

Area Description

Dewey Wills WMA is located in the southern portion of Catahoula and La Salle Parishes. Compartment 23 is located in all or portions of Sections 19, 20, 29, 30, 31 32, and 33 of T4N, R4E and encompasses 1,802 acres of bottomland hardwoods. The compartment is bound by Muddy Bayou Road to the north, Indian Bayou (North Fork) to the west, and Big Saline Bayou to the south. The eastern boundary of the compartment follows Duck Slough to its junction with Duck Creek. At that point, it follows Duck Creek to the intersection with its southern boundary, Big Saline Bayou. The terrain is relatively flat with the lower areas subject to seasonal floods.

Current Conditions

Portions of Compartment 23 have been affected by oak decline. Oak decline is not a disease, but a combination of many factors, natural and man-made, that weakens a tree and causes mortality. In this area, the species most impacted by oak decline has been the Nuttall oak, which is one of the most abundant species in the compartment. Many of the affected trees have already died or suffered from severe crown dieback, diminishing the forest canopy and providing an abundance of sunshine to the lower levels of the forest. The combination of ample sunlight and coarse woody debris currently provides exceptional browse and escape cover for species like white-tailed deer, among others. These conditions can be found in the northern portion of the compartment between Muddy Bayou Road and Airplane Brake. However, in the central portion of the compartment it has served as a catalyst for the growth of undesirable midstory shrubs, primarily *Crataegus* (hawthorne). In these areas, stem density of overstory tree species is low and midstory is very high. With midstory coverage being so prominent (80%-100%), regeneration of desirable tree species is almost nonexistent. In addition to low stocking, timber quality is relatively low. Stress of oak decline has given way to the red oak borer, which bores its way into the bole of the tree, compromising the integrity of the wood. Signs of red oak borers is ever present and include weeping sap, exit holes, and bark discoloration. Standing water, present for much of the year, also facilitates butt rot, and many of the Nuttall oak and overcup oak have been adversely affected.

Due to open water and sloughs that are inundated year-round, roughly 600 acres in the southern portion of this compartment are inaccessible to logging except under severe drought conditions. Timber quality in these areas is relatively good and stocking is high compared to other areas of the compartment. For the 1,200 acres in the northern portion that are accessible, timber quality and stocking are low. Within this portion, there is approximately 33.4 tons per acre of pulpwood and 6.3 tons per acre of sawtimber.

Forest Types

The forest types associated with this compartment are the Nuttall oak/ overcup oak forest type and the overcup oak/ bitter pecan forest type.

The Nuttall oak/ overcup type is the most abundant timber type within the compartment, representing 71% of the area and encompassing 1,272 acres. Tree species associated with this type vary with elevation changes. Lower areas contain primarily Nuttall oak, overcup oak, bitter

pecan, and green ash. As the elevation increases, the occurrence of overcup oak and bitter pecan decreases. The higher areas of this type often contain Nuttall oak and few of the previously mentioned species with the addition of willow oak. Timber quality is generally poor. The midstory consists of deciduous holly, hawthorn, swamp privet, and advanced regeneration and pre-commercial size trees. The understory consists of *Rubus*, greenbriar, red vine, poison ivy, rattan, various forbs and grasses, as well as the seedlings of major tree species.

The overcup oak/ bitter pecan type is associated with sloughs and areas of lower elevation within the compartment, representing 22% of the area and consisting of 391 acres. Primary species include overcup oak and bitter pecan along with Nuttall oak and green ash. Persimmon is also present. Baldcypress will occur in the lowest sites within this type. Timber quality and stocking are fair. The midstory consists of swamp privet, deciduous holly, and water elm. The understory consists of vines: rattan, poison ivy, and greenbriar. *Leersia*, wild carrot, and Joor sedge are also found here.

Willow oak is not listed as a forest type for this compartment because it does not constitute a significant portion of the overstory. However, some dominant trees of this species can be found scattered across the area, as well as a select few areas of heavy advanced regeneration that are a result of the combination of higher elevation and a deteriorating overstory. These areas have been highlighted on the timber types map (See Map). Within these areas, timber quality is relatively good and stocking is high.

The remaining 139 acres of Compartment 23 consist of open water or sloughs that are dominated by buttonbush. Timber in these areas consists of scattered baldcypress. These areas include Duck Bayou and North Fork, as well as other low-lying expanses that retain water into dryer months of the year as a result of beaver activity.

