cannon Branch
Palmer Creek
Longarm Branch
Devil Fork Creek
South Fork Sill Branch
First Prong
Second Prong
Mill Creek
Tillison Branch
Water Fork
Jennings Creek
Squibb Creek
Middle Fork Cassil Creek
South Fork
Clark Creek
Chigger Branch
Higgins Creek
Birchfield Camp Branch
Clouse Branch
Granny Lewis Creek
Big Branch
Gilbert Branch
Davis Creek
Fort Davie Creek
Rocky Fork
Broad Branch
Pig Branch
Mire Branch
Dry Creek
Buckstand Creek
Flint Creek
Long Branch
Rocky Fork
Watts Branch
Spivey Creek
Tilson Branch
Lizzie Branch
Murray Branch
Rich Gap Branch
Tumbling Creek
Big Bald Creek
Coffee Ridge Creek
Slip Creek
Devil Fork Creek
South Indian Creek
Hogskin Branch
23
26
81
23
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006. (tj)

SENSABAUGH CAVE

Location - (N35.6911, W84.6928) Sensabaugh Cave is located in Meigs County. The mouth is found 2.2 miles northwest of Ten Mile and 1.3 miles south of Maple Grove Church, in a sinkhole on the side of a hill, at an elevation of 830 feet.

Description - According to Barr (1961): "The mouth, which is 8 feet high and 20 feet wide, opens into a room 25 feet wide, 10 feet high, and 100 feet long. A small passage leads downdip past a 30-foot dome to the stream. From here a low, wide crawl leads into a room 10 feet high, 20 feet wide, and 120 feet long. Beyond this room the cave continues 30 feet farther as a crawlway and ends in breakdown. The stream contains many deep pools and is accessible through several adits {horizontal passage} extending downdip. A few dripstone formations are developed, and the cave is damp and muddy. It trends S. 30° W."

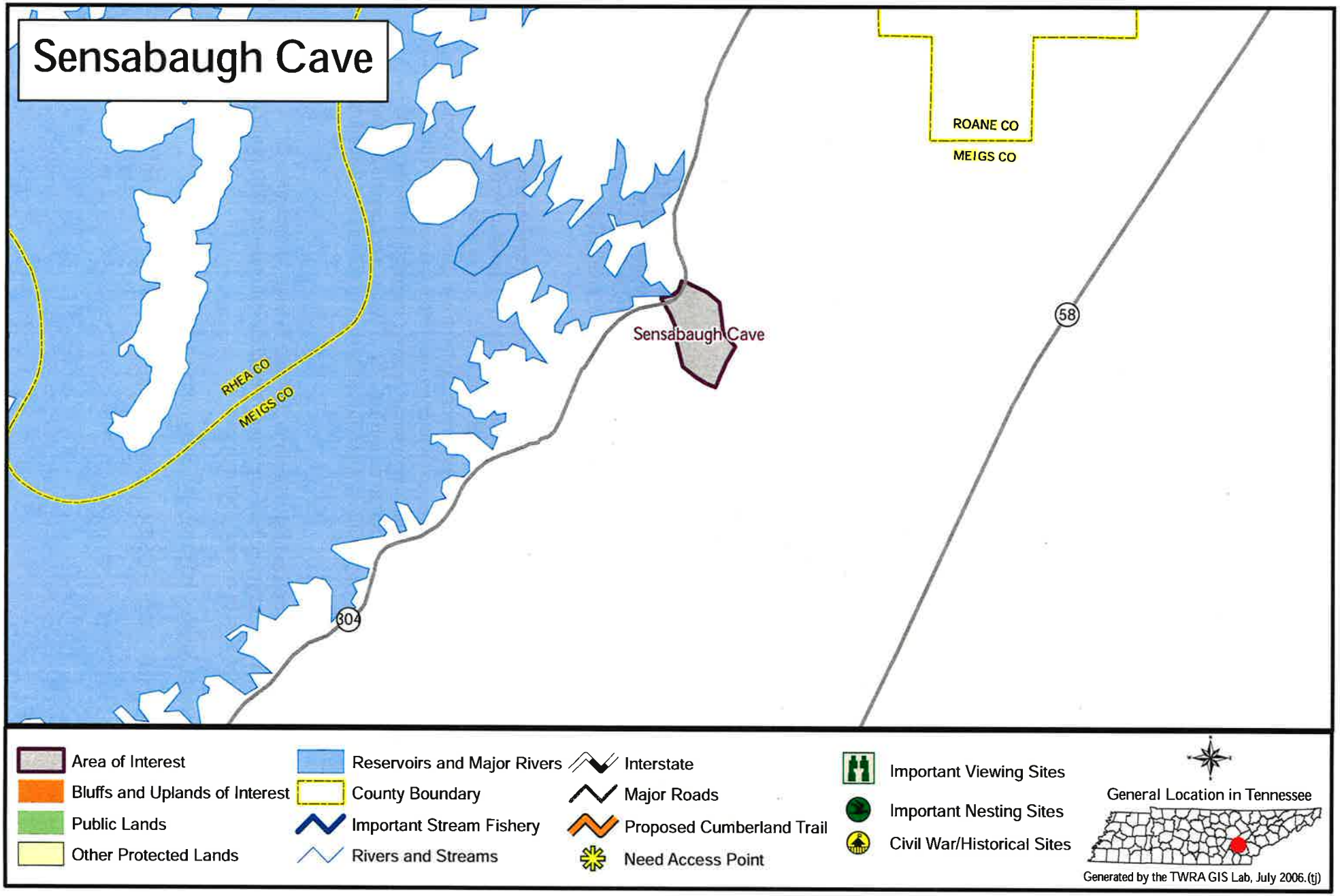
Significance - Sensabaugh Cave is home to a large but fluctuating colony of the state and federally endangered gray bat (*Myotis grisescens*). The summer roost has been estimated to contain as many as 8,000 gray bats since 1982, though the most recent count indicated only 340 (Harvey & Britzke, 2002).

Strategy - As with any inflow cave, protecting the watershed draining into it is key to maintaining the integrity of the cave. The presence of any large bat colony often implies an accompanying complex of dependent cave-obligate invertebrates, though this has not yet been determined for Sensabaugh Cave. Key to maintaining the bat roost, however, is proper control of human access to the cave at certain times of year, and establishment and management of a large forested buffer at the cave entrance. Establishment of a forested buffer to the nearby Watts Bar Lake also is prudent. In the short term, a relatively few acres can be protected surrounding the mouth of the cave, and maintained in native hardwoods, as appropriate. The core area (and subsequent expansions) may be protected through binding conservation easements or fee simple ownership. Comprehensive surveys of all biota in Sensabaugh Cave should be undertaken to augment what is currently known of the bat roost.

Aquatic cave animals likely are subject to negative impacts from excessive sedimentation, fertilizer, pesticides, animal waste, chemical spills, and agricultural & silvicultural runoff. A primary goal for any population is to control to the greatest extent possible the contributing sources in the recharge area supporting their cave habitats. The balance of the recharge area should be likewise protected through various means, including but not limited to the implementation of proper agricultural and silvicultural BMP's. Regular water quality monitoring within the cave should be part of the site's management.

Land Protection Needs – 65 acres (core area of 5 acres plus an additional 60 acres to protect the recharge area) at an estimated cost of $100,000.

Potential Partners - USFWS, TWRA, TNC, TDEC


Sensabaugh Cave
ROANE CO
MEIGS CO
Sensabaugh Cave
58
RHEA CO
MEIGS CO
304
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SMITH BEND & HIWASSEE REFUGE

Location – (N35.5640, W84.8247 and N35.3872, W84.9789, respectively) The Smith Bend and Hiwassee Refuge projects are located on the Tennessee River in Rhea and Meigs counties approximately fifty miles upstream from Chattanooga and five miles below Watts Bar Dam.

Description – The projects consists of a variety of habitats including a significant amount of wetlands, prior converted wetlands, uplands and lowland riparian areas. Prior to the establishment of several upstream dams, the areas historically consisted of bottomland hardwoods and lands converted to agriculture that were subject to variable natural flooding regimes based on precipitation events and their proximity to the river. River flow is now regulated so the flooding regimes are greatly altered, although much of the areas are still subject to some infrequent flooding.

Significance – The eastern Tennessee River Valley is an important migratory corridor for numerous waterfowl species and is especially important for black ducks and wood ducks. Much of the habitat for these species has been lost over the past few decades with the increased development of the areas along the river system for homes and industrial sites.

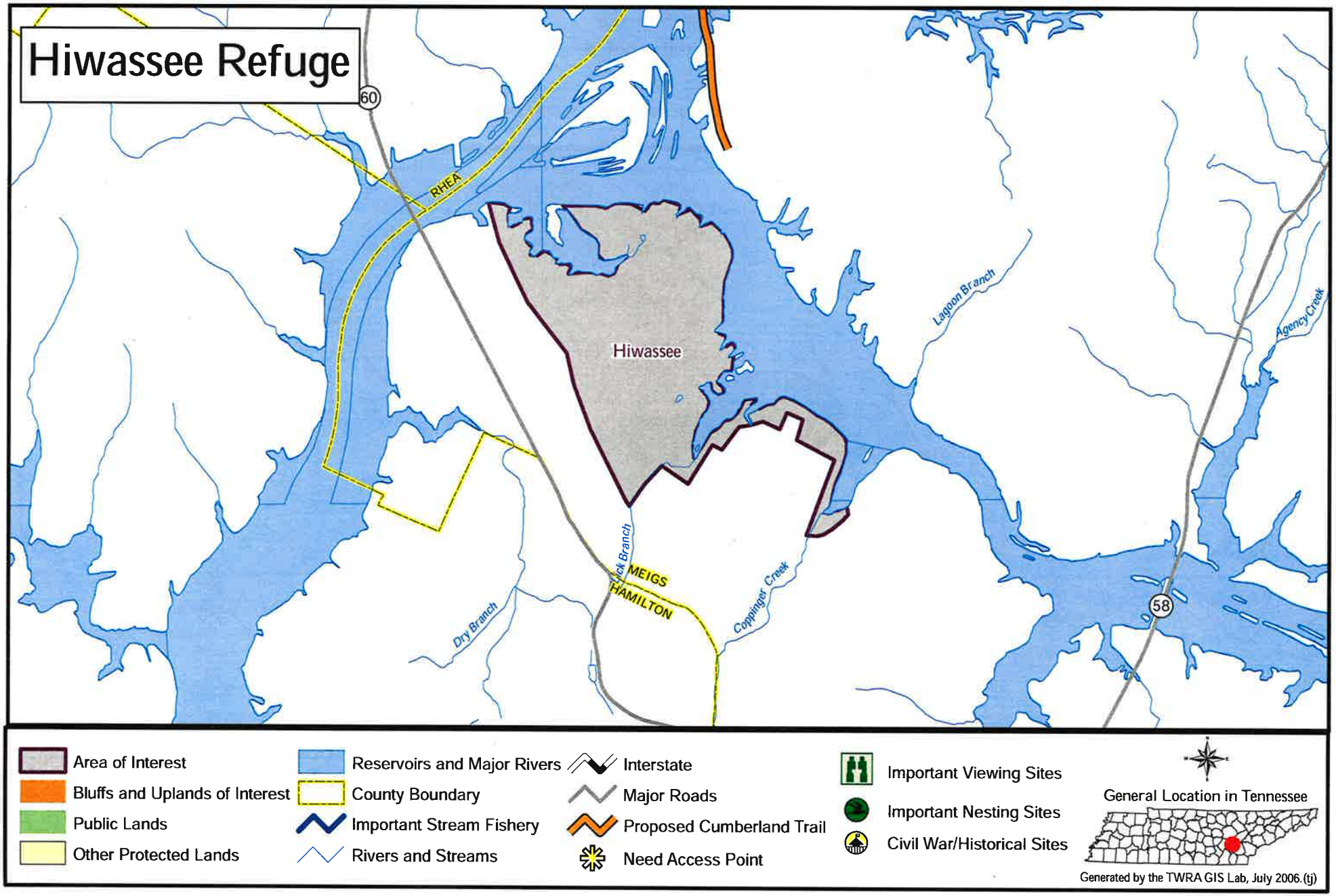
Protection of these areas and subsequent enhancement activities will provide habitat for the above mentioned species of concern as well as other species such as Swainson's warbler, Louisiana waterthrush, Acadian flycatcher, prothonotary warbler, American woodcock, wood thrush, and Kentucky warbler, all of which are identified as high-priority. Restoration of native grass and early successional habitats will provide important habitat benefits for a number of species requiring these habitats, including blue-winged warbler, bobolink (transient), northern bobwhite quail, field sparrow, eastern meadowlark, and orchard oriole.

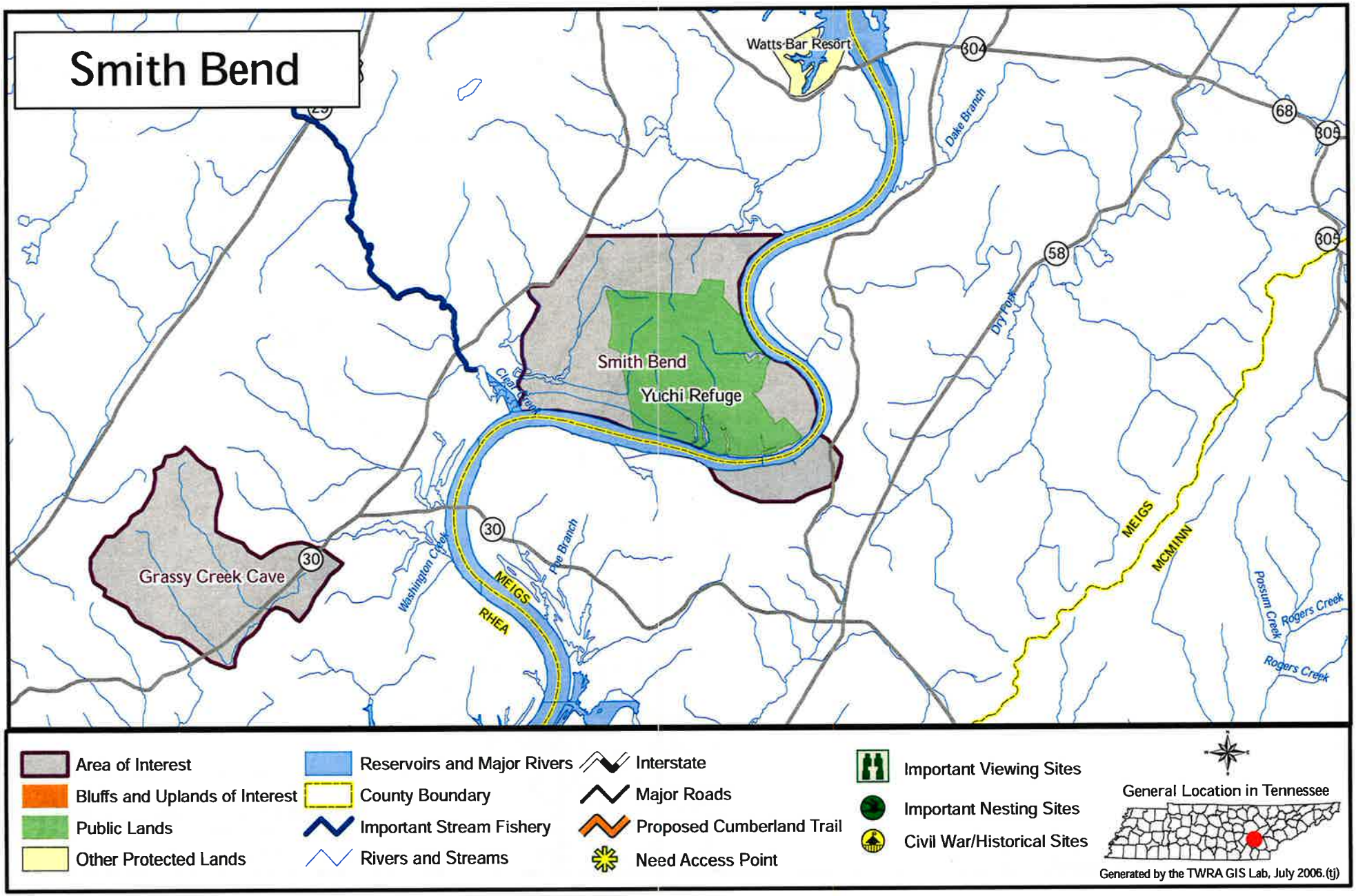
Migrating sandhill cranes have become an increasingly important species in the project areas, utilizing the wetland and wetland-associated habitats at Hiwassee Refuge and adjoining areas for stopover and wintering habitat. Currently, more than 10,000 sandhill cranes utilize the area each winter. The wetland restoration activities proposed for these areas will provide additional stopover and wintering habitat for this species. The project areas have also become instrumental in providing stopover migration habitat for the whooping crane reintroduction effort in the eastern US. TWRA is cooperating with the Whooping Crane Eastern Partnership to make this important stopover site available for this reintroduction effort.

The projects will have positive habitat benefits for other federally endangered or threatened species, including the bald eagle and five species of mussels. The projects will also benefit at least two state listed rare species.

Land Protection Needs - 1,000 acres at an approximate cost of $3,530,000

Potential Partners – TCF, TOS DU, Foothills Land Conservancy , TCF, and TWRA


Hiwassee Refuge
60
RHEA
Hiwassee
Lagoon Branch
Agency Creek
MEIGS
HAMILTON
Dry Branch
Coppinger Creek
58
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)


Smith Bend
Watts Bar Resort
304
68
305
58
30
Dake Branch
Dry Fork
Smith Bend
Yuchi Refuge
Grassy Creek Cave
Washington Creek
Pee Branch
MEIGS
RHEA
MCMINN
Possum Creek
Rogers Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SNAKE MOUNTAIN

Location - (N36.3333, W81.7073) Snake Mountain is located on the border of Johnson County, Tennessee and Watauga County, North Carolina, approximately 1.8 miles east of Zionville.

Description - Snake Mountain comprises 720 acres with approximately half in Tennessee, and is part of a double-peaked mountain to the east of the main Appalachian Mountain range (and east of the Cherokee National Forest). Two peaks comprise Snake Mountain, Snake Peak at 5518' and Meat Camp rises to 5560'. Lower and mid slopes of Snake Mountain have been cleared for pasture, but the upper slopes have natural plant communities intact and include northern hardwood forests and granite rock outcrop communities which allow for grand views.

