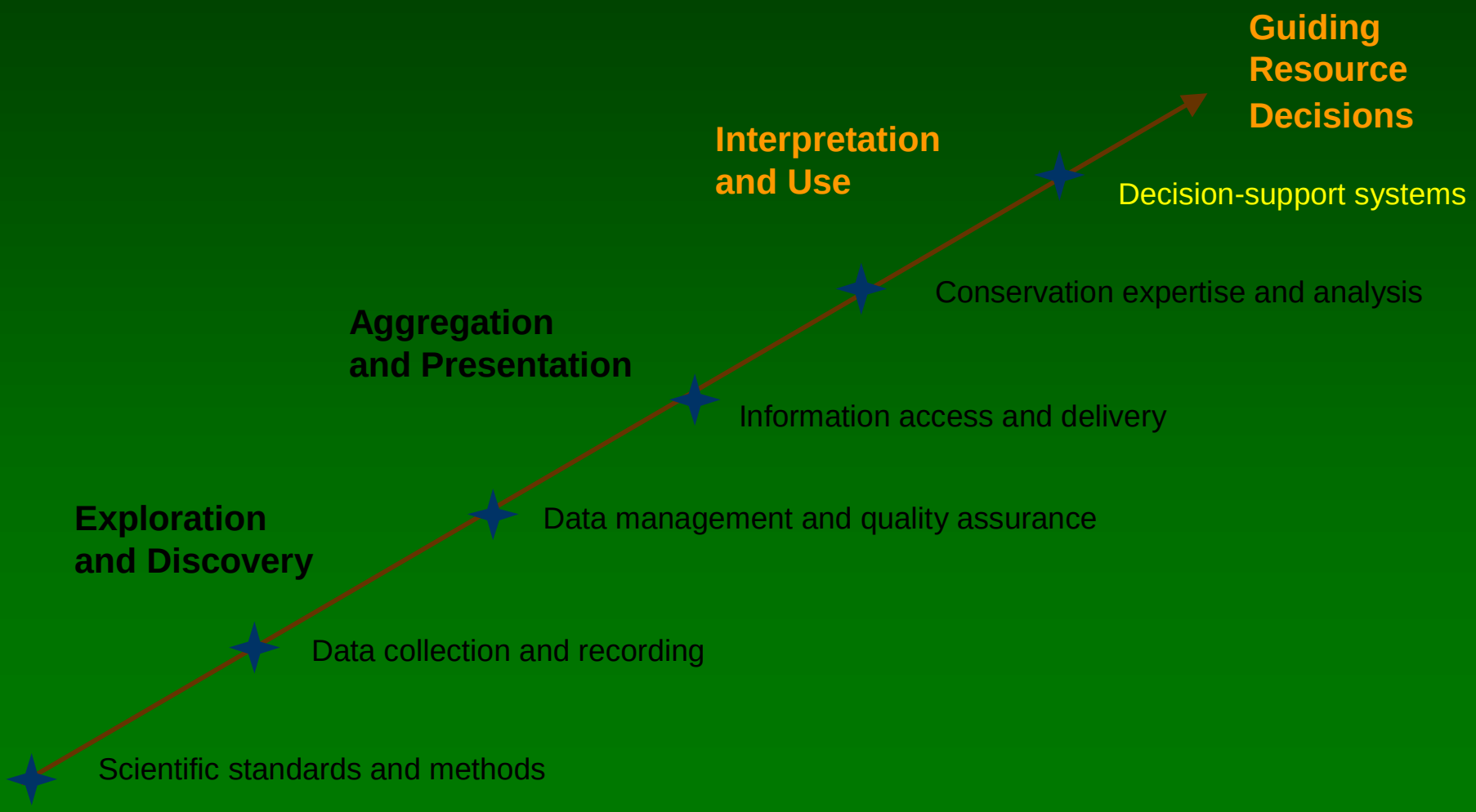
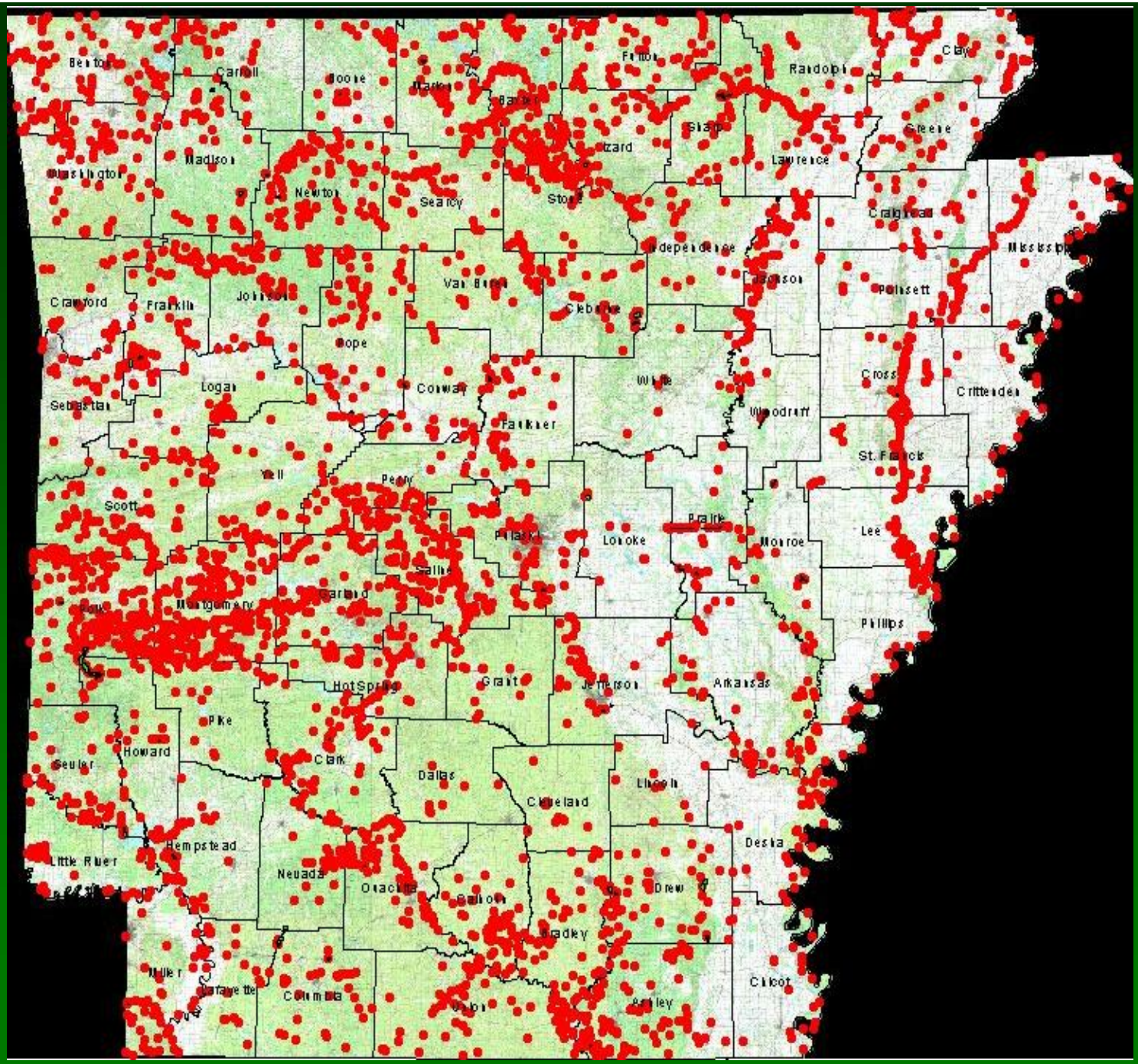
