

Central Arizona Grassland Strategy (CAGCS) 2014-2015 Implementation Plan: Yearend Project Completion Report

Region 3 CAGCS Projects

7- Up Grassland Restoration Project: Phase II



Purpose: To provide connectivity to grassland habitat opened up previously by work undertaken in 2010-2011. To reduce advancement and spread of alligator junipers into grassland habitat and expand this habitat to the north where pronghorn telemetry data indicates wide-scale use by this species and other grassland obligates.

Benefit: Creates movement corridors to waters utilized by pronghorn antelope and will help expand distribution and range, while easing predation pressures on this species. Work occurred on Arizona State Land Department land, with collaborative efforts between the lessee, ASLD and the Department.

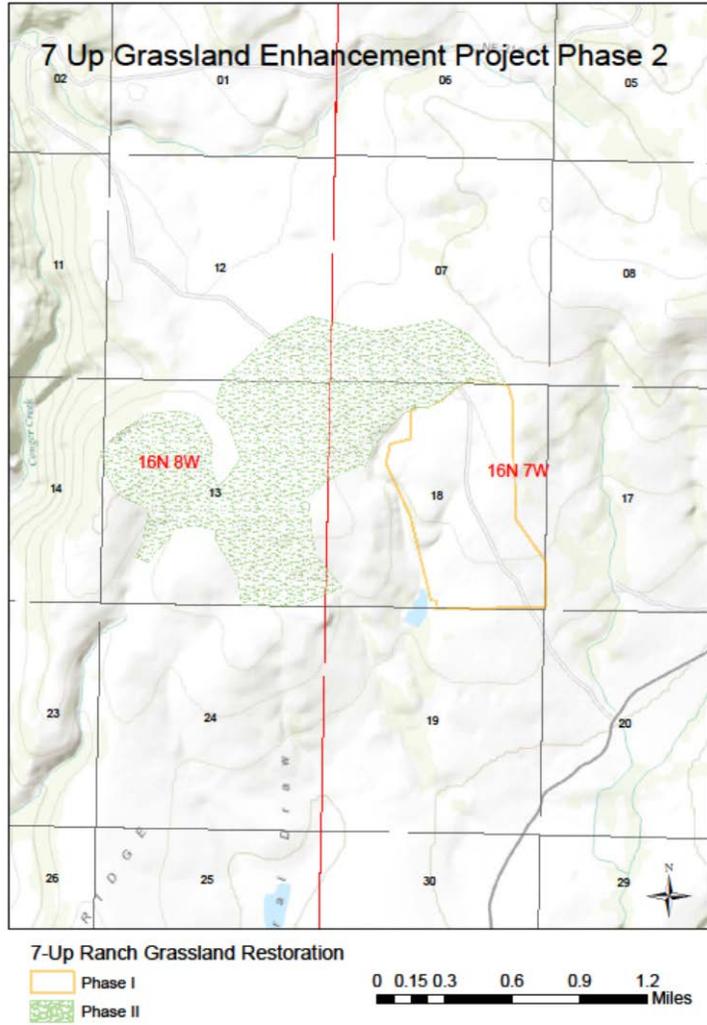
Total Acreage: With completion of Phase II a total of 1040 acres have been treated on the 7_Up Ranch.

- 400 acres completed in 2011 through LRP/LIP funding sources – Phase I
- **640 acres completed in November of 2014** – Phase II
 - **\$84,890 paid** to Summitt Forestry LLC from CAGCS budget (#06801)

Treatment Method: Cut/Stump method, whereby crews cut trees in advancement of herbicide applicators that spray each stump within 15 minutes of the tree bole being cut as close to the ground as possible. Slash material is scattered in low broad piles at maximum height of 18” above the soil surface.

Status: Immediate goals of treatment have been accomplished. Currently working in conjunction with NRCS to identify additional acreage about 4 miles northwest of this most recent project area in an area known as Scratch Canyon pasture. Pronghorn telemetry data indicates high use, with possible fawning areas occurring at this location, which is found just north of BLM land, bordering the BACA Float. No funding is targeted for the 7-Up Ranch for the 2016 budget cycle.

**In 2010 & 2011, 1200 acres were treated on the neighboring Yolo Ranch, contiguous to the 7-Up project area - treatment areas found in Sections 19, 25 & 30 on map shown below. Section 18 (T16N, R7W), approximately 400 acres (yellow polygon) on the southern most border of the 7-Up ranch was also treated.*



Cienega Watershed Thinning Project: Phase II



Purpose: To expand grassland habitat in GMU 19A, south of Hwy 169 near Cienega Creek, connecting to grassland mitigation work accomplished in 2014. Pronghorn telemetry data indicates use of areas cut in this phase of work, but impeded to the north.

Benefits: With openings and corridors cut in this phase of work, pronghorn should be able to utilize existing and recently cleared grasslands all the way to Hwy 169, unimpeded by vegetative barriers and with reduced predatory pressures. Work on phase I & II of this project was on Prescott National Forest land, with collaboration occurring between PNF and the Arizona Game and Fish Department personnel.