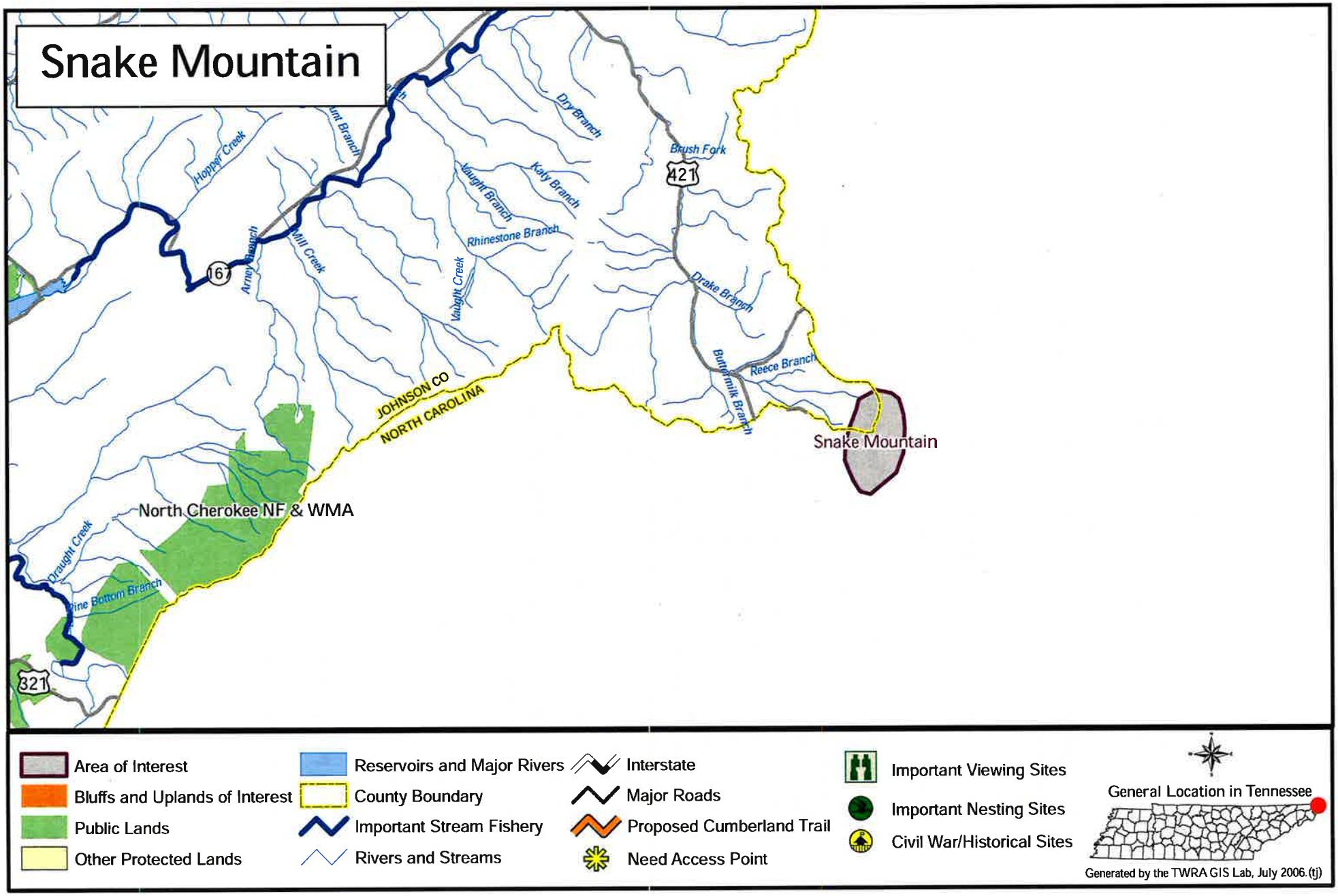
Significance - Biodiversity significance, very high to high. As with other locations in the southern Blue Ridge Mountains, the high elevations of Snake Mountain support habitats and species more common to the northeastern US, but rare further south. Such habitats include mountain woods, high-elevation forests, rocky bluffs, granite outcrops, mountain balds, and mashes and bogs. Twelve state-listed plant species are found in these habitats, and within Tennessee, most of these species are limited to the Blue Ridge Mountains and are considered rare and imperiled (S1 or S2). At least three of the state-listed plants, *Polygonum cilinode* (fringed black bindweed), *Prunus virginiana* (choke cherry), *Veronica americana* (American speedwell) have three or less extant occurrences in the state. *Cardamine clematitis* (mountain bittercress) grows in high elevation seeps. This plant is not only rare in Tennessee, but ranked as globally rare and perhaps imperiled.

There is a putative occurrence of *Corvus corax* (common raven) a state-threatened bird, and given the location and habitat of Snake Mountain, this seems likely. Presently in Tennessee, the species is restricted to the far eastern mountains and nests on narrow ledges often protected by overhanging rocks.

Strategy - TDEC files contain information on past landowners and this should be updated. TDEC should contact the North Carolina Division of Natural Heritage in order to learn of any biological surveys or conservation action within that section of Snake Mountain. Ornithologists should be contacted in order to confirm the presence of ravens and any other birds of interest.

Land Protection Needs – ~360 acres at an estimated cost of $750,000.

Potential Partners - TDEC, TWRA, TNC, TOS, Cherokee National Forest, Pisgah National Forest (North Carolina), and North Carolina Division of Natural Heritage.


Snake Mountain
Hopper Creek
Hunt Branch
Dry Branch
Brush Fork
421
Vaught Branch
Katy Branch
Rhinestone Branch
Arney Branch
Mill Creek
Vaught Creek
Drake Branch
Buttermilk Branch
Reece Branch
JOHNSON CO
NORTH CAROLINA
Snake Mountain
North Cherokee NF & WMA
Draught Creek
Pine Bottom Branch
321
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

SYCAMORE SHOALS STATE HISTORIC PARK

Location – (N36.3445, W82.2590) Sycamore Shoals State Historic Park is located in Carter County on U.S. Highway 321, in Elizabethton.

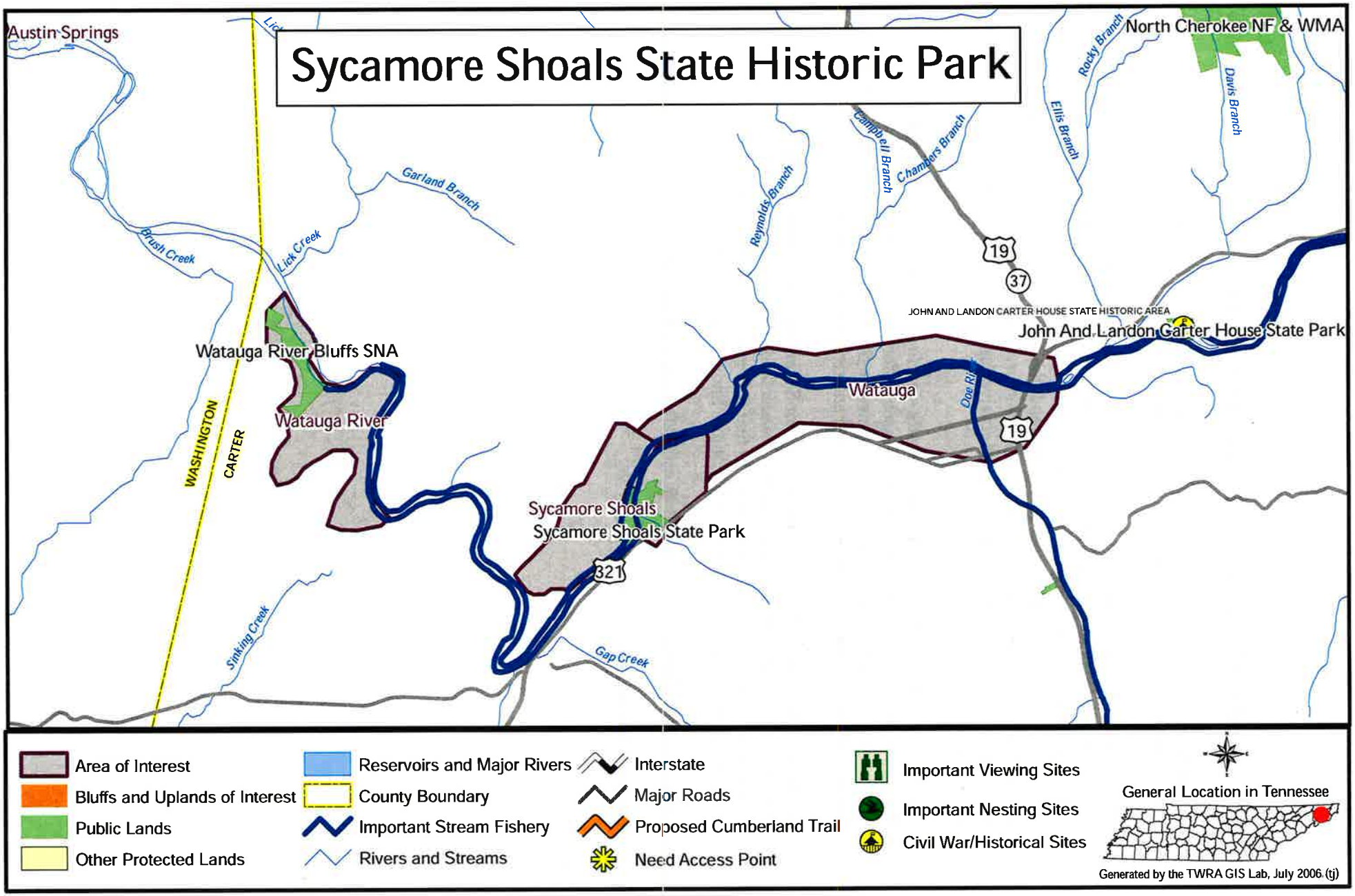
Significance - Sycamore Shoals is the site of the first permanent American settlement outside the original 13 colonies. It was here that the Watauga Association, the first majority-rule system of American democratic government was formed in 1772, when settlers elected five of their number to "govern and direct for the common good of all the people." These Articles of the Watauga Association invested in those elected representatives the legislative, judicial and executive functions of their fledgling government.

Sycamore Shoals is perhaps the most historically significant site in Tennessee. Sycmore Shoals played a pivotal role in not only Tennessee history but in the American Revolution. Today this site, preserved as a Tennessee State Park, invites visitors to relive history and enjoy a variety of historical, cultural and recreational experiences.

Strategy - The strategy for future acquisitions for Sycamore Shoals State Historic Park is to acquire properties surrounding the park for watershed protection and properties that have significant cultural and natural features that further the wildlife, aesthetics, interpretive and recreation missions of Sycamore Shoals Historic Area.

Land Protectin Needs – 201 acres at an estimated cost of $660,000.

Potential Partners TCF,TDEC, and, TNC.


Sycamore Shoals State Historic Park
Austin Springs
North Cherokee NF & WMA
Rocky Branch
Ellis Branch
Davis Branch
Campbell Branch
Chambers Branch
Reynolds Branch
Garland Branch
Brush Creek
Lick Creek
19
37
JOHN AND LANDON CARTER HOUSE STATE HISTORIC AREA
John And Landon Carter House State Park
Watauga River Bluffs SNA
Watauga River
Watauga
Doe Ri
19
WASHINGTON
CARTER
Sycamore Shoals
Sycamore Shoals State Park
321
Sinking Creek
Gap Creek
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

TUCKAHOE CREEK STATE SCENIC RIVER

Location – (N35.9869, W83.6360) Tuckahoe Creek is a tributary to the Lower French Broad River which contains parts of Cocke, Jefferson, Knox and Sevier Counties and drains 798 square miles before emptying into Fort Loudon Reservoir. Approximately 16 miles of Tuckahoe Creek in Sevier and Knox Counties from its confluence with the French Broad River upstream to its main stem headwaters was designated as a Class III State Scenic River in 1968.

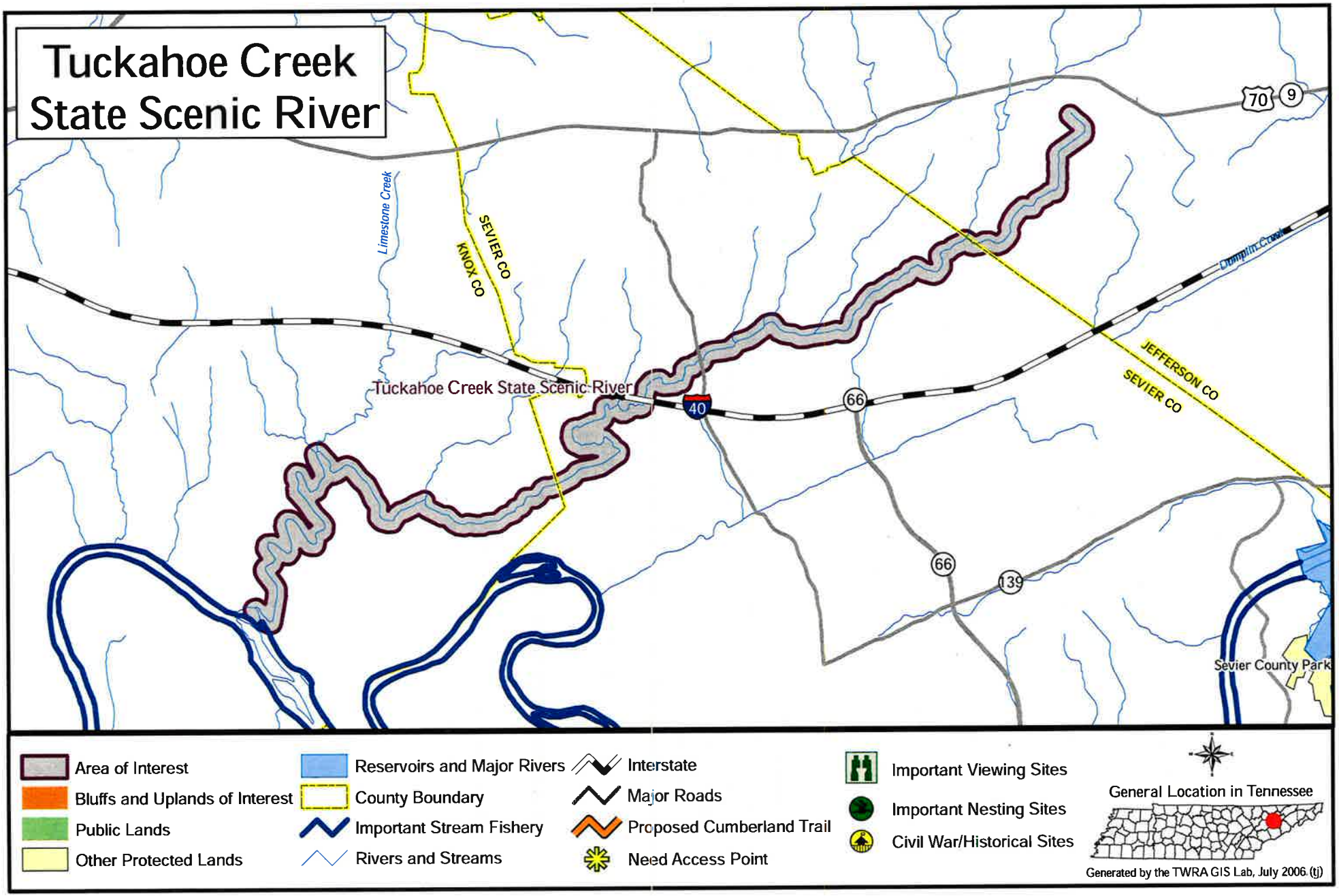
Description - Tuckahoe Creek originates north of Hwy 70 and flows some 16 miles southwesterly crossing Hwy 70 and I-40 before emptying into the French Broad River. The river flows through a landscape of rural and pastoral uses, with a mix of forested area and open lands.

Significance - The 1998 Tennessee Rivers Assessment Summary reported that Tuckahoe Creek's natural and scenic qualities were of local significance and its recreational fishery was of good.

Strategy - The site conservation plan for Tuckahoe Creek State Scenic River follows the guidelines of the State Scenic River Act and identifies a corridor of no more than 450 feet from the usual banks of the river on each side. Additionally, connecting contiguous protected areas to state and other publicly owned lands along the entire river corridor are a major approach toward protecting the Tuckahoe Creek and making it a scenic greenway. Methods for conserving these areas are by fee title purchases, conservation easements, landowner assistance programs, and conservation buyers. Public and private partnerships are key to protecting and maintaining this relatively unspoiled river. Acquisition of key tracts for public access and use will be strategically targeted.

Land Protection Needs – 100 acres at an estimated cost of $300,000

Potential Partners - TDEC, TWRA, TNC, USFWS, USFS, TVA, USACE, County Governments, Private Corporations, Foundations, Individual Donors.


Tuckahoe Creek
State Scenic River
Limestone Creek
KNOX CO
SEVIER CO
Tuckahoe Creek State Scenic River
Dumplin Creek
JEFFERSON CO
SEVIER CO
70
9
40
66
66
139
Sevier County Park
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006 (tj)

WALKERTOWN BRANCH BOG

Location – (N36.0269, W84.4052) Walkertown Branch Bog is located in Polk County west of Ducktown, 0.3-0.4 miles south of the railroad crossing.

Description - Located on the Blue Ridge Physiographic Province, the site is an open wetland historically used as a pasture. Herbaceous cover includes rushes, partridge pea, broomsedge, bush bluestem, and bull rushes covering a mat of cranberry.

