

Fort Gordon

Natural Resources Branch



31 August 2011



# Agenda

- **INRMP and Ecosystem Management**
- **Hunting and Fishing**
- **Deer Herd Management**
- **Regulation Changes and Check Station Requirements**
- **Hunter Opinion Survey**

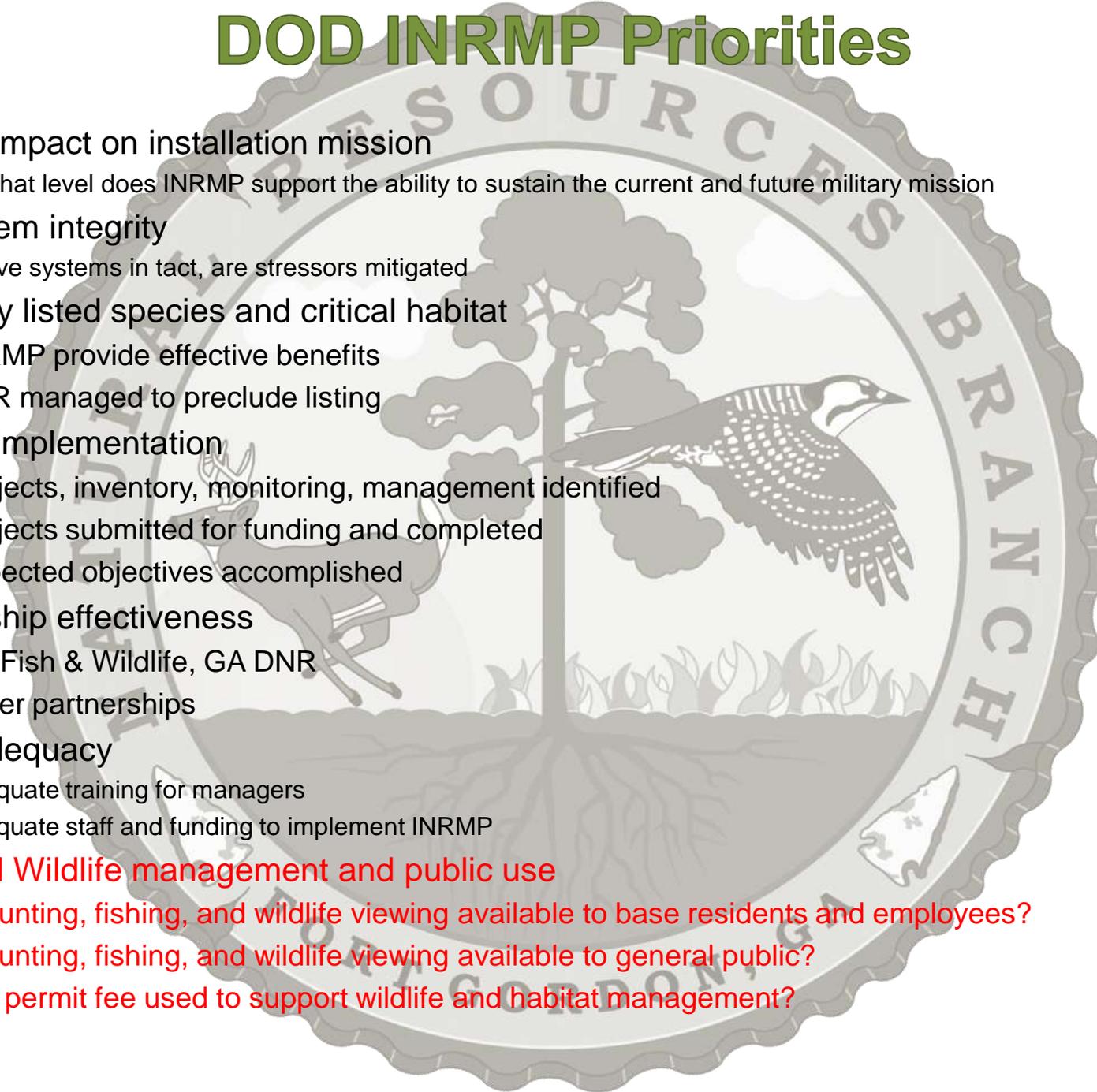
The background features a large, faded seal of the Fort Gordon Branch of the National Army Center of Environmental and Natural Sciences. The seal is circular with a scalloped edge. It contains a central illustration of a landscape with a tree, a deer, and a bird. The text "NATIONAL ARMY CENTER OF ENVIRONMENTAL AND NATURAL SCIENCES" is written around the top inner edge, and "FORT GORDON BRANCH" is written around the bottom inner edge. The seal is semi-transparent and serves as a background for the text.

**Support the Soldier and military mission  
while promoting the ecological integrity  
of Fort Gordon's landscape**

## **Key Management Plans & Guidance**

- DODI, Natural Resources Conservation
- Integrated Natural Resources Management Plan **(INRMP)**
- Integrated Wildland Fire Management Plan **(IWFMP)**
- US Fish & Wildlife Service Biological Opinion

# DOD INRMP Priorities



1. INRMP impact on installation mission
  - At what level does INRMP support the ability to sustain the current and future military mission
2. Ecosystem integrity
  - Native systems in tact, are stressors mitigated
3. Federally listed species and critical habitat
  - INRMP provide effective benefits
  - SAR managed to preclude listing
4. INRMP Implementation
  - Projects, inventory, monitoring, management identified
  - Projects submitted for funding and completed
  - Expected objectives accomplished
5. Partnership effectiveness
  - US Fish & Wildlife, GA DNR
  - Other partnerships
6. Team adequacy
  - Adequate training for managers
  - Adequate staff and funding to implement INRMP
7. Fish and Wildlife management and public use
  - Is hunting, fishing, and wildlife viewing available to base residents and employees?
  - Is hunting, fishing, and wildlife viewing available to general public?
  - Are permit fee used to support wildlife and habitat management?

# Fort Gordon INRMP Priorities



1. Mission support and requirements
  - Construction and Range development
  - Prescribed fire
  - Training area improvements
2. Ecosystem\Conservation based management
  - Composition and Structure
  - Ecological Process
  - Landscape Dynamics
3. Stewardship of rare or declining species and communities
  - RCW and Gopher Tortoise
  - Prescribed fire
4. Restoration of native systems
  - Conversion of off site pine species to longleaf or Loblolly
  - Establishment of native ground covers
  - Prescribed fire
5. Multiple land uses

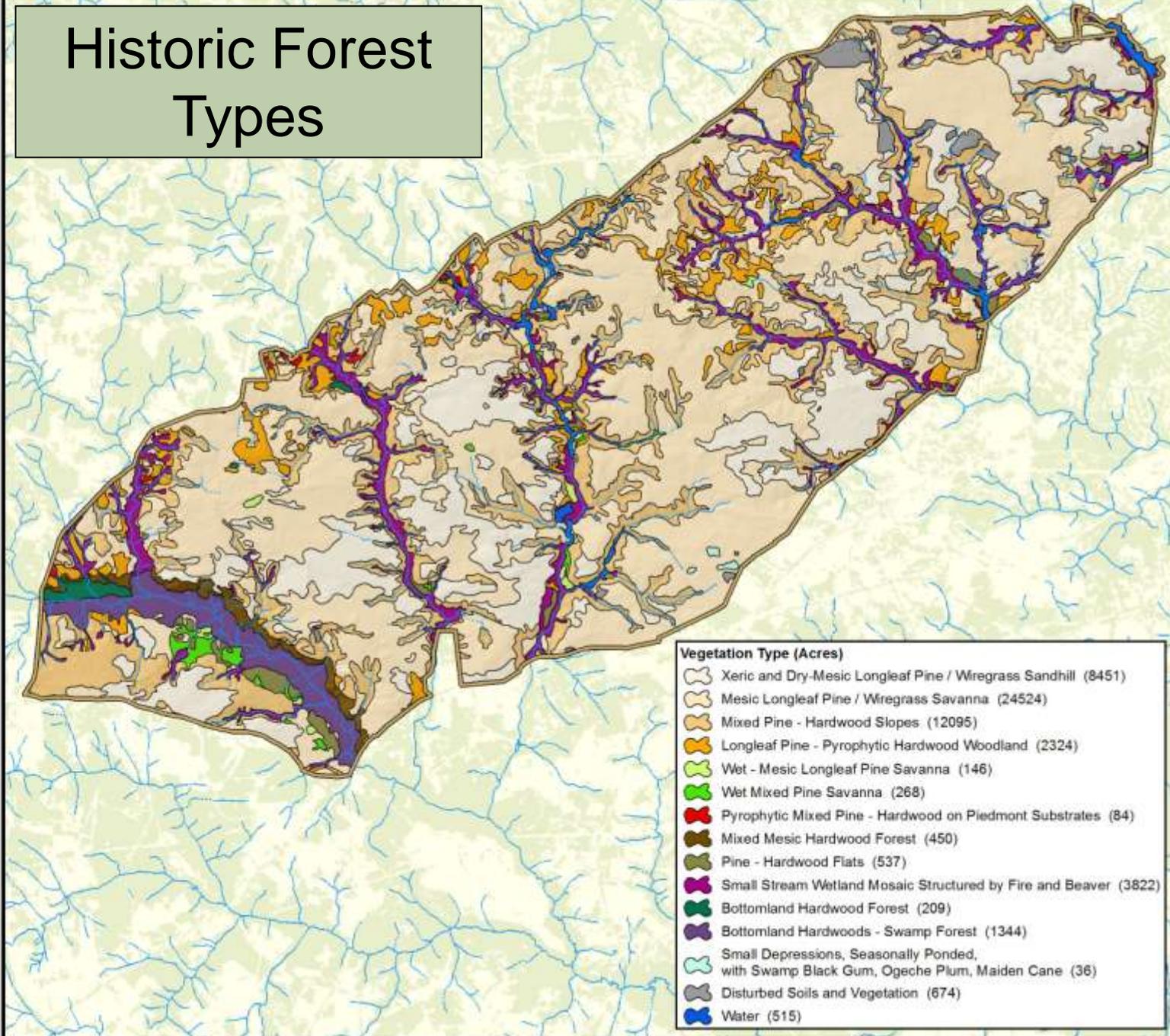
# Historic Forest Types



Installation Boundary

**Streams**

- Permanent
- Intermittent



Vegetation Type (Acres)	
	Xeric and Dry-Mesic Longleaf Pine / Wiregrass Sandhill (8451)
	Mesic Longleaf Pine / Wiregrass Savanna (24524)
	Mixed Pine - Hardwood Slopes (12095)
	Longleaf Pine - Pyrophytic Hardwood Woodland (2324)
	Wet - Mesic Longleaf Pine Savanna (146)
	Wet Mixed Pine Savanna (268)
	Pyrophytic Mixed Pine - Hardwood on Piedmont Substrates (84)
	Mixed Mesic Hardwood Forest (450)
	Pine - Hardwood Flats (537)
	Small Stream Wetland Mosaic Structured by Fire and Beaver (3822)
	Bottomland Hardwood Forest (209)
	Bottomland Hardwoods - Swamp Forest (1344)
	Small Depressions, Seasonally Pondered, with Swamp Black Gum, Ogeche Plum, Maiden Cane (36)
	Disturbed Soils and Vegetation (674)
	Water (515)

This map was produced by the Fort Gordon Natural Resources Branch, December 2010

Projection Based on:  
World Geodetic System of 1984  
UTM Zone 17 North  
Units: Meters



1:135,000  
0 1 2 Kilometers

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# Threatened & Endangered Species

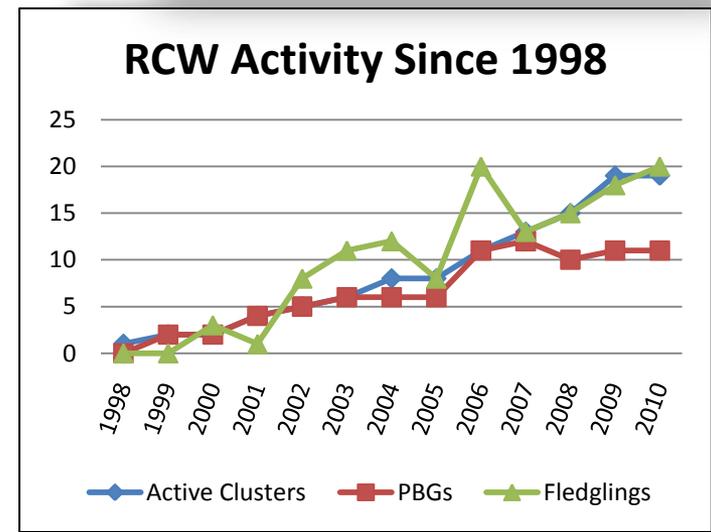
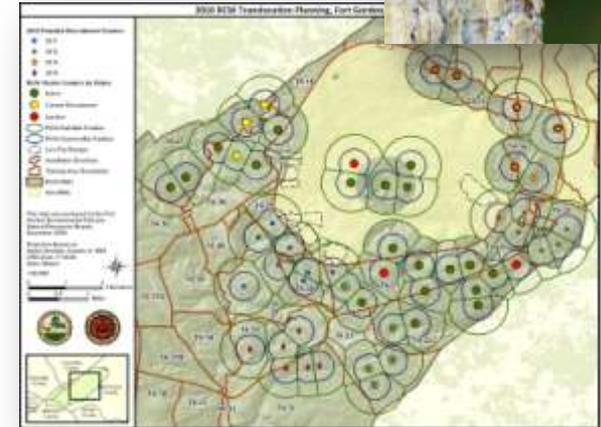
Federally Endangered Species	# of Species
Birds	1
Herps	1*
Species at Risk and Rare Species	
Birds	5
Fish	4
Herps	5
Mammals	2
Plants	11
Total	29



