

# Eastern Band of Cherokee Indians Integrated Geographical Information System (IGIS)



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# Background

- The Eastern Band of Cherokee Indians (EBCI) is the only federally recognized Tribe in North Carolina. Historically the Cherokee tribe is the largest tribe east of the Mississippi covering approximately an 8 state region.
- The Eastern Band of Cherokee Indian Reservation is located in the southern Appalachian Mountains of western North Carolina and consists of approximately 56,000 acres of remaining Tribal lands.



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# Cherokee Ancestral Homeland



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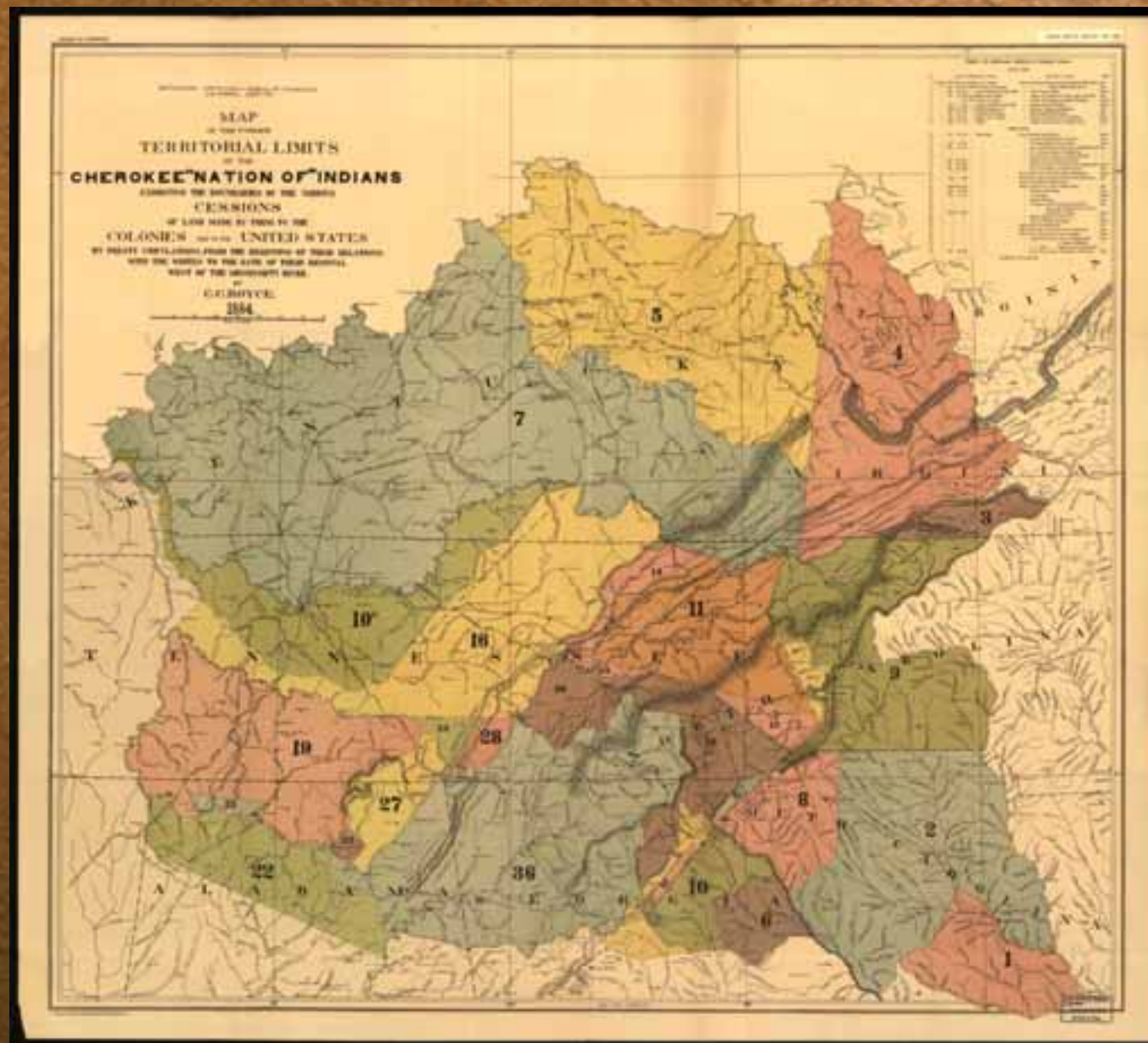
# Historical Overview of the EBCI

- What is now Western North Carolina has been part of the homeland of the Cherokee people for many centuries.
- Today's Eastern Band members are direct descendants of those who avoided the Cherokees' forced removal to Oklahoma in the 1830s, the "Trail of Tears."
- There are over 13,725 enrolled members of the Tribe today; over 60% live on the Qualla Boundary.