Soils

The soils found in this compartment are Bursley silt loam, occasionally flooded; Foley silt loam, occasionally flooded; Fausse clay, frequently flooded and Alligator clay, frequently flooded. Most areas of these soils are used for woodland and habitat for woodland wildlife. Foley and Bursley silt loams are the prominent soil types within this compartment. The following descriptions are according to the NRCS Soil Survey.

Foley silt loam, occasionally flooded (Fe), 51.2% of compartment- This level, poorly drained soil is on broad flats on low stream terraces at the elevation of flood plains. Trees most common are overcup oak, water hickory, green ash, Nuttall oak and cypress.

Bursley silt loam, occasionally flooded (Bs), 38.1% of compartment- This level, poorly drained soil is on low stream terraces at the elevation of flood plains. It has high potential for the production of Nuttall oak, Willow oak, swamp chestnut oak and green ash.

Fausse clay, frequently flooded (Fc), .9% of the compartment- This level, poorly drained soil is in old channel scars and other depressional areas at the lowest elevation on the alluvial plains. The most common trees are baldcypress, water tupelo, water locust, bitter pecan, black willow, and overcup oak.

Alligator clay, frequently flooded (At), .8% of the compartment- This level, poorly drained soil is found in backswamps, sloughs, and swales at the lowest elevations of alluvial plains.

Common tree species associated with this soil type are baldcypress, water tupelo, water locust, bitter pecan, overcup oak, and black willow.

Open water comprises 5.5% of the compartment surface area.

Wildlife

Compartment 23 currently provides habitat for a wide variety of game and non-game species of wildlife, as well as fur-bearers. Resident game species commonly found within the compartment include white-tailed deer, squirrels, and rabbits. Migrant game includes American woodcock and waterfowl during the fall and winter months. Non-game species include the Louisiana black bear, as well as migrant and resident birds. Fur-bearers include beaver, river otter, raccoon, opossum, bobcat, and gray fox. Presently, habitat is quite good throughout much of the compartment. Sparse canopy coverage has allowed for the growth of a variety of understory species, greenbriar being the most common. These areas of dense understory provide exceptional browse and escape cover for white-tailed deer, as well as escape cover for rabbits.

Objectives

- Remove overstory in areas heavily impacted by oak decline and other stressors
- Reduce midstory where it inhibits stand regeneration
- Facilitate seedling growth and advancement of regeneration
- Create early successional habitat for game and non-game wildlife
- Maintain large cavity/den trees (baldcypress) and soft mast producing trees (persimmon)
- Increase species diversity

Methods

Clearcut (98 acres)

- Clearcuts will be in 4 units encompassing 98 acres
- Boundaries will be marked with orange paint facing the interior of the cutting unit
- Whole trees to be pulled to the set for topping
- Baldcypress and persimmon are not to be cut

Concerns

- Road maintenance during logging activities
- Excess rutting in low or wet areas

Treatments

A timber harvest will be used to achieve the objectives set forth for this compartment. Treatment will consist of four clearcut units in the central portion of Compartment 23. Areas chosen for management were those with a severely deteriorating overstory combined with a heavy midstory and a lack of understory growth. In each of these areas, midstory coverage is limiting the amount of sunlight to the forest floor, hindering forest regeneration. Whole trees will be pulled to the set for topping. This practice will increase the amount of disturbance to the midstory and provide sunlight necessary for forest regeneration and advancement. Of the four areas to be cut,

the southeastern unit (23 acres) is surrounded on three sides by stands of young willow oak, which is a species severely lacking within the compartment. Logging disturbance in this area will facilitate the spread of willow oak, increasing species diversity and improving timber quality within the treatment area. Wildlife within this compartment will also benefit from the production of early successional habitat for several years post-harvest. Boundary of each clearcut will be marked with orange paint facing the interior of the cutting unit. All merchantable stems 8" in diameter and greater will be removed, with the exception of baldcypress and persimmon. Snags and large hollow trees that are not deemed to be merchantable will be retained in order to provide coarse woody debris and necessary habitat for cavity nesters.