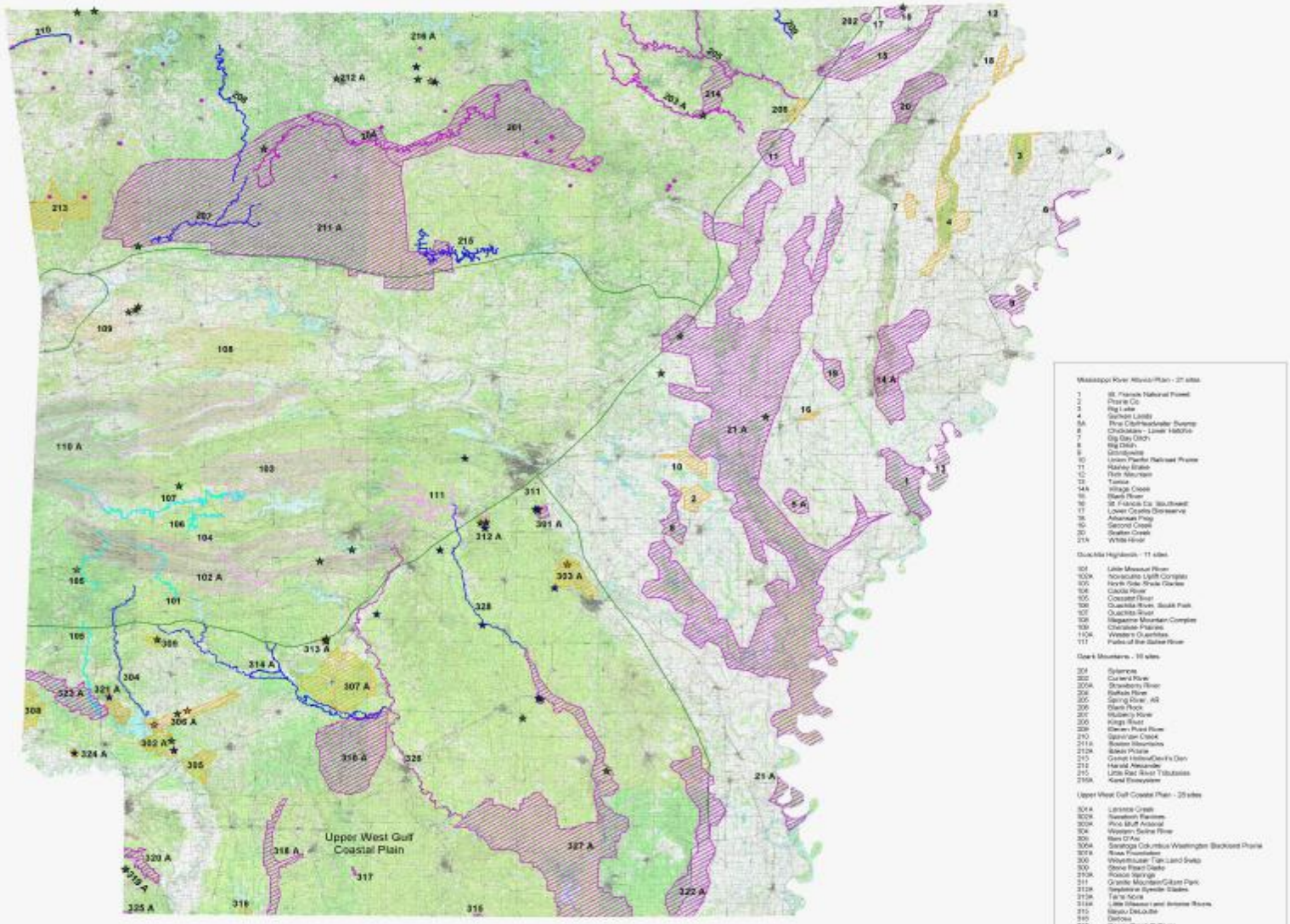
NatureServe Information Value Chain