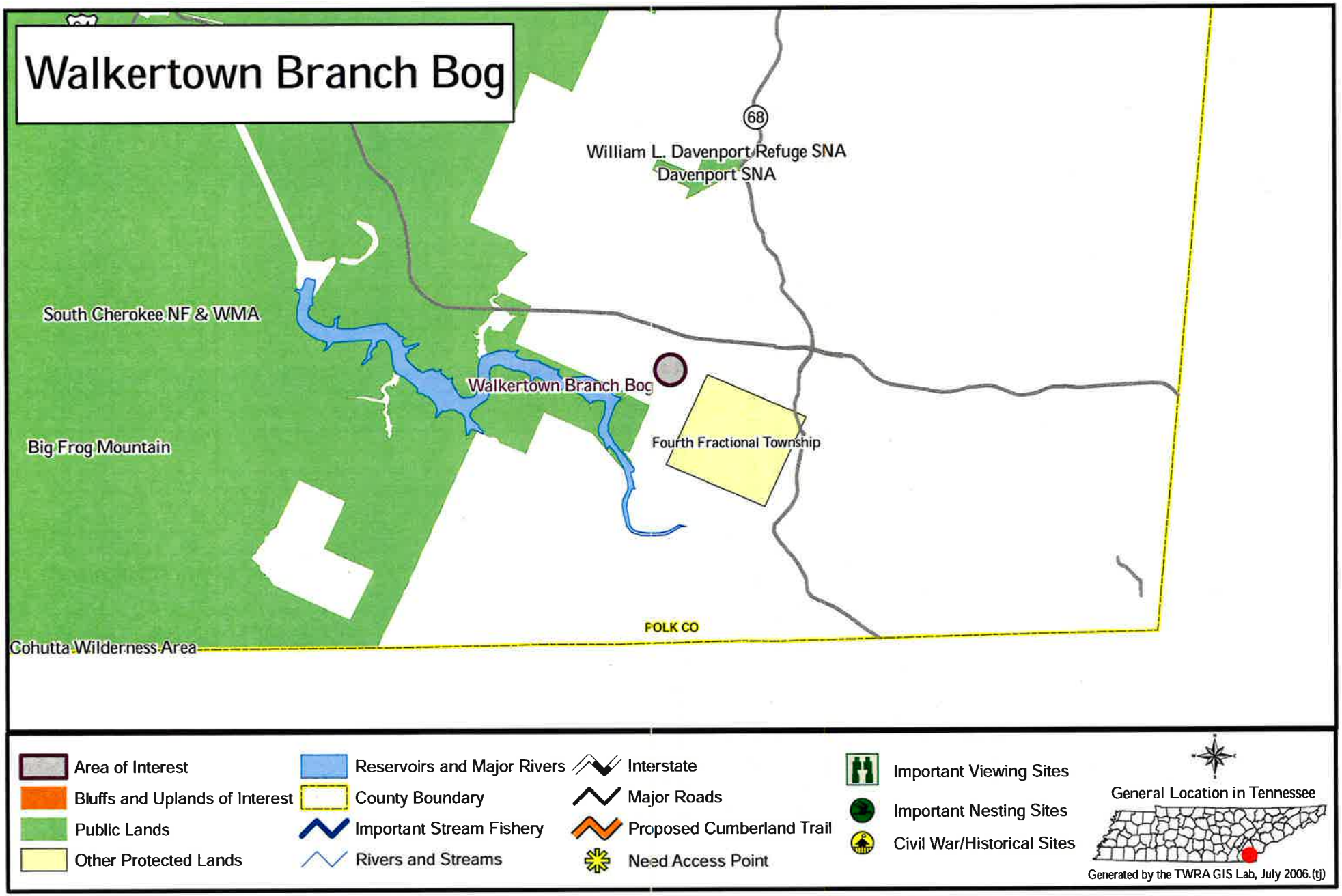
Significance – Site Importance High (B3) – This southern bog type is rare in the state and may be a remnant of glacial influence.

The site is ecologically significant for its population of large cranberry (*Vaccinium macrocarpon*), which is listed as threatened in the state.

Strategy - The strategy for acquisition at Walkertown Branch Bog is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 46 acres at an estimated cost of $80,000.

Potential Partners – TDEC


Walkertown Branch Bog
68
William L. Davenport Refuge SNA
Davenport SNA
South Cherokee NF & WMA
Walkertown Branch Bog
Big Frog Mountain
Fourth Fractional Township
POLK CO
Cohutta Wilderness Area
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

WATAUGA RIVER ACCESS AND HATCHERY

Location – (N36.3552, W82.2354) This project is located along the Watauga River adjacent to Sycamore Shoals State Park in northeast Tennessee in the city of Elizabethton, Carter County. (See Sycamore Shoals State Historic Park map)

Description – The property is part of the historic floodplain of the Watauga River, with 3,200 feet of river frontage. TVA dam operation no longer allows this property to flood. The site was used for a filtration plant operated by North American Rayon. Contaminated soil and abandoned structures remain on the property. The water supply to the filtration plant is safe and intact, providing access to a spring that can deliver 13 million gallons/day of 58° F. This water has been tested and is suitable for a trout hatchery.

Significance – The Watauga River is recovering from decades of industrial abuse. As recent as the 1970s the river was dead. In the past 30 years water quality improvements have successfully restored aquatic life to the river, but much work is still needed. The entire watershed needs improvements and this site is an excellent place to start. Converting this property from an industrial spoil to multi-use, environmentally friendly area would be a major achievement for State of Tennessee, TWRA, and the City of Elizabethton.

According to TWRA's strategic plan this land should be acquired to provide public fishing access to the Watauga River where most of the river is in private ownership. The Watauga River has a great trout fishery that is visited annually by about 21,000 anglers and is valued at $836,000. More access would improve the value of this resource to anglers and the community. This access would also be part of a greenway that could be used by everyone, not just anglers.

TWRA intends to build a hatchery and educational center to benefit TWRA's trout program and the City of Elizabethton. TWRA's strategic plan identifies the need for an additional 100,000 pounds of trout to meet growing demand for trout programs. The City would benefit because a hatchery at this location would draw additional tourism and provide an aquatic education facility for schools in the surrounding counties. Existing TWRA hatcheries are visited by up to 30,000 people each year and these hatcheries do not have educational centers. The hatchery planned for this site will have an educational center that will be sure to draw thousands more visitors. The educational center will have access to the river and hatchery, making it a great place to teach visitors about fishing, aquatic resources, and the importance of functioning rivers and riparian zones. The economic impacts of hatchery operation and tourism will certainly benefit the community.

Land Protection Needs – 19.3 acres in 3 tracts at a cost of $212,000. TWRA currently has an option on this property. An additional tract of 5.6 acres will be donated for the construction of a trout hatchery by the City of Elizabethton.

Potential Partners – TWRA, USFWS, EPA, USFS, TVA, Trout Unlimited, Boone Watershed Partnership, and the governments of Elizabethton and Carter County. The City of Elizabethton and Carter County want to help TWRA develop this property. The City is donating 5.6 acres and selling the remaining tracts at appraised value. The City has also offered to receive effluent from the hatchery into the city's water treatment system. The County has offered prison labor for various tasks associated with the cleanup of the property.

TWRA will compete for funding from the Environmental Protection Agency to cleanup the site via grants authorized by Subtitle A of the "Small Business Liability Relief and Brownfields Revitalization Act". The award of these grants will be essential to the success of this project.

The U.S. Fish and Wildlife Service, National Hatchery System would annually provide disease-free trout eggs to be reared at the hatchery.

WATAUGA RIVER BLUFFS SNA

Location – (N36.3547, W82.2980) The Watauga River Bluffs are located in the Ridge and Valley in Carter County off Stream Plant Rd near the town of Watauga. (See Sycamore Shoals State Historic Park map)

Description - The Watauga River Bluffs most conspicuous feature is the steep slope that drops more than 200 feet to the Watauga River's edge. The slope and the narrow bluffs make up most of the 50 acres. A small cave is located at the northeast end of the property. No public access has been developed at this site as it is primarily conserved for the purpose of protecting the population of Carolina pink.

Significance - The ecology is noteworthy because Watauga River Bluffs supports the largest known population of the state listed Carolina pink (*Silene caroliniana*). This population is mostly concentrated in an open dry chestnut oak forest occurring on the west to south facing upper slopes. This community has white ash as an associate canopy species and a sub-canopy comprised of bitternut hickory, eastern red cedar, and serviceberry. This community has a sparse herbaceous layer. This is a succeeding forest that is estimated to be approximately 60 or more years old.

Strategy - Watauga River Bluffs currently protects only 50 acres of land in a narrow strip along the Watauga River immediately southwest of the Town of Watauga. The landform currently owned by the State includes the bluffs and a cave at the northeast end of the property. Several acres of interesting knobs (the Bogart Knobs) and deep draws lie just to the southwest, west and southeast of the current property boundary and include plant communities worthy of protection. Additionally, steep bluffs to the southeast of the current boundary, called the Betty Range Cliff, are worthy of protection.

Land Protection Needs - 343 acres at an estimated cost of $950,000.

Potential Partners - TDEC and TWRA.

WRIGHT WHITE PINE STAND REGISTERED SNA

Location – (N36.4988, W81.9297) Wright White Pine Stand is located in Johnson County on Sluder Rd approximately 10 miles west of Mountain City.

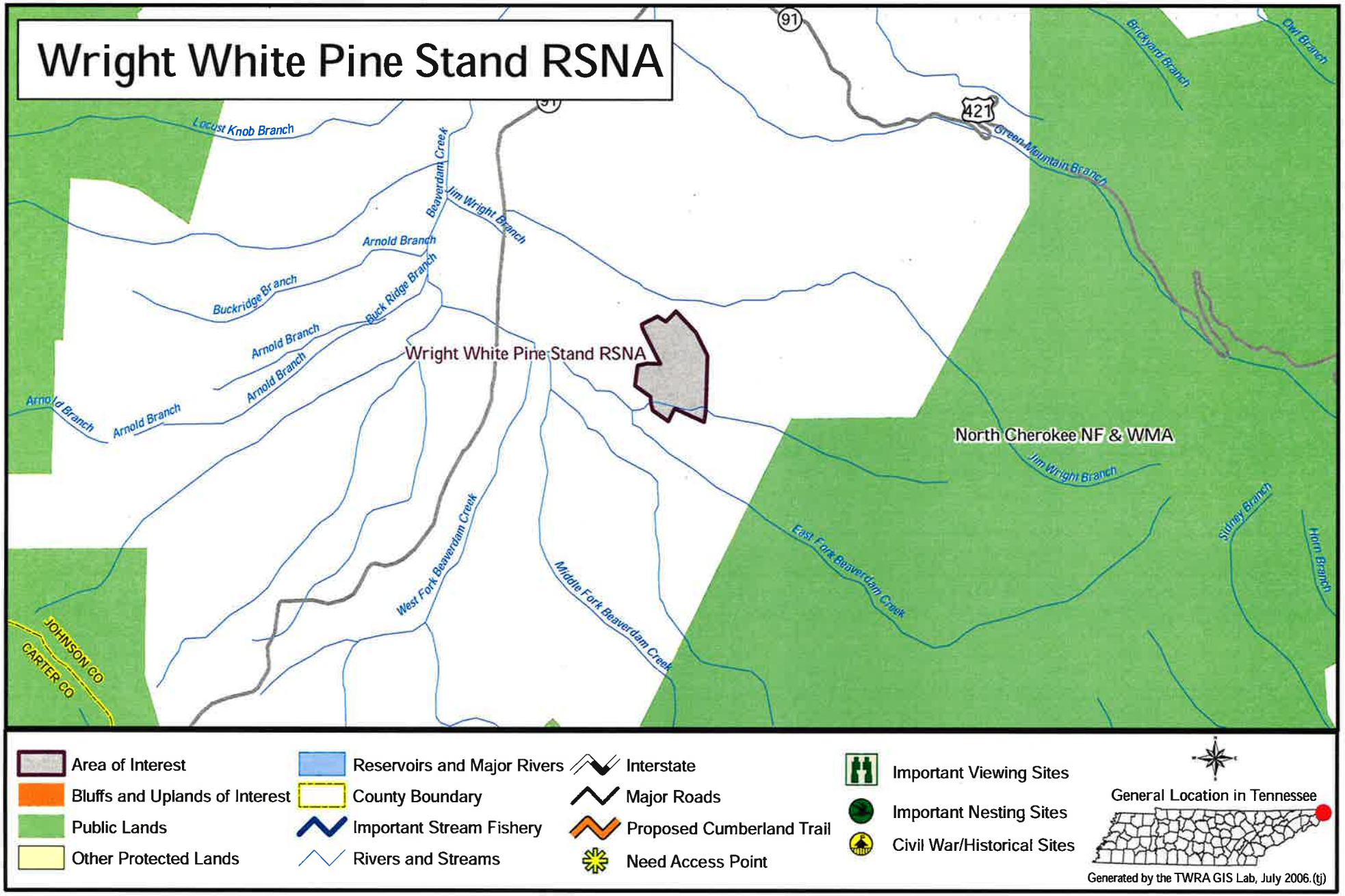
Description - Located in the Blue Ridge Physiographic Province, the site contains white pine and hemlock, 30-36 dbh, 120-130 feet high, and 100 years old. This white pine-hemlock stand is a fine example of the forest type, which was once widespread in northeast Tennessee. Although many of the trees have a dbh of greater than 30 inches, the forest is not virgin as the forests of Shady Valley were clearcut in 1917. Hardwood species, which are constituents of the canopy layer include chinkapin and northern red oak, blackgum, white ash, and American elm. The understory is quite open, but is composed primarily of rhododendron, with scattered individuals of buffalo-nut, dogwood, umbrella magnolia, and striped maple. Elevation is 2,875-2,930 feet and topography is slightly rolling.

Significance – Site Importance Moderate (B4) – Rare elements include the least weasel, hairy-tailed mole, star-nosed mole, and eastern woodrat.

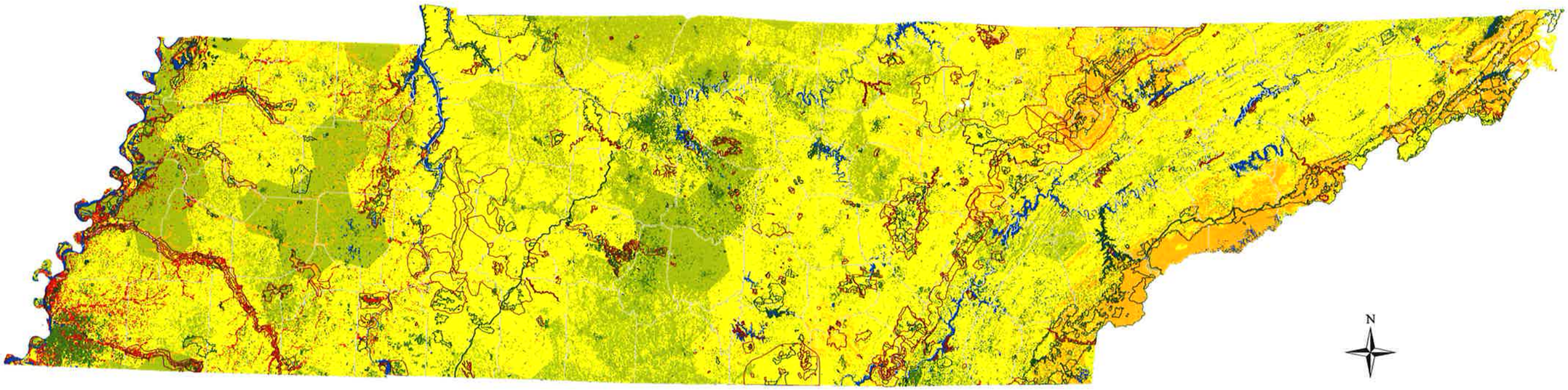
Strategy - The strategy for acquisition at Wright White Pine Stand is to acquire properties within and adjacent to the site design (site boundary) for access or access control, watershed protection, and preservation of rare species and representative communities. Preservation of these rare species and wildlife will provide educational opportunities for area colleges, universities, and the general public, and work toward preserving Tennessee's natural heritage.

Land Protection Needs – 39 needed acres at an estimated cost of $125,000.

Potential Partners – TDEC, TDA, and TWRA.


Wright White Pine Stand RSNA
91
421
Locust Knob Branch
Beaverdam Creek
Jim Wright Branch
Arnold Branch
Buckridge Branch
Buck Ridge Branch
Arnold Branch
Arnold Branch
Arnold Branch
Arnold Branch
Wright White Pine Stand RSNA
Brickyard Branch
Civil Branch
Green Mountain Branch
North Cherokee NF & WMA
Jim Wright Branch
Sidney Branch
Horn Branch
East Fork Beaverdam Creek
West Fork Beaverdam Creek
Middle Fork Beaverdam Creek
JOHNSON CO
CARTER CO
Area of Interest
Bluffs and Uplands of Interest
Public Lands
Other Protected Lands
Reservoirs and Major Rivers
County Boundary
Important Stream Fishery
Rivers and Streams
Interstate
Major Roads
Proposed Cumberland Trail
Need Access Point
Important Viewing Sites
Important Nesting Sites
Civil War/Historical Sites
General Location in Tennessee
Generated by the TWRA GIS Lab, July 2006.(tj)

Areas of Species Richness - TN Gap Analysis Program



N

- 1 - 80 species
- 81 - 95 species
- 96 - 110 species
- 111 - 125 species
- 126 - 140 species
- 141 - 160 species

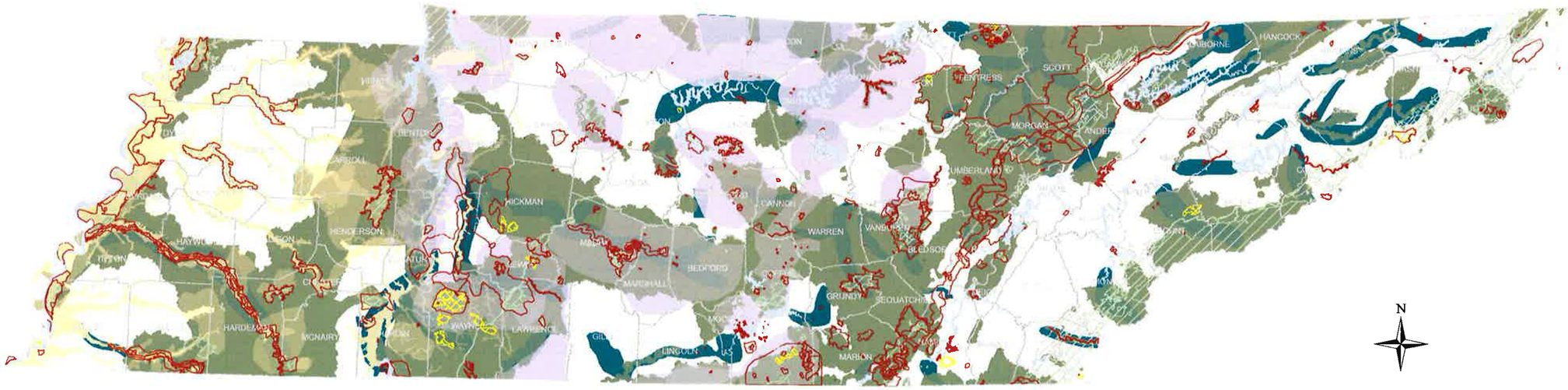
- Areas of Interest
- Public Lands
- County Boundaries