Logging Requirements

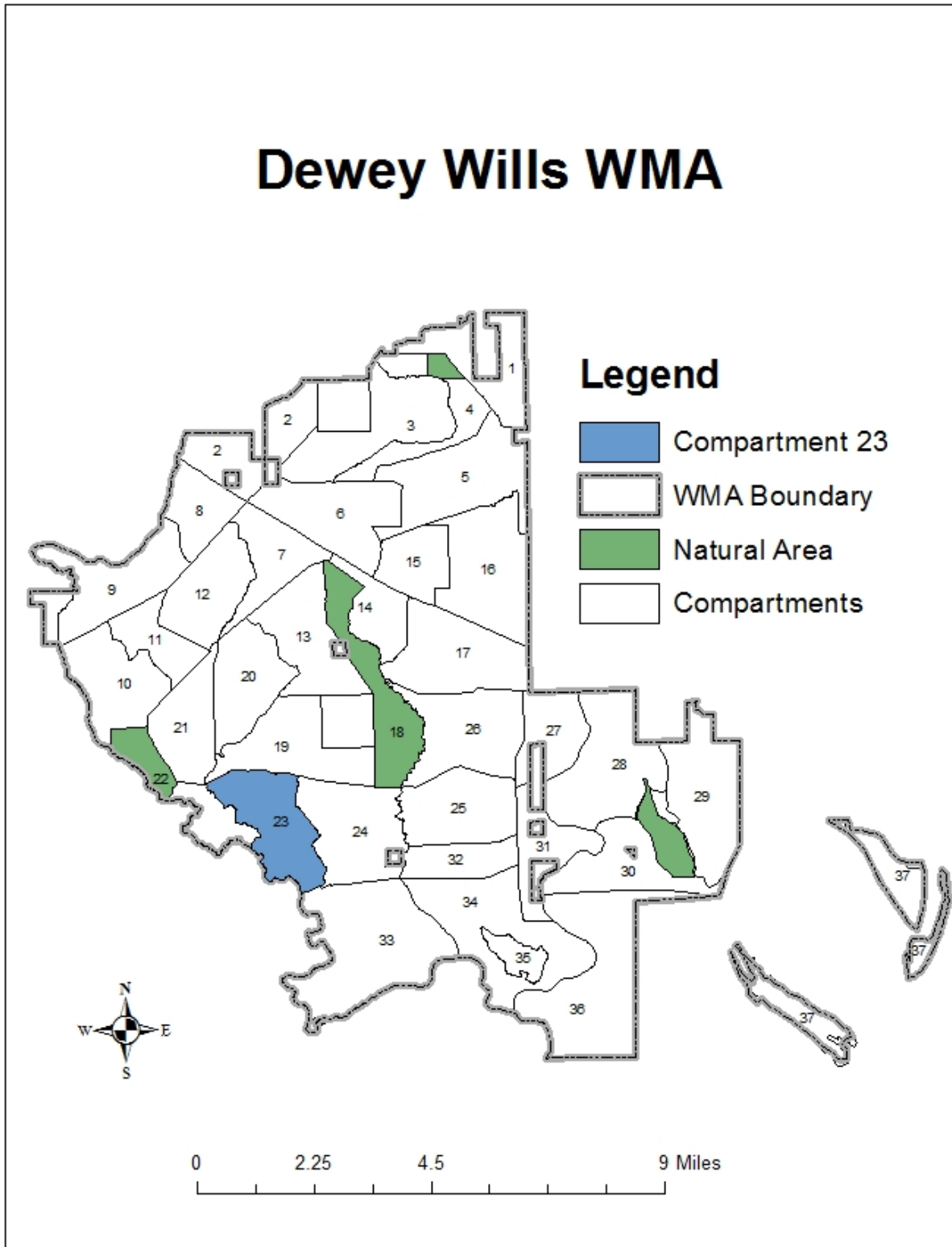
- No harvesting during wet periods
- No harvesting during the firearm seasons for white-tailed deer
- Whole trees to be pulled to and topped at set
- No cutting of baldcypress or persimmon
- Logging access will be Sandy Bayou Road, Muddy Bayou Road, and Pit Lake ATV Trail
- Follow Louisiana BMP guidelines at all times
- Loggers should be informed of the presence of Louisiana black bear; if operating between January and April and if a bear is seen within treatment area, the logger should leave *immediate* vicinity and contact LDWF Forester. Harvesting may continue in *immediate* vicinity of sighting only after approval from LDWF Forester.