\* Gopher Tortoise Federal Candidate species

# Red cockaded woodpecker Management

- ❖ Listed as Endangered by US Fish and Wildlife Service
- ❖ The Army revised the Management Guidelines for the Red cockaded Woodpeckers on Army Installations in 2007
- ❖ Fort Gordon's plan Includes:
  - **Habitat Management Unit (HMU)**  
25,275 acres
  - **Active Clusters**  
122
  - **Cluster Acres**  
1,220
  - **Translocation required until population reached 30 PBG**  
Attempt to move birds every year based on habitat availability
  - **Incidental Take**  
1 Fire  
3 SAIA
  - **Cluster Protection**  
At 40 PBG 4 recruitment clusters can be unprotected



# Proposed 2011-2016 RCW Recruitment Cluster Plan

FY 2012 Potential Recruitment Clusters

Fiscal Year

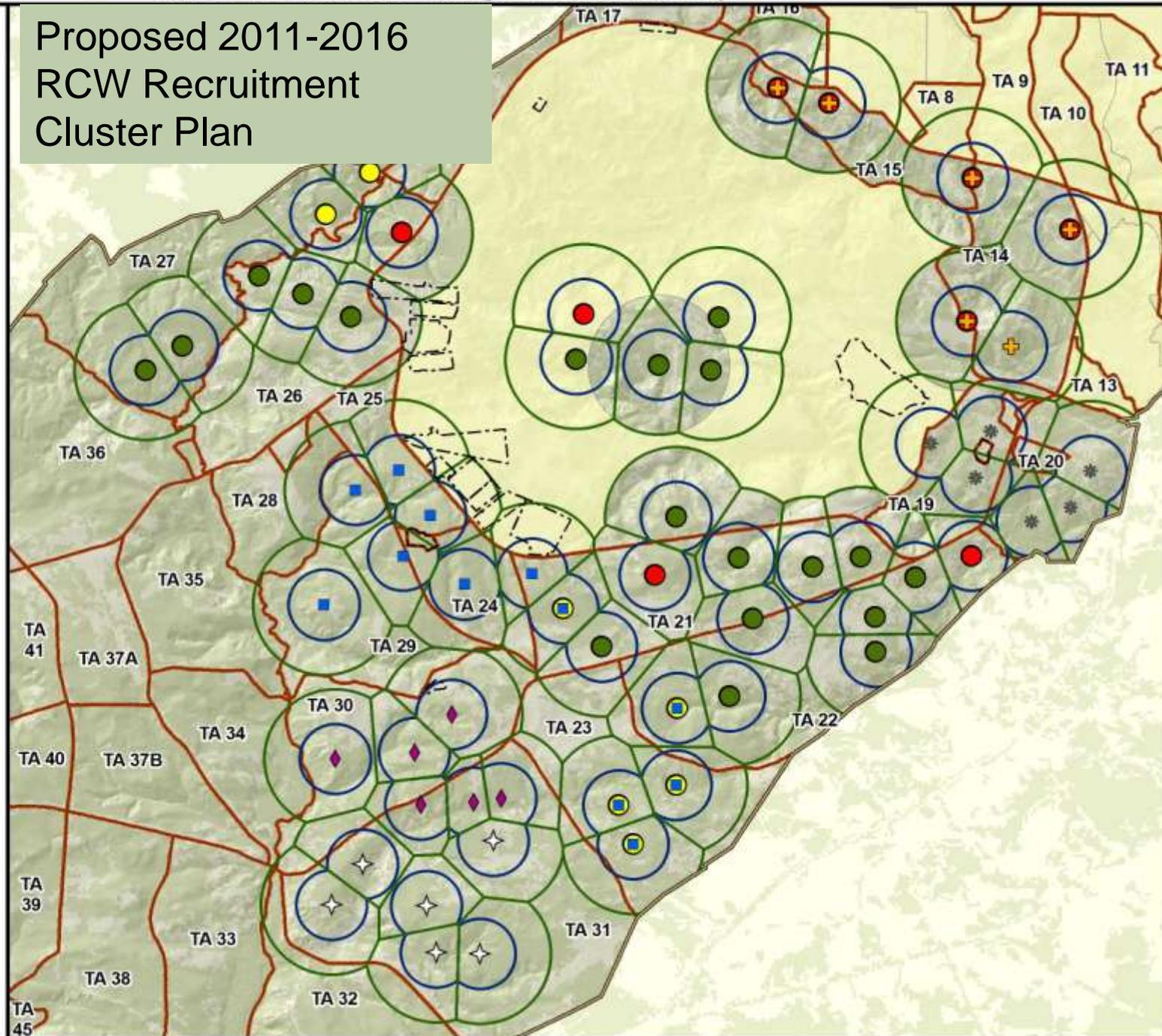
- 2012
- ✱ 2013
- ✚ 2014
- ◆ 2015
- ✧ 2016

RCW Cluster Centers by Status

- Active
- Current Recruitment
- Inactive
- RCW Half-Mile Partition
- RCW Quarter-Mile Partition
- ⋮ Live Fire Ranges
- ⋮ Installation Boundary
- ⋮ Training Area Boundaries
- RCW HMU
- Non-HMU

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# Gopher Tortoise Management

Gopher Tortoise is a candidate species under the Endangered Species Act and considered by the Army to be a Species At Risk (SAR). When this species becomes listed under the Endangered Species Act, it could impose significant land use restrictions to the military Mission.

In March of 2008 the Army issued: Management Guidelines for the Gopher Tortoise on Army Installations

New Requirements Include:

## Develop habitat management unit (HMU)

Fort Gordon = 35,277 acres

## Complete 100% survey of the HMU

## Determine total installation population

No net loss population goal

## Habitat and HMU management

Forest management

Prescribed burning

Control invasive species

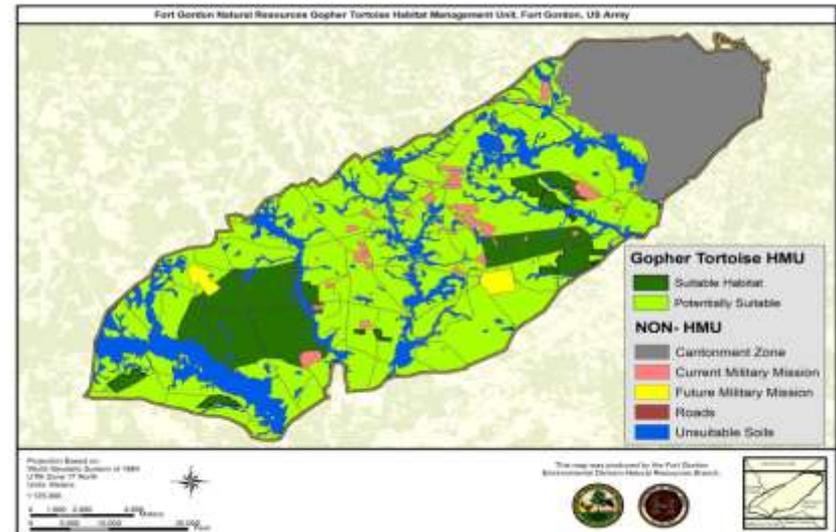
## Monitoring

Every burrow on 2-5 year intervals

Surveying project sites

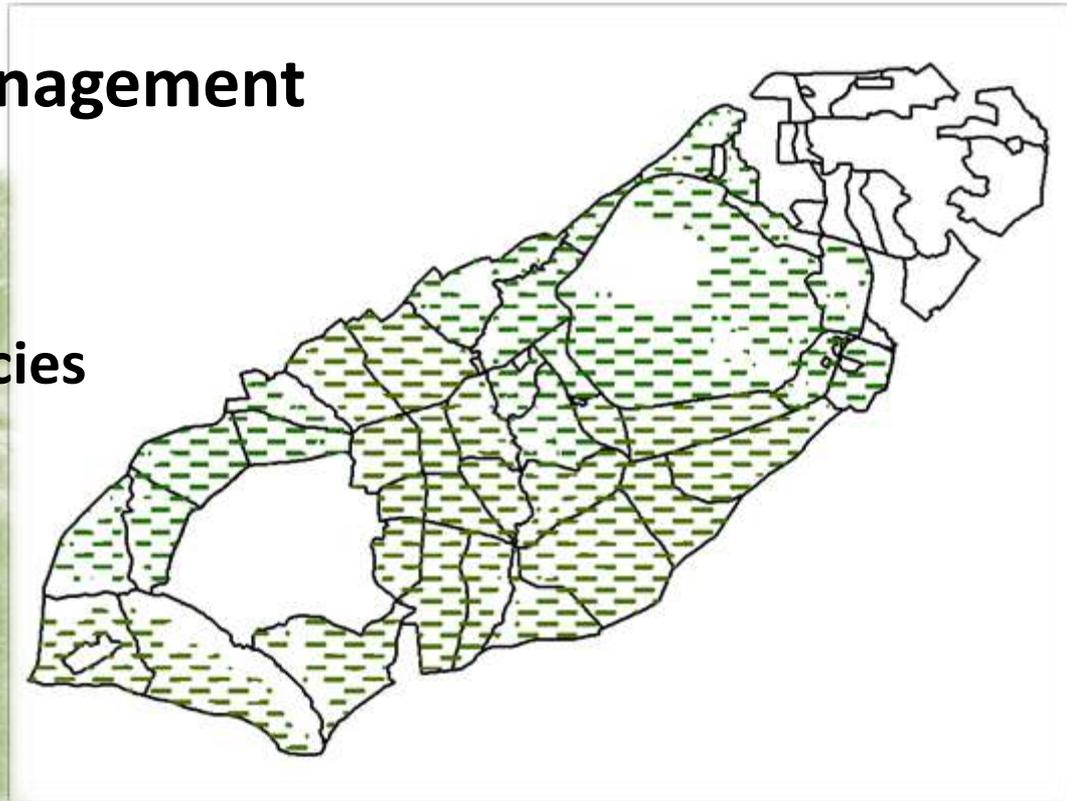
## Translocation

Relocate gopher tortoise to good habitat within the HMU



# Required Effort for Gopher Tortoise Population Estimates

- ❖ Surveyed over 116 miles of transect lines on foot
- ❖ All Training Areas and Small Arms Impact Area surveyed
- ❖ Habitat and HMU management
  - Forest management
  - Prescribed burning
  - Control invasive species



# Annual Prescribed Fire



## Burning benefits:

### •Military training

- Improves maneuver and visibility for military training within the forest
- Reduces loss of training time due to fire control

### •Wildfire danger

- Reduces the risk and number of wild fires caused by field training or other causes

### •Ecosystem Management

- Longleaf/wiregrass fire dependent

### •Legal and Regulatory Requirements

- Required by USFWS Biological Opinion (12 Nov 08) for RCW management

Year	Number of Wild Fires	Total Acres Burned	Average Size Acres
1960's	812	4560	5.6
1970's	406	2549	6.3
1980's	248	1464	5.9
1990's	125	763	6.1
2000's	101	745	7.3



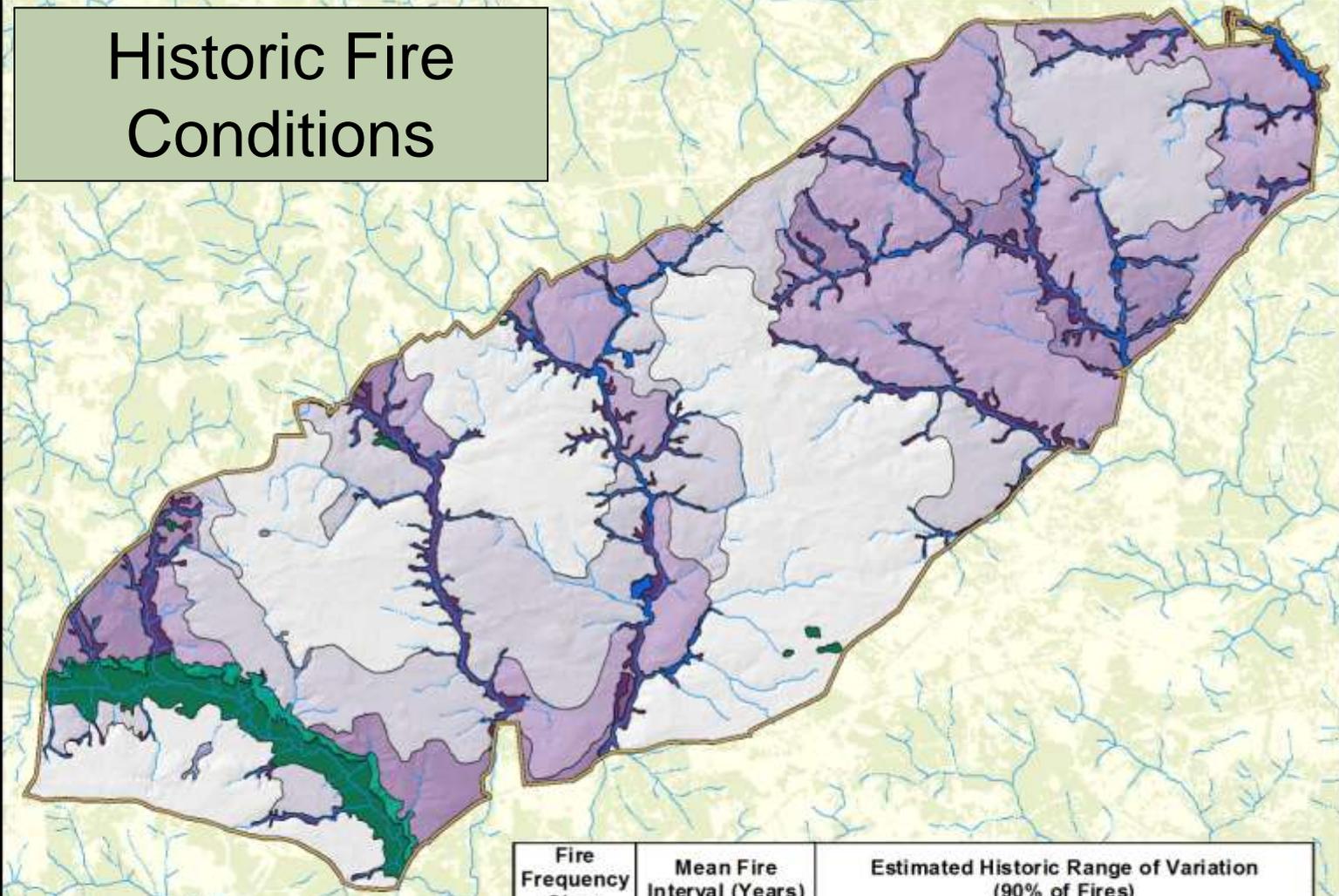
# Historic Fire Conditions

-  Installation Boundary
- Fire Frequency Class (Acres)**
-  A (18361)
-  B (13137)
-  C (14035)
-  D (3572)
-  E (70)
-  F (3747)
-  G (450)
-  H (1595)
-  W (515)
- Streams**
-  Permanent
-  Intermittent