Appendix 1

Species richness from Tennessee GAP Analysis Report, June 2000

Generated by the TWRA GIS (jj), 5/06

Priority Conservation Areas

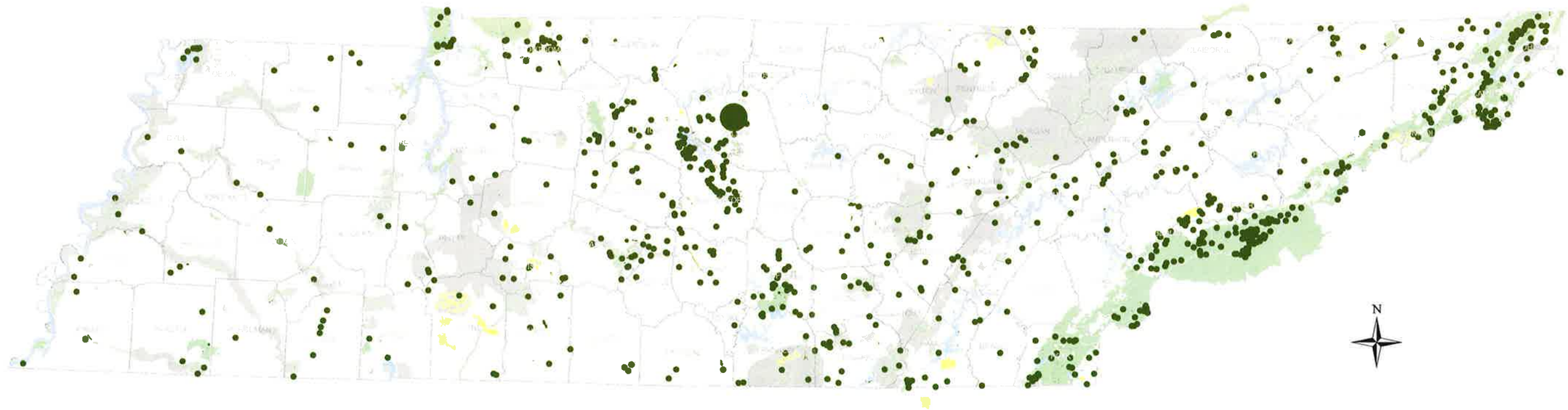


- TNC's Ecoregional Planning & Freshwater Initiative Conservation Areas
- West TN Wildlife Resources Conservation Plan
- Central Hardwoods Joint Venture Conservation Areas
- Important Aquatic Habitat Areas
- Areas of Interest
- Public Lands
- Other Protected Lands
- Major Reservoirs and Rivers
- County Boundaries

Appendix 2

Generated by the TWRA GIS (jj), 5/06

Rare Plant Locations

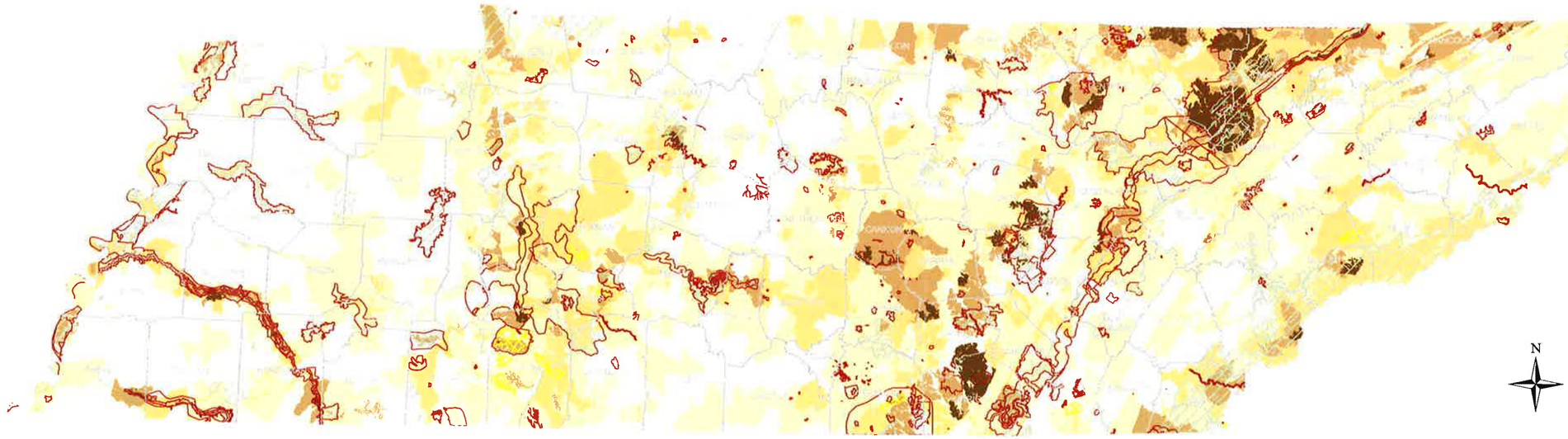


Rare Plant Locations
Areas of Interest
Public Lands
Other Protected Lands
Major Rivers and Reservoirs
County Boundaries

Appendix 3

Generated by the TWRA GIS (jj), 5/06

Combined Current CWCS Priority Habitat Areas



N

Tier 1 GCN Species

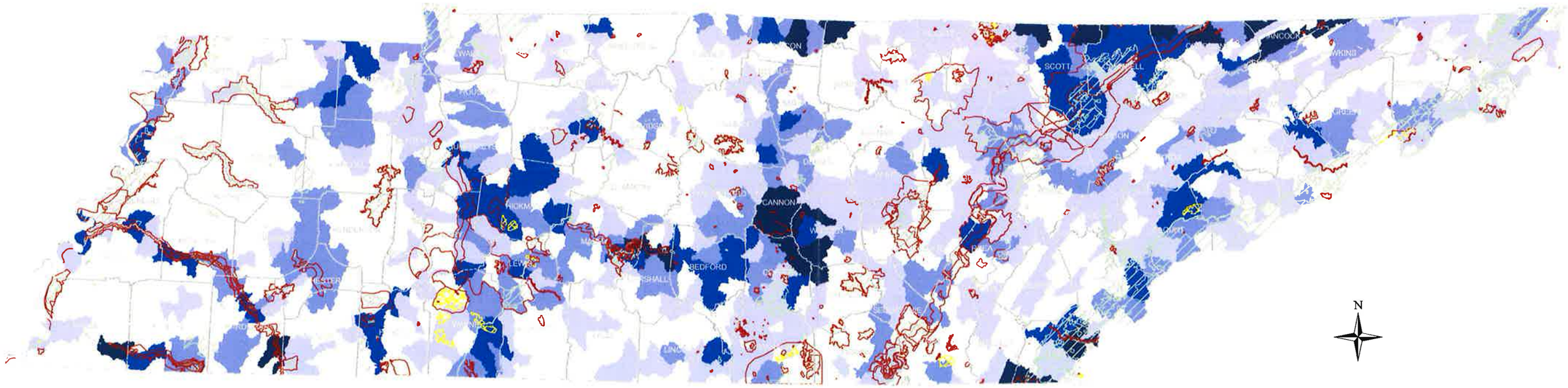
- 1 - 2
- 3 - 6
- 7 - 10
- 11 - 16

- Areas of Interest
- Public Lands
- Other Protected Lands
- County Boundaries

Appendix 4

Generated by the TWRA GIS (jj), 7/06

CWCS Aquatic Priority Habitat Areas



Aquatic Biological Hotspots

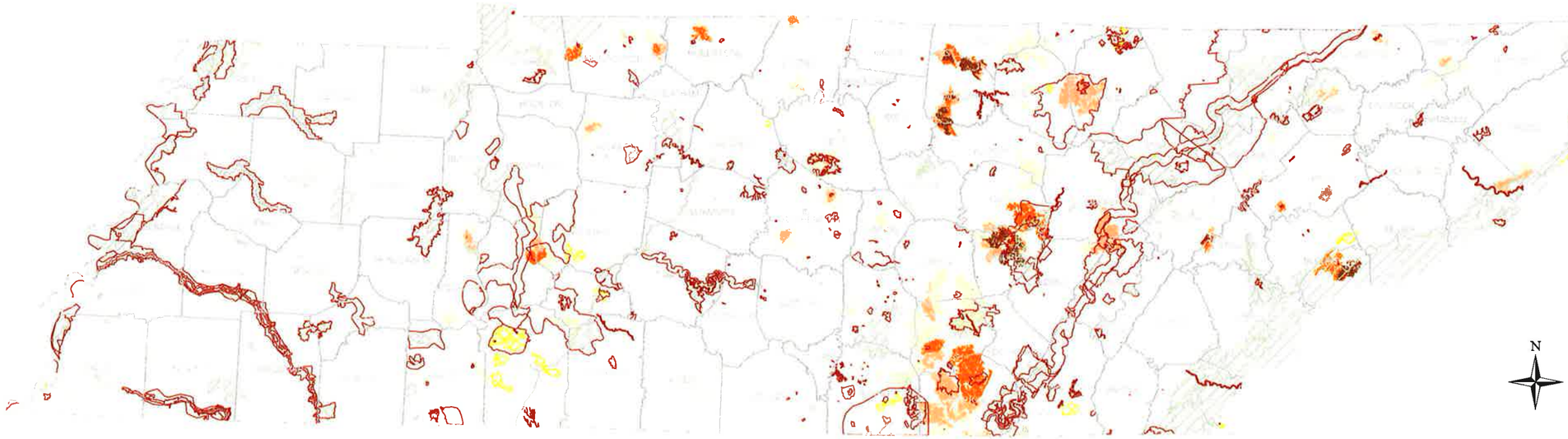
- Low
- Medium
- High
- Very High

- Areas of Interest
- Public Lands
- Other Protected Lands
- County Boundaries

Appendix 5

Generated by the TWRA GIS (jj), 7/06

CWCS Subterranean Priority Habitat Areas



N

Karst Biological Hotspots

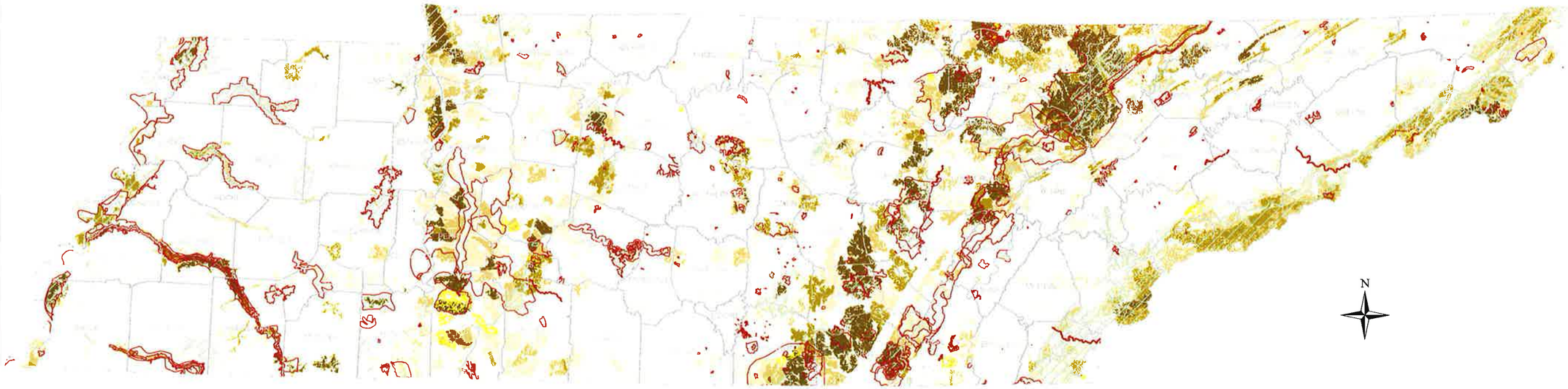
- Low
- Medium
- High
- Very High

- Areas of Interest
- Public Lands
- Other Protected Lands
- County Boundaries

Appendix 6

Generated by the TWRA GIS (jj), 7/06

CWCS Terrestrial Priority Habitat Areas



N

Terrestrial Biological Hotspots

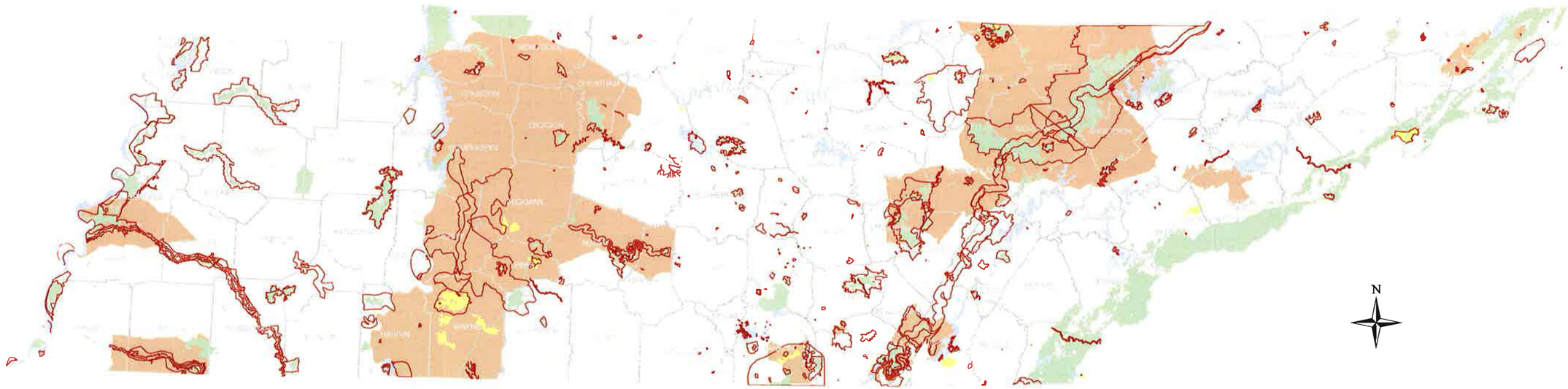
- Low
- Medium
- High
- Very High

- Areas of Interest
- Public Lands
- Other Protected Lands
- County Boundaries

Appendix 7

Generated by the TWRA GIS (jj), 7/06

Forest Legacy Areas

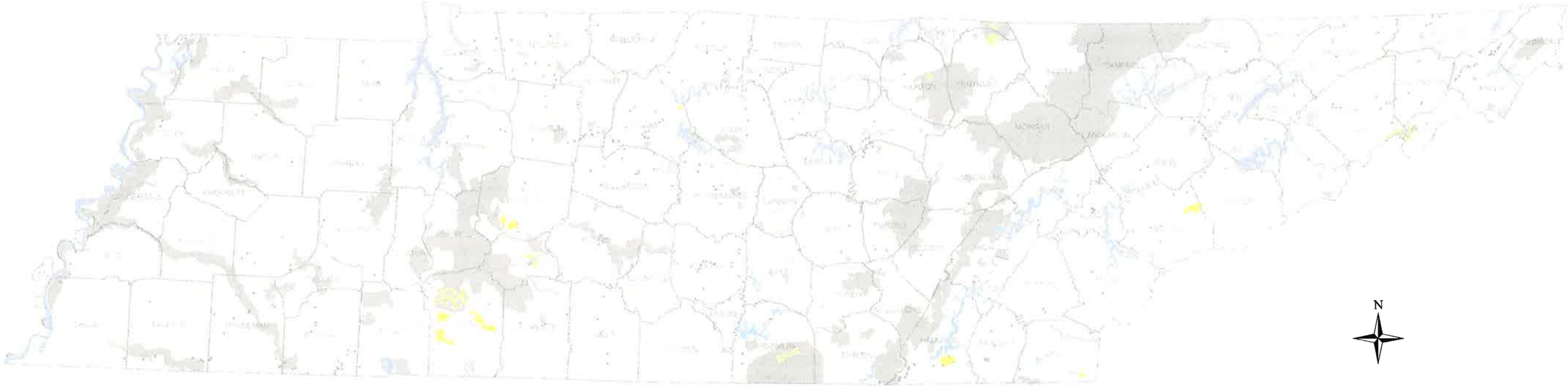


- Areas of Interest
- Forest Legacy Areas
- Public Lands
- Other Protected Lands
- Major Rivers and Reservoirs
- County Boundaries

Appendix 8

Generated by the TWRA GIS (jj), 5/06

Tennessee Heritage Conservation Plan
Areas of Interest
for
Tennessee Division of Forestry
Tennessee Department of Environment and Conservation
Tennessee Wildlife Resources Agency



N

- Areas of Interest
- Public Lands
- Other Protected Lands
- Major Rivers and Reservoirs
- County Boundaries

Appendix 9

Generated by the TWRA GIS (jj), 5/06

APPENDIX 10

TENNESSEE HERITAGE CONSERVATION TRUST FUND ACT OF 2005

CHAPTER NO. 444

HOUSE BILL NO. 2274
By Representatives McMillan, McDonald, Coleman, Moore, Fowlkes, Russell Johnson, DuBois, Marrero

Substituted for: Senate Bill No. 2259
By Senator Kyle

AN ACT to amend Tennessee Code Annotated Title 11, Chapter 7, relative to acquisition and preservation of land.

WHEREAS, from the hills and mountains of East Tennessee to the Cumberland Plateau to the Mississippi River, Tennessee offers an unparalleled array of natural areas; and

WHEREAS, Tennessee's undeveloped open spaces and undeveloped natural areas are important to our citizens' physical and mental health, the preservation of our state's heritage, and the continued growth and expansion of our state's economy; and

WHEREAS, in recent years there has been a significant increase in the rate at which Tennessee's open spaces are being developed. The United States Department of Agriculture reports that Tennessee lost an average of 100,000 acres of forest land and 75,000 acres of farmland to urbanization and development each year between1999-2003. As our state continues to grow more urbanized, protecting undeveloped open space and our natural heritage will become a greater challenge; and

WHEREAS, protecting undeveloped open space and the natural heritage of our state is critical to building and maintaining a vibrant economy. One of the fundamental engines of economic growth in the coming years will be the preservation of our state's high quality of life and a key component of the preservation of our quality of life lies in preserving our natural heritage; and

WHEREAS, our state's natural beauty draws thousands of visitors every year, making tourism the second largest industry in Tennessee. The tourism industry employs over 177,000 Tennesseans and contributes more than ten and a half billion dollars each year to our economy; and

WHEREAS, the state's forestry and agricultural industries also are invaluable components of Tennessee's economy, and state government must work to partner with these industries and other interested stakeholders to preserve Tennessee's rich natural heritage and valuable undeveloped open spaces; and

WHEREAS, the establishment of the Tennessee Heritage Conservation Trust Fund will enable the state to collaborate and partner with both public and private entities to permanently preserve some of Tennessee's undeveloped open spaces, while at the same time enhancing and strengthening the state's economy; now, therefore,

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

11-7-101. Short Title. This act shall be known and may be cited as the "Tennessee Heritage Conservation Trust Fund Act of 2005".

11-7-102. Definitions. As used in this part, unless the context requires otherwise:

(1) "Board" means the governing body of the Tennessee Heritage Conservation Trust Fund.

(2) "Non-profit organization" means an entity that is exempt from federal income taxation under § 501(a) of the Internal Revenue Code as an organization described in §501(c)(3) of the Internal Revenue Code.