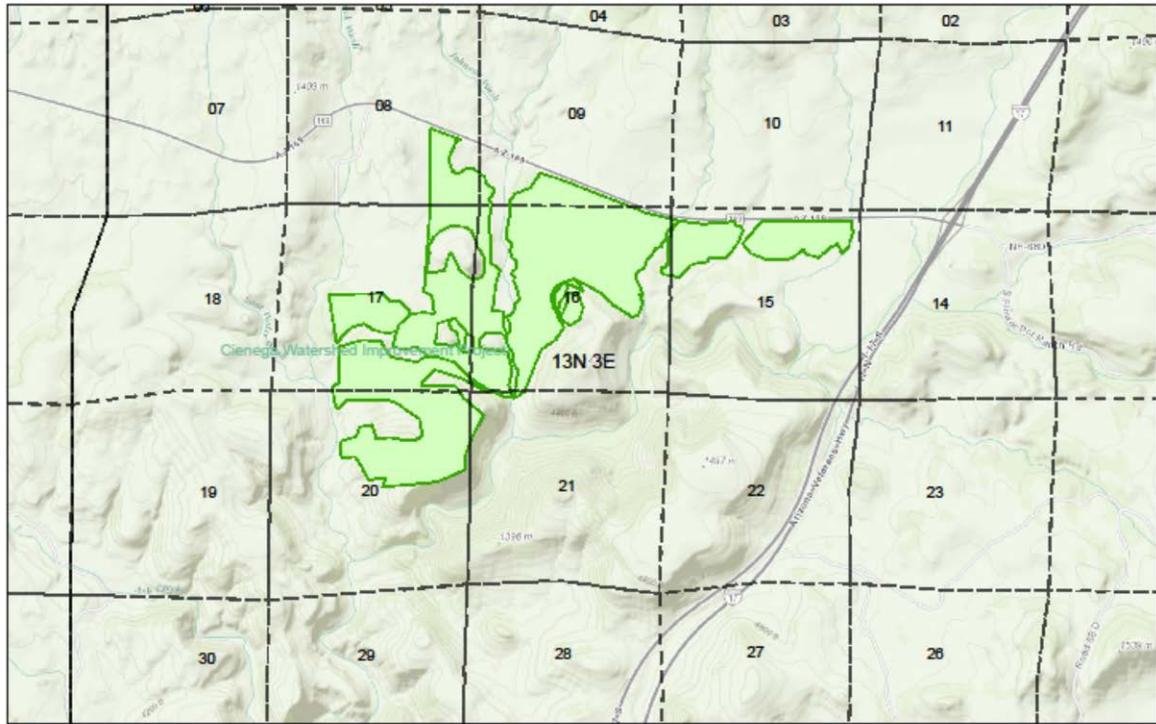
Total Acreage: A total area of 1,200 acres is encompassed within the treatment area between Phase I and Phase II work.

- April/May 2014: Phase I cut 566 acres of trees within a project area of 721 acres
- **April 2015: Phase II cut 410 acres of trees within a project area of 480 acres.**
 - Summitt Forestry LLC paid **\$20,090 @ \$49/acre**

Treatment Method: Hand cut with chain saws; slash dispersed into broad piles no higher than 18". Wood cutters from the community (i.e., public) will be directed to this project area in the late summer/autumn of 2015 by the PNF Verde Ranger District Office to help reduce biomass on the ground.

Status: With Phase I & II complete, hypothetical discussions between PNF and AGFD personnel addressing additional acreage to the southwest of the completed project area have been initiated. Additional corridor work in this direction will gain connectivity to portions of the Ash Creek Ranch, where a small resident pronghorn population occurs and where a volunteer project in 2010 installed a wildlife friendly fence. A short segment of fence should be modified in an area where Phase I work occurred to alleviate another potential predation obstacle.

Cienega Phase I & II



- June 12, 2015
- Townships
- Sections
- Completed Grassland Restoration

1:47,487
0.8
0 0.4 1 2 km

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCo, IGN, Kadaster NL, ...

Wade Albrecht
AGFD Landowner Relations Program's LORAX

Wagontire Grassland Enhancement Project (Phase I, II, Modification)



Purpose: To treat grassland invaded by juniper, by opening corridors and gaining connectivity between grassland habitat areas. Cutting trees to open passages to waters to reduce predation pressures on pronghorn and other wildlife.

Benefits: Expanded the grassland habitat in an important fawning area for pronghorn antelope on Prescott National Forest lands on the Almida Ranch. Removal of junipers will improve and increase habitat use for both migrating and resident pronghorn herds. The Wagontire project was another collaborative effort between AGFD and PNF personnel - Almida Ranch personnel also partnered in this process.