Benton
Carroll
Boone
Marion
Baxter
Fulton
Randolph
Clay
Madison
Izard
Sharp
Greene
Lawrence
Washington
Newton
Searcy
Stone
Craighead
Independence
Mississippi
Van Buren
Jackson
Poinsett
Crawford
Franklin
Johnson
Cleburne
Pope
Cross
Crittenden
Logan
Conway
White
Woodruff
Sebastian
Faulkner
St. Francis
Yell
Perry
Scott
Prairie
Lee
Pulaski
Lonoke
Monroe
Saline
Garland
Montgomery
Phillips
Hot Spring
Grant
Jefferson
Arkansas
Pike
Howard
Clark
Dallas
Lincoln
Sevier
Cleveland
Desha
Hempstead
Little River
Nevada
Ouachita
Calhoun
Drew
Bradley
Miller
Lafayette
Columbia
Union
Ashley
Chicot

Areas of Significant Biodiversity in Arkansas



The Nature Conservancy

Map produced by ANPO GIS Lab on January 23, 2002

N

10 0 10 Miles

UTM Zone 15, NAD 27

All Ecoregions Except Ouachita Highlands

Terrestrial Sites

Terrestrial/Aquatic Sites

Aquatic Sites

Aquatic/Terrestrial Sites

Karst Ecosystem Sites

Ouachita Highlands Ecoregion

Terrestrial Sites

Terrestrial/Aquatic Sites

Aquatic Sites

Aquatic/Terrestrial Sites

Nature Conservancy Preserves

Partnerships with Public Agencies

Partnerships with Private Landowners

ARKANSAS NATURAL HERITAGE COMMISSION

Mississippi River Alluvial Plain - 21 sites

1 St. Francis National Forest
2 Prairie Co.
3 Big Lake
4 Seven Lakes
5A Pine City/Needwater Swamp
6 Chicot/Ark - Lower Helena
7 Big Bay Ditch
8 Big Ditch
9 Grandwood
10 Union Pacific Railroad Prairie
11 Marley Brake
12 Pine Mountain
13 Tunica
14A Village Creek
15 Black River
16 St. Francis Co. Southeast
17 Lower Ozarks Bottleneck
18 Arkansas Post
19 Second Creek
20 Bratton Creek
21A White River

Ouachita Highlands - 11 sites

101 Little Missouri River
102A Ouachita Uplift Complex
103 North Fork Rivers Glades
104 Caddo River
105 Cossatot River
106 Ouachita River, South Fork
107 Ouachita River
108 Magazine Mountain Complex
109 Cherokee Prairies
110A Western Ouachitas
111 Forks of the Saline River

Ozark Mountains - 16 sites

201 Sylamore
202 Current River
203A Strawberry River
204 Buffalo River
205 Spring River, AR
206 Black Rock
207 Mulberry River
208 Kings River
209 Eleven Point River
210 Spavinaw Creek
211A Boston Mountains
212A Bates Prairie
213 Cornet Hollow/Devil's Den
214 Harold Alexander
215 Little Red River Tributaries
216A Karst Ecosystem