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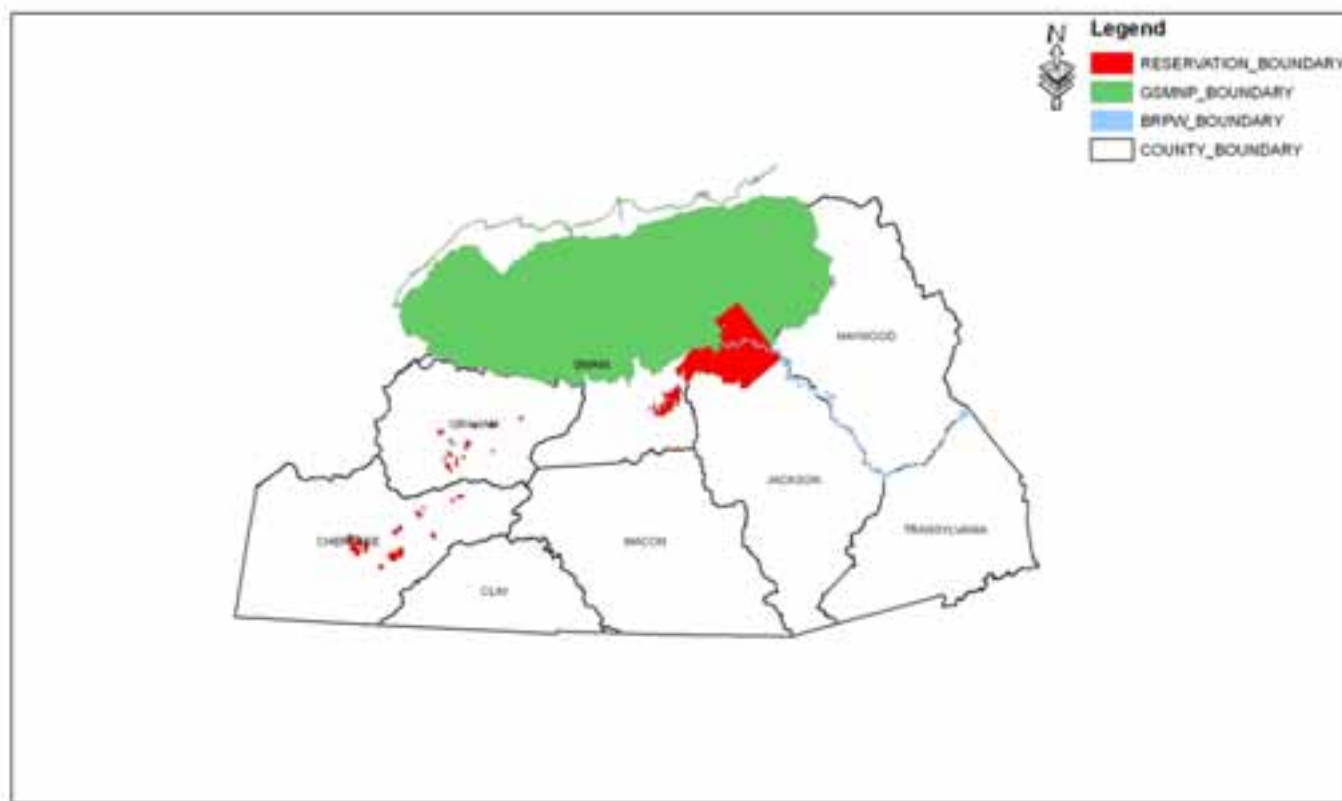
1884 Royce Map



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# Today's Remaining Tribal Lands



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# EBCI Tribal Government

- Headed by a popularly-elected Principal Chief, Vice Chief, and Tribal Council
- Provides services that are typical of those provided by most municipal governments.
- Provides police, fire, public safety, EMS and sanitation services to residents and the business community.
- Responsible for water and sewer services, environmental, planning, as well as road construction and maintenance.
- Also provides a variety of health, medical, community and recreational services to Tribal members.