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1:135,000  
0 1 2 Kilometers  
0 0.5 1 Miles



Fire Frequency Class	Mean Fire Interval (Years)	Estimated Historic Range of Variation (90% of Fires)
A	2	1 - 4
B	3	1 - 5
C	4	2 - 6
D	5	2 - 9
E	8	4 - 20 +
F	Variable	Beaver and fire influenced wetland mosaic
G	Variable	Infrequent light fires creeping down from tops of slopes
H	None	Never burned except on margins, or rare, light surface fires in thin leaf litter



**June 17, 2010**



**15 Days Later: July 2, 2010**



**96 Days Later: October 6, 2010**

# Timber Management

- Pine Basal Area target 40-60 in Longleaf and 40-80 in Loblolly
- Favor marking diseased, leaning, damaged trees and hardwoods likely to die or be killed by fire in next 10 years.
- Within BA guidelines favor canopy opening of at least 6 feet between crowns
- Openings of 0.25 to 0.5 acres within stands are permissible
- Hardwoods no more than 10-20% of canopy trees in RCW forage area
- Red oak, Post oak or White oak species retain other species remove
- Outside hardwood inclusions in RCW forage area midstory should be sparse\minimal

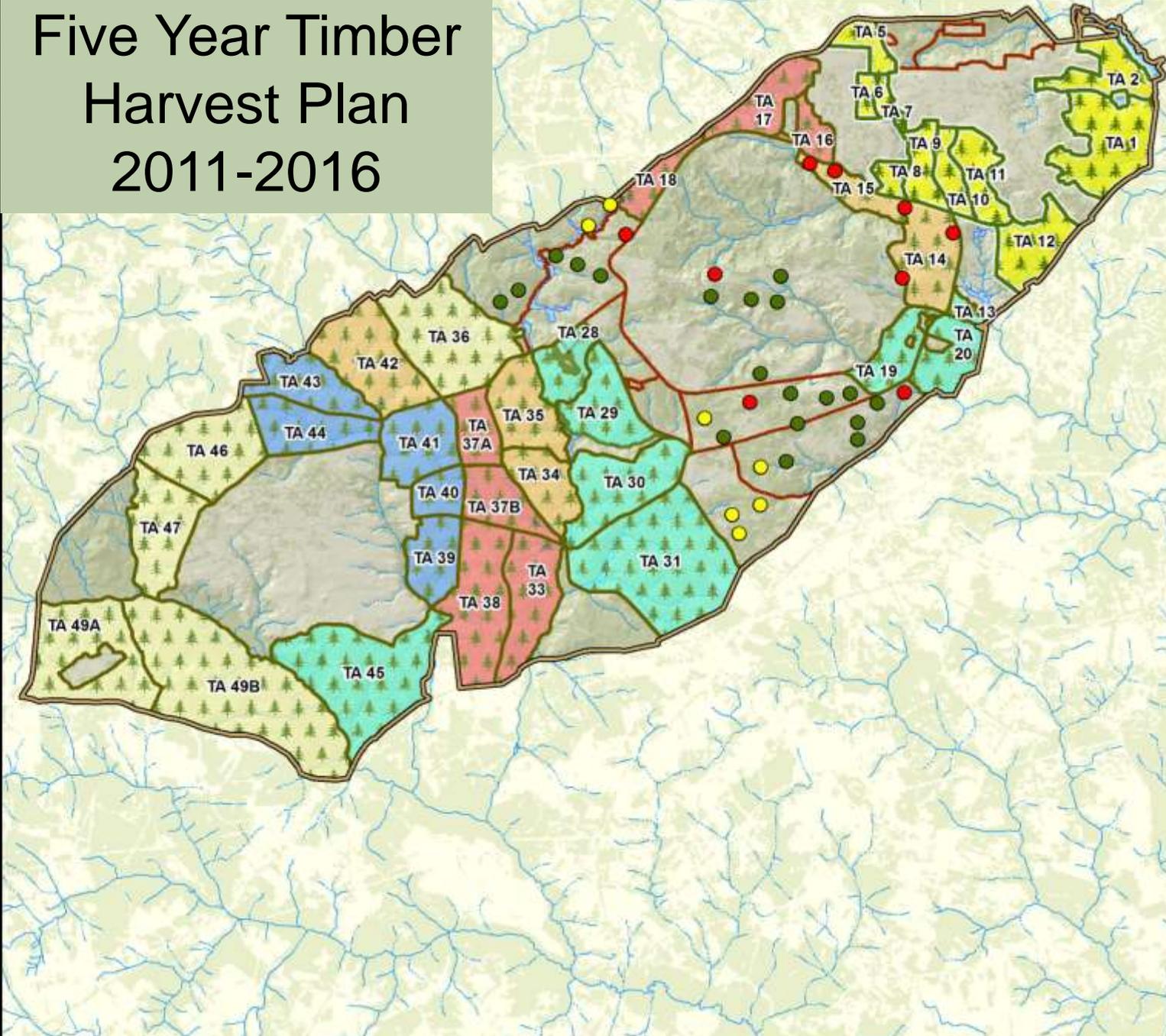
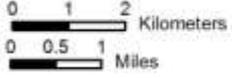


# Five Year Timber Harvest Plan 2011-2016

-  2016 Timber Harvest
- Previous Year Timber Harvest**
-  2015
-  2014
-  2013
-  2012
-  2011
- RCW Cluster Centers by Status**
-  Active
-  Current Recruitment
-  Inactive
-  Installation Boundary
-  Training Area Boundaries

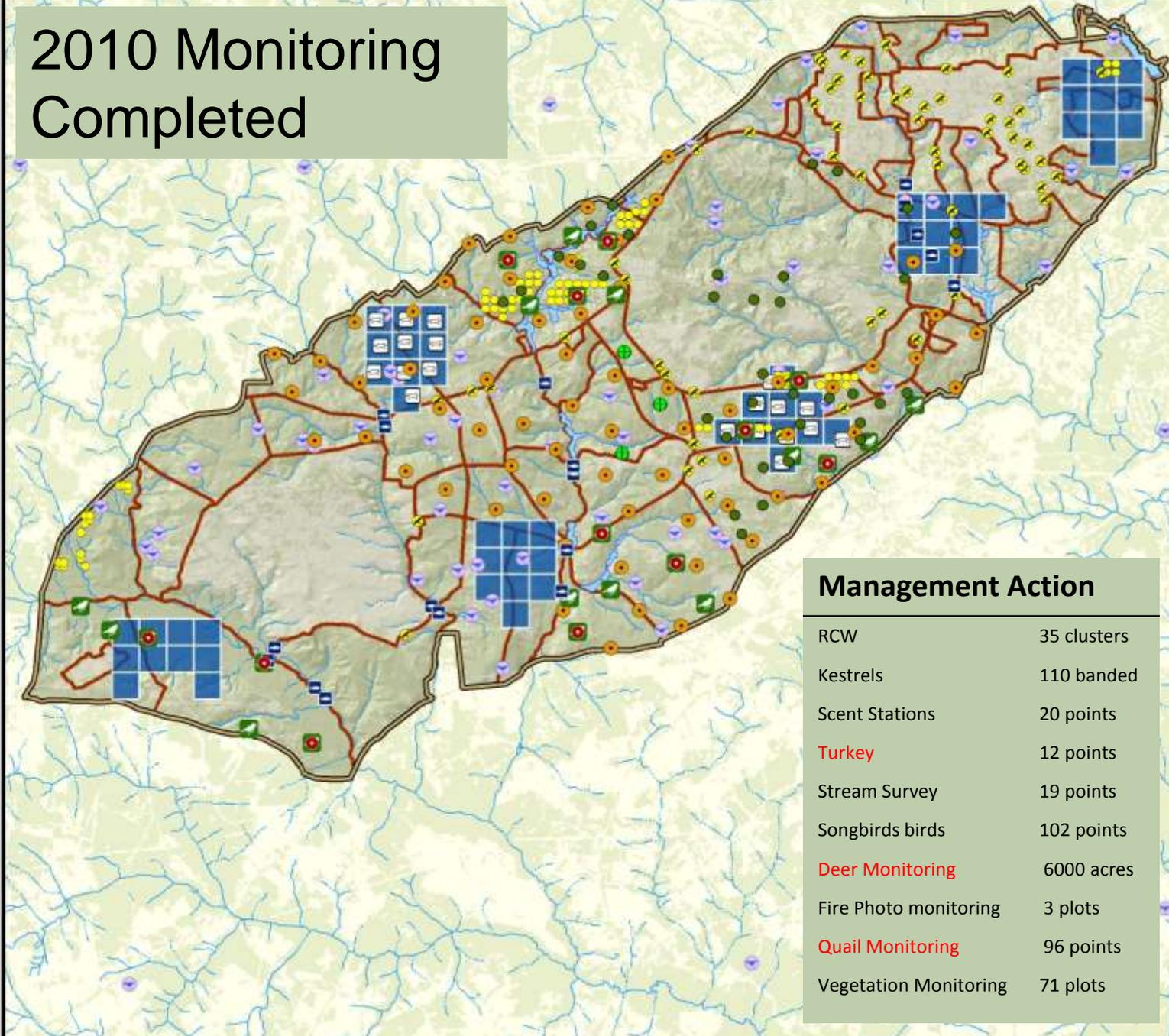
This map was produced by the Fort Gordon Natural Resources Branch, December 2010

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 Units: Meters  
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# 2010 Monitoring Completed

-  Fire Result Photo Monitoring
-  RCW Managed Clusters
-  Gobble Census
-  Stream Survey Locations
-  Covey Call Count
-  Bobwhite Whistle Count
-  Kestrel Nest Box
-  Vegetation Monitoring Points
-  Songbird Survey Points
-  Scent Stations
-  White-tailed Deer Camera Survey Grid
-  Installation Boundary
-  Training Area Boundaries



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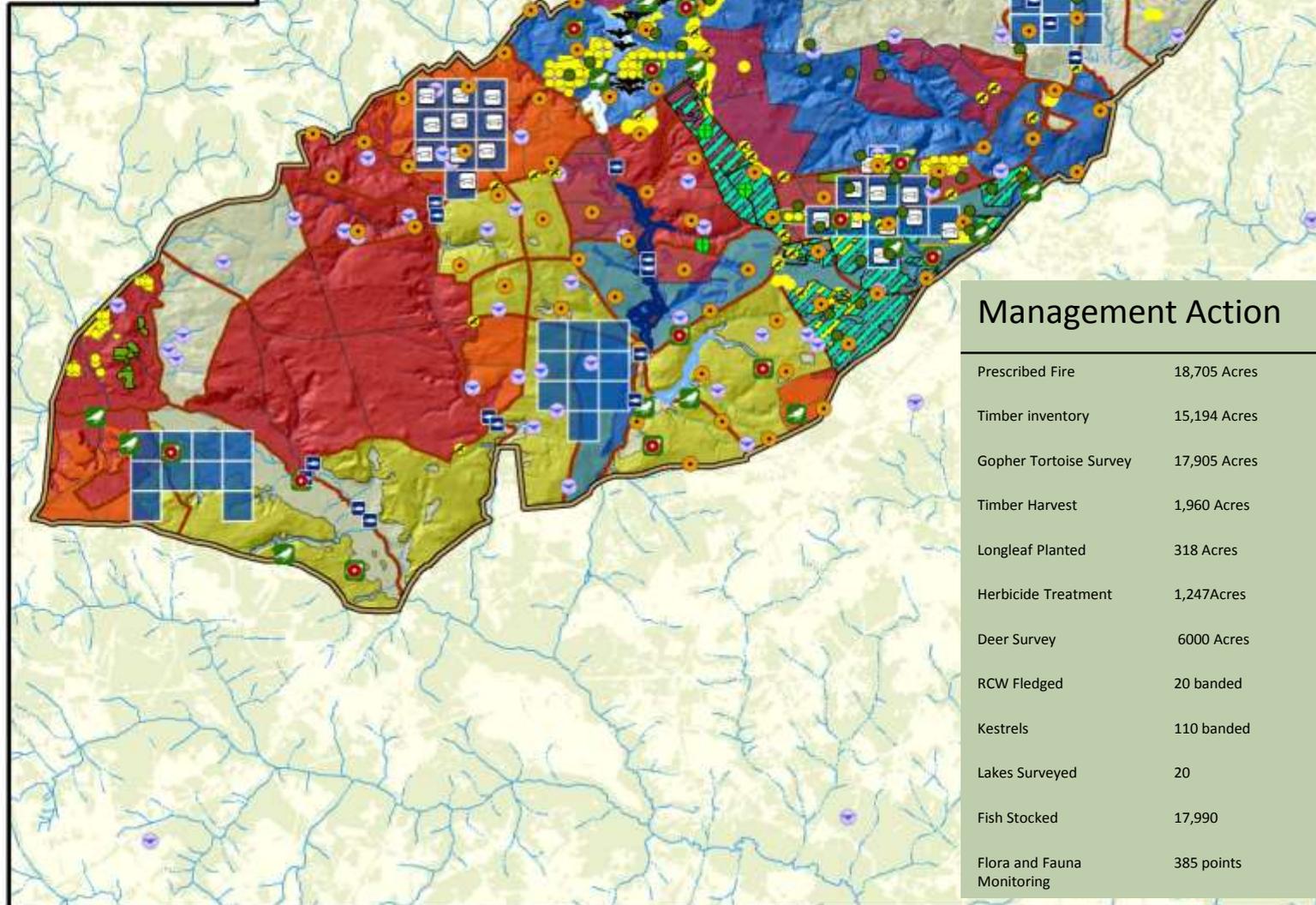
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0 1 2 Kilometers  
0 0.5 1 Miles