Upper West Gulf Coastal Plain - 25 sites

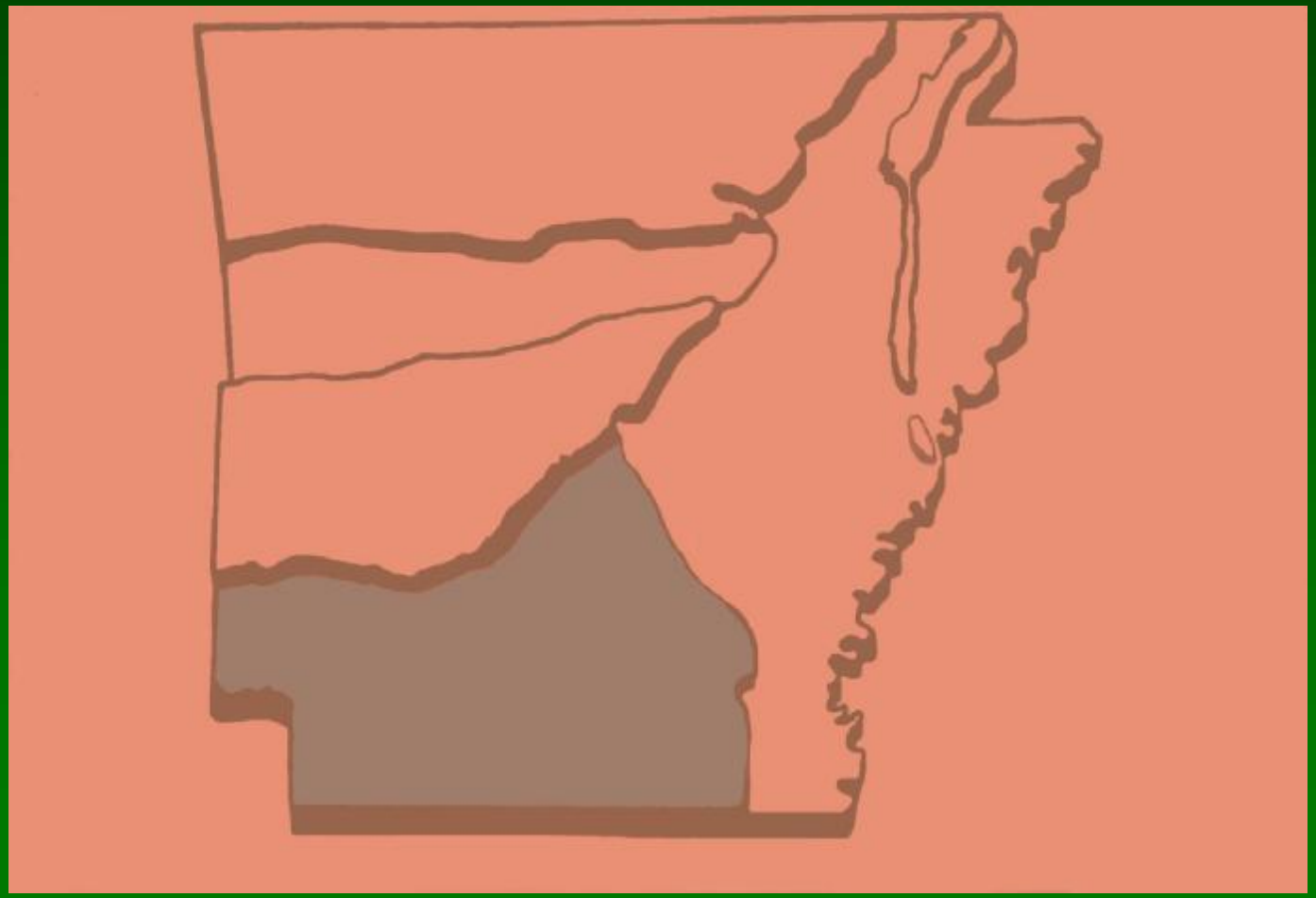
304A Lacassia Creek
305A Saratoga Columbus Washington Blackland Prairie
306 Wolfe/Houser Tyler Land Swap
307 Stone Prairie Glades
308A Poison Springs
309 Granite Mountain/Gillam Park
310A Tall'a Nova
311 Maglu DeLoutre
312 Bellows
313 Corner Creek Bottoms
314A Boyce Dorchest
315A Miller County Sandhills
320A Bluff River WMA
321A White Cliffs Mill
325A Bayou Bartholomew
325A Pond Creek Bottoms
326A Palmetto Flats
325A Cobb/Black Islands
325 Lower Ouachita River
327A Coastal Ark River Terraces/Bastrop Ridge
325 Saline River

Notes:

The letter A appended to an identifier designates an Action Site

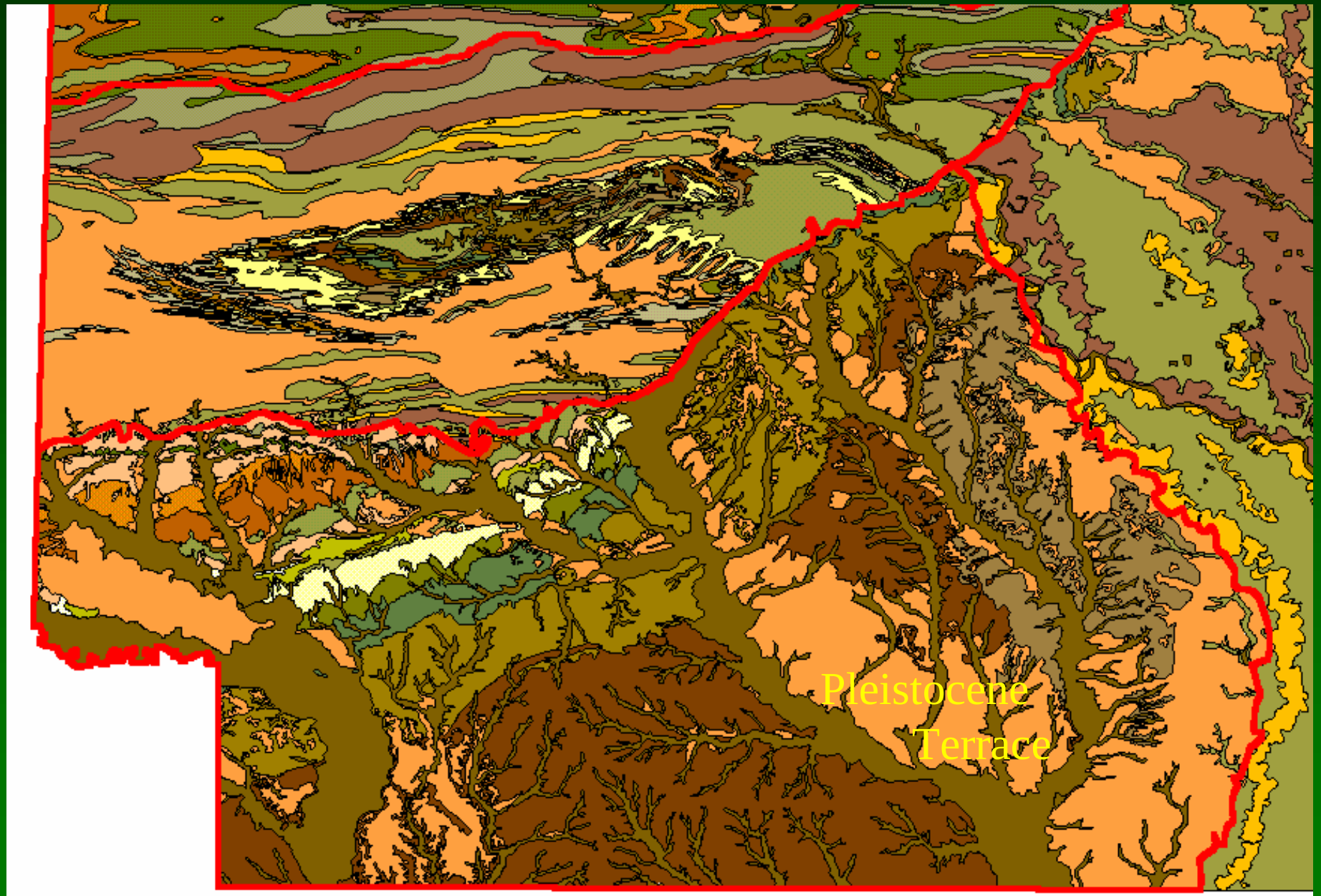
All of the Karst Ecosystem sites are collectively labeled with a single identifier (216A)