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# Cherokee: A Major Tourist Destination

- Cherokee is a major tourist destination for millions of visitors each year
- Cherokee is the gateway to both the Blue Ridge Parkway and the Great Smoky Mountains National Park – two of the top three most visited recreation areas in the United States
  - 2,267,625 visitors crossed through the Cherokee entrance to the GSMNP in 2005
  - Cherokee is the southern terminus of the Blue Ridge Parkway; an estimated 536,000 people traveled the Parkway through Cherokee in 2004
  - Average 2005 daily traffic count on Highway 441 from Gateway Exit to Reservation: 15,000

*(Sources: National Park Service, NC Department of Transportation, and Blue Ridge Parkway)*



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# Recreation



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# Recreation: Fishing



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# Why GIS?

- The EBCI has experienced significant economic growth and there is now a need for many numerous Tribal government programs work on geographically related day to day workflow, task and projects.
- Currently these programs are limited with no single point to store, track, update share and report on current project/activities.



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# What are the Geographically Related Workflows?

*“Growing inside the 56,000 acre Mountainous box”*

- Site Plan Review (NEPA)
- Environmental Permitting
- Cultural Preservation
- Housing Services
- Utilities Services



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# Goal

- Improve the Tribes ability
  - Serve its Tribal Members
  - Preserve Culture
  - Protect limited natural and cultural resources



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# Housing

- Estimated 800 Tribal members waiting to develop home site
- Current Site Plan review process takes weeks and months
- Integrate Housing Division workflows to send ABCs on for review
- Improve ability to qualify Tribal member for services



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# Utilizing the A B Cs

- Each of the Tribal programs need much of the same information name, address, phone number, where is it located, what kind of a house is it, what size is it, etc. (known as the ‘ABCs’ of a project).
- Utilize leverage data across existing workflows



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# The Workflow

- Enter the ABCs
- Locate area
- Propose site area
- Check it against existing data
- Send on for review
- Reviewers check it/ propose changes and make decision
- Utilize data from assessment projects



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[illegible]



# Needs, Cont'd

- EMS, Police services (including 911 addressing) geo-coding
- Environmental protection, regulation and permitting buffer zone topology rules
- Forest and logging management
- Economic planning and development
- Project management integration
- Disaster planning with national standards
- Interpol ability with numerous federal agencies
- GIS standards and formats



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# Needs

- Accurate Parcel surveys, transactions and transaction history (referenced to Benchmarks)
- Secure parcel transaction workflow integration
- Cultural and archeological site assessment workflow/data/history/sites
- Residential and commercial development inspection and permitting workflow
- Utilities (Water, sewer, fiber optics and Dept. of Transportation) workflow
- Housing infrastructure workflow integration and management
- IT infrastructure network datasets



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# The EBCI plans to integrate existing geographically related workflows:

- Parcel transactions
- Parcel transaction history, parcel surveys
- Cultural and archeological data/history
- Historical documents management
- Environmental protection, regulations, logging
- Project management & review development
- Residential and Commercial
- Economic planning/development
- Inspection/permitting
- Utilities, housing, infrastructure
- Disaster planning
- EMS services



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# Land Holdings Management

- Currently a BIA responsibility
- EBCI seeks to build a highly accurate IGIS land records dataset(s) including present and past Tribal lands
- Combining IGIS with EDMS



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**PASSED**

CHEROKEE COUNCIL HOUSE  
CHEROKEE, NORTH CAROLINA

JUL 11 1991

RESOLUTION NO. 467 (1991)

WHEREAS, the Eastern Band of Cherokee Indians is presently a member of the North Carolina Indian Commission, with two representatives on the Board; and,

WHEREAS, the Eastern Band of Cherokee Indians is the only federally recognized Indian Tribe participating in the North Carolina Indian Commission; and

WHEREAS, the purpose of the Commission is to foster cooperation between Indian people and work for the benefit of Indian people; and

