# Forest Service Savannah River Highlights of Fiscal Year 2014 Annual Accomplishments

John Blake, Assistant Manager Research March 24, 2015

Operating under Interagency Agreement Number DE-A109-00SR22188

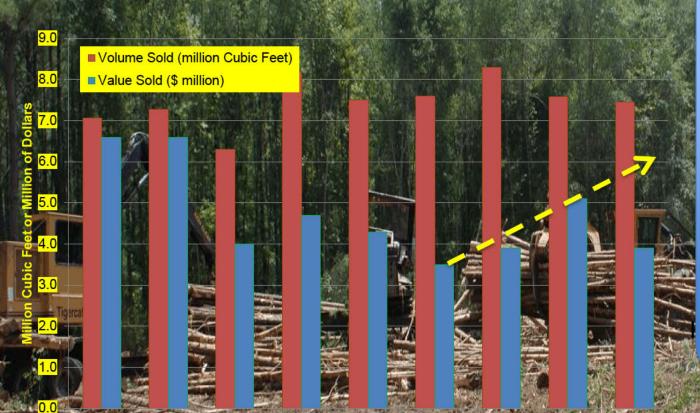


# Purpose

To satisfy a Strategic & Legacy
 Management Committee 2015 Work Plan topic



# Volume and Value of Forest Products



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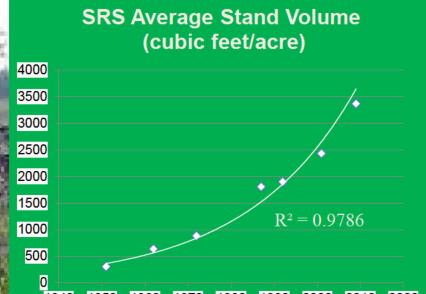
### Forest Inventory Research

- Snag occurrence modeling for cavity nesting species
- Understory vegetation cover habitat mapping
- Developed new method for modeling growth

880 acres of planting was completed including 865 acres of pine and 15 acres of hardwood (oaks)

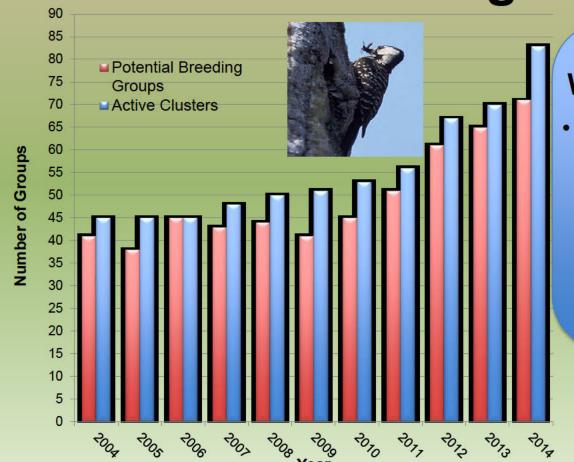
### Reforestation





About 46% of the biomass are hardwoods and 54% are pines. (based on Light Detection and Ranging [LiDAR])

# Red-Cockaded Woodpecker Clusters and Breeding Groups



# Red-Cockaded Woodpecker Research

 Assess forage habitat and reproduction over a range of cluster densities to determine acres required for forage habitat to achieve 250 breeding groups

# Threatened, Endangered and Sensitive Species Surveys



- Plants (42 State sensitive, two endangered)
- Amphibians and reptiles (seven State sensitive)
- 87 fish species (one State sensitive, one endangered)
- 54 species of mammals (four State sensitive)
- 259 species of birds (eight State sensitive, two endangered)
- A lot of invertebrates and insects (nine State sensitive)

- Completed about 10,000 acres of forest land plant surveys prior to harvesting or other treatments
- A new population of endangered smooth purple coneflower was found
- Golden eagles were first observed foraging on SRS

#### **Native Fire Savanna Restoration**

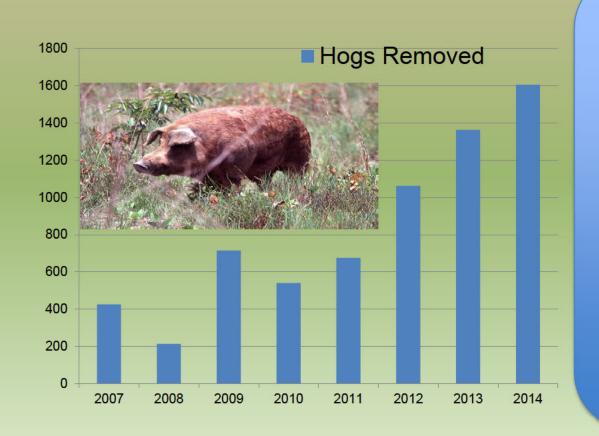
Goal: Restore native plants, native pollinators and associate habitat for vertebrates. No annual targets. Most work is accomplished in conjunction with red-cockaded woodpecker treatments

