**A Review of Tennessee's Regulatory Framework Relative to Habitat Conservation Planning on the Cumberland Plateau**

**Forestry, Wildlife & Fisheries Graduate Seminar**
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## Presentation Overview

- Introduction/ Justification for Research
- Research Objectives
- Methods
- Findings
- Discussion/Implications

## Habitat Conservation Plans

- Endangered Species Act conflicts
- 1982 ESA amendment (Section 10)
- Allows resource use to occur under HCP to minimize/mitigate impacts
- Non-federal entities receive Incidental Take Permit
- Cooperative, proactive, voluntary

## Cumberland HCP

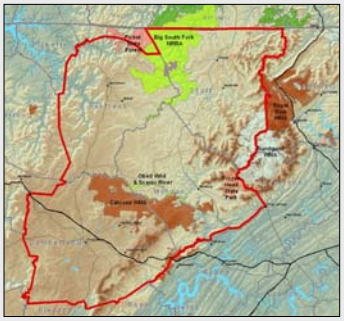
- Biodiversity Hotspot
  - Extensive hardwood forests
  - Aquatic and karst ecosystems
  - 20+ T&E species
- Stressors
  - Incompatible forestry
  - Mining impacts
  - DEVELOPMENT

Blackside Dace

Purple Bean Mussel

Indiana Bat

## Cumberland HCP Study Area



- 4 Counties
  - Cumberland
  - Morgan
  - Scott
  - Fentress
- 2 Watersheds
  - Emory
  - Big South Fork

## Development Issues

## Cumberland HCP

Process (2005-2007)

- FWS HCP Planning and Assistance Grant
- The Nature Conservancy/UT scoping process
- Need for HCP

  *Are existing regulatory processes adequate to protect threatened and endangered species?*
- Interest in HCP

  *What are potential benefits/incentives for resource users to develop an HCP?*

## Research Objectives

1) Summarize regulatory framework
   - Aquatic T&E species, development impacts
2) Gather perspectives on regulatory process and its limitations
3) Identify potential benefits of HCP

## Methods

- Document Analysis
- Key Informant Interviews
- Verification/Member Checking

## Key Informant Interviews

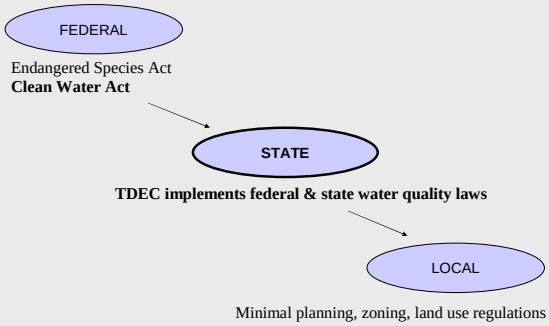
**State**
TN Dept of Environment & Conservation
Tennessee Wildlife Resources Agency

**Federal**
Fish & Wildlife Service
Army Corps of Engineers
National Park Service

**Nongovernmental (NGO)**
Tennessee Clean Water Network
The Nature Conservancy
National Parks Conservation Association

## FINDINGS & DISCUSSION

## Regulatory Framework



## State Implementation

Federal Clean Water Act
TN Water Pollution Control Act

- Water Quality Criteria
- Designated Uses-Aquatic Life
- Antidegradation-Tier **2**

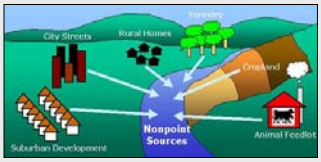
**PERMITS**

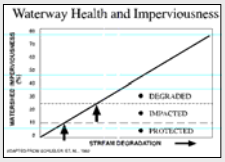
**Discharges: NPDES**
- Industrial & Municipal Wastewater
- Stormwater
  - Municipal (MS4)
  - Construction

**Habitat Alteration**
- Section 404 (USACE)& 401 Certification (TDEC)
- TN Aquatic Resource Alteration Permit (ARAP)

## Challenges & Limitations

- Fragmentation and Uncertainty
  - Permit-by-permit decision making
  - Limited assessment of cumulative impacts
  - Uncertainty about species impact thresholds




## Challenges & Limitations

- Fragmentation and Uncertainty
  - Dispersed authority limits agency oversight

**TDEC Nashville**
Treatment Plants (NPDES)
Impoundments (ARAP)

**Corps of Engineers**
Water Supply Projects
Sect 404

**TDEC Cookeville**
(Cumberland, Fentress)
Construction
Stormwater & MS4
(NPDES)

**TDEC Knoxville**
(Morgan, Scott)
Utility crossings,
minor dredge/fill
(ARAP)

## Challenges & Limitations

- Political and Institutional
  - Pressure on agencies to grant permits
  - Adversarial dynamics
  - Weak monitoring and enforcement
  - Limited agency resources
  - **No forum for landscape-level decision-making**

## Potential Benefits of HCP

- Expertise/resources for science and planning
- Adaptive management
- Collaborative decision-making
- Locally implemented and enforced
- Increased local awareness and capacity

## Progress Report

- Scoping → **HCP development**
- Science Advisory Committee, Steering Committee, Technical Teams
- **Partners:** Cumberland County, Crossville, Morgan County, Wartburg, possibly others

## Acknowledgments


- Dr. David Ostermeier
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- UT Natural Resource Policy Center
- The Nature Conservancy
- Cumberland HCP Development Team
- Interview participants


## Questions?

www.cumberlandhcp.org