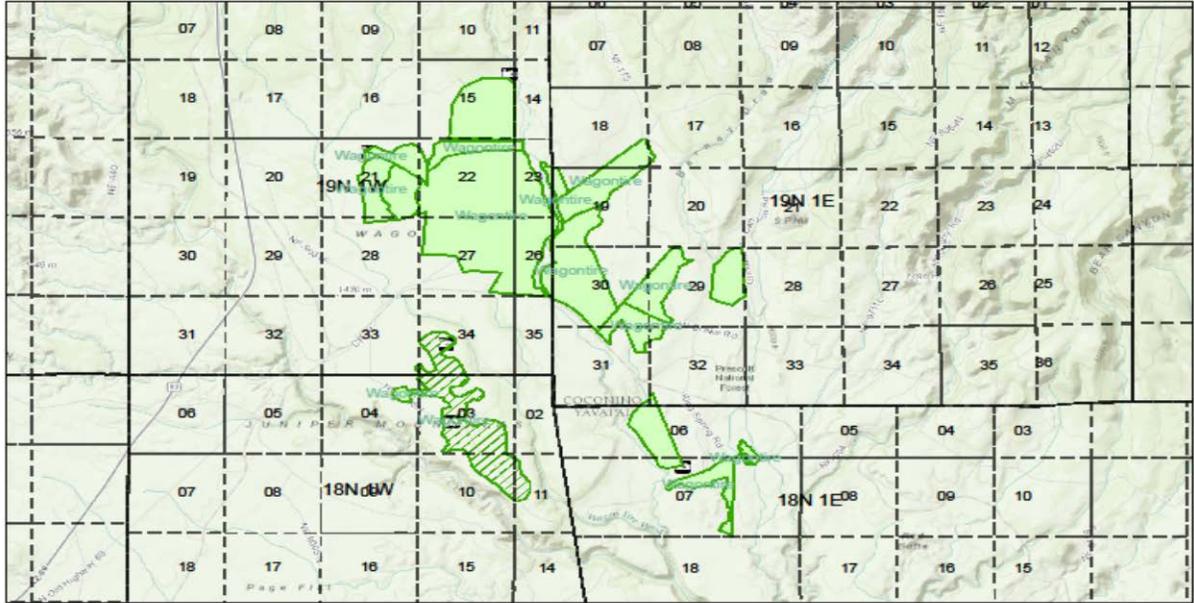
Total Acreage: Since the early spring of 2014, 4,015 acres have been treated on Wagontire Flat.

- Phase I: 2650 acres cut by Summitt Forestry – Completed in 2014
- Phase II: 692 acres cut mechanically by Almida Ranch personnel
 - 192 acres high density trees: 2014 (\$12,500, LRP funds)
 - **500 acres of low density trees: winter/spring of 2015 (\$12,501, LRP funds)**
- Modification Treatment: 673 acres cut by Summitt Forestry
 - **\$33,000 @ \$49/acre – Funded by HPC funds (\$8K) and \$25,000 in PNF funds.**

Treatment Method: Variable treatment types, with Phase I and the recent Modification being undertaken by hand crews with chainsaws, lopped into broadly scattered slash piles, no higher than 18” above the soil surface. Phase II treatments were treated mechanically by ranch personnel on an Agra-Axe. Trees were toppled, with and the Prescott National Forest, Chino Ranger District opening up these areas to the public for wood gathering, which will bring this vertical structure down significantly.

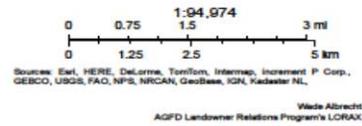
Status: AGFD CAGC’s work complete. Additional acreage will be treated by Almida Ranch with support through NRCS cost-share (RCPP). The identified amount should exceed 1000 acres. Additional acreage to the south of Hell Canyon may have potential, once NEPA is completed for this area.

Wagontire Complete



June 12, 2015

- Townships
- Sections
- Completed Grassland Restoration
- In Progress Grassland Restoration
- Planned Grassland Restoration
- 📷 Photo Monitoring Point



Fort Rock Grassland Enhancement Project: Phase III



Purpose: To reduce fragmentation of grassland habitat by cutting one-seed juniper and Utah juniper trees to open up corridors for pronghorn movement. This will gain connectivity for pronghorn populations to freely move between the western portions of the Yavapai Ranch, through the Double O Ranch to the Fort Rock Ranch.

Benefit: Open up habitat for grassland obligate species while creating openings to waters frequented by wildlife, retaining edge effect for mule deer and creating safe view-sheds for pronghorn. To release understory grasses and forbs by cutting juniper trees and thereby reducing competition for valuable resources, lending diversity to the plant community.

Total Acreage: Since the early spring of 2014, 1887 acres have been treated on the Fort Rock Ranch, owned by Rex Maughan and managed by Don Glasgow.

- Phase I: 200 acres cut immediately next to new water source = Well #5
- Phase II: 337 acres treated in same section as Phase I as additional monies became available (T19N, R9W, Section 5)
- **Phase III, Stage 1: 1350 acres** of deeded land treated in polygon located in: T19N, R8W Section 6; T19N, R9W Section 1; T20N, R8W Section 31; T20N, R9W Section 25.
 - **Maughan Ranches paid \$81,000** for this stage of Phase III work.