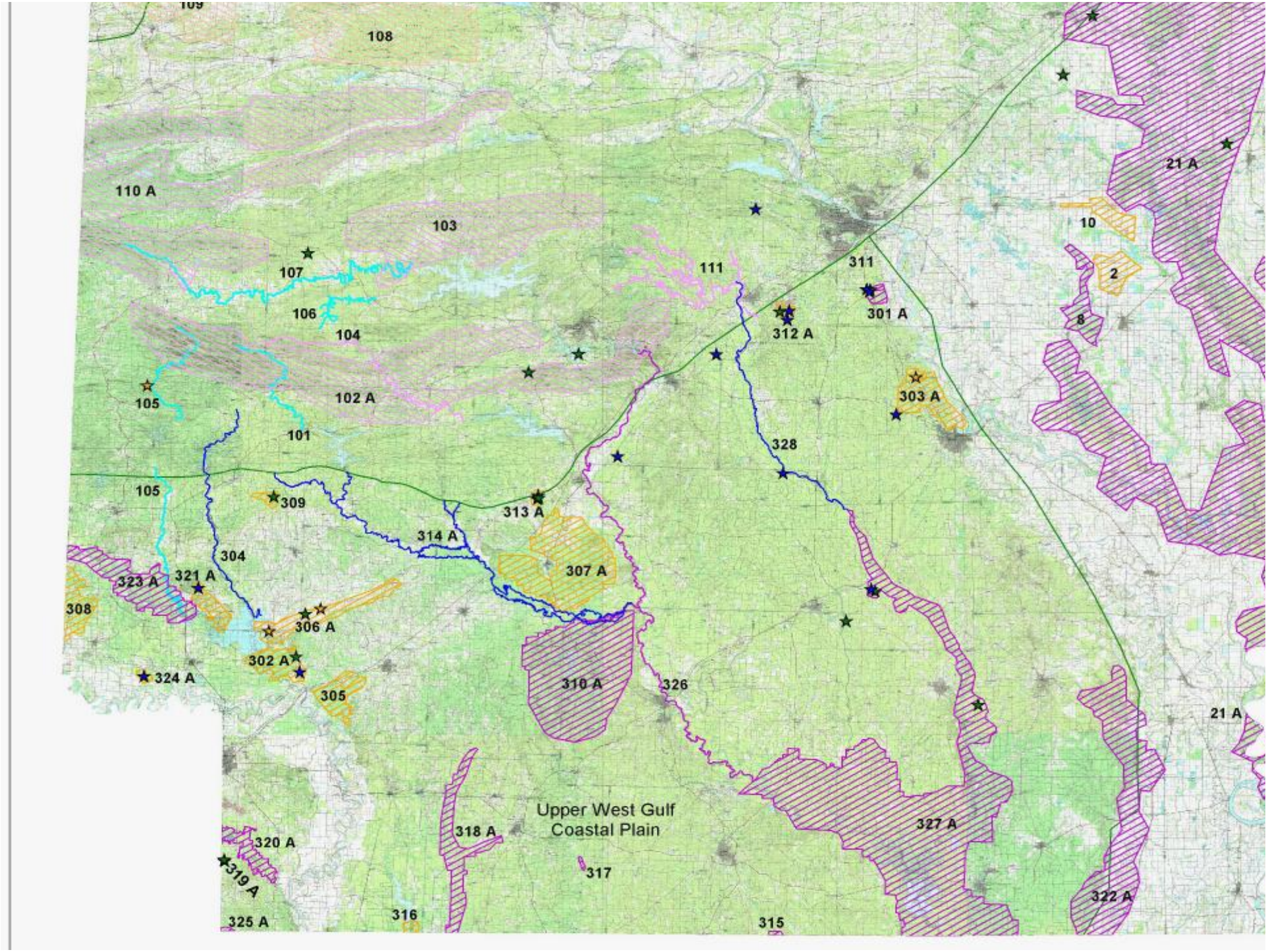
West Gulf Coastal Plain in Arkansas

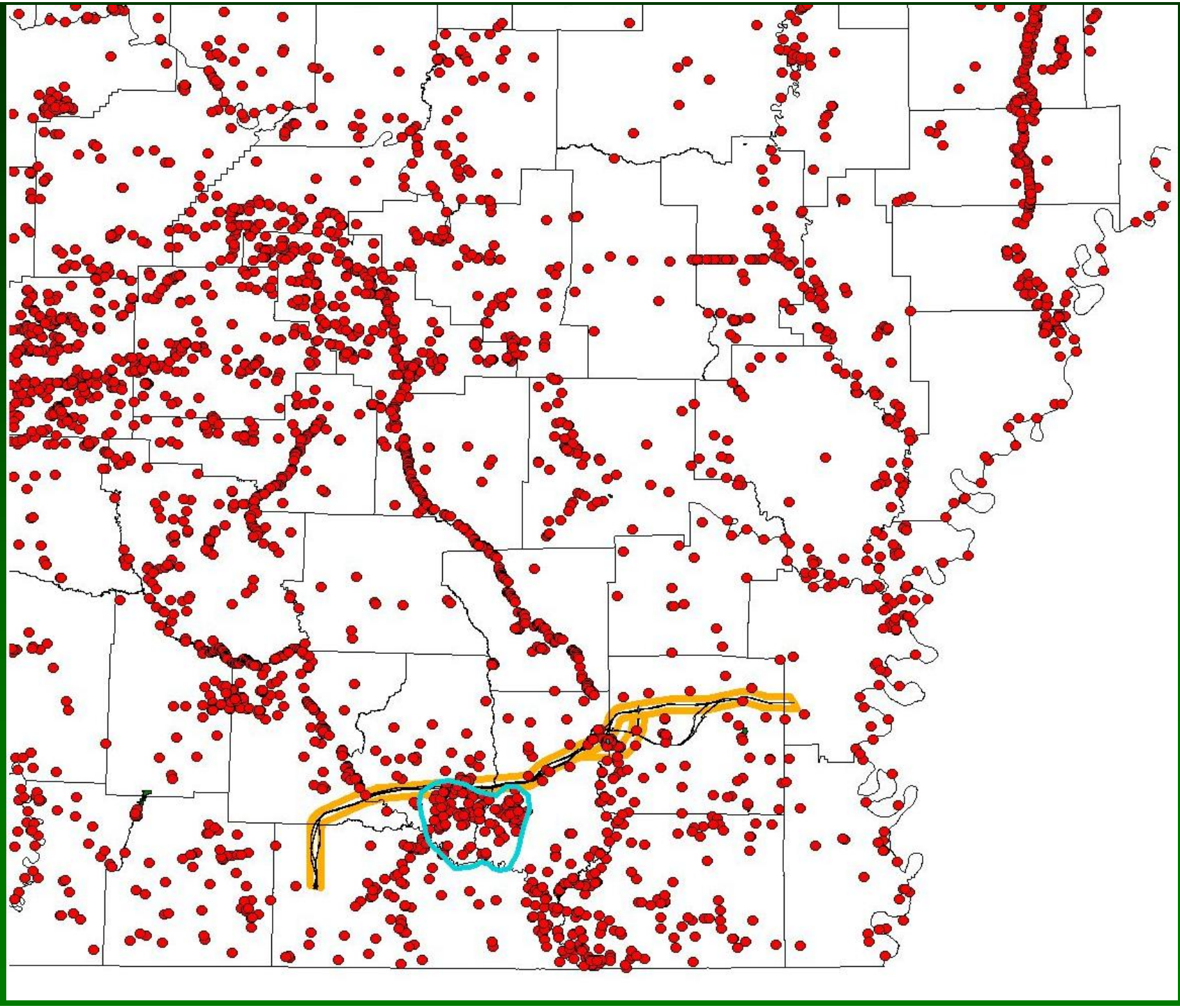