Management Action	
RCW	35 clusters
Kestrels	110 banded
Scent Stations	20 points
Turkey	12 points
Stream Survey	19 points
Songbirds birds	102 points
Deer Monitoring	6000 acres
Fire Photo monitoring	3 plots
Quail Monitoring	96 points
Vegetation Monitoring	71 plots

# 2010 INRMP Implementation

-  White-tailed Deer Camera Survey Grid
  -  Songbird Survey Points
  -  Scent Stations
  -  Vegetation Monitoring Points
  -  Kestrel Nest Box
  -  Bobwhite Whistle Count
  -  Covey Call Count
  -  Stream Survey Locations
  -  Gobbler Census
  -  RCW Managed Clusters
  -  Fire Result Photo Monitoring
  -  FY2010 Accomplished Burns
  -  Timber Inventory
  -  GT Survey Area 2010
  -  Installation Boundary
  -  Training Area Boundaries
-  Bat Houses
  -  Cluster Planting Stands
  -  Longleaf Replanting Area
  -  Timber Sold
  -  Managed Waterfowl Impoundments
  -  Lake Management Actions
  -  Surveyed Lakes



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Management Action	
Prescribed Fire	18,705 Acres
Timber inventory	15,194 Acres
Gopher Tortoise Survey	17,905 Acres
Timber Harvest	1,960 Acres
Longleaf Planted	318 Acres
Herbicide Treatment	1,247Acres
Deer Survey	6000 Acres
RCW Fledged	20 banded
Kestrels	110 banded
Lakes Surveyed	20
Fish Stocked	17,990
Flora and Fauna Monitoring	385 points

# Hunting

Hunting and Fishing Resource Map, Fort Gordon, US Army




**Hunting/Fishing Sign-in Station**  
 Hunting/Fishing Points of Interest  
 TA Access Points  
 Dove Fields  
 No Hunting  
 Archery Hunting Only (Contaminant Training Areas)  
 County Boundary

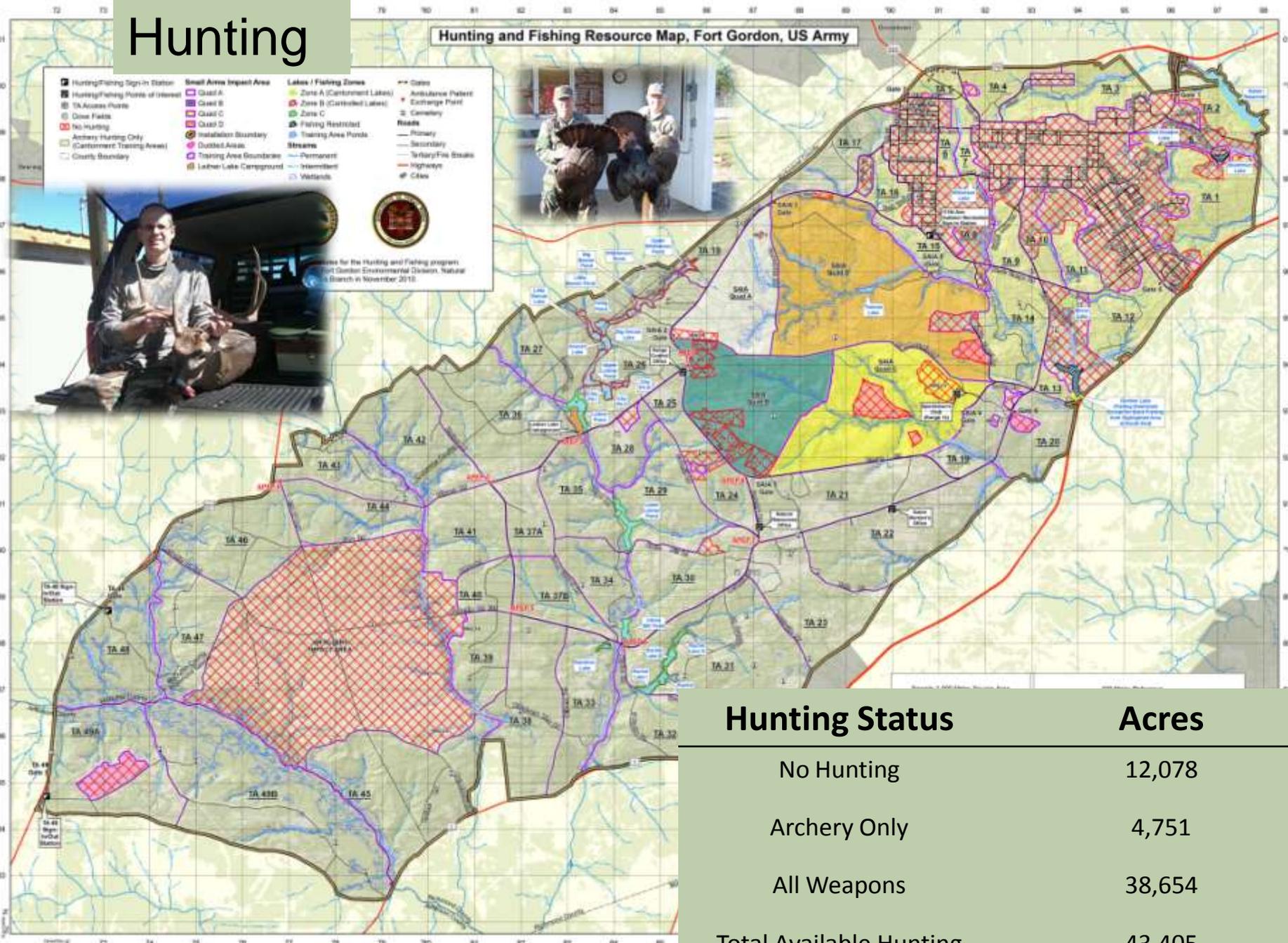
**Small Arms Impact Area**  
 Class A  
 Class B  
 Class C  
 Class D  
 Installation Boundary  
 Doubted Areas  
 Training Area Boundaries  
 Lake/Lake Campground  
 Wetlands

**Lakes / Fishing Zones**  
 Zone A (Contaminant Lakes)  
 Zone B (Controlled Lakes)  
 Zone C  
 Fishing Restricted  
 Training Area Ponds

**Streams**  
 Permanent  
 Intermittent  
 Wetlands

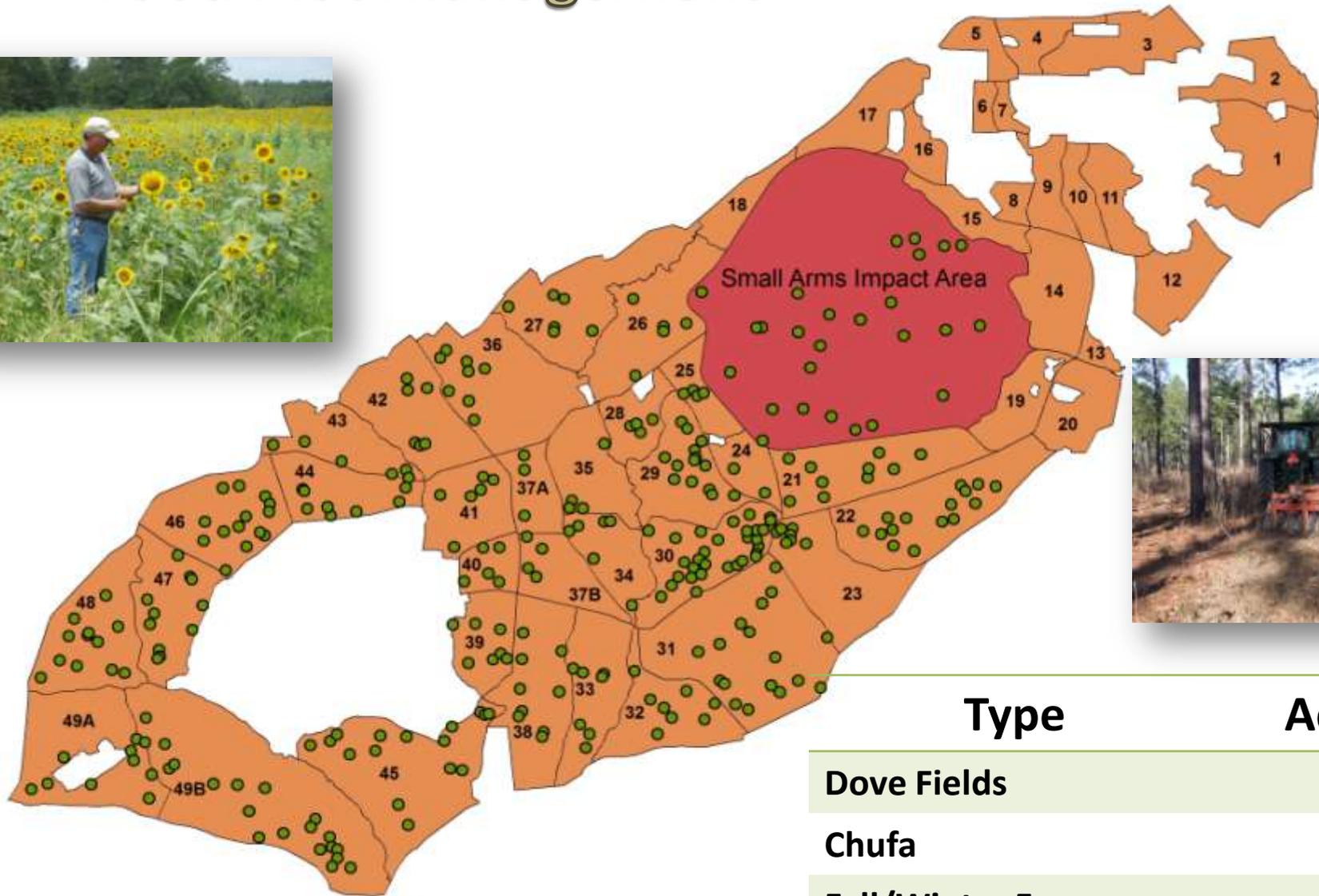
**Other**  
 Ambulance Patient Exchange Point  
 Cemetery  
 Roads: Primary, Secondary, Tertiary/Trails  
 Highways  
 Cities

Approved for the Hunting and Fishing program  
 Fort Gordon Environmental Division, Natural Resources Branch in November 2010



Hunting Status	Acres
No Hunting	12,078
Archery Only	4,751
All Weapons	38,654
<b>Total Available Hunting</b>	<b>43,405</b>