WHEREAS, at the present time some members of the North Carolina

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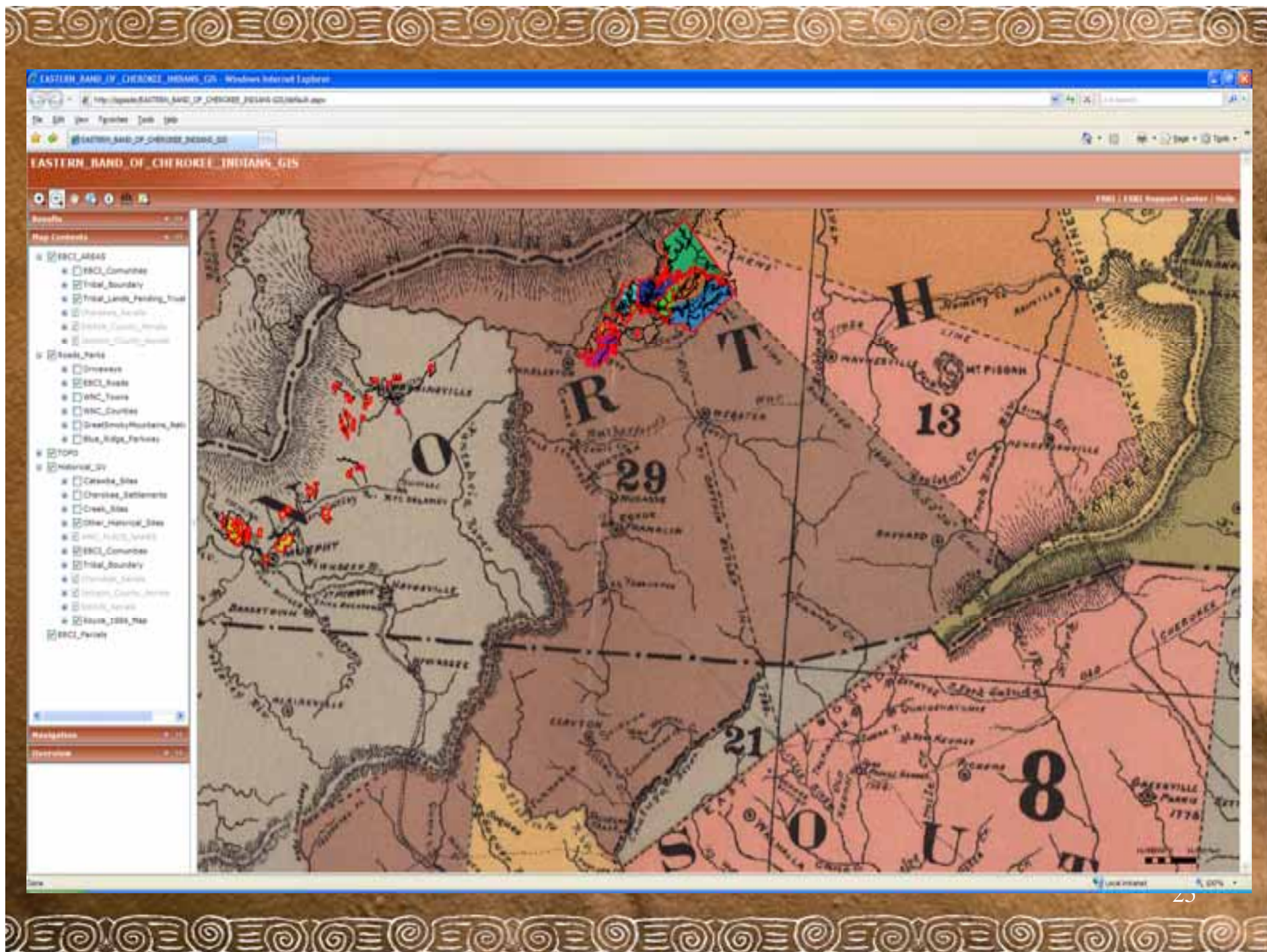
# Archeological

- Digitizing historical maps of Ancestral Homelands
- Increase Tribes Historic Preservation Office ability to protect sites
- NEPA Process
- GPS/GIS field mapping of new and existing sites
- Site investigations



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# Cultural

- Cultural Education
  - Cultural Language based maps
- Cultural Artisan Resources
  - Inventory limited resources
  - Enhancement (Quality, Quantity)
  - Simplified access for harvesting
  - Improve Management
  - Protection for future generations use