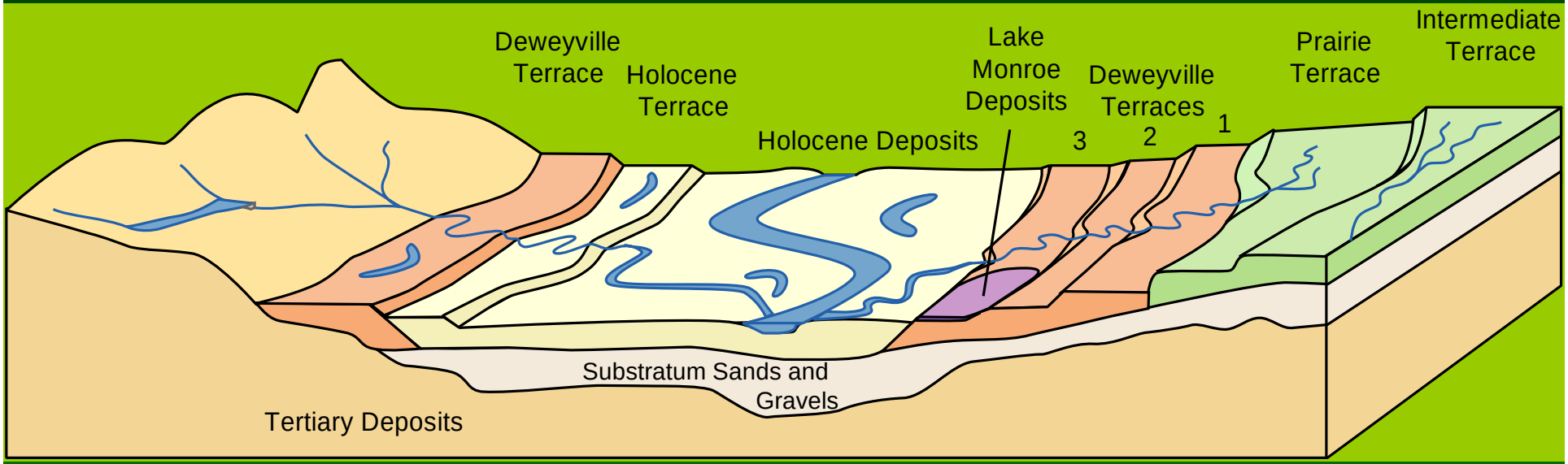
Goal

Conservation of a threatened system:
Pleistocene Terraces of the
West Gulf Coastal Plain