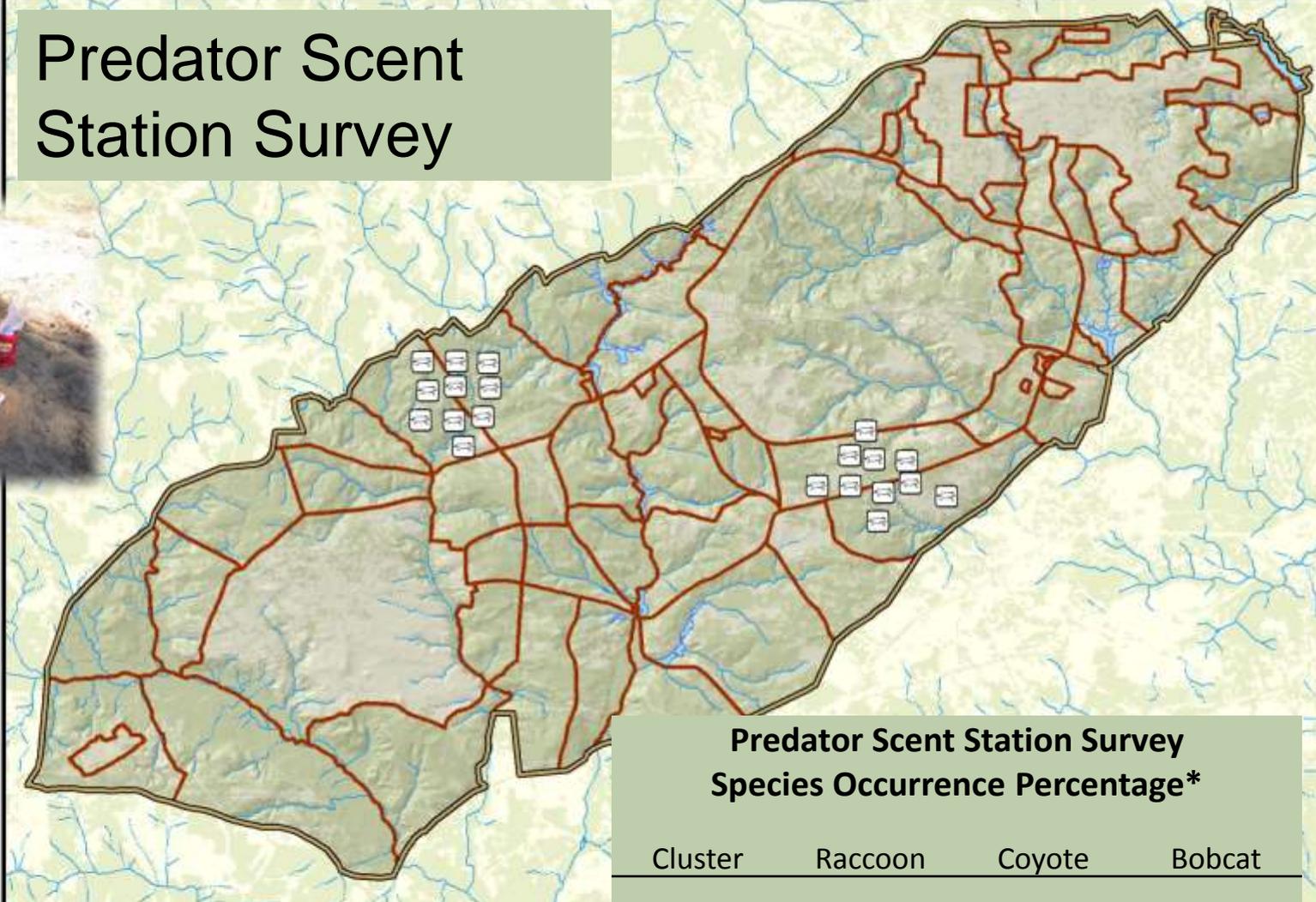
# Food Plot Management



Type	Acres
Dove Fields	75
Chufa	40
Fall/Winter Forage	120
Spring/Summer Forage	50

-  Scent Stations
-  Installation Boundary
-  Training Area Boundaries

# Predator Scent Station Survey



This map was produced by the Fort Gordon Natural Resources Branch, December 2010

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1:135,000  
0 1 2 Kilometers  
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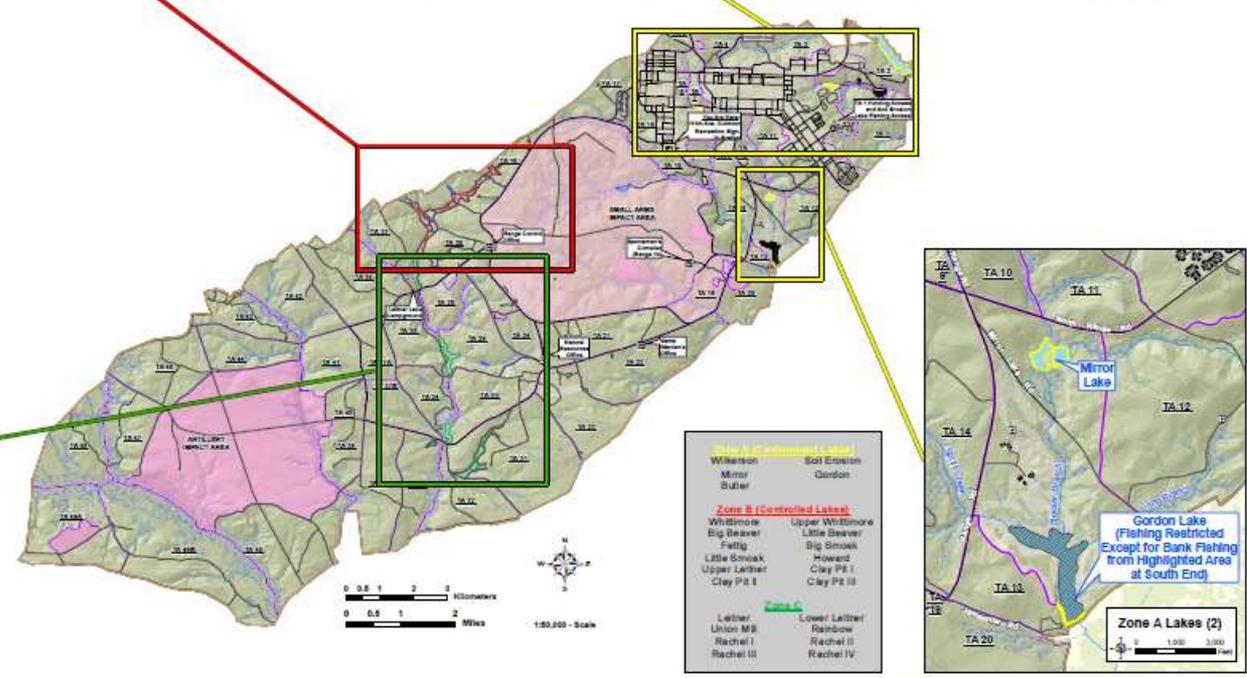
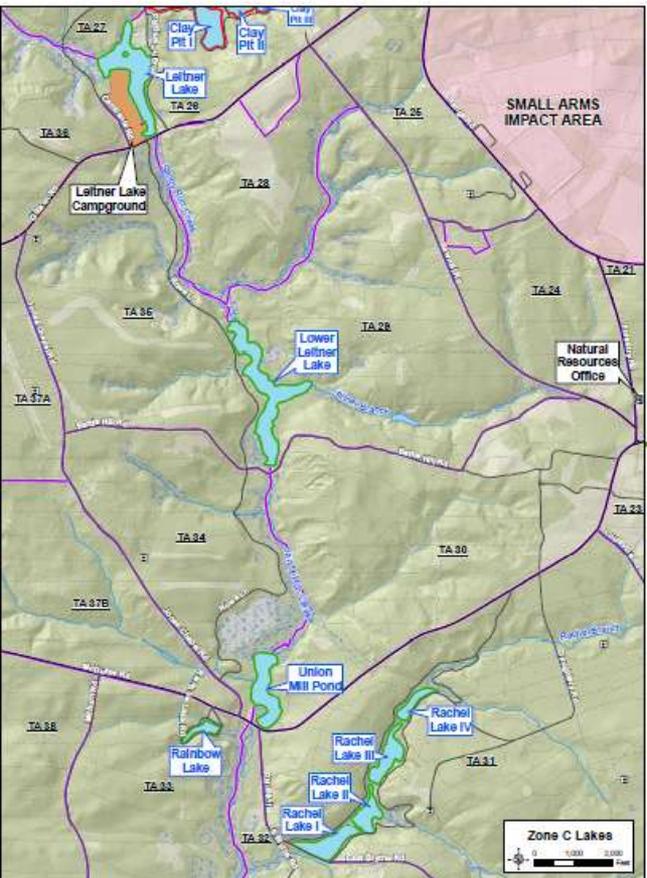
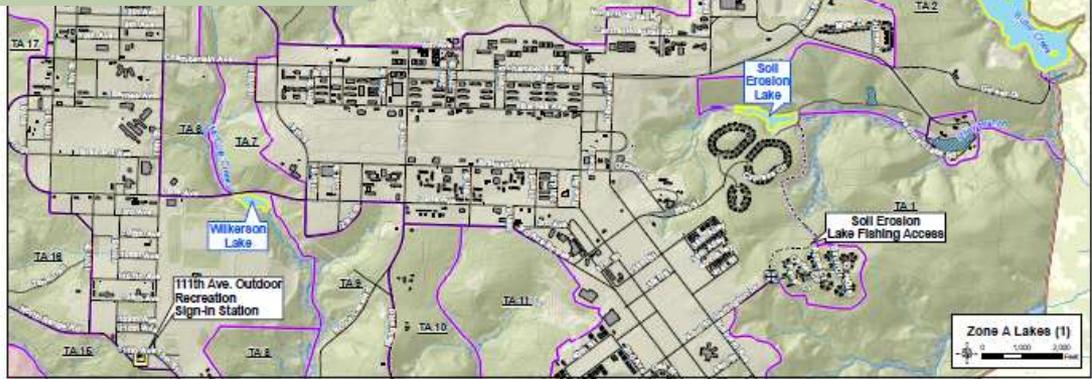
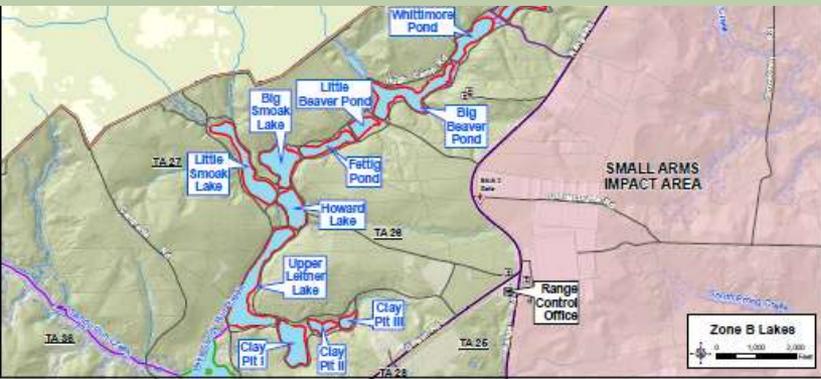
Each cluster contained 10 stations and was surveyed for 5 consecutive days for a total of 100 station-days.

## Predator Scent Station Survey Species Occurrence Percentage\*

Cluster	Raccoon	Coyote	Bobcat
3	0%	18%	2%
4	2%	10%	2%
Average	1%	14%	2%

\*Percentage of station days where species presence was detected.

# Fisheries and Lake Management



Projection and Map Grid Based on World Geodetic System of 1984 UTM Zone 17 North

This map contains information regarding the fishing program on Fort Gordon. It was produced by the Fort Gordon Environmental Division, Natural Resources Branch in October, 2008.



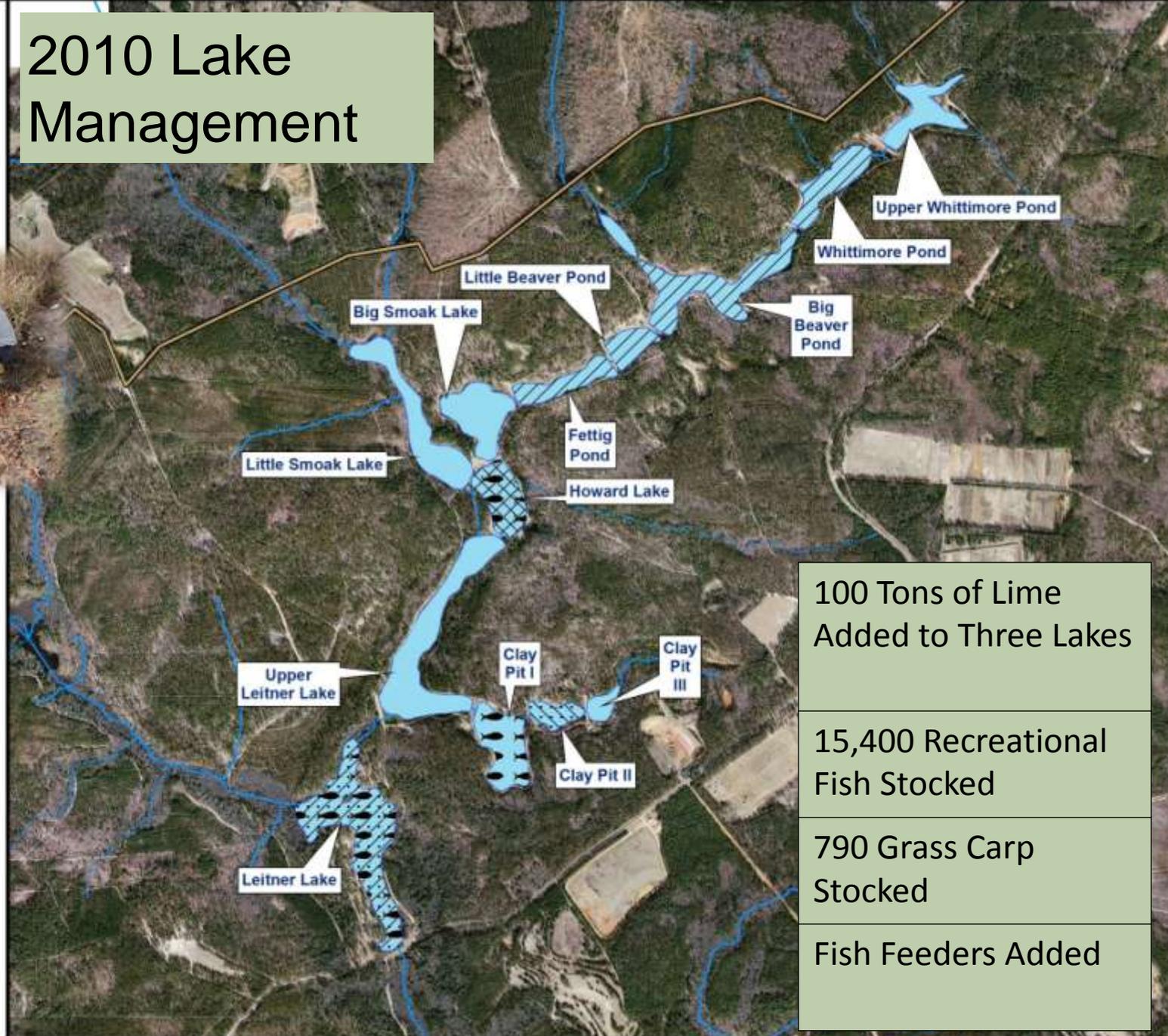
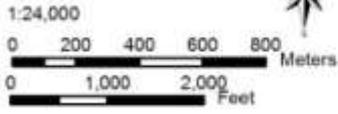
# 2010 Lake Management