Treatment Method: Ranch personnel with chainsaws and loppers cutting the main boles as close to the ground as possible, while distributing slash in low scattered piles, no higher than 18" above the soils surface. Edge effect created by retaining trees in draws, ephemeral washes, ridge-tops and rocky hilltops and escarpments. Larger trees in open area limbed up to retain savannah like quality, providing shade to livestock and wildlife, while reducing predation pressures on pronghorn.

Status: Work will be completed on deeded ground by early autumn, 2017. Phase I & II were completed in June of 2014. Stage I of phase III work will be completed in June, with stage II planned to begin in late July of 2015.

Region 6 CAGCS Projects

POINT EXTREME WELL MAINTENANCE- AGUA FRIA NATIONAL MONUMENT



Photo: Well rig and trench (left) and AGFD Staff and contractors (right); Agua Fria National Monument. Photos courtesy of Chris McLaughlin BLM Archeologist

Purpose: Improve water availability for wildlife in the southern portion of the Agua Fria National Monument (AFNM) GMU21

Benefit: Water will be available year around for wildlife in the southern portion of the AFNM.

Status: The Point Extreme well maintenance actions were completed in May 2015. Solar panel was installed and pump submerged. The well collar had to be pulled and re-set due to previously unknown break. A trough was installed approximately 100 feet away from well and storage tank and connected via a submerged pipe.

2014-15 Budget: AGFD Pittman Robinson State Grants for Mule Deer Initiative (WHEI) – \$47,274.23

CROSS Y ALLOTMENT IMPROVEMENTS – AGUA FRIA NATIONAL MONUMENT

2014-15 Accomplishments – Cross Y Allotment:

- Road fixed to allow equipment access
- Well fixed
- Solar panel installed
- Solar pump installed
- Pipe submerged
- Trough installed

Estimated Total Cost:

- \$12,600 for road improvement
- \$36,4000 for well retrofit and to remove old materials

- \$4,000 for staff time

Project Funding Sources:

- AGFD Pittman Robinson State Grants for Mule Deer Initiative (WHEI)

Potential Future Projects: Multiple water development projects have been proposed in the Horseshoe Allotment, located centrally within the AFNM, and the adjoining Copper Creek allotment which is managed by the Tonto National Forest. Three wells have been proposed, all of which connect to proposed wildlife waters.

GMU 21 SYCAMORE MESA JUNIPER THINNING (BLM) AND AGUA FRIA ANTELOPE HABITAT IMPROVEMENT PROJECT (PNF)



Photo: Unit BLM 10; pre-treatment (left) and post-treatment (right); Agua Fria National Monument

Purpose: Improve GMU 21 pronghorn habitat quality by reducing juniper tree densities within movement corridors and grassland/woodland savannah habitat.

Benefit: Restoration of movement corridors and improved grassland habitat could expand pronghorn distribution and range, promote genetic exchange, and protect the long-term viability of the GMU 21 herd.

Total Acreage: 2015 plans have expanded the total treatment target from 5832 to 6796 acres

- 2356 acre Prescott NF
- 4440 acre BLM-Agua Fria National Monument

Treatment Method: Chainsaw Cut, pile and lop/scatter, follow-up pile burning or broadcast burning

Status: Ongoing project (see Map 1) expected to take several years to complete; initiated in 2004 by BLM, 2006 by AGFD and 2009 by PNF. Out of the target 6796 acres 65% of the project is considered 100% complete (4268 ac); 19% is partially complete (881 ac). In summary, 25 out of 37 units are complete. Three units (275 ac) including BLM2b, PNF10 and PNF7 have been eliminated for treatment. There are a remaining 10 units to be evaluated for treatment in the future; some of which are partially complete.

2014-15 Budget:

- AGFD Pittman Robinson State Grants for CAGCS – \$157,062.00
- AGFD Pittman Robinson State Grants for Mule Deer Initiative (WHEI) – \$271,991.23

2014-15 Accomplishments:

PNF 6/14/15/13/2 –

- PNF conducted pile burning on 528 acres February 2015, as follow-up to the Spring 2014 cutting (see *Project Completion Report Pronghorn Corridor – Prescribed Pile Burn (Verde Ranger District, Prescott National Forest; June 24, 2015)* and below “*Supplemental Work Conducted by PNF in Support of the Project*”
- Cost – \$21,000 @ 40.00/acre (PNF funded)

BLM 10 –

- BLM conducted pile burning on 147 acres March 2015, as follow-up to the Spring 2014 cutting
- 5,880.00 (2014 AGFD-BLM Collection Agreement)
- AGFD Habitat Partnership Committee Mule deer/Pronghorn Tag Funds

BLM 29 –

- 238 out of 241 acres cut
- CAGCS \$88,100.00 (PO#AGFD15-086320/\$86,540.00; PO# 092619/\$1,560.00)
- Contacted to Robert Winders Inc.
- Follow-up burning FY15/16 estimated cost 11,662.00 @ 49.00/ac

BLM 15 –

- 173 out of 183 acres
- WHEI \$113,750.00 (PO# AGFD15-087170)
- Contracted to Summitt Forest Inc.
- Follow-up burning FY15/16 estimated cost \$8,477.00 @ 49.00/ac