Pleistocene
Terrace


109
108
110 A
103
107
106
104
105
102 A
101
105
309
313 A
314 A
304
323 A
321 A
308
306 A
302 A
324 A
305
310 A
326
307 A
328
303 A
111
311
301 A
312 A
21 A
10
2
8
21 A
Upper West Gulf
Coastal Plain
318 A
320 A
319 A
325 A
316
317
315
327 A
322 A




Deweyville
Terrace
Holocene
Terrace
Holocene Deposits
Lake
Monroe
Deposits
Deweyville
Terraces
3
2
1
Prairie
Terrace
Intermediate
Terrace
Substratum Sands and
Gravels
Tertiary Deposits

Pleistocene Terraces Ecosystem Plant Communities

- Pine-hardwood flatwoods
- Wet hardwood flatwoods
- Bottomland hardwood forests
- “Upland” pine-hardwood woodlands
- Seeps
- Saline soil barrens
- Sand prairies – not in study area
- Tallgrass Prairies – not in study area

Pine-oak flatwoods

Saline soil prairie or barrens

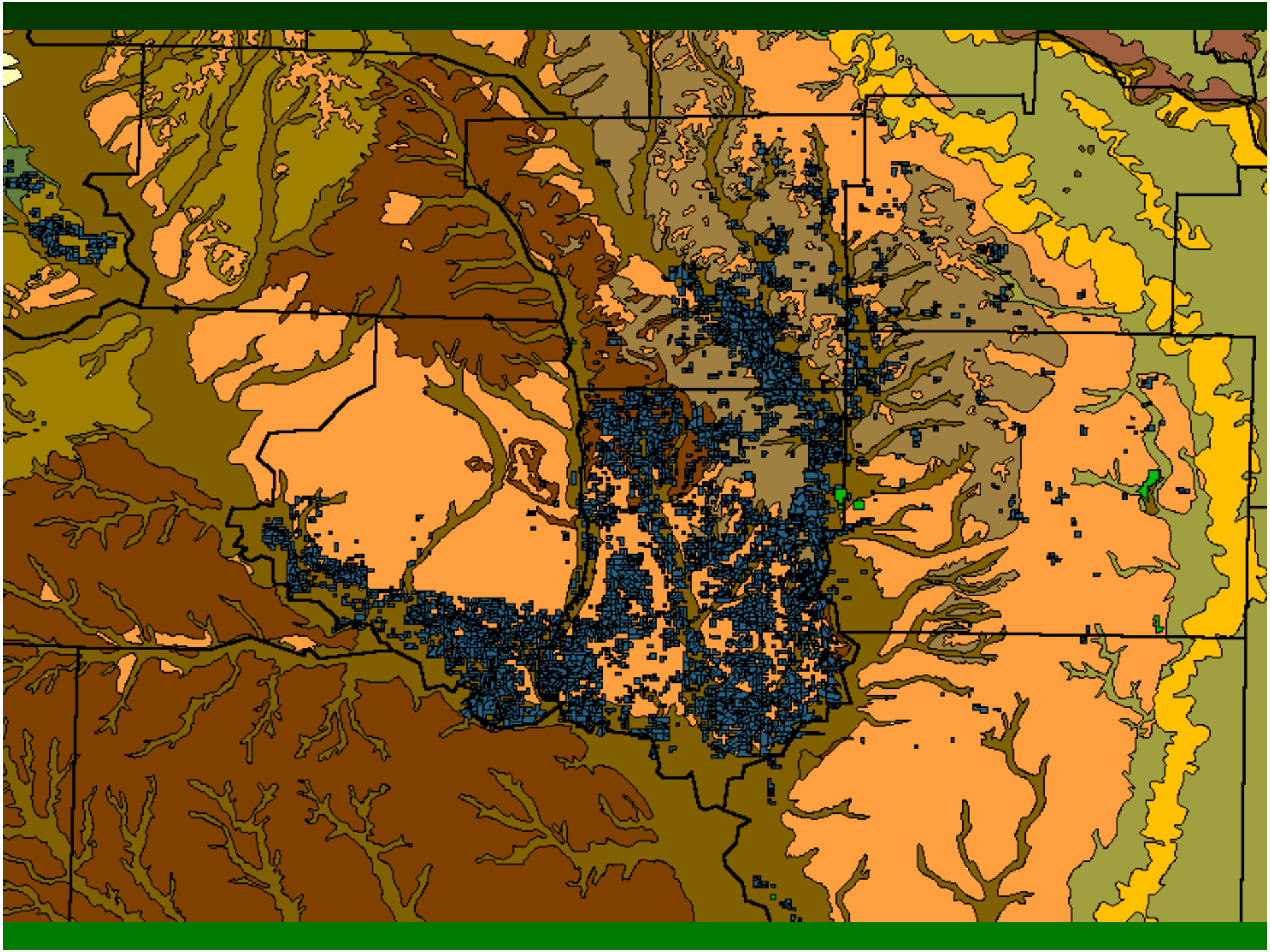
Over 40 plant species of conservation concern occur in the Arkansas Pleistocene Terraces.