Additional Entry Requirements

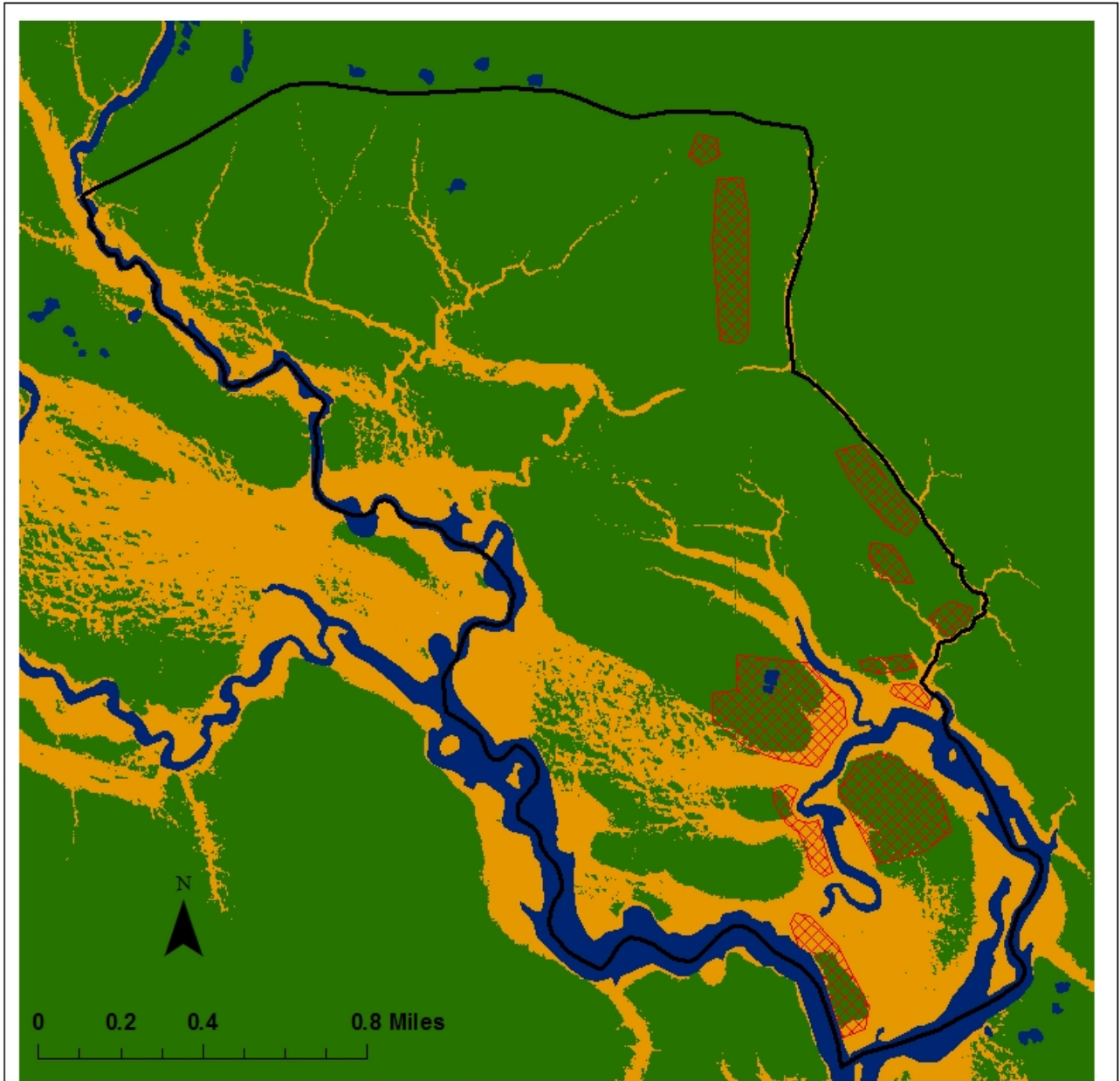
- Re-entry necessary to monitor establishment of regeneration

Attached maps (WMA, Forest Type, Treatment, and Harvest History)