BLM 36 and BLM 10 –

- 237.5 out of 518 acres (BLM 36) and 45 out of 213 acres (BLM 10)
- Total Unit costs = BLM 36 – 237.5acres @ \$167,884.23 BLM 10- \$25,351.00
- CAGCS \$59,994.00 (PO#AGFD15-089965/\$26,159; PO#AGFD15-091219/\$16,867; PO#AGFD15-091873/\$16,968)
- WHEI \$86,254.00 (PO#AGFD15-089204) and \$46,987.23(PO#AGFD15-094334)
- Contracted to Summitt Forest Inc.
- Follow-up burning FY15/16 estimated cost \$13,818.00 @ 49.00/ac

BLM 35 –

- 90 out of 383ac area
- WHEI \$25,000.00 (PO#092619)
- CAGCS \$7,400.00 (PO#092619)
- Contracted to Robert Winders Inc.
- Follow-up burning FY15/16 estimated cost \$4,410.00 @ 49.00/ac



Photo: Photo of Unit BLM 15 post-treatment in foreground and Unit PNF 5 with no treatment in background to illustrate reduction of juniper densities from 50-100 stems/acre to 3-5 stems/acre.

Estimated Total Cost: Initially estimated at \$1,363,000 million to treat 5751 acres @ 200/acre average cost for juniper thinning; contractor costs have increased in 2014 and 2015 significantly. Since project initiation \$1,087,943 worth of juniper thinning contracts have been awarded by AGFD; PNF has awarded \$97,810 for juniper thinning; and BLM costs are not available. The average cost for PNF and BLM fire crews to conduct follow-up pile burning is \$49.00/acre; which could be extrapolated to a cost of \$213,000 to burn 4268 acres to date. The running average cost for all AGFD juniper thinning contracts to date was, \$261.00/acre in FY 14-15 and increased to \$296.00/acre in FY 15-16.

Project Funding Sources:

- AGFD Wildlife Conservation Fund
- AGFD Game and Fish Fund
- AGFD Pittman Robinson State Grants for CAGCS
- AGFD Pittman Robinson State Grants for Mule Deer Initiative (WHEI)
- AGFD Habitat Partnership Committee: Mule Deer/Antelope tag funds
- Department of Interior - Healthy Lands Initiative funding (through BLM)
- Bureau of Land Management – various program budgets
- Prescott National Forest – Integrated Resource Restoration funding

Potential Future Treatment Types: Following the removal of junipers, it may be necessary to follow up with additional vegetative treatments. Potential techniques that may be implemented include herbicide application to reduce cat-claw, mesquite, and snakeweed encroachment and seeding of pile burn scars. NEPA does not currently cover these activities. Treatment acres, if conducted, will be recorded as new acres treated respective of each treatment type.

Supplemental Work Conducted by BLM Adjacent to Project Area (not shown on Map 1):

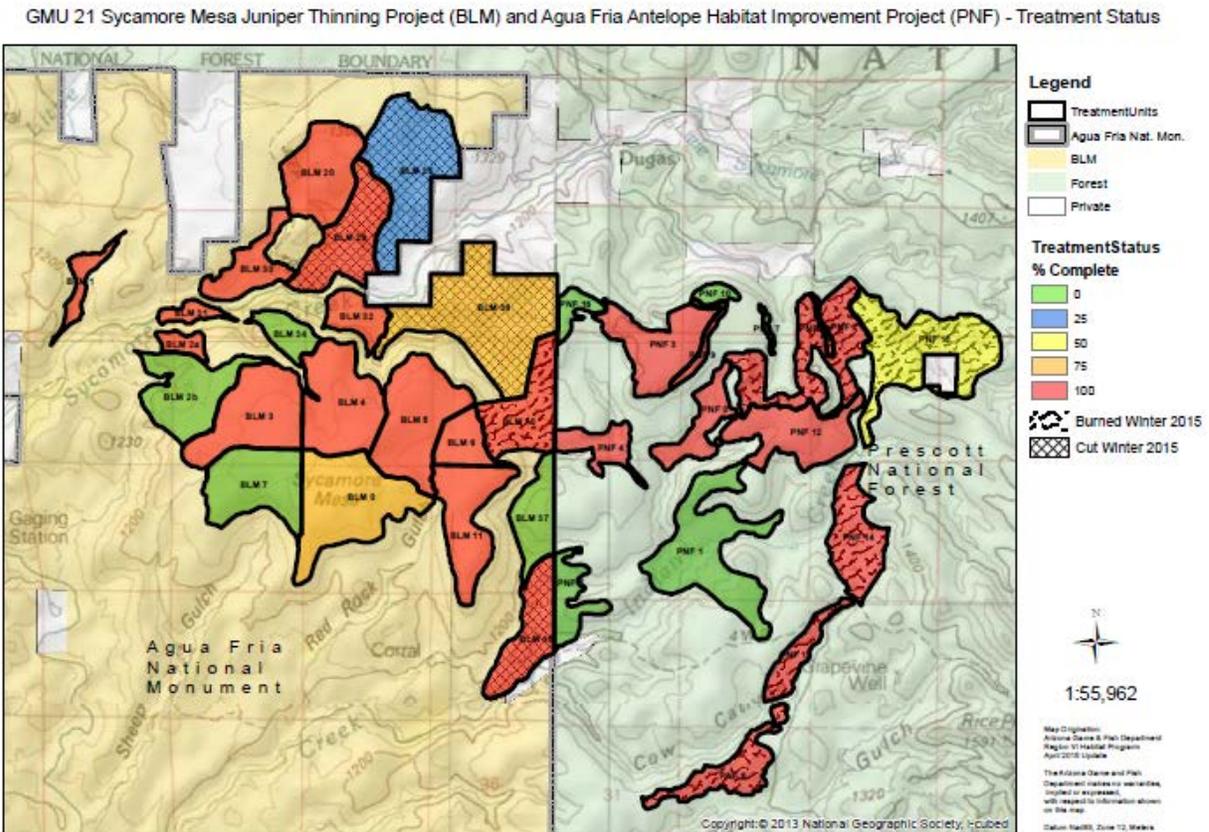
BLM continues to expand juniper thinning and prescribed fire applications south and adjacent to the project area in the Sheep Gulch/Red Rock Gulch areas and further south within the Agua Fria National Monument. See also Progress Report: *Gmu 21 Juniper Thinning (BLM) 2010 to 2012 and Agua Fria Grassland Restoration 2009 to 2011 (Bureau of Land Management, Agua Fria National Monument)*