### Savanna Restoration Research

- Effects of overstory longleaf pine stocking on understory plants
- Establishment of native plants on old-field forest stands
- Recovery and dispersal of native plants and pollinators in remnants



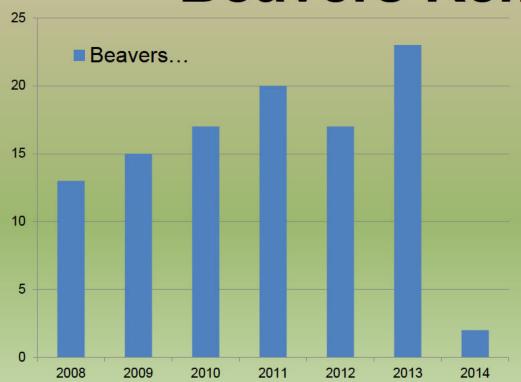
# Feral Hogs Removed



#### **Hog Research**

- Track female sounder hog movements to determine from behavior if we can extirpate hogs locally for extended time
- Determine if leaving hog carcasses in the woods is enhancing coyote populations (cost factor)
- Cooperating with SREL on USDA funded hog control studies

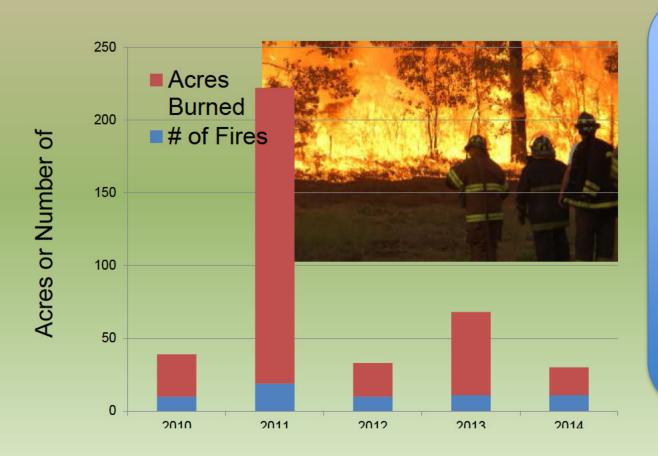
#### **Beavers Removed**



Installation of beaver excluder devices were started in 2014. They reduced the need to trap beavers while minimizing damage to site infrastructure.



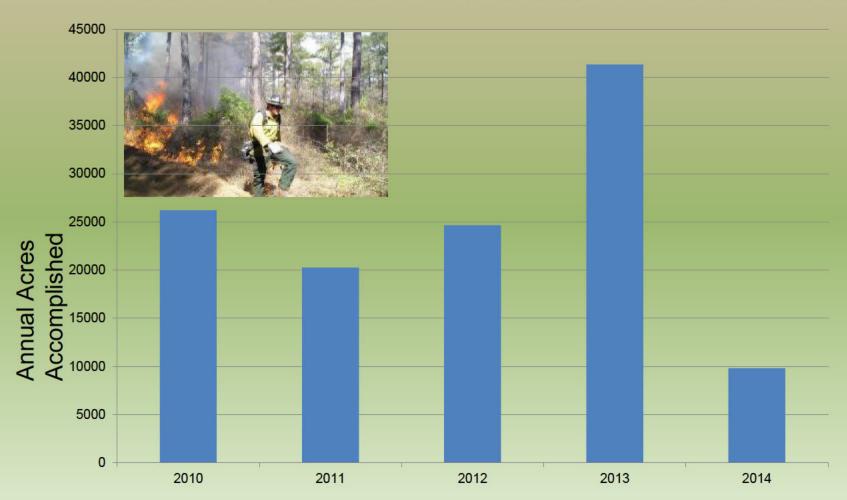
#### Wildfires and Acres Burned



#### Hazardous Fuels Research

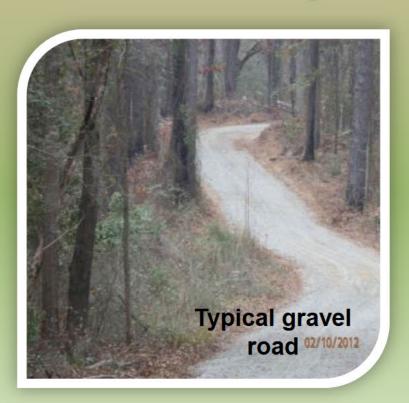
- Completed spatial analysis and mapping of hazardous fuel quantities and fire behavior under extreme weather conditions
- Cooperating with SRNL on climate change impacts