Dewey Wills WMA Compartment Map



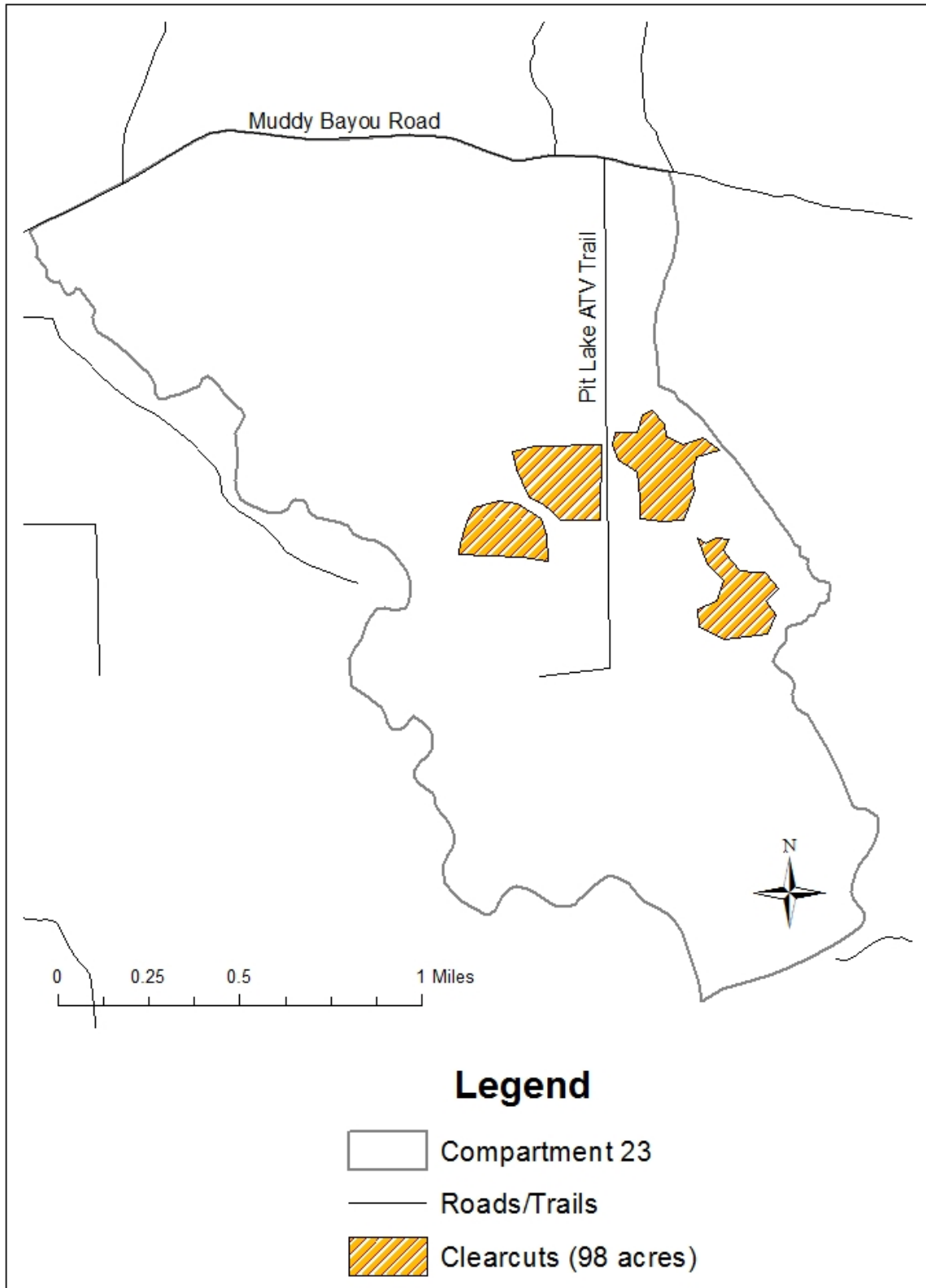
Dewey Wills WMA Compartment 23 Forest Type