Supplemental Work Conducted by PNF in Support of the Project:

PNF is currently completing NEPA analysis for the “*Agua Fria Grasslands Improvement Project*”, which will target habitat improvement management actions across ~98,000 acres north of our project area. Treatments consist

primarily of prescribed burning in various vegetative types (i.e. grasslands, woodlands, and chaparral) and juniper thinning in Juniper Grasslands to improve vegetation conditions and move the landscape towards a natural fire regime. In short, the future will involve expansion of the current restoration activities within the Agua Fria grasslands.

See also Progress Report: *Project Completion Report Pronghorn Corridor – Prescribed Pile Burn (Verde Ranger District, Prescott National Forest; June 24, 2015)* page 15.



GMU 21 Sycamore Mesa Juniper Thinning Project (BLM) and Agua Fria Antelope Habitat Improvement project (PNF) – Treatment Status.

**Verde Ranger District
Prescott National Forest
Pronghorn Corridor – Prescribed Pile Burn June 24, 2015**

The Pronghorn Corridor Rx Pile Burn treated about 525 acres with prescribed fire/pile burning of cut trees within the juniper-grassland vegetation type located in Township 11 North, Range 4 East, Sections 16, 17, 20, 21, 28, 29, 31, and 32 on the Verde Ranger District, Prescott National Forest. This project area is part of the 2,367 total acres as identified in the Agua Fria Antelope Habitat Improvement Project Environmental Assessment. Total project cost was about \$21,000 funded by the Prescott NF at a cost of \$40 per acre.