-  Installation Boundary
-  Recreational Fish Stocking
-  Lime and/or Fertilizer
-  Grass Carp Stocking
-  Feeder Added
-  Lakes



This map was produced by the Fort Gordon Natural Resources Branch, December 2010

Projection Based on:  
World Geodetic System of 1984  
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Units: Meters



- 100 Tons of Lime Added to Three Lakes
- 15,400 Recreational Fish Stocked
- 790 Grass Carp Stocked
- Fish Feeders Added

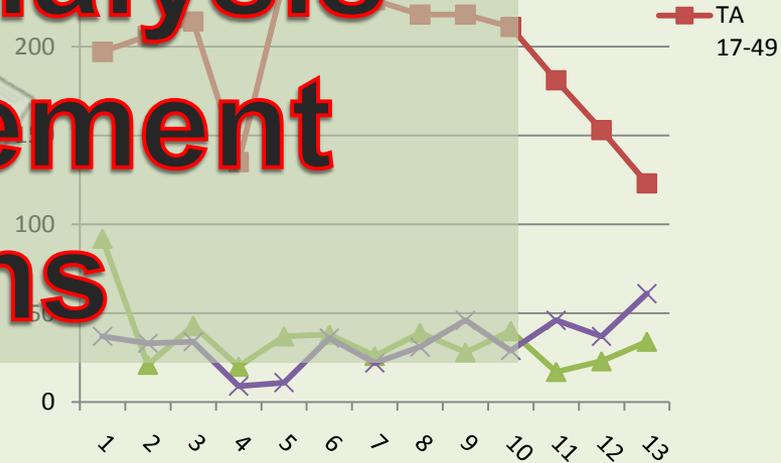
## Deer Estimates from Surveys

Archery  
Only

Fawn:Doe	0.3	0.9
Buck:Doe	0.5	10.4
Density	26	

# Deer Data Analysis and Management Decisions

## Deer Harvest Trend By Deer Management Zone



Axis Title

90% Extrapolation Factor

$X = \text{Population Factor}$

$P_s = N_{ba} / N_{doe}$

$E_b = (B * P_s) + B$

$P_d = N_d / N_{ba}$

$E_d = E_b * X * P_d$

$P_f = N_f / N_d$

$E_f = E_d * P_f$

$P_s = \text{Ratio of Spike:Branch-antlered bucks}$

$E_b = \text{estimated total buck population}$

$P_d = \text{ratio of does:bucks}$

$E_d = \text{estimated total doe population}$

$P_f = \text{ratio of fawns:does}$

$E_f = \text{estimated total fawn population}$

CE/1000Acres= camera estimate/1000Acres

Camera Tally	$N_{ba}$	$N_{Uniqueba}$	$N_{sa}$	$N_f$	Population Factor	Extrapolation Factor
	90.00	2.5	0.00	354.00	115.00	0.03

Bucks	Does	Fawns
3	10	3

Buck:Doe	Spikes:Ba	Fawn:Doe
0.25	0.00	0.33

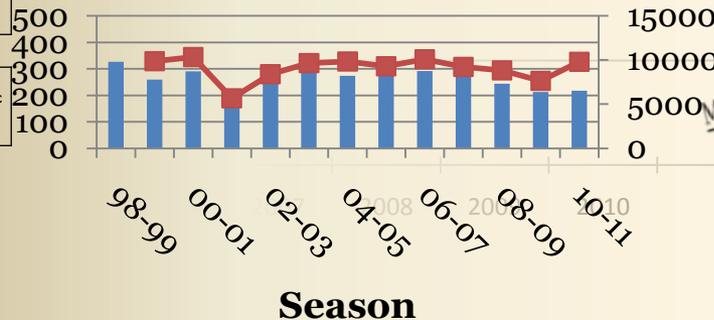
Bucks/1000ac	Does/1000ac	Fawns/1000ac
3	11	4

1999	2000	2001	2002	2003
			CE/1000ac	Buck:Doe (1000ac)
			17	0.25

Deer/Mi <sup>2</sup>
11

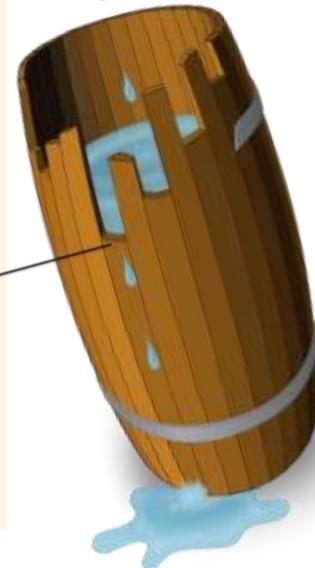
## Annual Deer Harvest and Hunter Events

Total Deer Harvest    Fall Hunter Events



Total Hunter # (STD)

Hunter Success



# Deer Herd Management Camera Survey

- Efficient
  - 24-7 observation of an area
  - Easily placed throughout a variety of habitats
  - Minimum manpower required
  - Provides an index of other species in the area
- Accurate
  - Buck:Doe ratios
  - Fawn crop estimate
  - Deer density estimate
  - Seeing is believing



# Deer Camera Survey Grids



Created by: Fort Gordon Natural Resources Branch 2011



78°F 08/12/10 04:58 AM 0000000002



93°F 08/07/09 10:44 AM 0000000006



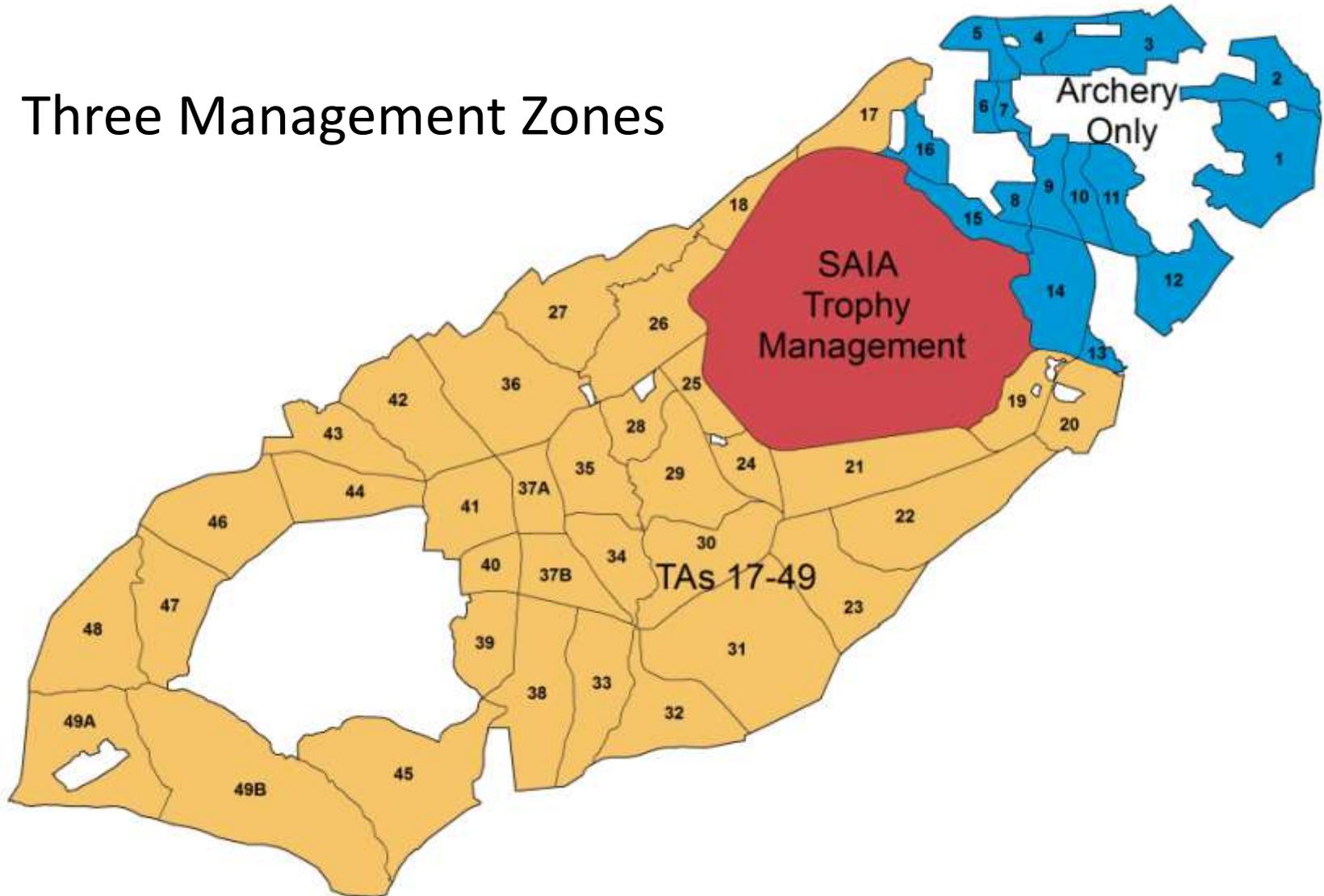
66°F 07/22/09 05:49 PM 0000000003

# Deer Herd Management

- Buck to Doe Ratios – from camera surveys
- Age Structure of Harvest – from check station data
- Recruitment Rates
  - Fawn to Doe Ratios – from camera surveys
  - Lactation Rates - from check station data
- Physiological Indicators
  - Kidney Fat Index – from check station data
  - Yearling weights – from check station data
- Georgia DNR Guidelines for Deer Herd Management
  - Harvest Strategy Equations

# Deer Herd Management

Three Management Zones



# Deer Herd Management

## ● Archery Only Area

- Manage for low population
- Unrestricted antlerless harvest
- No antler restrictions
- Monitor population closely -retrieve 100% age data



# Deer Herd Management

- Small Arms Impact Area (Trophy Area)
  - Manage for older age bucks ( $\geq 3.5$  year old) by enforcing antler restrictions
  - Unrestricted antlerless harvest
  - Monitor population closely -retrieve 100% age data

# Deer Herd Management

## ☛ Training Areas 17-49

- Maximize harvest while maintaining highest productivity
- Restricted antlerless harvest
- No antler restrictions
- Monitor population closely -retrieve 100% age data

# Deer Jawbone Submission

- Jawbones provide age which is a **very important** piece of data in deer herd management
- Submission of jawbones is now **MANDATORY**
  - Jawbones of antlerless deer must be submitted at the time the kill card is submitted
  - Jawbones of antlered deer must be submitted within 7 days of harvest (assistance with removal from trophy bucks will be available)
  - Failure to submit jawbones may result in suspension of hunting privileges

# Mandatory Check Station

- All deer harvested during **normal duty hours** (0700-1600 M-F) **must** be checked by a Fort Gordon biologist
- A phone number will be posted at each hunter sign-in station to call for a check
- Staff will also be available on several weekends to check deer
- Failure to have deer checked may result in suspension of hunting privileges

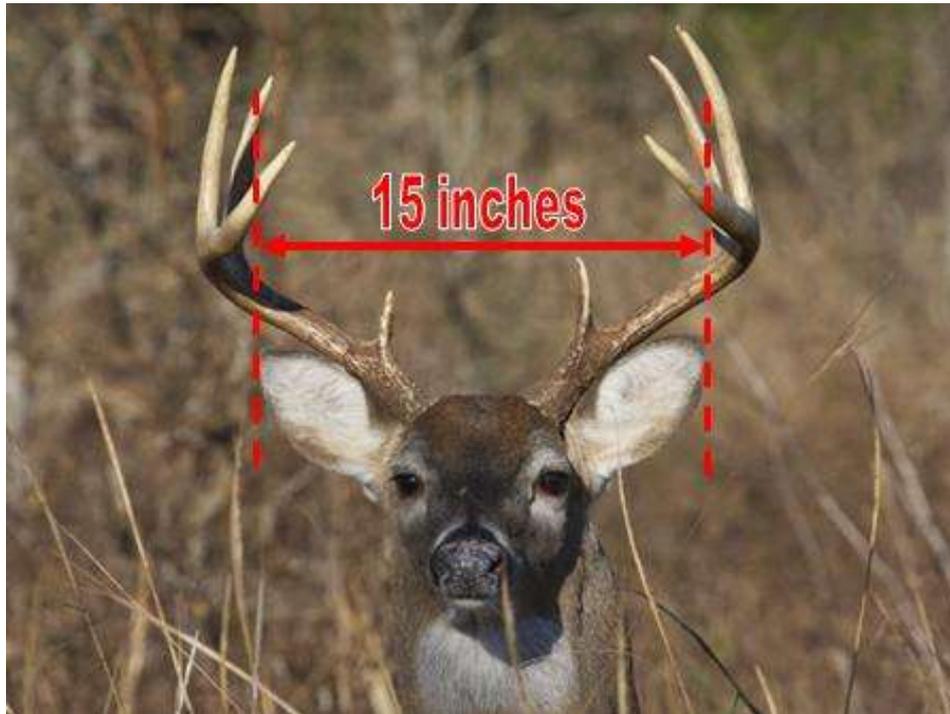
# Antlerless Quota

- Antlerless quota in TAs 17-49 is set at 42
  - Harvest as usual until 42 antlerless deer are harvested, after that only antlered deer may be harvested
  - Notice will be posted at sign in boards when quota is reached
  - Each hunter may harvest no more than 2 antlerless deer in these areas (17-49)
  - Does not apply to SAIA or Archery only areas