(3) "Trust fund" means the Tennessee Heritage Conservation Trust Fund.

11-7-103. Establishment of trust fund.

(a) The Tennessee Heritage Conservation Trust Fund is hereby established as a special agency account in the state general fund. The purpose of this trust fund is to assist the state in permanently conserving and preserving tracts of land within the state of Tennessee for the purposes of promoting tourism and recreation, including outdoor activities such as hunting, fishing, equestrian activities and hiking; protecting, conserving and restoring the state's physical, cultural, archeological, historical and environmental resources; and preserving working landscapes.

(b) Moneys in the trust fund shall be invested by the state treasurer in accordance with applicable general law, except as qualified by this part. The state treasurer shall hold the trust fund separate and apart from all other moneys, funds, and accounts.

(c) Any balance remaining unexpended at the end of a fiscal year in the trust fund shall be carried forward into the subsequent fiscal year.

(d) Investment earnings credited to the assets of the trust fund, including but not limited to interest, shall be carried forward into the subsequent fiscal year.

(e) The trust fund is authorized to request and receive gifts, contributions, bequests, donations, and grants from any legal and appropriate source to effectuate its purpose. Any such funds received shall be deposited into the trust fund, provided that if any such items are not in the form of funds, any income, rents, or proceeds generated from them shall be deposited into the trust fund.

(f) The trust fund is authorized to create or establish a non-profit organization which shall also be eligible to request and receive gifts, contributions, bequests, donations and grants from any legal and appropriate source to effectuate the trust fund's purpose.

(g) Moneys in the trust fund and in any non-profit entity created pursuant to subsection (f) shall be expended only in accordance with, and for the purposes stated in, the provisions of this part. No part of the fund shall be diverted to the general fund or any other public fund for any purpose whatsoever.

11-7-104. Establishment of board of trustees.

(a) There is hereby established the Tennessee Heritage Conservation Trust Fund Board of Trustees. The board shall be attached to the department of environment and conservation for administrative purposes but shall be independent of the department. Expenditures from the trust fund shall be made only upon authorization of the board.

(b) The board shall consist of eleven (11) members.

(1) Trustees shall be appointed by the governor, subject to confirmation by each house of the general assembly, but appointments shall be effective until adversely acted upon by the general assembly.

(2) Persons appointed to the board shall include persons knowledgeable in the areas of land acquisition, management, conservation and protection.

(3) The membership of the board shall appropriately reflect the racial and geographic diversity of this state. At no time shall the membership of the board be composed of more than four (4) members who reside in any one of the grand divisions of the state as defined in Title 4, Chapter 1, Part 2.

(4) The commissioner of environment and conservation, the commissioner of agriculture, and the executive director of the wildlife resources agency, or their designees, shall serve as ex-officio, non-voting members of the board.

(5) The governor shall appoint a board chairperson from the membership of the board. Other officers shall be selected as provided in the bylaws of the fund.

(c) Trustees shall serve four (4) year, renewable terms; provided that of the initial trustees appointed:

(1) Three (3) trustees shall be appointed for an initial term of four (4) years;

(2) Three (3) trustees shall be appointed for an initial term of three (3) years;

(3) Three (3) trustees shall be appointed for an initial term of two (2) years; and

(4) Two (2) trustees shall be appointed for an initial term of one (1) year.

(d) Should a board position become vacant through resignation, removal, or other cause, the governor shall appoint a new member to serve the unexpired term, subject to confirmation of each house of the general assembly as provided in (b). Trustees shall continue to serve on the board after the expiration of their term until a new trustee is appointed.

(e) A quorum of the board shall be seven (7) trustees.

(f) Trustees shall receive no compensation for their service on the board, but may be reimbursed for those expenses allowed by the provisions of the comprehensive travel regulations as promulgated by the department of finance and administration and approved by the attorney general and reporter.

(g) The board shall adopt and implement a policy related to conflicts of interest to ensure that all trustees avoid any situation that creates an actual or perceived conflict of interest related to the work of the trust fund.

(h) The board shall submit an annual report to the governor, speaker of the house, speaker of the senate, comptroller of the treasury, chairperson of the senate environment, conservation and tourism committee, chairperson of the house conservation and environment committee, chairperson of the senate government operations committee, and chairperson of the house government operations committee by June 30 of each year. Such report shall include detailed information on the operation and financial status of the trust fund and any non-profit entity created pursuant to 11-7-103(f).

(i) The trust fund and any non-profit entity created pursuant to 11-7-103(f) shall be subject to an annual audit by the comptroller of the treasury, and the trust fund or entity shall bear the full costs of this audit.

(j) Operating expenses of the board and its staff shall be paid from the fund.

11-7-105. Authority of board of trustees

In carrying out the purposes of the trust fund, the board is authorized to do the following:

(1) Acquire for the state, by purchase or by donation, and convey, sell, exchange, lease or otherwise transfer any interest in real property; however, the board does not have the power of eminent domain;

(2) Make grants or loans to state, federal or local governments and to non-profit organizations in order to carry out the purposes of this part including, but not limited to, grants or loans provided to acquire a fee simple or other interest in real property;

(3) Enter into contracts and cooperative agreements, other than grants or loans pursuant to subsection (b), with state, federal and local governments, with private individuals and corporations, and with associations and organizations as the trust fund may deem necessary or convenient to enable it to carry out the purposes of this part;

(4) Adopt, amend and repeal bylaws;

(5) Appoint an executive director of the fund and such other staff as is necessary to carry out the provisions of this part;

(6) Adopt policies and guidelines for the use of the trust fund, including the procedure for identifying projects, establishing conservation priorities and allocating money from the trust fund; and

(7) Take any other necessary actions to carry out the provisions of this part.

11-7-106. Grants and loans from trust fund

(a) The board shall make grants or loans pursuant to 11-7-105 only after the recipient entity has entered into an agreement with the trust fund, on the terms and conditions specified by the board. After approving a grant or loan, the board may assist the grantee in carrying out the purposes of the grant.

(b) When awarding grants or making loans pursuant to this section, the board may require repayment of those funds on the terms and conditions it deems appropriate. Proceeds from the repayment or reimbursement of amounts granted or loaned by the board shall be deposited in the fund.

(c) Any entity applying for a grant or loan from the trust fund to acquire an interest in real property shall specify the following in the grant or loan application:

(1) The intended use of the property;

(2) The intended ultimate owner of the property;

(3) The entity that will be responsible for managing the property;

(4) The funding source for the cost of ongoing management; and

(5) Any other information required by the board.

(d) Any entity applying for a grant or loan from the trust fund to acquire an interest in real property shall provide a copy of the organization's most recent audited annual financial statements. Such statements must have been prepared within two (2) years of the date of the grant application.

(e) In order to receive a grant from the trust fund to assist in the acquisition of any interest in real property, a public agency or nonprofit organization must enter into an agreement with the board. The terms of such agreement shall include the following:

(1) The terms under which the interest in real property is ultimately acquired shall be subject to the board's approval;

(2) The interest in real property acquired under the grant shall not be used as security for a debt unless the board approves the transaction;

(3) The board shall take appropriate action to protect the public interest in the acquisition by ensuring that the land will be permanently conserved. In meeting this obligation, the board shall employ appropriate means, including but not limited to the acquisition of conservation easements or reversionary interests;

(4) Any subsequent transfer of an interest in the real property acquired pursuant to this part shall be subject to approval of the board, and a new agreement sufficient to protect the public interest shall be entered into between the board and the transferee;

(5) A description of the level of use that will be allowed on the property. In awarding grants pursuant to this chapter, the board shall take appropriate action to ensure the preservation of a public benefit that is consistent with the public interest in the acquisition;

(6) A requirement that the public agency or nonprofit organization provide to the state an independent appraisal of the fair market value of the interest in real property to be acquired; and

(7) A requirement that the public agency or nonprofit organization provide to the state a copy of a financial audit of the agency or organization that has been prepared by an independent public accountant for the most recent completed fiscal year. In addition, the agency or organization shall be required to provide the state with such an audit for subsequent fiscal years during the term of the grant agreement.

11-7-107. Acquisition and disposition of real property interests

Acquisitions and disposals of any interest in real property, other than the acquisition of conservation easements and reversionary interests, acquired for the state by the trust fund or the nonprofit organization created under 11-7-103(f) shall be subject to the requirements of § 4-15-102(d) and § 12-2-112. Notwithstanding any other law to the contrary, the acquisition of conservation easements and reversionary interests by the trust fund and the acquisition of any interest in real property by a non-state public agency or a nonprofit organization using grant funds received from the trust fund shall only require that such real property interest be promptly

reported to the state building commission and shall not be subject to § 4-15-102(d) or § 12-2-112 or any other approval otherwise required by state law.

11-7-108. Tax exemption

Real property in which the trust fund acquires a fee simple interest for the state shall be exempt from all state and local property taxes.

11-7-109. Conservation compensation fund; certification of tax exempt real property

(a) There is hereby created a special agency account in the state general fund to be known as the conservation compensation fund. Expenditures from such fund shall only be made to implement and effectuate the purposes of this part. Funds deposited in such fund shall not revert at the end of any fiscal year and all interest accruing on investments and deposits of the fund shall be returned to and made a part of the fund.

(b) On or before January 1 of each year, the commissioner of finance and administration shall certify to the comptroller of the treasury such information as is necessary to identify the parcels of property which have been rendered tax exempt through acquisition by the state pursuant to this part. The comptroller of the treasury shall determine the appropriate tax rate and assessed value of each such parcel of property, and on or before March 1 of each year, shall certify to the commissioner of finance and administration the amount of property tax revenue lost by each affected city or county the prior calendar year. The assessed value shall be based on the use value provided for in title 67, chapter 5, part 10, if the property is of sufficient size to have been classified under that part. Acquisition by the state pursuant to this part of property classified under title 67, chapter 5, part 10, shall not constitute a change in the use of the property, and no rollback taxes shall become due solely as a result of such acquisition. If the property is not of sufficient size to have been classified under title 67, chapter 5, part 10, the assessed value shall be determined according to the same basis as other like property within the jurisdiction. Each subsequent yearly reimbursement amount shall be based on the same assessed value, tax rate and use in effect on the date of purchase. The commissioner of finance and administration shall reimburse each affected city and county the amount so determined from funds available in the conservation compensation fund. In any year in which funds available in the conservation compensation fund are insufficient to fully reimburse such cities and counties, the commissioner of finance and administration shall effect a transfer of funds from the Tennessee Heritage Conservation Trust Fund to the conservation compensation fund in an amount sufficient to fully reimburse the affected cities and counties. Funds transferred from the Tennessee Heritage Conservation Trust Fund to the conservation compensation fund along with interest, if any, accruing on such funds after their transfer to the conservation compensation fund, shall be expended to reimburse affected cities and counties only for lands acquired by the state under this chapter.

PASSED: May 27, 2005
APPROVED: June 17, 2005

APPENDIX 11

THE PUBLIC LANDS CHALLENGE: PROTECTING TENNESSEE'S NATURAL LANDS FOR FUTURE GENERATIONS

One in a series of three papers on environmental issues facing Tennessee produced by the Vanderbilt Center for Environmental Management Studies (VCEMS) with the support of the Vanderbilt Institute for Environmental Risk and Resources Management and the Tennessee Conservation League. The views expressed are those of the authors and not necessarily those of any sponsoring organizations.

July 2002

The Public Lands Challenge:
Protecting Tennessee's Natural Lands for Future Generations

Overview

The State of Tennessee's natural lands are rich in aesthetic beauty and biological diversity. They provide a wide range of public health, recreational, environmental and economic benefits to the State and its citizens. The rapid rate of land development and population growth in the State, however, poses a serious threat to ensuring that sufficient natural lands are protected for future generations. Unlike many states that have taken aggressive steps to protect natural lands in the face of rapid growth and development, Tennessee lacks a comprehensive, coordinated, and well-funded approach to public lands conservation. This paper suggests several approaches that the State should consider for meeting the public lands challenge. These include the development of the following: a strategic vision and plan for public lands that includes a State -wide, comprehensive approach for determining the amount of and location of lands needed to achieve long-term goals and increased integration of the State's conservation and economic development policies; mechanisms for increased coordination among the agencies responsible for public lands conservation; creative funding mechanisms for public lands acquisition; and new approaches for encouraging private land donations and conservation efforts.

Problem

Tennessee is a state of great and diverse natural beauty from the Mississippi River in the West to the Great Smoky Mountains in the East. The State's plentiful mountains, lakes, rivers, wetlands, streams, and abundant wildlife provide recreational opportunities for citizens and tourists and provide habitat to some of the most diverse animal and plant species in the country.[1]

Natural lands provide environmental, economic, and quality of life benefits to Tennessee and its citizens. These benefits are potentially threatened, however, by the rapid rate of land development in the State. Land is being developed at a rate that is seventh highest in the nation. Over 400,000 acres of open space were developed between 1992 and 1997.[2] As the amount of open space decreases across the State and the population grows, it is becoming increasingly important to ensure that natural lands are conserved to allow children and adults to experience the outdoors and to preserve habitat for plants and wildlife.

Despite the tremendous value of open space and natural lands, the State lacks a comprehensive, coordinated vision for the acquisition and protection of its lands for future generations. Land acquisition and management is implemented through a variety of programs which are administered by different agencies. While some agencies informally coordinate their efforts, the State has not provided the vehicle or the resources

for integrating the work of the various programs in a manner that: fosters science-based decision-making on a State-wide basis to identify overall land conservation goals; meets wildlife habitat management requirements; and supports acquisition initiatives over the long term. Other rapidly developing Southern states have taken steps to meet the land conservation challenge by setting state-wide goals for acquiring and preserving land for future generations. For example, the goal of the Georgia Greenspace Program is to permanently preserve at least 20 percent of Georgia's land and water for informal recreation and to protect natural resources.[3] Similarly, the North Carolina General Assembly recently passed a law which provides that it is the goal of the State to protect an additional million acres of farmland, open space, and other conservation land by December 31, 2009.[4]

In addition to lacking a comprehensive approach to land conservation, Tennessee lags behind many other states in the amount of funding it dedicates to land acquisition, and the funding that it does dedicate may be in jeopardy in the face of the State's fiscal problems. States across the country are realizing the critical importance of acquiring and conserving public lands for future generations. In the 2000 and 2001 elections, voters in other states approved ballot measures that provided $7.5 billion and $1.7 billion respectively for land conservation.[5] Tennessee dedicates approximately $10 million per year to land acquisition through a percentage of the real estate transfer tax.[6] In contrast, states both larger and smaller than Tennessee, such as Florida and New Jersey, dedicate $300 million and $98 million per year respectively for land acquisition and conservation.[7] Georgia appropriated $30 million for its Georgia Greenspace Program alone in 2001.[8]

Without a strategic vision and plan, Tennessee is likely to continue to underinvest in the conservation of public lands. Unlike more conspicuous environmental problems that galvanize citizens, such as polluted rivers or smog, preserving Tennessee's natural lands is a less immediately obvious concern. Over fifteen years ago, the Governor's Commission on Tennesseans' Outdoors concluded that: "[an] aggressive program of land acquisition and protection will be necessary to keep pace with expected population increases."[9] To date, that goal has not been fully realized.

Why Tennessee Must Meet the Challenge

Conserving public lands is essential to the State and future generations of its citizens for many reasons, including public health, environmental quality, and economic strength.

Public Health

It is well documented that spending time in nature has a positive effect on people's sense of well-being. Outdoor recreation in particular is important to public health. As recognized by the Governor's 1986 Commission on Tennesseans' Outdoors: "Refreshment of body and spirit through outdoor recreation is a basic human necessity."[10] Furthermore, preserved land can help mitigate air and water pollutants, which are associated with myriad negative health effects. For example, preserved land can filter water pollution by serving as riparian buffers.[11]

Environment

Tennessee's public lands provide habitat for a wide range of plant, animal, and aquatic life. Tennessee is considered the most biologically diverse inland state in the country.[12] This rich biodiversity provides natural resources for food, fuel, medicines, recreation, climate and flood control, and water filtration.[13] The State's rapid pace of development threatens to destroy plant and animal habitat, which could ultimately result in the destruction of some species. Furthermore, much of the State's biodiversity is aquatic, and the primary threats to it are land development and attendant nonpoint source water pollution, including polluted runoff from paved streets. Conservation of public lands not only protects habitat from development, it also helps preserve the quality of environment so that wildlife can thrive.

Economy

Failure to acquire and manage public lands in the face of continuing growth and development may adversely impact State and local economies. For example, the tourism industry could be harmed, which is a $9 billion a year industry in Tennessee and the second largest in the State.[14] Over 30 million people annually visit Tennessee's State parks.[15] State parks alone generated approximately $229 million in sales for lodging, food, and retail items, and produced 4,500 jobs in the regions surrounding the parks in 2000-2001. Secondary multiplier effects added approximately $146 million in sales for lodging, food, and retail items to this direct income and created an additional 1,857 jobs.[16] In addition, fishing, hunting, and boating licenses generated approximately $5.7 million for the State in 2001, which is only a fraction of the revenue generated from related expenditures such as food and lodging.[17] Preserving the State's biodiversity and threatened species by conserving land also helps prevent triggering certain legal requirements, such as those under the Endangered Species Act, which can ultimately restrict economic development and business activities.[18] Furthermore, while the new homes, businesses, and roads that have been built in recent years represent important contributions to the State's economy, increased sprawl and the attendant loss of natural lands, if left unchecked, may make it increasingly difficult to continue to attract and maintain businesses and their work forces.

Possible Approaches to Meeting the Challenge

Tennessee could take many approaches to address the public lands challenge. The following are some possible directions that the State should consider. Additional research could help identify other alternatives and determine the best choice or combination of choices:

Development of a State Vision and Plan

Tennessee could initiate an inter-agency effort, led by the governor's office, to develop a long-range and integrated approach to conservation of public lands. The goals could include:

- Identifying objectives for the State's public lands conservation efforts, such as providing recreational opportunities, preserving special lands such as gorges and views, maintaining biodiversity, and preserving environmental quality;

- Working with the State's current land conservation programs to identify and possibly implement a State-wide, comprehensive approach for determining the amount and location of the land needed to achieve these goals over the long term.

- Developing and implementing a plan for achieving the State's public lands acquisition goals, which could include: consideration of possible funding mechanisms, such as private donations and bond issues; use of additional science-based tools, such as geographic information systems; and assessment of whether additional legal authority is required to accomplish acquisition goals, such as broader authorization for the Tennessee Wildlife Resources Agency to acquire uplands, in addition to wetlands.