In addition to globally-rare species, many species of outer Coastal Plain flatwoods occur here at the northern limit of their ranges.

Disturbance-adapted system

- Fire
- Tornadoes
- Windthrows
- Insects
- Ice storms

These ecosystems need the open structure historically caused by these disturbances



Opportunities

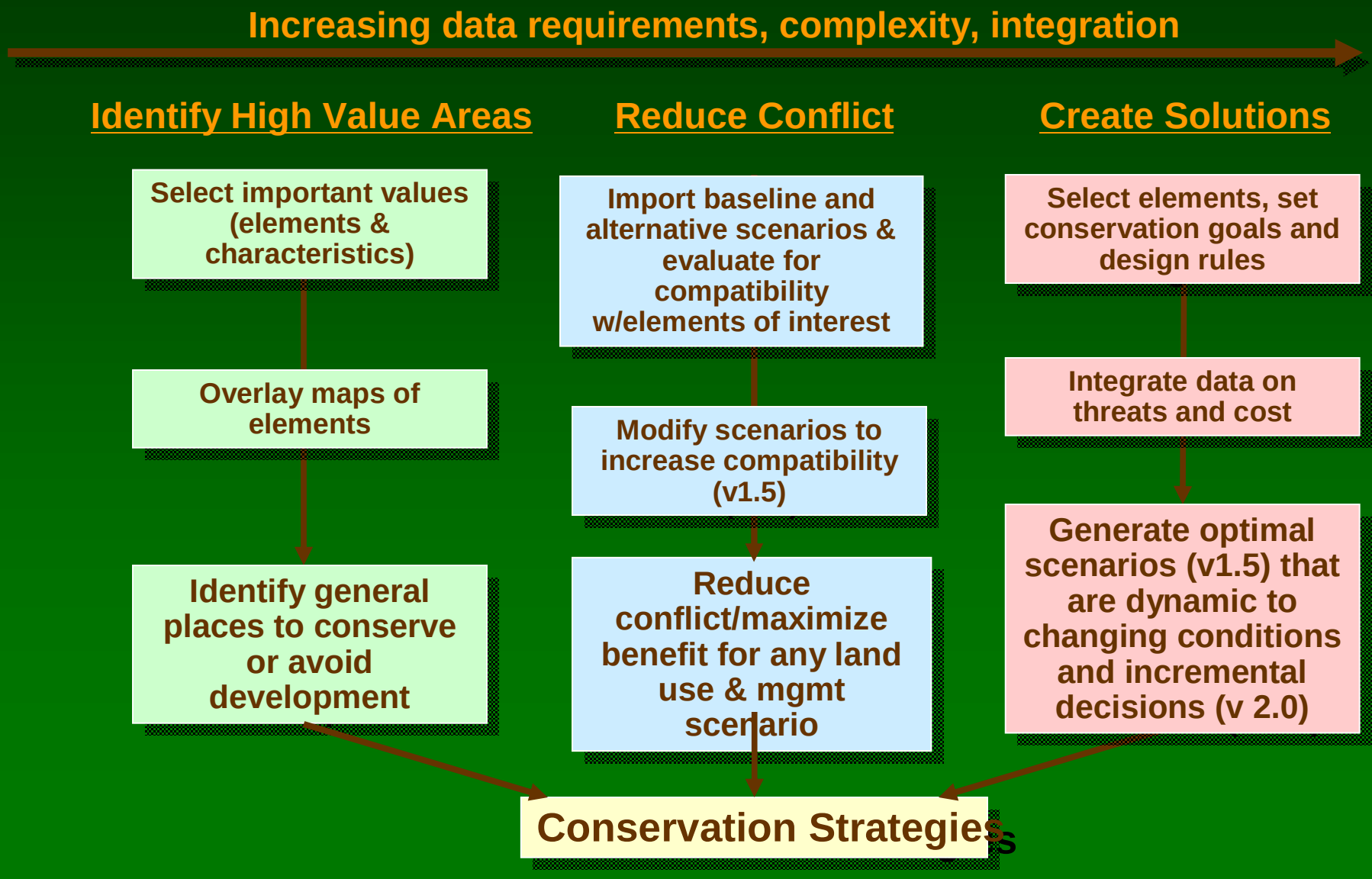
Desired basal area

Incompatible

Arkansas Natural Heritage Commission, Arkansas Game and Fish Commission and The Nature Conservancy are negotiating to buy easements on some Potlatch lands to ensure management that maintains the natural system and species of concern, provides public recreation and continues to provide economic return from timber production.

In addition to placing easements on some lands, Potlatch would like to know the ecological value of each timber stand it manages so management may be modified to increase emphasis on timber production on stands with lower conservation value and decrease it on stands of higher conservation value.

Vista Supports Three Approaches



The simplest application of Vista provides a rating of ecological importance which can meet the immediate needs of the Arkansas partners. The software can be used also to develop alternative management scenarios.

Results

Conflict/Opportunity Stand Map

Category (#Stands)

Neutral (1/800)
- Low EV Low CV (1)

Forest Opp (5/800)
- Med EV Low CV (4)
- High EV Low CV (1)

Cons Opp (47/800)
- Low EV Med CV (34)
- Low EV High CV (13)

Conflict (747/800)
- Med EV Med CV (121)
- High EV Med CV (52)
- Med EV High CV (317)
- High EV High CV (257)