

# Payson Goat Grazing Project



## A Forest Service Perspective

Christine Thiel, Rangeland Management Specialist

Tonto National Forest, Payson Ranger District



# Project Origins

- Payson Verde River Ranch obtains term grazing permit for American Gulch allotment in 2002
- Current term permit allows up to 200 adult cattle for 7 months in winter/spring, and 81 yearlings for 5 months
- Recent stocking rates have been much less – averaging about 45% of permitted number over last 10 years
- About 60% of allotment vegetation is interior chaparral, remaining is pinyon/juniper type
- Is this allotment truly suited to grazing cattle, or would another class of livestock make more sense?



# Project Origins

- Approached by Spurlock's in 2003 with proposal to change term permit to goats
- Allotment Management Plan (AMP) revision required for this type of change
- AMP revision process must adhere to National Environmental Policy Act (NEPA)
- American Gulch allotment not scheduled for AMP revision for several years
- How can we expedite getting goats onto the ground?



# Payson Wildland-Urban Interface Project

- Project initiated in March 2003
- Encompasses about 68,000 acres surrounding Payson, AZ
- Objective of project is to reduce fuel loadings and the threat of a catastrophic wildfire to the communities within the Payson area



# Payson WUI Treatments

- Thinning small size class trees
- Grassland restoration
- Fuelbreak construction
- Pile burning, broadcast burning, or vegetative maintenance
- Remove dead trees of all sizes within 200' of private lands



# Goats As a Management Tool

- Initial goat project area is 2350 acres in size within Payson WUI boundary
- Objectives for treatment would be a mosaic of treated areas covering 60-70% of the project area
- Treated areas would have 80-100% of all green, brushy vegetation consumed, including leaves and small twigs



# Issues Raised During Scoping

- Possibility for goats to transmit diseases to wildlife – Tuberculosis, Brucellosis, Pinkeye
- Goats foraging outside treatment areas
- Increased ground disturbance by concentrating livestock use – higher potential for erosion?



# Other Goat Projects on the Tonto

- Greenback Allotment, Tonto Basin, AZ
- Published “Influence of Spanish goats on vegetation and soils in Arizona chaparral” in Journal of Range Mgmt, March 1991
- Most preferred shrubs impacted at all goat stocking levels – these species also most preferred by wildlife (Ceanothus)
- Perennial herbaceous vegetation did not increase in response to decline in shrub cover after 4-1/2 year study – recommend re-seeding



BUCKLAND  
INDUSTRY  
PREMIUM STOCK TANK  
1000 GAL  
12' x 48"







# FS Administration of Permit

- Permittee required to have goats visually inspected by a veterinarian, who will provide the FS a health certificate before goats enter Forest
- A 24-hour cleansing period required to mitigate noxious weed dispersal
- All penning sites must be surveyed for heritage resources before use



# Project Monitoring

- Pre-treatment measurement of browse species composition by line intercept method
- Visual inspections of utilization to insure target browse species are being utilized
- Compliance with special terms and conditions of permit, including control of herd, adequacy of pens and campsites



## Is It Working?

- Estimate that about 500 acres have been treated thus far; 1,400-1,600 acres targeted for treatment
- No goat escapes
- Erosion from concentrated trailing has not been noticed
- Herbaceous species utilization has been very light – using target brush species



# Can We Do Better?

- Permittees propose to use electric fencing to create 50-acre paddocks where goats will be penned until project objectives are met (estimate about 10 days)
- 24-hour foraging will help meet project objectives more quickly, and will allow goats nutritional needs to be better served



# What We Have Learned, So Far

- Goats are a successful tool for vegetation manipulation
- Public perception of the project is very positive
- Permittee commitment to proper management is essential



# “Challenges”

- Goat pen sites must be surveyed for archeological occurrences – which is time-consuming
- Permittee requests for changes in management must “fit” within the constraints of current NEPA, or a new decision is required, which is also time-consuming
- Forest Service requires considerable lead-time to provide the necessary clearances to abide with applicable laws and regulations



# What Does The Future Hold

- Goats may be used to maintain vegetation within mechanically treated fuelbreaks
- Goat pre-treatment before prescribed burning treatments can mitigate possible negative outcomes – create “cooler” fires with less smoke
- Treatment areas will need continual maintenance since the main brush species within the project area (shrub oak) sprouts back in any season in response to rainfall