Legend

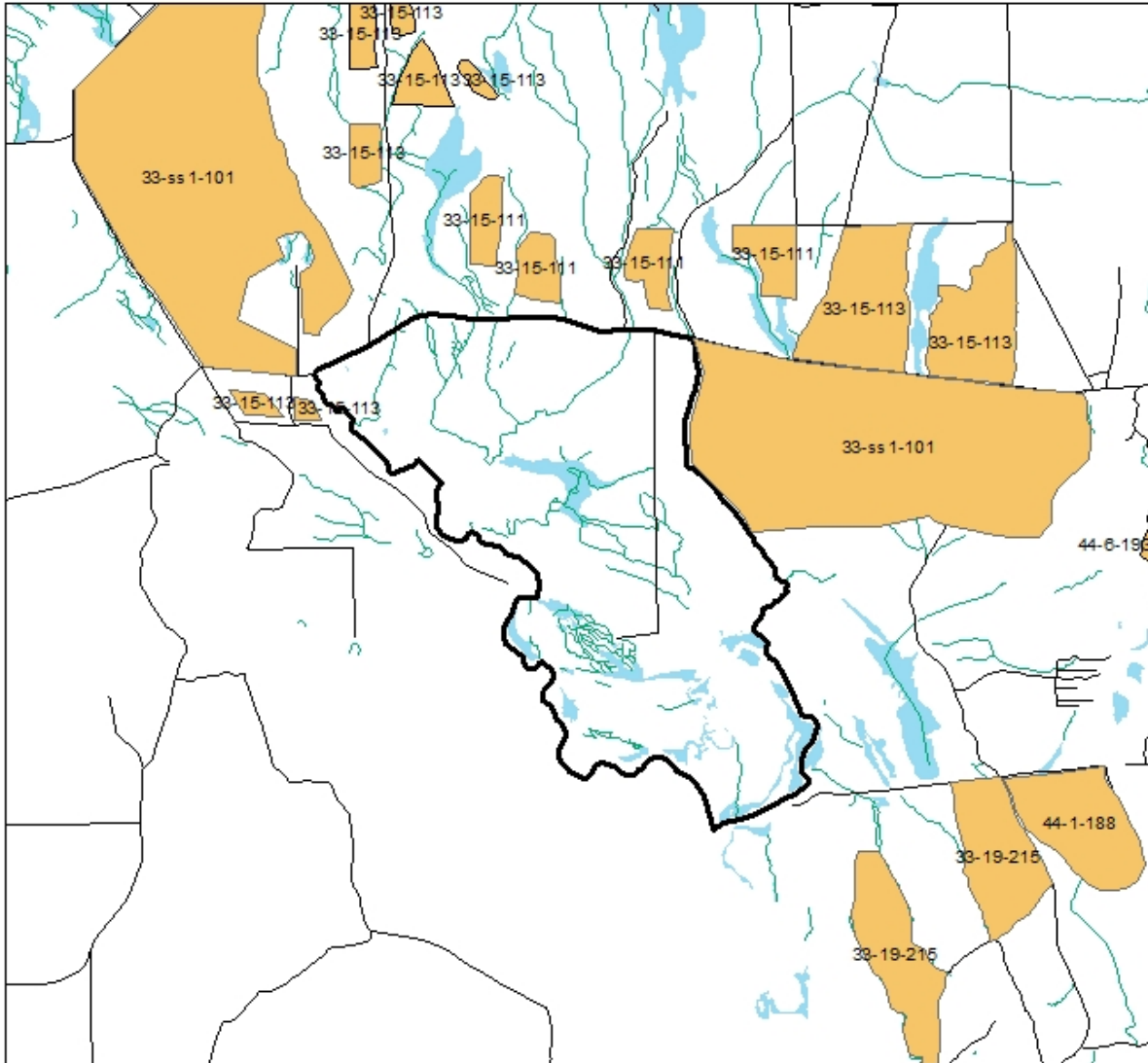
-  Compartment 23
-  Open Water
-  Nuttall/Overcup
-  Overcup/Bitter Pecan
-  Willow Oak Regen

Dewey Wills WMA Compartment 23 Proposed Treatment



Dewey Wills WMA Past Treatments

Adjacent Treatments



Sale Number	Treatment Type	Acres	Year
44-1-188	shelterwood	135	1989
33-ss1-101	individual/group selection	800	2002
33-ss1-101	individual/group selection	900	2003
33-15-111	clearcut	33	
33-15-111	clearcut	46	
33-15-113	clearcut	25	2013
33-15-111	clearcut	35	
33-15-111	clearcut	39	
33-15-113	clearcut	11	2013
33-15-113	clearcut	6	2013
33-19-215	operator select	132	2016
33-19-215	operator select	141	2016
33-19-215	operator select	89	2016
33-15-113	individual selection	172	2013
33-15-113	individual selection	132	2013
33-12-107	individual selection	260	2008