# Antler Restriction Change

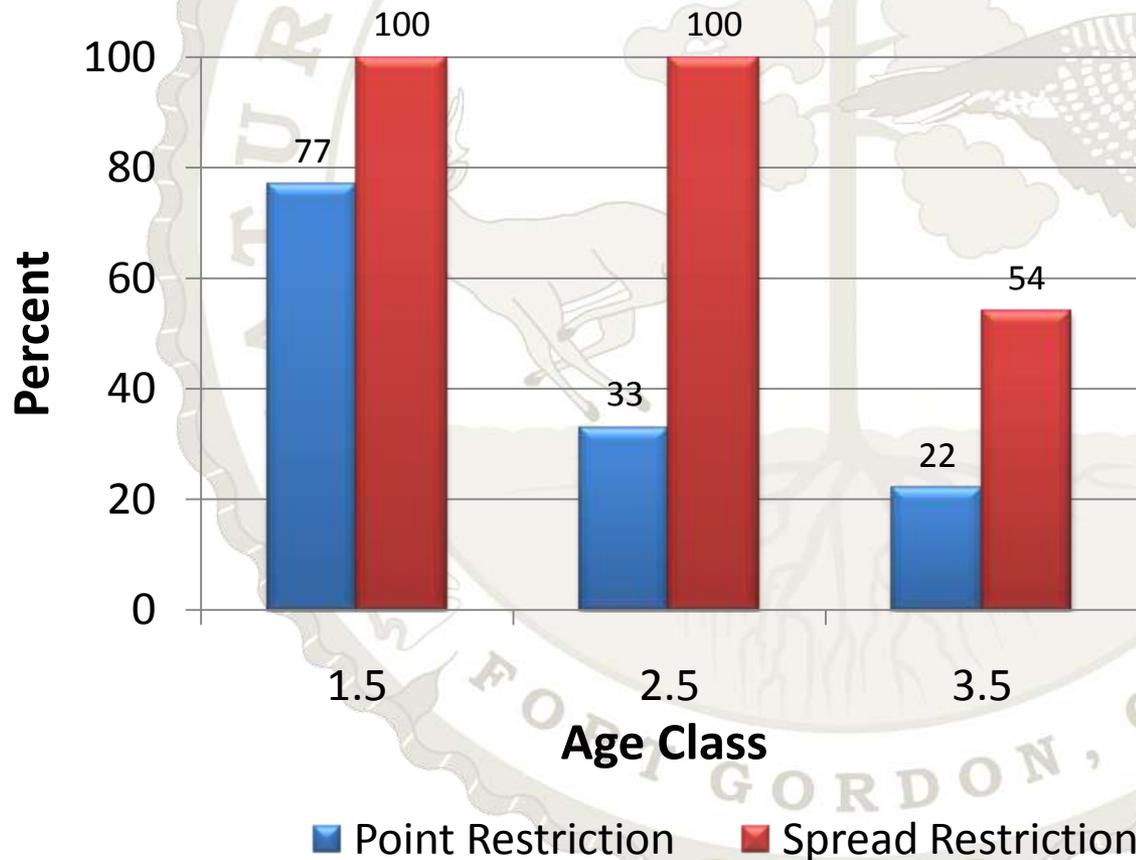


- Antler restrictions in SAIA changing to 15 inch inside spread



# Antler Restriction Change

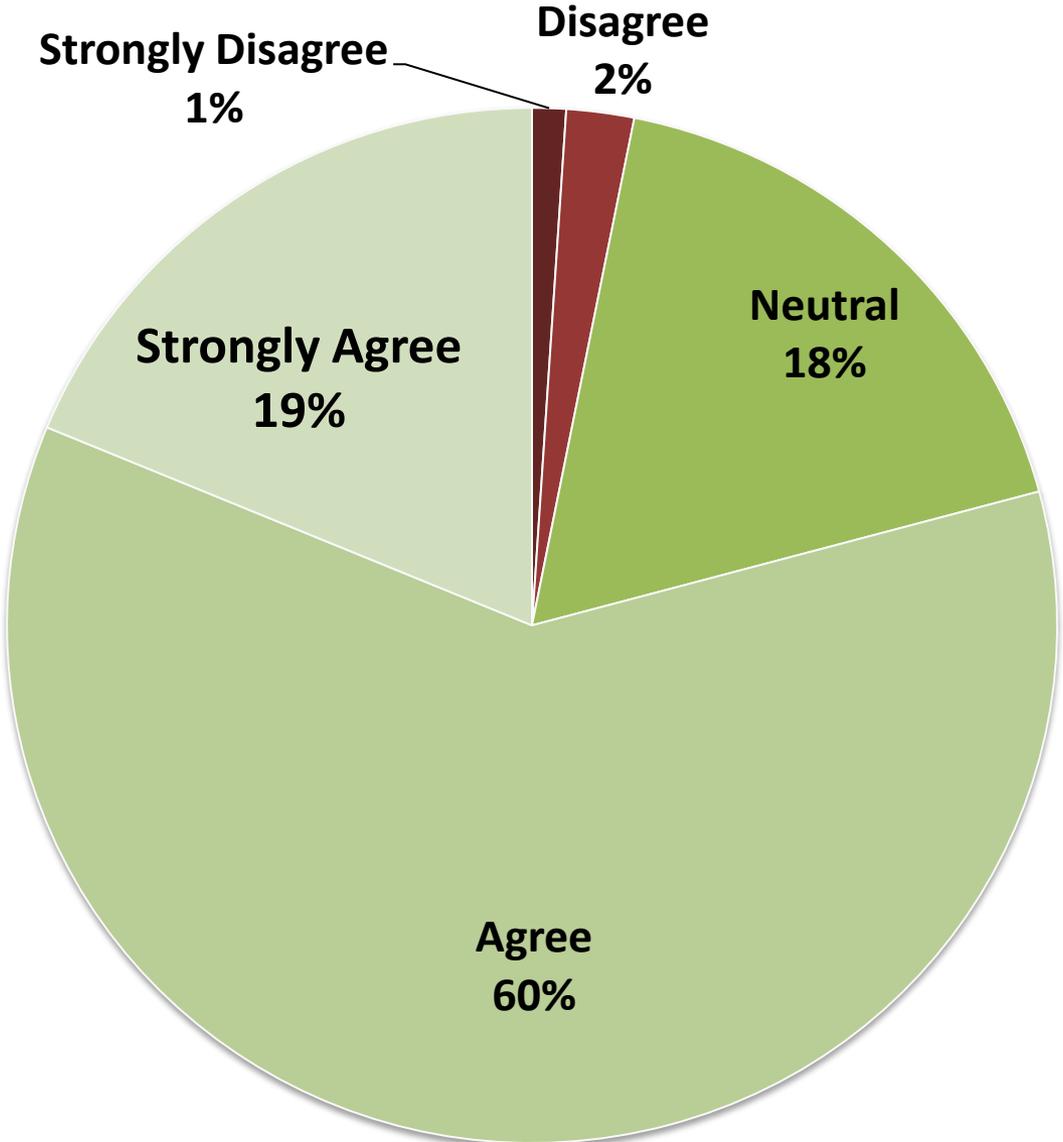
Percentage of Fort Gordon Bucks Protected from Harvest by Different Antler Restrictions



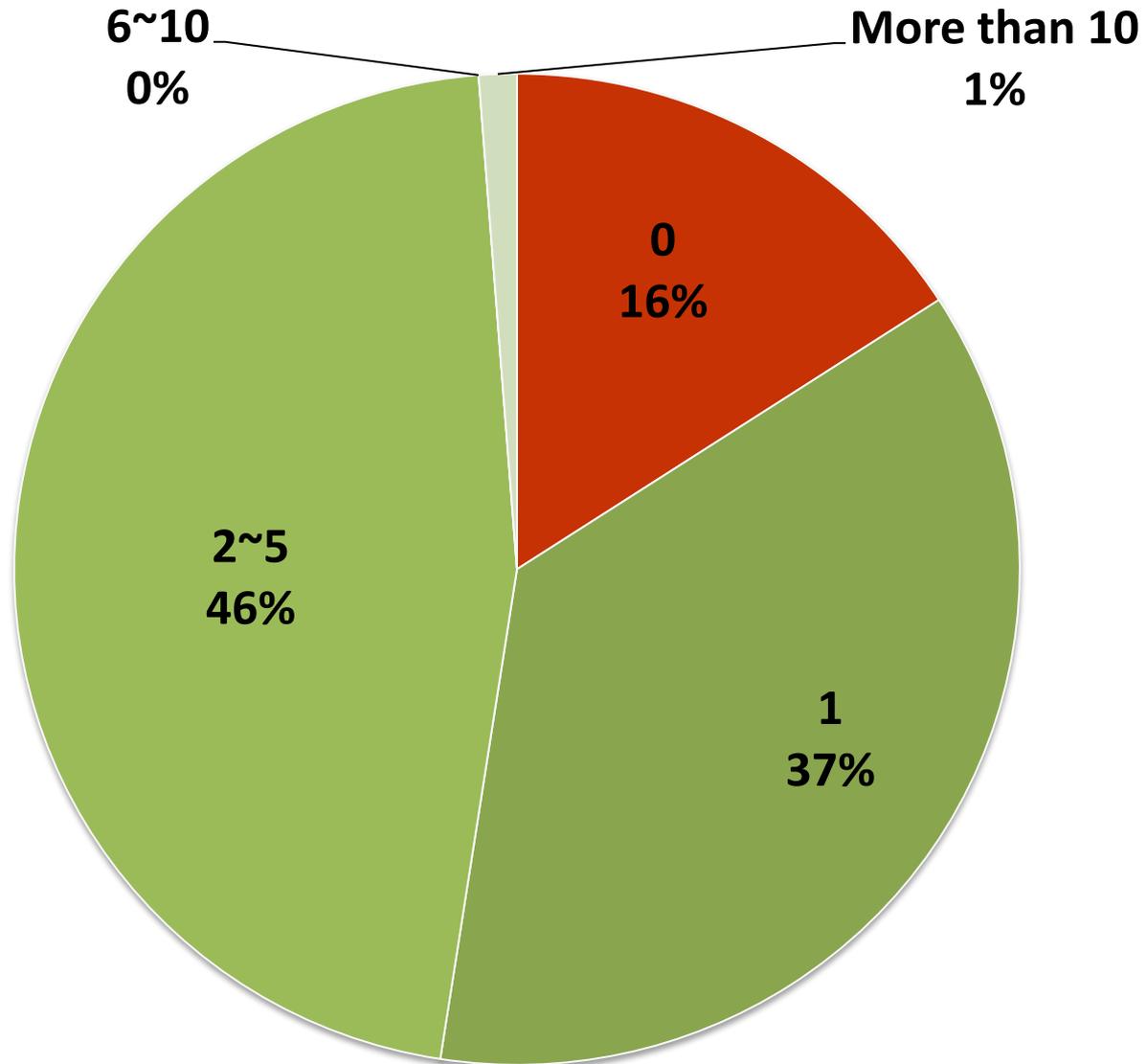
# Hunter Opinion Surveys



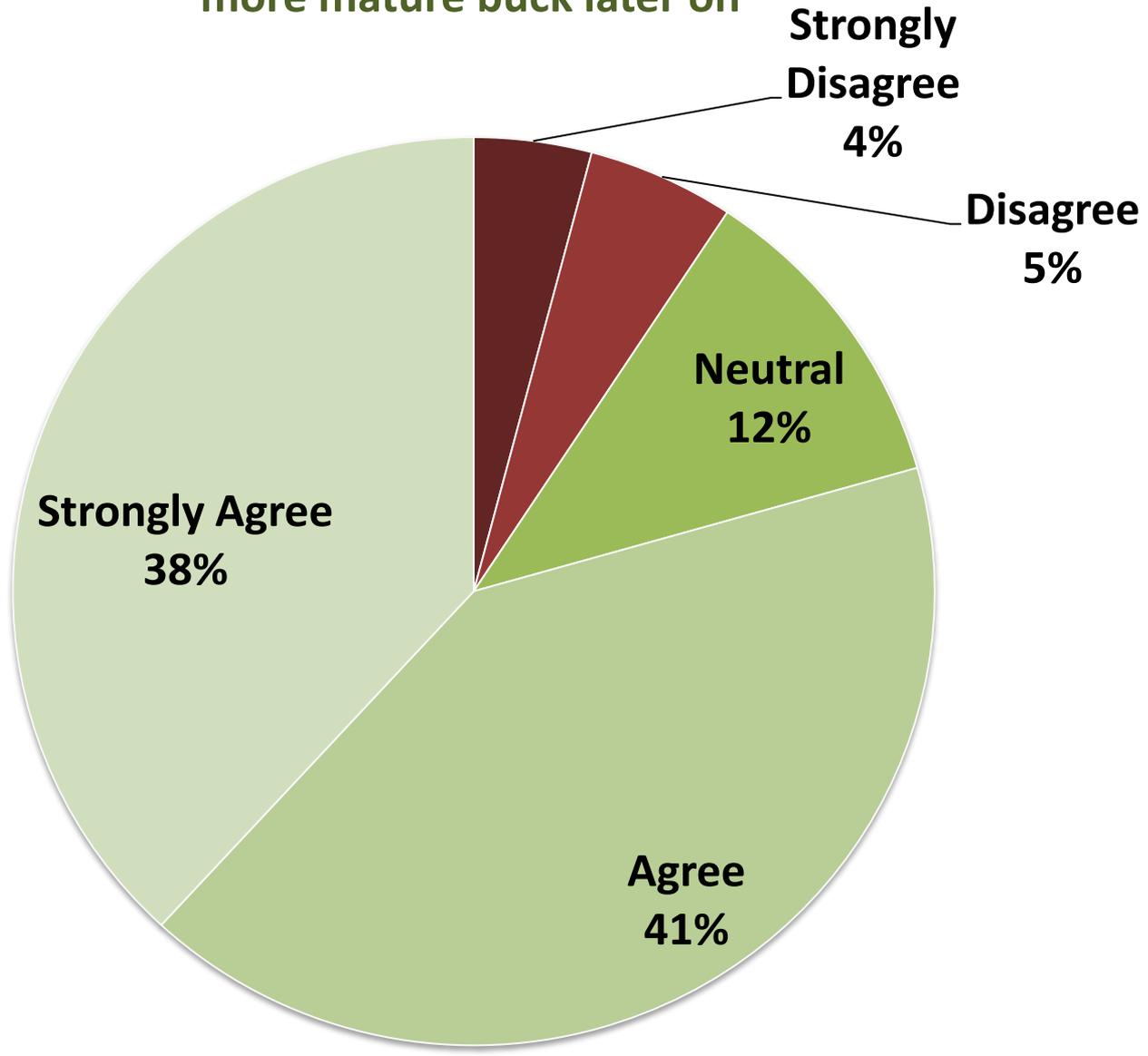
# Individuals that feel they have an adequate opportunity to harvest deer while hunting on Fort Gordon