- Examining the viability and merits of integrating the State's approach to conserving public lands with its growth and economic development policies, as many states are doing across the country. Such integration can be achieved in a wide variety of ways, including the development of so called "green infrastructure plans," which plan for and establish networks of preserved open space and waterways that can help guide growth, prevent haphazard conservation efforts, create wildlife corridors, and protect water quality.[19] Any such efforts should include the State's Office of Economic Development which could, for example, provide support for State and local efforts to attract sustainable businesses.

Establishment of a Mechanism for Inter-Agency Coordination

Several Tennessee agencies acquire and manage public lands: The Tennessee Department of Environment and Conservation, which acquires and manages land for the state parks and natural areas; the Tennessee Wildlife Resources Agency, which oversees acquisition and management of wildlife management areas; and the Tennessee Department of Agriculture, Division of Forestry, which acquires and manages state forests. The various programs that these agencies administer have different goals, funding, and staff. These programs coordinate on particular projects, but may benefit from the establishment of a vehicle for more systematic and consistent coordination in making acquisition and management decisions and setting long-range goals. An inter-agency task force or similar vehicle, coordinated through the governor's office, could facilitate this linkage and marshal the resources of all the responsible agencies. The task force could include other State agencies that work on related issues and projects, such as the State Department of Transportation, which both acquires and develops public lands. The task force could also coordinate with local governments and regional federal agencies such as the

Environmental Protection Agency and the United States Fish and Wildlife Service. In addition, an advisory group to the interagency group could provide technical expertise and policy direction, and include representatives from non-governmental organizations and businesses. A possible model for such an effort could be the Interagency Wetlands Committee, which oversees the development of a comprehensive wetlands plan for the State.[20]

Provision of Adequate Funding

States across the country, including the Southeast, have developed a wide range of creative approaches to funding land acquisition and conservation. Often these approaches rely on dedicated funding streams for acquiring and managing public lands because reliable and continuous funding cannot be guaranteed through state legislative appropriations processes from year to year. For example, many states and their localities have relied on bond issues to raise funds for land acquisition, including DeKalb County, Georgia, which passed a $125 million bond measure in 2001 to acquire land for parks and natural areas, preserve green space, and improve parks.[21] Similarly, Orange County, North Carolina passed a $20 million bond measure for parks, open space, and recreational facilities.[22]

A governor-appointed, multi-stakeholder task force, or similar mechanism, could be useful for developing and possibly implementing innovative funding approaches in Tennessee. Bond issues may be particularly worth exploring because they provide funding that can enable a state to acquire critical lands as they become available, rather than requiring the State to wait until annual funding is available or has accumulated. During such delays, critical property can be taken off the market or increase substantially in price. For instance, more than 300,000 acres of industry-owned forestland has been put on the market in the last two years in Tennessee, but the State has had inadequate resources to capture critical parcels before they were subdivided.[23]

Tennessee law specifically authorizes the use of monies deposited in the State lands acquisition fund to be used as a revenue stream to pay the principal of and interest on revenue bonds.[24] States and localities across the country have used similar approaches to fund bond issues. In Arnold, Missouri, for example, voters passed a six-year sales tax, and by bonding against the income will generate an estimated $4 million for local park acquisition, storm water control, and recreational facilities. [25] The Florida Forever initiative, a ten-year, $3 billion program passed by the State legislature, is funded by bonds backed by the State's tax on the transfer of real estate.[26]

The task force or similar group could also examine whether there are current funds that could be redirected to land conservation. For example, the State could consider whether gas tax revenues generated from water-based fuel docks used by motorboats in Tennessee waterways could be redirected for land acquisition that could help protect rivers and lakes. In addition, opportunities for leveraging private donations and dollars in a more strategic and focused manner could be explored. Finally, the task force or group could determine whether the State is leveraging all available federal dollars and not missing any

important opportunities to fund land acquisition by using existing funds to match federal dollars.

In addition to leveraging private and federal funding and redirecting existing sources of revenue, the State could consider the structure of self-funding mechanisms such as user and facility fees in the State parks, and opportunities to outsource certain hospitality functions.

Encouragement of Private Donations

States across the country are adopting programs that encourage private landowners to conserve their lands. These programs take advantage of growing public recognition of the importance of conserving land for future generations and supplement State-directed conservation efforts. In Tennessee alone there are 26 land trusts dedicated to conserving private lands.[27] Tennessee currently provides incentives to certain owners of open space, agricultural, and forest land through its "greenbelt law," which provides for property to be taxed based on its current use value rather than on the value of the land if potentially converted to another use.[28] Given the success of this tax incentive and the success of other types of incentive programs across the country, Tennessee could consider the adoption of new programs that encourage private land conservation.
Two particularly successful approaches to private land conservation are voluntary conservation easements and purchase of development rights programs. A conservation easement is a legal agreement between a landowner and a private land trust or government agency that limits certain uses of the land in order to protect its conservation value. The landowner continues to own and use the land while a private land trust or government agency holds, monitors, and enforces the terms of the conservation easement. States across the country are providing a range of incentives for landowners to donate conservation easements. Virginia established a State-wide public land trust, The Virginia Outdoors Foundation, which holds conservation easements and has the ability to monitor and enforce their terms. The Foundation often works in partnership with local conservation groups and private land trusts.[29] Tennessee could explore whether there are other steps it could take to encourage voluntary easements through additional financial incentives or through education and outreach about current State and federal incentives.

Purchase of development rights programs focus on the voluntary sale and legal retirement of development rights to land through a conservation easement. The farmer or landowner sells the right to develop the land to a private conservation organization or government agency while retaining title to the land and other property rights, such as the right to farm. In exchange, the landowner is compensated for the difference between the value of the land on the open market and the value as restricted for farmland or open space. For example, Michigan has a purchase of development rights program that is funded through conversion tax revenues on land removed from agricultural production.[30] In addition, in evaluating whether a purchase of development rights program makes sense for Tennessee and its localities, the State could consider participating in related federal programs. For example, the Farmland Protection Program provides funds to state governments to help purchase development rights to keep productive farmland in agricultural use.[31] Kentucky

participates in the federal program and has set up its own implementing program, the Purchase of Agricultural Conservation Easements (PACE) program. [32]

In addition to conservation easements, purchase of development rights programs, and similar tools, donations of private lands can also augment a state's public lands programs. Tennessee's current land conservation programs have succeeded on an ad hoc basis over the years in obtaining corporate donations of lands whenever possible. For example, the Bridgestone/Firestone Corporation donated 10,000 acres of land near Sparta, Tennessee called "Scott's Gulf."[33] Tennessee could consider whether a more strategic, State-wide approach to encouraging such donations would be valuable in forwarding its public lands conservation effort.

This paper is part of a series of white papers on environmental issues in Tennessee. The three papers discuss public lands, nonpoint source water pollution, and the contribution of motor vehicle miles traveled to ozone pollution. These three issues are illustrative of the environmental challenges that Tennessee faces in the coming decade. The focus on these topics, however, is not intended to suggest that these are the only or the most important environmental issues that the State must address. The papers highlight some possible approaches that could be examined further, based on information gathered during a series of over two dozen interviews with representatives from State and local government, businesses, and nonprofit organizations. While potential solutions are offered, they are by no means exhaustive of potential solutions that might be considered and they should not be taken as specific recommendations without further analysis on the costs and benefits of each alternative. These papers were produced by the Vanderbilt Center for Environmental Management Studies (VCEMS) with the support of the Vanderbilt Institute for Environmental Risk and Resources Management and the Tennessee Conservation League. The views expressed are those of the authors and not necessarily those of any sponsoring organizations. Contributing authors and researchers include: Linda Breggin, Mark Cohen, Meghan Lockman, Ann Olsen, and Kristen Shepherd. Electronic versions of the papers in this series, as well as additional information about the authors, are available on the VCEMS web site at www.vanderbilt.edu/vcems.

Endnotes:

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INDEX BY PROJECT

Project Name	Region	Narrative Page #	Map Page #
Aetna Mountain	Cumberland Plateau	58	59
Alcoa Marsh-Lesser-RSNA	East Tennessee	14	15
Alpine Mountain	Cumberland Plateau	13	14
Amber Darter Designated Critical Habitat	East Tennessee	16	31
Ament Cave	Cumberland Plateau	16	155
Antioch Bridge	Cumberland Plateau	17	38
Armstrong Bar	West Tennessee	27	28
Auntney Hollow	Middle Tennessee	97	99
Austin Springs	East Tennessee	18	19
Barnett's Woods	Middle Tennessee	15	50
Basin Spring RSNA	Middle Tennessee	17	18
Baugus Cave	Tennessee River West	13	15
Bean Switch	West Tennessee	54	57
Beason Creek	Tennessee River West	16	17
Beech Creek Bluffs	Tennessee River West	26	28
Berry Cave	Cumberland Plateau	18	20
Big Cypress	West Tennessee	54	57
Big Hill Pond	West Tennessee	16	17
Big Mouth Cave	Cumberland Plateau	21	69
Big Ridge	East Tennessee	20	21
Big Woods	Cumberland Plateau	22	23
Billy Swamp	Middle Tennessee	19	119
Blackburn Fork	Cumberland Plateau	130	132
Bledsoe Creek	Middle Tennessee	20	21
Bledsoe State Forest	Cumberland Plateau	24	145
Blooin Hollow	Cumberland Plateau	25	36
Blowhole Cave	Middle Tennessee	22	136
Bogota WMA	West Tennessee	29	31
Bon Aqua Forest	Middle Tennessee	24	25
Booker T Washington	Cumberland Plateau	26	27
Boyd Barrens	Cumberland Plateau	28	170
Brady Mountain	Cumberland Plateau	29	30
Brawleys Fork	Middle Tennessee	26	27
Bridgewater Cave	Middle Tennessee	28	29
Briggs Chapel Hollow	Middle Tennessee	30	144
Brooks Island	East Tennessee	22	23
Buck Creek Cove	Cumberland Plateau	31	36
Buffalo River	Tennessee River West	18	19
Buffalo State Scenic River	Middle Tennessee	31	32
Bullrun Knobs	East Tennessee	24	25
Burnt Hill Road Glade	Middle Tennessee	33	67
Caney Fork River Bluffs	Middle Tennessee	35	36
Caney Hollow Cave	Cumberland Plateau	32	104
Carrol Cabin Barrens	Tennessee River West	20	22
Carter Mountain	Cumberland Plateau	35	36
Carter SNA	Cumberland Plateau	34	36
Catoosa WMA	Cumberland Plateau	37	38
Cedar Creek Sullivantia	Cumberland Plateau	39	163
Cedar Grove Glade	Middle Tennessee	37	38
Cedar Hill Swamp	Middle Tennessee	39	40
Cedars of Lebanon State Forest, SNA and State Park	Middle Tennessee	41	43
Chandler Cove Falls	East Tennessee	26	27
Cheatham WMA	Middle Tennessee	44	46
Chickasaw NWR	West Tennessee	35	39

INDEX BY PROJECT

Project Name	Region	Narrative Page #	Map Page #
Chickasaw State Forest	West Tennessee	18	19
Chimney Rock	Cumberland Plateau	40	41
Chimneys SNA	Cumberland Plateau	42	43
Clifty Creek Gorge	Cumberland Plateau	44	45
Clinch State Scenic River	East Tennessee	28	29
Cold Creek Refuge	West Tennessee	35	39
Colditz Cove SNA	Cumberland Plateau	46	47
Collins Scenic River	Cumberland Plateau	139	140
Collins Trifolium Glade	Middle Tennessee	47	48
Conasauga State Scenic River	East Tennessee	30	31
Cordell Hull State Historic Park	Cumberland Plateau	48	49
Couchville Cedar Glade SNA	Middle Tennessee	100	101
Cove Lake State Park	Cumberland Plateau	50	163
Cowan Tunnel	Cumberland Plateau	51	36
Cumberland Mountain State Park	Cumberland Plateau	52	53
Cumberland River (Haynes Bottom/Shelton Ferry)	Middle Tennessee	49	50
Cumberland River Bluffs (At Hartsville)	Middle Tennessee	51	52
Cumberland River Bluffs (at Oldham Road)	Middle Tennessee	51	52
Cumberland River Bluffs (Sulpher Springs)	Middle Tennessee	53	54
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Cummings Cove	Cumberland Plateau	58	59
Cummings Lake	Cumberland Plateau	60	81
David Crockett State Park	Middle Tennessee	55	56
Davis Bridge	West Tennessee	16	17
Davy Crockett Birthplace	East Tennessee	32	33
Densford Bar	West Tennessee	25	26
Devil's Backbone	Middle Tennessee	57	61
Doe Mountain	East Tennessee	34	35
Doe River Gorge	East Tennessee	36	37
Dripping Rock Bluff RSNA	Middle Tennessee	62	29
Dry Branch	Middle Tennessee	63	144
Dry Creek Ravine	Cumberland Plateau	61	127
Duck River Bluffs	Middle Tennessee	64	67
Duck River Habitat Corridor	Middle Tennessee	64	67
Duck River/Buffalo River	Tennessee River West	23	25
Duck State Scenic River	Middle Tennessee	64	67
Duke Creek	Middle Tennessee	69	70
Dunbar Cave	Middle Tennessee	71	72
Eagle Creek	Tennessee River West	26	28
Eagle Lake Refuge	West Tennessee	32	34
Eaton Bottoms	West Tennessee	41	42
Edwards Point Sandstone Outcrops	Cumberland Plateau	62	63
English Cave	Cumberland Plateau	64	125
Ernest Rice	West Tennessee	29	31
Fall Creek Falls State Park and SNA	Cumberland Plateau	65	145
Falling Water Falls SNA	Cumberland Plateau	108	110
Fiery Gizzard Cove	Cumberland Plateau	73	74
Flat Rock	Middle Tennessee	73	74
Flint River Bottom SNA	Middle Tennessee	75	76
Forest Mill Pond RSNA	Middle Tennessee	77	152
Fort Loudon State Historic Park	East Tennessee	38	39
Fort Pillow	West Tennessee	20	25
Fort Wright	West Tennessee	35	40
Franklin State Forest	Cumberland Plateau	66	36

INDEX BY PROJECT

Project Name	Region	Narrative Page #	Map Page #
French Broad State Scenic River	East Tennessee	40	41
Frozen Head SNA	Cumberland Plateau	67	38
Gattinger's	Middle Tennessee	78	43
Ghost River	West Tennessee	58	61
Gilliland Glade And Oak Forest	East Tennessee	42	43
Gladeview Barrens SNA	Middle Tennessee	79	104
Gladeview Glade	Middle Tennessee	79	104
Gooch WMA	West Tennessee	54	57
Goose Pond	Cumberland Plateau	68	69
Grassy Creek Cave	Cumberland Plateau	70	87
Grassy Pond	Middle Tennessee	80	152
Grindstone Mountain Geologic Feature	Cumberland Plateau	71	72
Grundy Forest SNA and Firey Gizzard Cove	Cumberland Plateau	73	74
Grundy Lakes State Park	Cumberland Plateau	75	74
Gumdale Silurian Glade Site	Tennessee River West	20	22
Hampton Creek Cove	East Tennessee	44	45
Harper Road - Sycamore Branch	Cumberland Plateau	76	83
Harpeth River State Park	Middle Tennessee	44	46
Harpeth State Scenic River	Middle Tennessee	81	82
Harrison Bay State Park	Cumberland Plateau	77	78
Haskins Chapel Road Cedar Glades	Middle Tennessee	83	67
Hatchie State Scenic River	West Tennessee	20	22
Hawkins Cove East	Cumberland Plateau	79	36
Haws Spring Fork	Middle Tennessee	84	85
Hay Hollow	Middle Tennessee	86	87
Haynes Botton/Shelton Ferry	Middle Tennessee	49	50
Henry Horton State Park	Middle Tennessee	88	89
Herron Cave	Middle Tennessee	90	48
Hickman County Bat Cave	Middle Tennessee	57	61
Hickory Flats WMA	Middle Tennessee	105	106
Hicks Gap	Cumberland Plateau	80	81
Hidden Lakes State Park	Middle Tennessee	44	46
Highway 53 Roadside Barrens	Middle Tennessee	119	120
Hill Creek And Cave	Middle Tennessee	91	136
Hiwassee Refuge	East Tennessee	79	80
Hiwassee State Scenic River	East Tennessee	48	47
Hiwassee_Ocoee Recreation Areas	East Tennessee	46	47
Hop-In Refuge	West Tennessee	54	57
Horner Cave	East Tennessee	50	51
Horns Bluff	West Tennessee	41	42
House Mountain SNA	East Tennessee	52	53
Hubbards Cave	Cumberland Plateau	82	83
Hunter Bog RSNA	East Tennessee	54	55
Hunter Marsh	East Tennessee	54	55
Indian Cave	East Tennessee	56	57
Indian Mountain State Park	Cumberland Plateau	84	163
Island No. 35\Densford Bar	West Tennessee	25	26
Issac Spring Pond	Cumberland Plateau	85	140
John Tully WMA	West Tennessee	35	40
Johnsonville State Historic Area	Tennessee River West	29	30
Kelly Ridge Cave	East Tennessee	58	59
Kyles Ford	East Tennessee	60	62
Lacefield Falls RSNA	Tennessee River West	55	56
Lake Isom NWR	West Tennessee	45	48