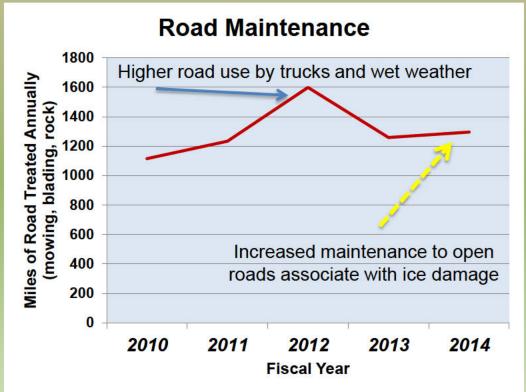
#### **Prescribed Fire Acres Burned**



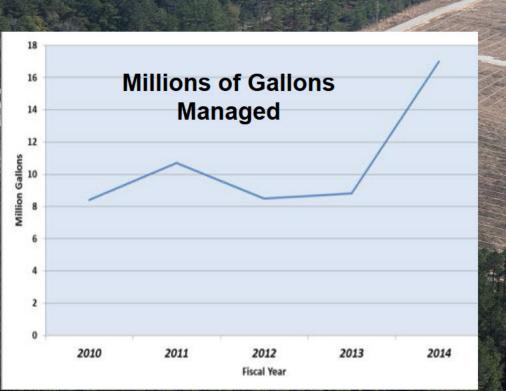
#### **Boundary Maintenance** 70 **Fencing** Ice Damage Fire Break 20 River Boundary Signage 2010 2011 2012 2013 2014 Fiscal Year — Fence Maintenance — Boundary Fire Break — River Boundary

# Road System Management





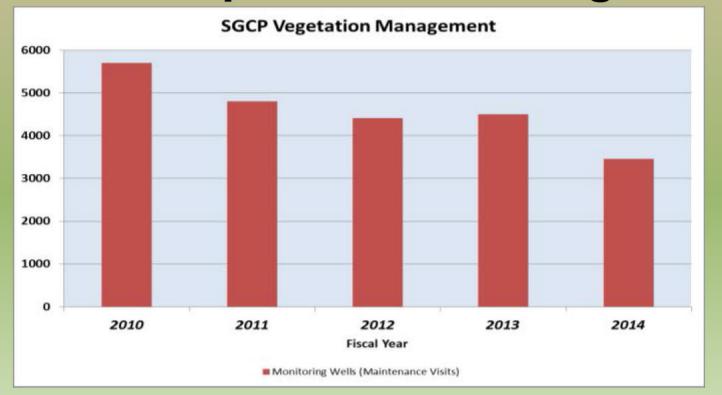
# Mixed Waste Management Facility Tritium Phytoremediation



#### MWMF Western Expansion

 Two additional expansion areas have increased the capacity of the system to manage the tritium in the seepage to Fourmile and reduce the discharge to Savannah River.

# Soil & Groundwater Closure Program Acres of Cap and Well Management



We perform routine vegetation maintenance (mowing, fertilizer, pesticides), repair erosion and do animal control on ~586 ac of caps per year.

# Special Project: Erosion Control at F-02 Outfall

#### **Before**

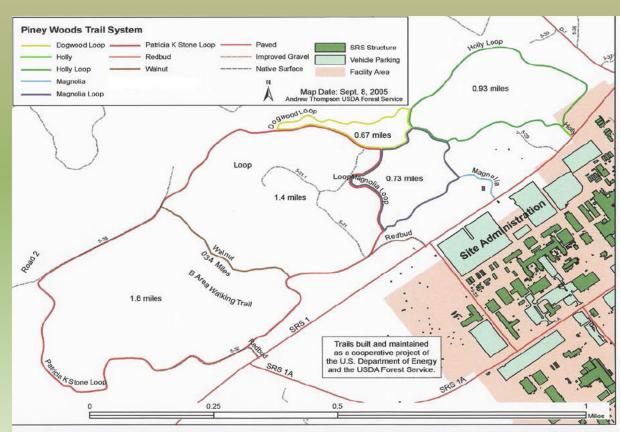


#### **After**



#### **Trail Maintenance**

 We typically maintain 11 miles of walking trails. This year two major trail systems (A-area and S-area) are still blocked due to ice storm, totaling 7.6 miles.



### **Community Outreach**



### **Programs**





Savannah River Environmental

**Science Field Station** 

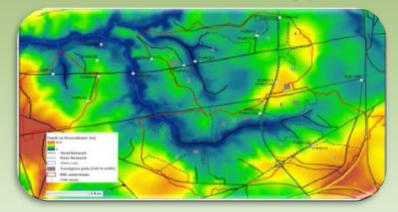
### **Externally Funded Research**

Nation Science Foundation: Corridor Study in Savannas





DOE Renewable Energy: Water Quality & Use of Bioenergy Crops





## **Questions?**