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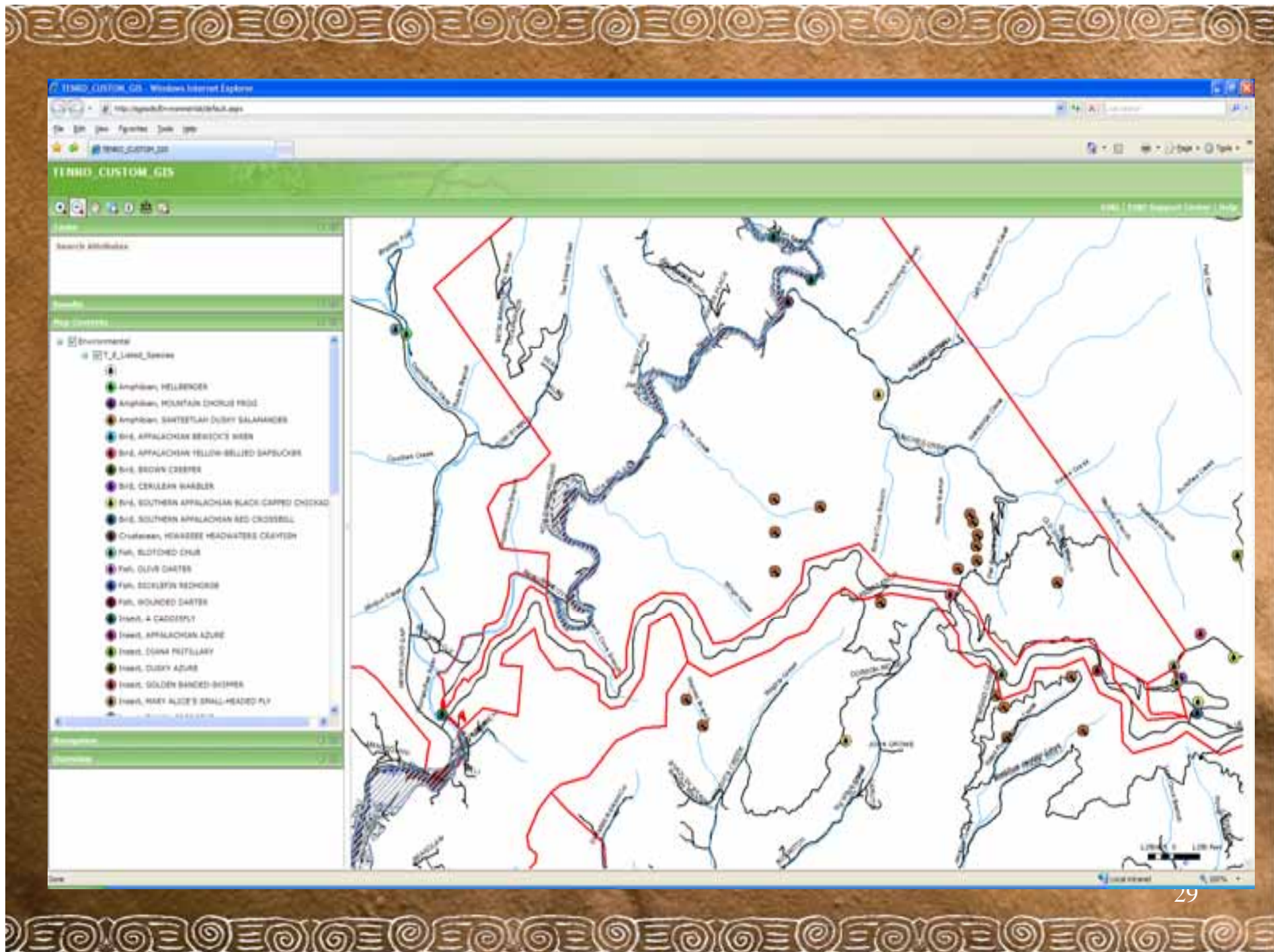
# Environmental

- Assessment
  - Species occurrence modeling
    - 32 known T&E species
    - New species found each year
  - Inventory
    - Utilize project assessments, NPS data
  - Regulatory
    - NEPA, Flood Zones, Permitting, Protection
  - Protection
    - IGIS workflow rules, buffers, topology



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# Thanks

- Dept of Interior, BLM & BIA
  - ELA ESRI Software Program
- USDA RBOG
  - Improving our ability to develop economically
- Cherokee Preservation Foundation
- EPA Region 4 Non-Point Source
  - Our 1<sup>st</sup> GPS unit (2003)



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# Thanks

- ESRI
  - Professional Services
    - Jan Mares, Paul Gallimore
  - John Young, ESRI Federal Accounts
  - Anne Taylor, Natural Resources Team



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Questions  
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