INDEX BY PROJECT

Project Name	Region	Narrative Page #	Map Page #
Lane Farm	Middle Tennessee	92	43
Langford Branch SNA	Middle Tennessee	57	61
Laurel Creek Bog Site	East Tennessee	63	64
Laurel Snow	Cumberland Plateau	86	87
Lee Farm	Cumberland Plateau	88	140
Lee Station Road Barrens	Cumberland Plateau	89	143
Lewis State Forest	Middle Tennessee	93	94
Lick Creek Bottoms WMA	East Tennessee	65	66
Lincoln County Bat Cave	Middle Tennessee	95	96
Little Beech Creek	Tennessee River West	31	32
Little Grinders Creek	Middle Tennessee	97	99
Lone Mountain State Forest	Cumberland Plateau	90	91
Long Hunter State Park	Middle Tennessee	100	101
Long Pond Slough	Middle Tennessee	102	50
Loosahatchie Bar\Robinson Crusoe Island	West Tennessee	27	28
Lost Creek Cave	Cumberland Plateau	92	145
Lower Hatchie NWR	West Tennessee	35	40
Lower Obion River	West Tennessee	29	31
Lucius Birch SNA	West Tennessee	58	61
Magendanz Falls RSNA	Cumberland Plateau	94	47
Maness Swamp Refuge	West Tennessee	54	57
Manus Road	Middle Tennessee	103	104
Marion County Sinkhole	Cumberland Plateau	95	96
Martha Sundquist State Forest	East Tennessee	67	68
Mascot Cedar Glade	East Tennessee	69	53
May Prairie SNA	Middle Tennessee	105	106
Mcmahan Creek	Middle Tennessee	69	70
Mcminn's Bluff	Middle Tennessee	107	109
Meades Quarry Cave	East Tennessee	70	71
Meadow Creek Seep	Cumberland Plateau	97	141
Measles Gulf And Cave	Cumberland Plateau	98	99
Meeman Shelby Forest WMA	West Tennessee	32	34
Meredith Cave	Cumberland Plateau	100	163
Middle Cypress Creek	Tennessee River West	33	34
Middle Fork Habitat Corridor	West Tennessee	41	42
Mid-Mississippi Alluvial Valley	West Tennessee	35	38
Mill Cave	Cumberland Plateau	101	30
Mill Creek - Indian Creek Drainage	Middle Tennessee	110	112
Mill Creek - Nolensville Headwaters	Middle Tennessee	110	112
Mill Creek - Upper Owl Creek Drainage	Middle Tennessee	110	112
Mill Creek Hemlock Forest	Cumberland Plateau	102	132
Millstone Mountain	West Tennessee	35	38
Mingo Swamp	Cumberland Plateau	103	104
Montgomery Bell	Middle Tennessee	113	114
Morril's Cave SNA	East Tennessee	72	73
Moss Island WMA	West Tennessee	29	31
Mousetail Landing	Tennessee River West	35	36
Mud Creek Swamp	Cumberland Plateau	105	134
Mud Flats Cave	East Tennessee	74	75
Mulberry Bridge Bluff	Middle Tennessee	115	96
Natchez Trace	West Tennessee	43	44
Nathan Bedford Forrest	Tennessee River West	37	38
Newsom's Mill State Park	Middle Tennessee	44	46
Nine-acre Glade Complex	Tennessee River West	20	22

INDEX BY PROJECT

Project Name	Region	Narrative Page #	Map Page #
Norris Dam State Park	Cumberland Plateau	106	107
North Chickamauga Creek SNA & WMA	Cumberland Plateau	108	110
Obion River WMA	West Tennessee	54	57
Old CCC Road Barking Treefrog Pond	Cumberland Plateau	111	36
Old Hog Lot Orchid	Cumberland Plateau	112	110
Old Stone Fort State Archaeological Park	Middle Tennessee	116	117
Old Turnpike Road	Cumberland Plateau	113	36
Overbridge SNA	Middle Tennessee	118	74
Ozone Falls SNA	Cumberland Plateau	114	115
Panther Creek State Park	East Tennessee	76	77
Paris Landing	Tennessee River West	39	40
Parks Creek Swamp	Middle Tennessee	119	120
Pearson's Cave	East Tennessee	78	62
Peters Bridge Sandstone Rockhouses	Cumberland Plateau	116	136
Philadelphia Glade	Middle Tennessee	121	67
Phillipy Pitts	West Tennessee	45	48
Pickadilly Prairie	Middle Tennessee	122	123
Pickett State Forest, WMA, and State Park	Cumberland Plateau	117	119
Pickwick Lake/Dry Creek Area	Tennessee River West	41	43
Pickwick Landing	Tennessee River West	41	43
Piney Falls SNA	Cumberland Plateau	120	122
Piney River Watershed	Cumberland Plateau	120	122
Pinson Mounds State Park	West Tennessee	49	51
Piper Caves	Middle Tennessee	124	29
Plantation Pond	Cumberland Plateau	123	141
Porter's Bluff	Middle Tennessee	126	72
Powell River Preserve SNA	Cumberland Plateau	124	125
Prentice Cooper State Forest and WMA	Cumberland Plateau	126	127
Radnor Lake	Middle Tennessee	127	128
Rattlesnake Falls	Middle Tennessee	147	149
Rattlesnake Lodge Cedar Glades	Middle Tennessee	83	67
Red Clay	East Tennessee	79	80
Reedy Creek Cove	East Tennessee	81	82
Reelfoot Lake Complex	West Tennessee	45	48
Ridgetop Barrens	Middle Tennessee	129	164
Ripshin Bog	East Tennessee	83	84
Rising Sun Bluff At Potato Hill	Middle Tennessee	107	109
Roan Mountain State Park	East Tennessee	85	86
Roaring Creek Gorge	Cumberland Plateau	128	129
Roaring River	Cumberland Plateau	130	132
Robinson Crusoe Island	West Tennessee	27	28
Rock Island State Park	Cumberland Plateau	133	134
Rocky Fork	East Tennessee	87	88
Rocky Hill Road Glades And Barrens	Middle Tennessee	47	48
Rugby SNA	Cumberland Plateau	135	136
Rumbling Falls Cave System	Cumberland Plateau	137	138
Rushing Creek Habitat Area	Tennessee River West	44	45
Rutledge Falls	Middle Tennessee	130	138
Salt Lick Creek Forest	Middle Tennessee	131	132
Sandy Mitchell Hollow	Middle Tennessee	57	61
Savage Gulf	Cumberland Plateau	139	141
Scales Mountain Knobs RSNA	Middle Tennessee	135	136
Scotts Gulf	Cumberland Plateau	142	143
Sensabaugh Cave	East Tennessee	89	90

INDEX BY PROJECT

Project Name	Region	Narrative Page #	Map Page #
Sequatchie Cave SNA	Cumberland Plateau	146	147
Sgt. Alvin C. York State Historic Park	Cumberland Plateau	15	119
Shaws Creek Bottoms	West Tennessee	58	61
Shelton Ferry	Middle Tennessee	49	50
Sherwood Escarpment	Cumberland Plateau	148	36
Short Mountain	Middle Tennessee	135	136
Short Springs SNA	Middle Tennessee	137	138
Slickrock Branch/Paint Rock Creek	Cumberland Plateau	150	165
Smith Bend	East Tennessee	91	93
Smith Glade	Middle Tennessee	139	67
Snake Mountain	East Tennessee	94	95
South Berlin Glade	Middle Tennessee	139	67
South Fork of the Forked Deer River System	West Tennessee	49	51
Southwestern Highland Rim Project	Middle Tennessee	141	144
Sowell Mill Glade	Middle Tennessee	64	67
Spencer Powerline Seeps	Cumberland Plateau	151	143
Spring Creek Bottom And Glade	Middle Tennessee	145	146
Spring Creek State Scenic River	Cumberland Plateau	130	132
Standing Stone State Forest and State Park	Cumberland Plateau	152	153
Stewart State Forest	Tennessee River West	46	47
Stillhouse Hollow Falls	Middle Tennessee	147	149
Stinging Fork Falls SNA	Cumberland Plateau	120	122
Sullenger Bend SNA	Middle Tennessee	150	96
Summitville Mountain Spring	Middle Tennessee	151	152
Sunk Lake	West Tennessee	35	38
Sunnybell Glade SNA	Middle Tennessee	153	154
Svenson's Bluff	Middle Tennessee	159	161
Sycamore Shoals	East Tennessee	96	97
T. O. Fuller	West Tennessee	52	53
Tanager Hill	Cumberland Plateau	154	155
Taylor Hollow	Middle Tennessee	155	156
Tennesee River Gorge	Cumberland Plateau	156	59
Textbook Glade	Middle Tennessee	64	67
The Coalings	Tennessee River West	20	22
The Swamps	Middle Tennessee	157	158
Thorny Cypress	West Tennessee	29	31
Tigrett WMA	West Tennessee	41	42
Tims Ford State Park	Cumberland Plateau	157	158
Tobaccoport Cave	Tennessee River West	48	50
Tuckahoe Creek State Scenic River	East Tennessee	98	99
Tumbleweed WMA	West Tennessee	29	31
Tunnel Cave And Waterfall	Tennessee River West	31	32
Turk Creek	West Tennessee	34	36
Turkey Creek	Cumberland Plateau	159	36
Turnbull Creek	Middle Tennessee	159	161
Turnbull Creek Bluff	Middle Tennessee	159	161
Twin Falls Hollow	Middle Tennessee	57	61
Tynes Glade	Middle Tennessee	162	48
Tyree Springs	Middle Tennessee	163	164
Upper Caney Fork	Cumberland Plateau	160	143
Upper Cumberland	Cumberland Plateau	161	163
Upper Obion River Project	West Tennessee	54	57
Virgin Falls SNA	Cumberland Plateau	166	167
Walker Branch Hills SNA	Tennessee River West	51	52

INDEX BY PROJECT

Project Name	Region	Narrative Page #	Map Page #
Walkertown Branch Bog	East Tennessee	100	101
Walterhill Floodplain	Middle Tennessee	165	
Washmorgan Hollow SNA	Cumberland Plateau	168	132
Watauga River Access	East Tennessee	102	97
Watauga River Bluffs	East Tennessee	104	97
Wayside Swamp	Middle Tennessee	166	152
West Morrison Pond & Low Woods Protection Planning	Cumberland Plateau	169	170
White Buis Cave & Coonsies Creek Cave	Cumberland Plateau	171	125
White County Wetlands Complex	Cumberland Plateau	172	173
White Lake Refuge	West Tennessee	29	31
White Oak Creek WMA	Tennessee River West	53	54
Whites Creek Watershed	Cumberland Plateau	174	176
Wildcat Hollow RSNA	Tennessee River West	55	56
William B. Clark Cons. Area	West Tennessee	58	61
Williams Tract	Cumberland Plateau	177	14
Willoughby Tract	Middle Tennessee	167	168
Window Cliffs	Cumberland Plateau	178	173
Witty Creek	Middle Tennessee	69	70
Wolf River	West Tennessee	58	61
Wolf River White Cedar Slopes	Cumberland Plateau	180	49
Wolf River WMA	West Tennessee	58	61
Wolf, Farmer & Cave Coves	Cumberland Plateau	179	36
Wright White Pine Stand RSNA	East Tennessee	105	106

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
ANDERSON			
Clinch State Scenic River	East Tennessee	28	29
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Upper Cumberland	Cumberland Plateau	161	163
BEDFORD			
Burnt Hill Road Glade	Middle Tennessee	33	67
Haskins Chapel Road Cedar Glades	Middle Tennessee	83	67
Rattlesnake Lodge Cedar Glades	Middle Tennessee	83	67
BENTON			
Natchez Trace	West Tennessee	43	44
Rushing Creek Habitat Area	Tennessee River West	44	45
BLEDSOE			
Bledsoe State Forest	Cumberland Plateau	24	145
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Lee Station Road Barrens	Cumberland Plateau	89	143
Piney Falls SNA	Cumberland Plateau	120	122
Piney River Watershed	Cumberland Plateau	120	122
Roaring Creek Gorge	Cumberland Plateau	128	129
Stinging Fork Falls SNA	Cumberland Plateau	120	122
BLOUNT			
Alcoa Marsh-Lesser-RSNA	East Tennessee	14	15
Kelly Ridge Cave	East Tennessee	58	59
BRADLEY			
Amber Darter Designated Critical Habitat	East Tennessee	16	31
Conasauga State Scenic River	East Tennessee	30	31
Gilliland Glade And Oak Forest	East Tennessee	42	43
Grindstone Mountain Geologic Feature	Cumberland Plateau	71	72
Hiwassee_Ocoee Recreation Areas	East Tennessee	46	47
Red Clay	East Tennessee	79	80
CAMPBELL			
Cedar Creek Sullivantia	Cumberland Plateau	39	163
Chimney Rock	Cumberland Plateau	40	41
Cove Lake State Park	Cumberland Plateau	50	163
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Indian Mountain State Park	Cumberland Plateau	84	163
Meredith Cave	Cumberland Plateau	100	163
Norris Dam State Park	Cumberland Plateau	106	107
Upper Cumberland	Cumberland Plateau	161	163
CANNON			
Blowhole Cave	Middle Tennessee	22	136
Brawleys Fork	Middle Tennessee	26	27
Collins Scenic River	Cumberland Plateau	139	140

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Duke Creek	Middle Tennessee	69	70
Hill Creek And Cave	Middle Tennessee	91	136
Short Mountain	Middle Tennessee	135	136
Witty Creek	Middle Tennessee	69	70
CARROLL			
Natchez Trace	West Tennessee	43	44
CARTER			
Doe River Gorge	East Tennessee	36	37
Hampton Creek Cove	East Tennessee	44	45
Hunter Bog RSNA	East Tennessee	54	55
Hunter Marsh	East Tennessee	54	55
Ripshin Bog	East Tennessee	83	84
Roan Mountain State Park	East Tennessee	85	86
Sycamore Shoals	East Tennessee	96	97
Watauga River Access	East Tennessee	102	97
Watauga River Bluffs	East Tennessee	104	97
CHEATHAM			
Cheatham WMA	Middle Tennessee	44	46
Cumberland River Bluffs (Sulpher Springs)	Middle Tennessee	53	54
Harpeth River State Park	Middle Tennessee	44	46
Harpeth State Scenic River	Middle Tennessee	81	82
Svenson's Bluff	Middle Tennessee	159	161
Turnbull Creek	Middle Tennessee	159	161
Turnbull Creek Bluff	Middle Tennessee	159	161
CHESTER			
Chickasaw State Forest	West Tennessee	18	19
Pinson Mounds State Park	West Tennessee	49	51
South Fork of the Forked Deer River System	West Tennessee	49	51
CLAIBORNE			
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
English Cave	Cumberland Plateau	64	125
Powell River Preserve SNA	Cumberland Plateau	124	125
Upper Cumberland	Cumberland Plateau	161	163
White Buis Cave & Coonsies Creek Cave	Cumberland Plateau	171	125
CLAY			
Standing Stone State Forest and State Park	Cumberland Plateau	152	153
COCKE			
French Broad State Scenic River	East Tennessee	40	41
Martha Sundquist State Forest	East Tennessee	67	68
COFFEE			
Billy Swamp	Middle Tennessee	19	119

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Brawleys Fork	Middle Tennessee	26	27
Collins Scenic River	Cumberland Plateau	139	140
Forest Mill Pond RSNA	Middle Tennessee	77	152
Grassy Pond	Middle Tennessee	80	152
Hickory Flats WMA	Middle Tennessee	105	106
Highway 53 Roadside Barrens	Middle Tennessee	119	120
May Prairie SNA	Middle Tennessee	105	106
Mcmahan Creek	Middle Tennessee	69	70
Old Stone Fort State Archaeological Park	Middle Tennessee	116	117
Parks Creek Swamp	Middle Tennessee	119	120
Rutledge Falls	Middle Tennessee	130	138
Short Springs SNA	Middle Tennessee	137	138
Summitville Mountain Spring	Middle Tennessee	151	152
Wayside Swamp	Middle Tennessee	166	152
CROCKETT			
Eaton Bottoms	West Tennessee	41	42
Horns Bluff	West Tennessee	41	42
Middle Fork Habitat Corridor	West Tennessee	41	42
Tigrett WMA	West Tennessee	41	42
CUMBERLAND			
Antioch Bridge	Cumberland Plateau	17	38
Bledsoe State Forest	Cumberland Plateau	24	145
Brady Mountain	Cumberland Plateau	29	30
Catoosa WMA	Cumberland Plateau	37	38
Cumberland Mountain State Park	Cumberland Plateau	52	53
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Mill Cave	Cumberland Plateau	101	30
Ozone Falls SNA	Cumberland Plateau	114	115
Upper Caney Fork	Cumberland Plateau	160	143
Whites Creek Watershed	Cumberland Plateau	174	176
DAVIDSON			
Couchville Cedar Glade SNA	Middle Tennessee	100	101
Harpeth State Scenic River	Middle Tennessee	81	82
Hidden Lakes State Park	Middle Tennessee	44	46
Long Hunter State Park	Middle Tennessee	100	101
Mcminn's Bluff	Middle Tennessee	107	109
Mill Creek - Indian Creek Drainage	Middle Tennessee	110	112
Newsom's Mill State Park	Middle Tennessee	44	46
Radnor Lake	Middle Tennessee	127	128
Ridgetop Barrens	Middle Tennessee	129	164
Rising Sun Bluff At Potato Hill	Middle Tennessee	107	109
DECATUR			
Baugus Cave	Tennessee River West	13	15
Carrol Cabin Barrens	Tennessee River West	20	22
Gumdale Silurian Glade Site	Tennessee River West	20	22
Nathan Bedford Forrest	Tennessee River West	37	38

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Nine-acre Glade Complex	Tennessee River West	20	22
The Coalings	Tennessee River West	20	22
DICKSON			
Montgomery Bell	Middle Tennessee	113	114
Pickadilly Prairie	Middle Tennessee	122	123
Turnbull Creek	Middle Tennessee	159	161
Turnbull Creek Bluff	Middle Tennessee	159	161
DYER			
Bogota WMA	West Tennessee	29	31
Ernest Rice	West Tennessee	29	31
Lower Obion River	West Tennessee	29	31
Middle Fork Habitat Corridor	West Tennessee	41	42
Moss Island WMA	West Tennessee	29	31
Obion River WMA	West Tennessee	54	57
Thorny Cypress	West Tennessee	29	31
Tigrett WMA	West Tennessee	41	42
White Lake Refuge	West Tennessee	29	31
FAYETTE			
Ghost River	West Tennessee	58	61
Lucius Birch SNA	West Tennessee	58	61
Shaws Creek Bottoms	West Tennessee	58	61
William B. Clark Cons. Area	West Tennessee	58	61
Wolf River	West Tennessee	58	61
Wolf River WMA	West Tennessee	58	61
FENTRESS			
Alpine Mountain	Cumberland Plateau	13	14
Colditz Cove SNA	Cumberland Plateau	46	47
Catoosa WMA	Cumberland Plateau	37	38
Magendanz Falls RSNA	Cumberland Plateau	94	47
Peters Bridge Sandstone Rockhouses	Cumberland Plateau	116	136
Pickett State Forest, WMA, and State Park	Cumberland Plateau	117	119
Sgt. Alvin C. York State Historic Park	Cumberland Plateau	15	119
FRANKLIN			
Blackburn Fork	Cumberland Plateau	130	132
Blooin Hollow	Cumberland Plateau	25	36
Buck Creek Cove	Cumberland Plateau	31	36
Caney Hollow Cave	Cumberland Plateau	32	104
Carter Mountain	Cumberland Plateau	35	36
Carter SNA	Cumberland Plateau	34	36
Cowan Tunnel	Cumberland Plateau	51	36
Franklin State Forest	Cumberland Plateau	66	36
Hawkins Cove East	Cumberland Plateau	79	36
Mingo Swamp	Cumberland Plateau	103	104