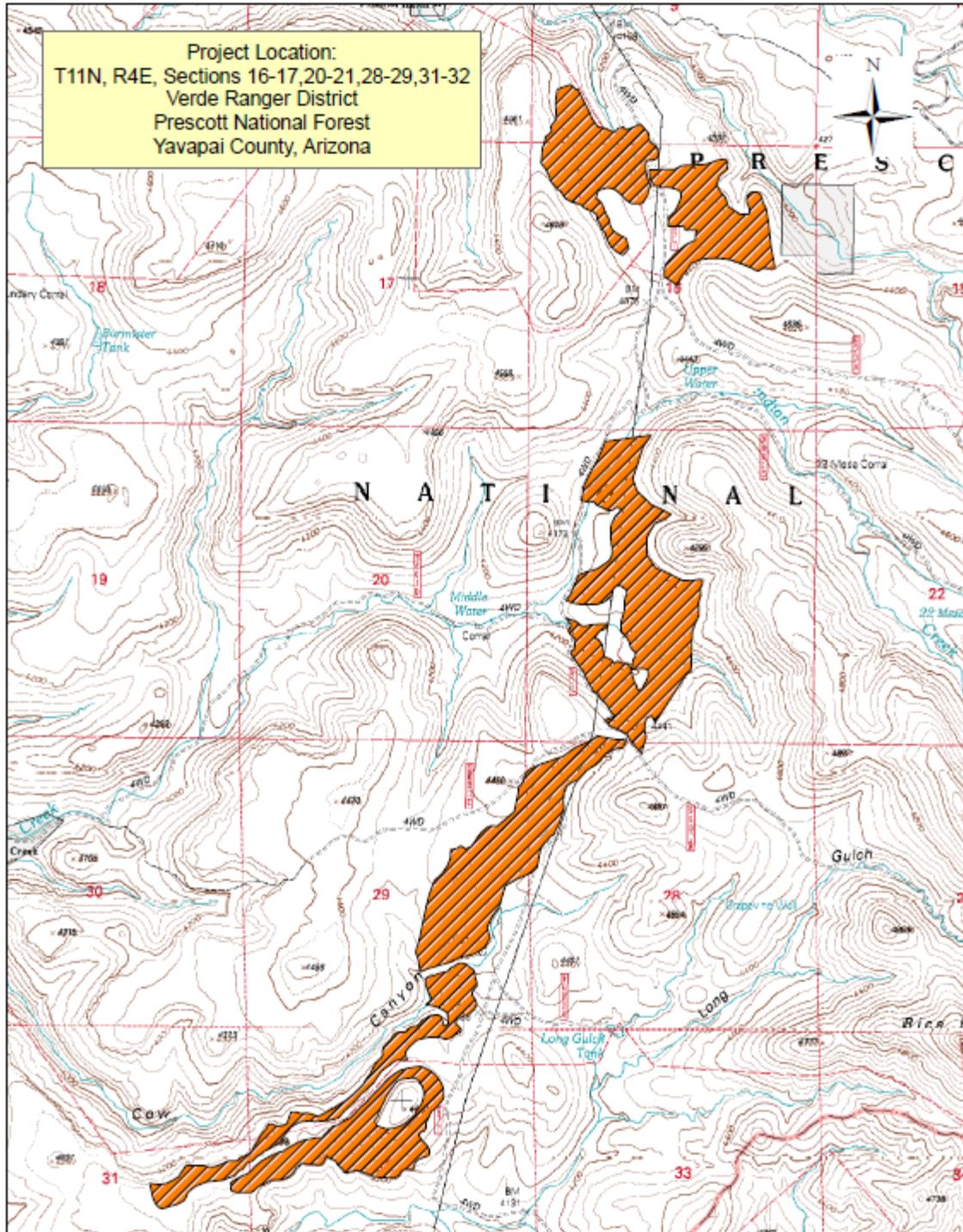
Photo 1: Drip torch ignition of cut tree slash piles.



Photo 2: Post burn consumption of tree slash piles in Unit 14.



Pronghorn Corridor - Pile Burning of Treated Units



**Verde Ranger District
Prescott National Forest
Pronghorn Habitat Improvement – Fence Modification**

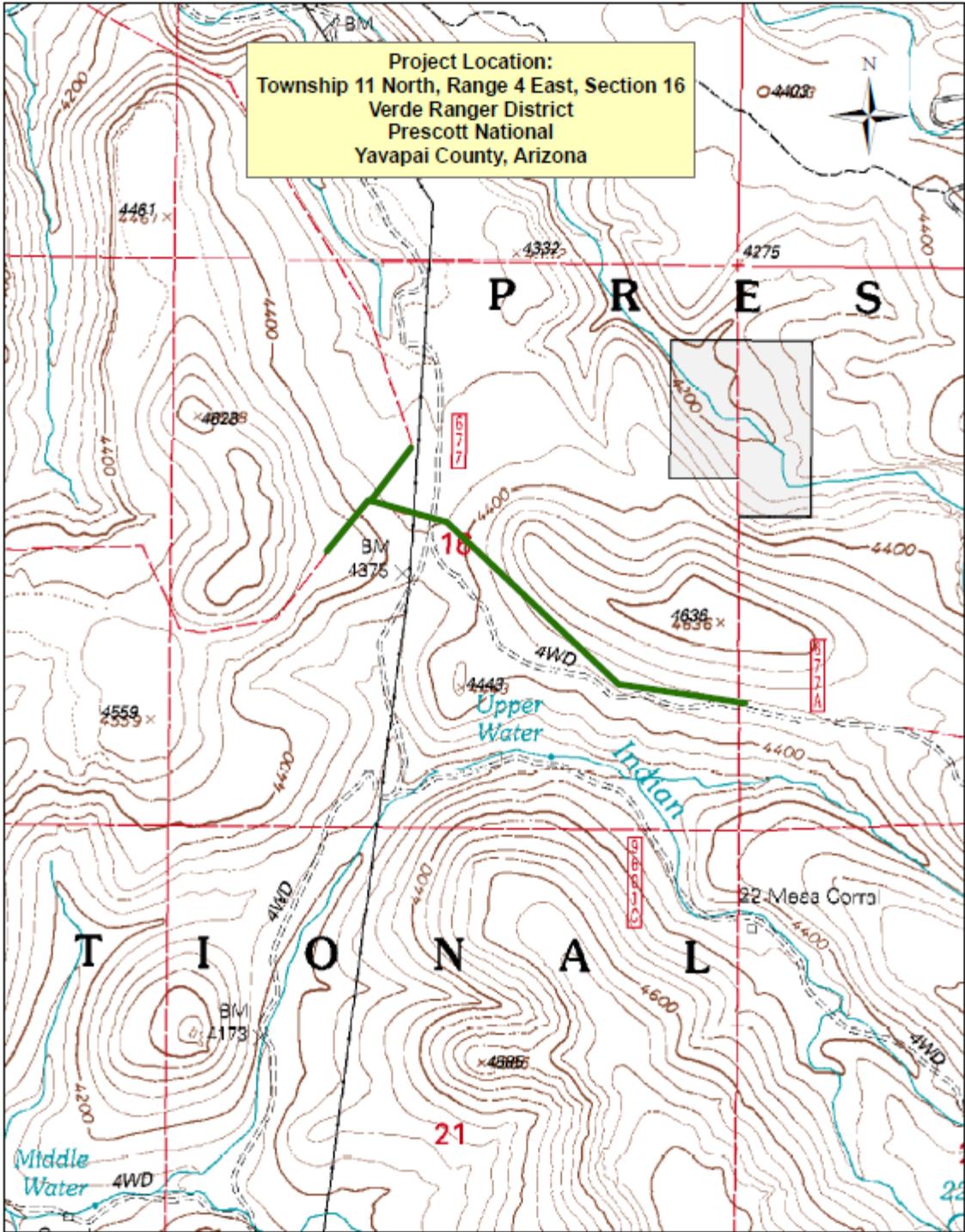
Photo 1: Fence design pre-reconstruction