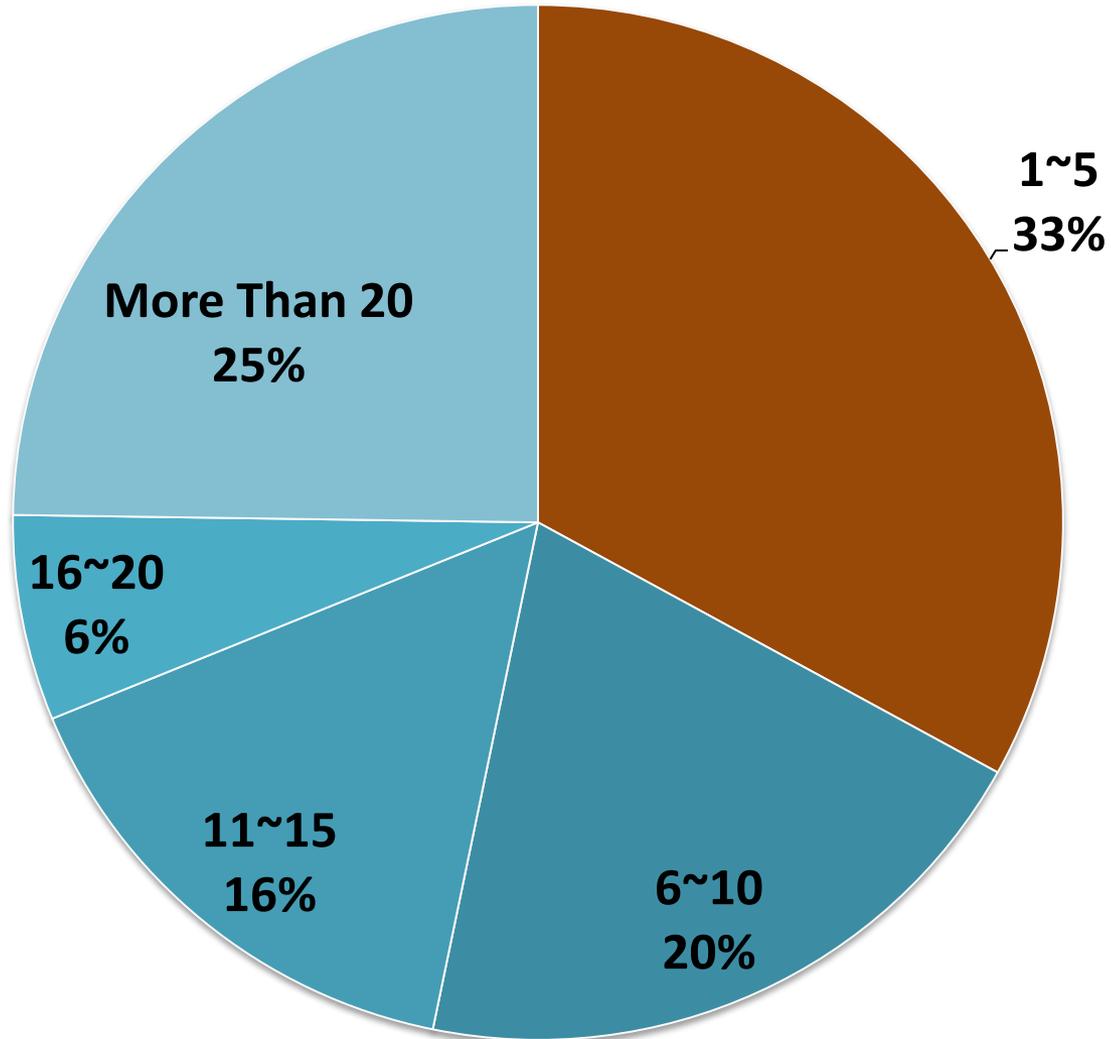
# The average number of deer seen by individuals while hunting last season on Fort Gordon



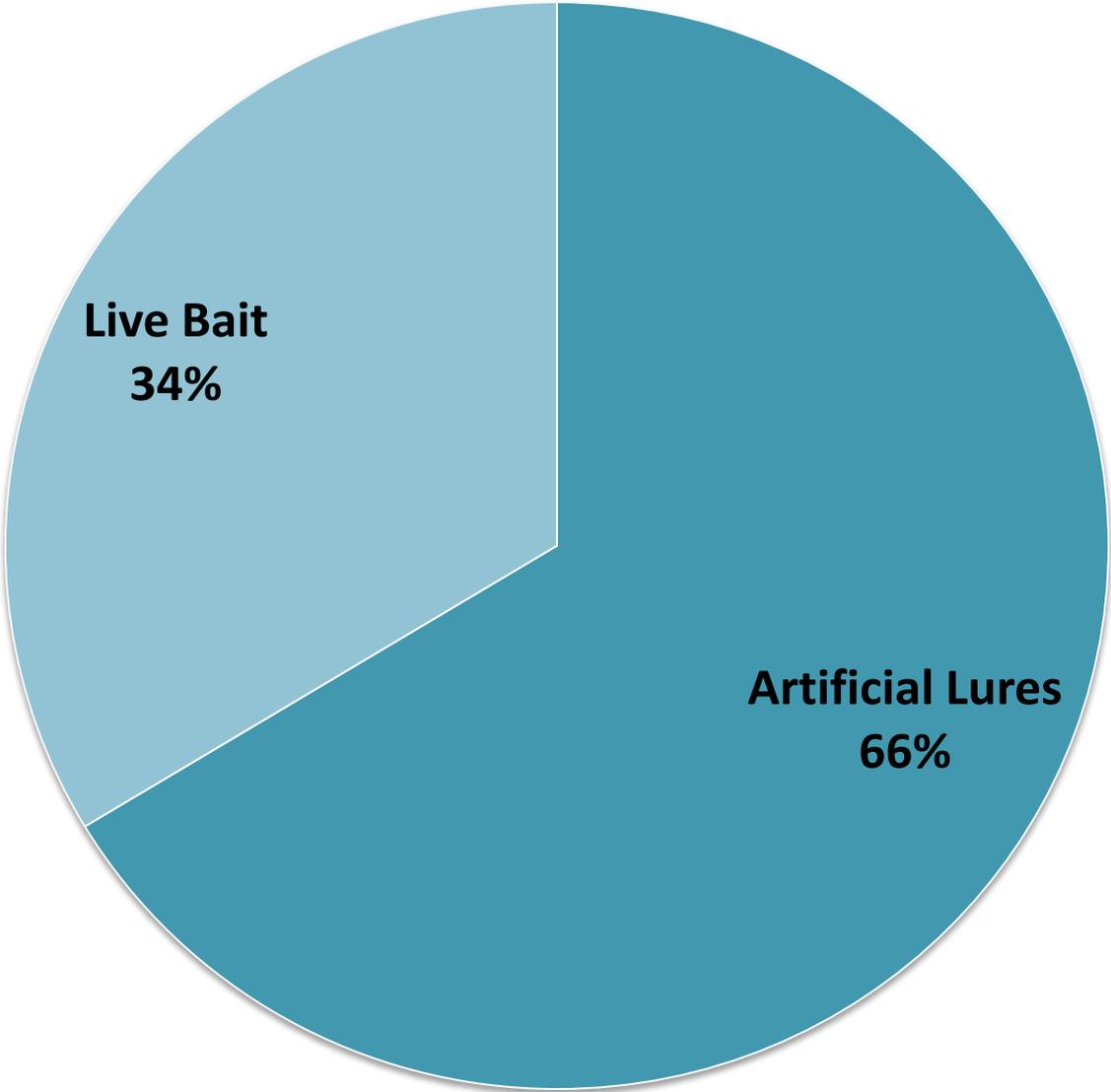
**Individuals that would pass on a chance to harvest a younger (small) buck to increase the chances of an opportunity to harvest a larger more mature buck later on**



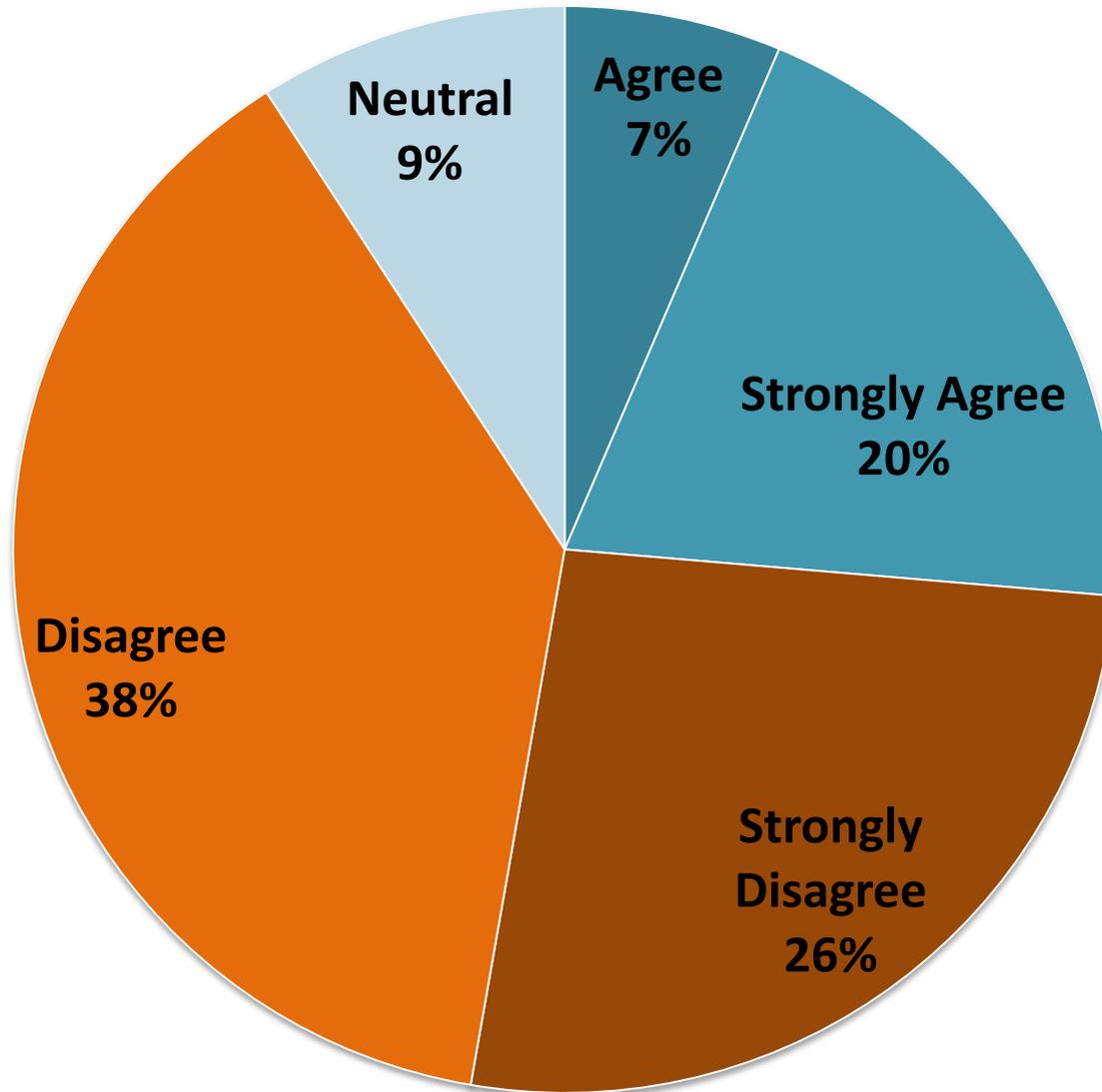
# How many times an individual fishes per year on Fort Gordon



# Anglers bait of choice while fishing on Fort Gordon



# Anglers that keep most of the fish they catch on Fort Gordon



# Firearms Update

- Army Regulation 190-11; Physical Security of Arms, Ammunition and Explosives
  - Updated on 28 June 2011
  - Installation is working on a process to comply with the changes to the regulation. Once the Commanding General has approved the process it will be published
  - Fort Gordon Regulation, 210-13, dated 28 February 2007, is the current local regulation for Control of Firearms, Ammunition and Other Dangerous Weapons
  - **For now the current Fort Gordon 210-13 requirements are in effect and will be followed with no changes**

# QUESTIONS

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