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Old CCC Road Barking Treefrog Pond	Cumberland Plateau	111	36
Old Turnpike Road	Cumberland Plateau	113	36
Sherwood Escarpment	Cumberland Plateau	148	36
Tims Ford State Park	Cumberland Plateau	157	158
Turkey Creek	Cumberland Plateau	159	36
Wolf, Farmer & Cave Coves	Cumberland Plateau	179	36
GIBSON			
Eaton Bottoms	West Tennessee	41	42
Horns Bluff	West Tennessee	41	42
Maness Swamp Refuge	West Tennessee	54	57
Middle Fork Habitat Corridor	West Tennessee	41	42
Upper Obion River Project	West Tennessee	54	57
GRAINGER			
Indian Cave	East Tennessee	56	57
GREENE			
Davy Crockett Birthplace	East Tennessee	32	33
French Broad State Scenic River	East Tennessee	40	41
Lick Creek Bottoms WMA	East Tennessee	65	66
Rocky Fork	East Tennessee	87	88
GRUNDY			
Big Mouth Cave	Cumberland Plateau	21	69
Collins Scenic River	Cumberland Plateau	139	140
Goose Pond	Cumberland Plateau	68	69
Grundy Forest SNA and Firey Gizzard Cove	Cumberland Plateau	73	74
Grundy Lakes State Park	Cumberland Plateau	75	74
Issac Spring Pond	Cumberland Plateau	85	140
Lee Farm	Cumberland Plateau	88	140
Meadow Creek Seep	Cumberland Plateau	97	141
Plantation Pond	Cumberland Plateau	123	141
Savage Gulf	Cumberland Plateau	139	141
HAMBLEN			
Panther Creek State Park	East Tennessee	76	77
HAMILTON			
Booker T Washington	Cumberland Plateau	26	27
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Edwards Point Sandstone Outcrops	Cumberland Plateau	62	63
Falling Water Falls SNA	Cumberland Plateau	108	110
Grindstone Mountain Geologic Feature	Cumberland Plateau	71	72
Harrison Bay State Park	Cumberland Plateau	77	78
North Chickamauga Creek SNA & WMA	Cumberland Plateau	108	110
Old Hog Lot Orchid	Cumberland Plateau	112	110
Tennesee River Gorge	Cumberland Plateau	156	59

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
HANCOCK			
Brooks Island	East Tennessee	22	23
Kyles Ford	East Tennessee	60	62
HARDEMAN			
Big Hill Pond	West Tennessee	16	17
Chickasaw State Forest	West Tennessee	18	19
Davis Bridge	West Tennessee	16	17
Hatchie State Scenic River	West Tennessee	20	22
HARDIN			
Beason Creek	Tennessee River West	16	17
Lacefield Falls RSNA	Tennessee River West	55	56
Pickwick Lake/Dry Creek Area	Tennessee River West	41	43
Pickwick Landing	Tennessee River West	41	43
Walker Branch Hills SNA	Tennessee River West	51	52
White Oak Creek WMA	Tennessee River West	53	54
Wildcat Hollow RSNA	Tennessee River West	55	56
HAWKINS			
Horner Cave	East Tennessee	50	51
Pearson's Cave	East Tennessee	78	62
HAYWOOD			
Hatchie State Scenic River	West Tennessee	20	22
HENDERSON			
Natchez Trace	West Tennessee	43	44
HENRY			
Paris Landing	Tennessee River West	39	40
HICKMAN			
Bon Aqua Forest	Middle Tennessee	24	25
Briggs Chapel Hollow	Middle Tennessee	30	144
Devil's Backbone	Middle Tennessee	57	61
Hickman County Bat Cave	Middle Tennessee	57	61
Southwestern Highland Rim Project	Middle Tennessee	141	144
HUMPHREYS			
Buffalo River	Tennessee River West	18	19
Duck River/Buffalo River	Tennessee River West	23	25
Johnsonville State Historic Area	Tennessee River West	29	30
Southwestern Highland Rim Project	Middle Tennessee	141	144
JACKSON			
Roaring River	Cumberland Plateau	130	132
Spring Creek State Scenic River	Cumberland Plateau	130	132

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Washmorgan Hollow SNA	Cumberland Plateau	168	132
JEFFERSON			
Tuckahoe Creek State Scenic River	East Tennessee	98	99
JOHNSON			
Doe Mountain	East Tennessee	34	35
Laurel Creek Bog Site	East Tennessee	63	64
Snake Mountain	East Tennessee	94	95
Wright White Pine Stand RSNA	East Tennessee	105	106
KNOX			
Bullrun Knobs	East Tennessee	24	25
Clinch State Scenic River	East Tennessee	28	29
House Mountain SNA	East Tennessee	52	53
Mascot Cedar Glade	East Tennessee	69	53
Meades Quarry Cave	East Tennessee	70	71
Mud Flats Cave	East Tennessee	74	75
Tuckahoe Creek State Scenic River	East Tennessee	98	99
LAKE			
Lake Isom NWR	West Tennessee	45	48
Phillipy Pitts	West Tennessee	45	48
Reelfoot Lake Complex	West Tennessee	45	48
Tumbleweed WMA	West Tennessee	29	31
LAUDERDALE			
Chickasaw NWR	West Tennessee	35	39
Cold Creek Refuge	West Tennessee	35	39
Fort Pillow	West Tennessee	20	25
Fort Wright	West Tennessee	35	40
John Tully WMA	West Tennessee	35	40
Lower Hatchie NWR	West Tennessee	35	40
Mid-Mississippi Alluvial Valley	West Tennessee	35	38
Sunk Lake	West Tennessee	35	38
LAWRENCE			
Buffalo State Scenic River	Middle Tennessee	31	32
David Crockett State Park	Middle Tennessee	55	56
LEWIS			
Auntney Hollow	Middle Tennessee	97	99
Devil's Backbone	Middle Tennessee	57	61
Dry Branch	Middle Tennessee	63	144
Langford Branch SNA	Middle Tennessee	57	61
Lewis State Forest	Middle Tennessee	93	94
Little Grinders Creek	Middle Tennessee	97	99
Sandy Mitchell Hollow	Middle Tennessee	57	61
Southwestern Highland Rim Project	Middle Tennessee	141	144

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Twin Falls Hollow	Middle Tennessee	57	61
LINCOLN			
Flint River Bottom SNA	Middle Tennessee	75	76
Lincoln County Bat Cave	Middle Tennessee	95	96
Mulberry Bridge Bluff	Middle Tennessee	115	96
LOUDON			
Clinch State Scenic River	East Tennessee	28	29
MACON			
Salt Lick Creek Forest	Middle Tennessee	131	132
MADISON			
Hatchie State Scenic River	West Tennessee	20	22
Pinson Mounds State Park	West Tennessee	49	51
South Fork of the Forked Deer River System	West Tennessee	49	51
Turk Creek	West Tennessee	34	36
MARION			
Aetna Mountain	Cumberland Plateau	58	59
Chimneys SNA	Cumberland Plateau	42	43
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Cummings Cove	Cumberland Plateau	58	59
Cummings Lake	Cumberland Plateau	60	81
Dry Creek Ravine	Cumberland Plateau	61	127
Fiery Gizzard Cove	Cumberland Plateau	73	74
Franklin State Forest	Cumberland Plateau	66	36
Grundy Forest SNA and Firey Gizzard Cove	Cumberland Plateau	73	74
Hicks Gap	Cumberland Plateau	80	81
Marion County Sinkhole	Cumberland Plateau	95	96
Prentice Cooper State Forest and WMA	Cumberland Plateau	126	127
Sequatchie Cave SNA	Cumberland Plateau	146	147
Tennesee River Gorge	Cumberland Plateau	156	59
MARSHALL			
Duck River Bluffs	Middle Tennessee	64	67
Duck River Habitat Corridor	Middle Tennessee	64	67
Duck State Scenic River	Middle Tennessee	64	67
Henry Horton State Park	Middle Tennessee	88	89
Smith Glade	Middle Tennessee	139	67
South Berlin Glade	Middle Tennessee	139	67
Textbook Glade	Middle Tennessee	64	67
MAURY			
Buffalo State Scenic River	Middle Tennessee	31	32
Duck River Bluffs	Middle Tennessee	64	67
Duck River Habitat Corridor	Middle Tennessee	64	67
Duck State Scenic River	Middle Tennessee	64	67

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Haws Spring Fork	Middle Tennessee	84	85
Hay Hollow	Middle Tennessee	86	87
Philadelphia Glade	Middle Tennessee	121	67
Rattlesnake Falls	Middle Tennessee	147	149
Sowell Mill Glade	Middle Tennessee	64	67
Stillhouse Hollow Falls	Middle Tennessee	147	149
Willoughby Tract	Middle Tennessee	167	168
MCMINN			
Hiwassee_Ocoee Recreation Areas	East Tennessee	46	47
MCNAIRY			
Big Hill Pond	West Tennessee	16	17
Hatchie State Scenic River	West Tennessee	20	22
South Fork of the Forked Deer River System	West Tennessee	49	51
MEIGS			
Hiwassee Refuge	East Tennessee	79	80
Hiwassee_Ocoee Recreation Areas	East Tennessee	46	47
Sensabaugh Cave	East Tennessee	89	90
Smith Bend	East Tennessee	91	93
MONROE			
Fort Loudon State Historic Park	East Tennessee	38	39
Hiwassee_Ocoee Recreation Areas	East Tennessee	46	47
MONTGOMERY			
Barnett's Woods	Middle Tennessee	15	50
Cumberland River (Haynes Bottom/Shelton Ferry)	Middle Tennessee	49	50
Dunbar Cave	Middle Tennessee	71	72
Haynes Botton/Shelton Ferry	Middle Tennessee	49	50
Long Pond Slough	Middle Tennessee	102	50
Porter's Bluff	Middle Tennessee	126	72
Shelton Ferry	Middle Tennessee	49	50
MOORE			
Tims Ford State Park	Cumberland Plateau	157	158
Sullenger Bend SNA	Middle Tennessee	150	96
MORGAN			
Catoosa WMA	Cumberland Plateau	37	38
Clifty Creek Gorge	Cumberland Plateau	44	45
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Frozen Head SNA	Cumberland Plateau	67	38
Lone Mountain State Forest	Cumberland Plateau	90	91
Peters Bridge Sandstone Rockhouses	Cumberland Plateau	116	136
Rugby SNA	Cumberland Plateau	135	136
Upper Cumberland	Cumberland Plateau	161	163

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
OBION			
Gooch WMA	West Tennessee	54	57
Hop-In Refuge	West Tennessee	54	57
Roaring River	Cumberland Plateau	130	132
Spring Creek State Scenic River	Cumberland Plateau	130	132
OVERTON			
Mill Creek Hemlock Forest	Cumberland Plateau	102	132
Roaring River	Cumberland Plateau	130	132
Spring Creek State Scenic River	Cumberland Plateau	130	132
Standing Stone State Forest and State Park	Cumberland Plateau	152	153
Standing Stone State Forest and State Park	Cumberland Plateau	152	153
PERRY			
Buffalo River	Tennessee River West	18	19
Little Beech Creek	Tennessee River West	31	32
Mousetail Landing	Tennessee River West	35	36
Southwestern Highland Rim Project	Middle Tennessee	141	144
Tunnel Cave And Waterfall	Tennessee River West	31	32
PICKETT			
Cordell Hull State Historic Park	Cumberland Plateau	48	49
Pickett State Forest, WMA, and State Park	Cumberland Plateau	117	119
Wolf River White Cedar Slopes	Cumberland Plateau	180	49
POLK			
Amber Darter Designated Critical Habitat	East Tennessee	16	31
Conasauga State Scenic River	East Tennessee	30	31
Hiwassee State Scenic River	East Tennessee	48	47
Walkertown Branch Bog	East Tennessee	100	101
PUTNAM			
Ament Cave	Cumberland Plateau	16	155
Caney Fork River Bluffs	Middle Tennessee	35	36
Mill Creek Hemlock Forest	Cumberland Plateau	102	132
Roaring River	Cumberland Plateau	130	132
Spring Creek State Scenic River	Cumberland Plateau	130	132
Tanager Hill	Cumberland Plateau	154	155
Williams Tract	Cumberland Plateau	177	14
Window Cliffs	Cumberland Plateau	178	173
RHEA			
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Grassy Creek Cave	Cumberland Plateau	70	87
Hiwassee Refuge	East Tennessee	79	80
Laurel Snow	Cumberland Plateau	86	87
Piney Falls SNA	Cumberland Plateau	120	122
Piney River Watershed	Cumberland Plateau	120	122
Roaring Creek Gorge	Cumberland Plateau	128	129

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Smith Bend	East Tennessee	91	93
Stinging Fork Falls SNA	Cumberland Plateau	120	122
Whites Creek Watershed	Cumberland Plateau	174	176
ROANE			
Berry Cave	Cumberland Plateau	18	20
Clifty Creek Gorge	Cumberland Plateau	44	45
Clinch State Scenic River	East Tennessee	28	29
Whites Creek Watershed	Cumberland Plateau	174	176
ROBERTSON			
Cedar Hill Swamp	Middle Tennessee	39	40
Ridgetop Barrens	Middle Tennessee	129	164
The Swamps	Middle Tennessee	157	158
RUTHERFORD			
Cedar Grove Glade	Middle Tennessee	37	38
Collins Trifolium Glade	Middle Tennessee	47	48
Flat Rock	Middle Tennessee	73	74
Gladeview Barrens SNA	Middle Tennessee	79	104
Gladeview Glade	Middle Tennessee	79	104
Herron Cave	Middle Tennessee	90	48
Manus Road	Middle Tennessee	103	104
Overbridge SNA	Middle Tennessee	118	74
Ridgetop Barrens	Middle Tennessee	129	164
Rocky Hill Road Glades And Barrens	Middle Tennessee	47	48
Scales Mountain Knobs RSNA	Middle Tennessee	135	136
Sunnybell Glade SNA	Middle Tennessee	153	154
Tynes Glade	Middle Tennessee	162	48
Walterhill Floodplain	Middle Tennessee	165	
SCOTT			
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Slickrock Branch/Paint Rock Creek	Cumberland Plateau	150	165
Upper Cumberland	Cumberland Plateau	161	163
SEIVER			
Tuckahoe Creek State Scenic River	East Tennessee	98	99
SEQUATCHIE			
Collins Scenic River	Cumberland Plateau	139	140
Cumberland State Scenic Trail State Park	Cumberland Plateau	54	55
Falling Water Falls SNA	Cumberland Plateau	108	110
North Chickamauga Creek SNA & WMA	Cumberland Plateau	108	110
SHELBY			
Armstrong Bar	West Tennessee	27	28
Eagle Lake Refuge	West Tennessee	32	34
Loosahatchie Bar\Robinson Crusoe Island	West Tennessee	27	28

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Meeman Shelby Forest WMA	West Tennessee	32	34
T. O. Fuller	West Tennessee	52	53
Wolf River	West Tennessee	58	61
Wolf River WMA	West Tennessee	58	61
SMITH			
Bridgewater Cave	Middle Tennessee	28	29
Caney Fork River Bluffs	Middle Tennessee	35	36
Dripping Rock Bluff RSNA	Middle Tennessee	62	29
Piper Caves	Middle Tennessee	124	29
STEWART			
Stewart State Forest	Tennessee River West	46	47
Tobaccoport Cave	Tennessee River West	48	50
SULLIVAN			
Morril's Cave SNA	East Tennessee	72	73
Reedy Creek Cove	East Tennessee	81	82
SUMNER			
Bledsoe Creek	Middle Tennessee	20	21
Taylor Hollow	Middle Tennessee	155	156
Tyree Springs	Middle Tennessee	163	164
TIPTON			
Densford Bar	West Tennessee	25	26
Island No. 35\Densford Bar	West Tennessee	25	26
Meeman Shelby Forest WMA	West Tennessee	32	34
Mid-Mississippi Alluvial Valley	West Tennessee	35	38
Millstone Mountain	West Tennessee	35	38
Robinson Crusoe Island	West Tennessee	27	28
TROUSDALE			
Cumberland River Bluffs (At Hartsville)	Middle Tennessee	51	52
Cumberland River Bluffs (at Oldham Road)	Middle Tennessee	51	52
UNICOI			
Chandler Cove Falls	East Tennessee	26	27
Rocky Fork	East Tennessee	87	88
UNION			
Big Ridge	East Tennessee	20	21
VAN BUREN			
Bledsoe State Forest	Cumberland Plateau	24	145
Fall Creek Falls State Park and SNA	Cumberland Plateau	65	145
Harper Road - Sycamore Branch	Cumberland Plateau	76	83
Measles Gulf And Cave	Cumberland Plateau	98	99

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Rumbling Falls Cave System	Cumberland Plateau	137	138
Scotts Gulf	Cumberland Plateau	142	143
Spencer Powerline Seeps	Cumberland Plateau	151	143
WARREN			
Big Woods	Cumberland Plateau	22	23
Boyd Barrens	Cumberland Plateau	28	170
Collins Scenic River	Cumberland Plateau	139	140
Duke Creek	Middle Tennessee	69	70
Hubbards Cave	Cumberland Plateau	82	83
Mud Creek Swamp	Cumberland Plateau	105	134
Rock Island State Park	Cumberland Plateau	133	134
West Morrison Pond & Low Woods Protection Planning	Cumberland Plateau	169	170
Witty Creek	Middle Tennessee	69	70
WASHINGTON			
Austin Springs	East Tennessee	18	19
WAYNE			
Beech Creek Bluffs	Tennessee River West	26	28
Eagle Creek	Tennessee River West	26	28
Little Beech Creek	Tennessee River West	31	32
Middle Cypress Creek	Tennessee River West	33	34
Southwestern Highland Rim Project	Middle Tennessee	141	144
WEAKLEY			
Bean Switch	West Tennessee	54	57
Big Cypress	West Tennessee	54	57
Maness Swamp Refuge	West Tennessee	54	57
Obion River WMA	West Tennessee	54	57
Upper Obion River Project	West Tennessee	54	57
WHITE			
Bledsoe State Forest	Cumberland Plateau	24	145
Lost Creek Cave	Cumberland Plateau	92	145
Scotts Gulf	Cumberland Plateau	142	143
Upper Caney Fork	Cumberland Plateau	160	143
Virgin Falls SNA	Cumberland Plateau	166	167
White County Wetlands Complex	Cumberland Plateau	172	173
WILLIAMSON			
Basin Spring RSNA	Middle Tennessee	17	18
Harpeth State Scenic River	Middle Tennessee	81	82
Mill Creek - Nolensville Headwaters	Middle Tennessee	110	112
Mill Creek - Upper Owl Creek Drainage	Middle Tennessee	110	112
WILSON			
Cedars of Lebanon State Forest, SNA and State Park	Middle Tennessee	41	43
Couchville Cedar Glade SNA	Middle Tennessee	100	101

INDEX BY COUNTY

	Region	Narrative Page #	Map Page #
Gattinger's	Middle Tennessee	78	43
Lane Farm	Middle Tennessee	92	43
Spring Creek Bottom And Glade	Middle Tennessee	145	146