Photo 2: Fence design post-reconstruction



Pronghorn Habitat Improvement - Fence Modification



NRCS 2014-2015 Projects

The Natural Resource Conservation Service continues efforts within the CAGCS boundary with completed projects included brush management, wells, fencing and watering facility improvements for a total of \$242,644. In addition to those projects completed, another \$102,206 is eligible for and in process of completion and these includes fencing, pipelines, pumping plants, wells and watering facilities.

Projects have also been approved and completed for 2016 in the amount of \$8,827 to include brush management, water facilities and pumping plant. Those eligible for 2016, 2017 and 2018 so far are in the amount of \$76,878 to include brush management projects.

Approved projects were completed or near completion. Eligible are those in process.

Brush Management	ac	5.0	2014	\$82.25	Approved
Brush Management	ac	11.0	2014	\$180.95	Approved
Brush Management	ac	133.0	2014	\$18,304.79	Approved
Brush Management	ac	325.0	2014	\$24,375.00	Approved
Brush Management	ac	100.0	2014	\$20,108.00	Approved
Fence	ft	3,707.0	2014	\$4,300.12	Approved
Fence	ft	3,484.0	2014	\$4,041.44	Approved
Fence	ft	5,384.0	2014	\$14,752.16	Approved
Fence	ft	12,248.0	2014	\$33,560.00	Eligible
Fence	ft	600.0	2014	\$732.00	Eligible
Pipeline	ft	2,850.0	2014	\$4,674.00	Eligible
Pipeline	ft	800.0	2014	\$1,312.00	Eligible
Pumping Plant	no	1.0	2014	\$3,742.00	Eligible
Pumping Plant	no	1.0	2014	\$5,699.80	Approved
Pumping Plant	no	800.0	2014	\$4,144.00	Eligible
Water Well	no	1.0	2014	\$5,620.00	Eligible
Water Well	no	1.0	2014	\$10,479.00	Approved
Water Well	no	1.0	2014	\$6,254.00	Eligible
Watering Facility	no	1.0	2014	\$1,395.00	Eligible
Watering Facility	no	1.0	2014	\$2,450.00	Eligible
Watering Facility	no	1.0	2014	\$1,162.50	Approved
Watering Facility	no	1.0	2014	\$3,690.00	Approved
Watering Facility	no	2.0	2014	\$10,080.00	Eligible
Watering Facility	no	1.0	2014	\$4,199.00	Eligible
Watering Facility	no	1.0	2014	\$4,199.00	Eligible
Watering Facility	no	1.0	2014	\$4,199.00	Eligible
Watering Facility	no	1.0	2014	\$4,199.00	Eligible
Brush Management	ac	200.0	2015	\$40,810.00	Approved
Brush Management	ac	186.6	2015	\$25,736.81	Approved

Brush Management	ac	130.0	2015	\$21,466.90	Approved
Fence	ft	6,334.0	2015	\$17,355.16	Approved
Fence	ft	9,200.0	2015	\$25,208.00	Approved
Pipeline	ft	2,100.0	2015	\$4,092.00	Eligible
Pumping Plant	no	1.0	2015	\$3,742.00	Eligible
Water Well	no	1.0	2015	\$4,891.51	Approved
Watering Facility	no	1.0	2015	\$1,163.00	Eligible
Watering Facility	no	1.0	2015	\$2,450.00	Eligible
Brush Management	ac	65.0	2016	\$1,069.25	Approved
Brush Management	ac	85.0	2016	\$14,037.00	Eligible
Pumping Plant	no	1.0	2016	\$3,946.97	Approved
Watering Facility	no	1.0	2016	\$1,226.44	Approved
Watering Facility	no	1.0	2016	\$2,584.75	Approved
Brush Management	ac	120.0	2017	\$19,816.00	Eligible
Brush Management	ac	260.0	2018	\$42,934.00	Eligible