

Joe Kurz WMA – Native warm season grass (NWSG) restoration

Table 1 - Funds requested and expenditures

Joe Kurz Budget	Unit cost estimate	Acres	GOS request	Spent as of 3/2014
Seed	\$35/acre	125	\$4,375	\$6,265
Imazapyr	\$80/acre	125	\$5,000	\$6,171
Glyphosate	\$60/acre	94	\$3,750	\$8,460
Plowing	\$20/acre	94	0 (in kind)	Will need redo
Burning	\$15/acre	94	0 (in kind)	completed
Total			\$13,125	\$20,896

A total of 165 acres of old hayfields and pastures on Joe Kurz WMA (see attached map) were identified as priorities for native warm season grass restoration by game management and nongame biologists (Theron Menkin and Nathan Klaus). Most of these fields were being heavily encroached with brush, predominantly sweetgum and Chinese privet. Fields were put into two classes, those requiring removal of woody plants prior to planting and those ready for immediate conversion to native grasses.

By June 1st 2013 71 acres of brush encroached fields were sprayed to remove woody encroachment. It was agreed these fields are to be allowed to ‘rot down’ for a year or more since currently they are too brushy for planting equipment. During that time they will also be burned to reduce woody debris and are scheduled for planting in 2015 and 2016.

By the end of June 2013 an additional 94 acres without woody encroachment was prepared for planting with two herbicide applications. Seed was purchased, however the weather did not cooperate. Fields remained too wet to plant through the planting window of 2013. These fields are to be sprayed again in early summer of 2014 and hopefully will be planted soon after.

Deviations to date:

- Fields could not be planted in 2013 due to wet weather
- Poor seed harvests in the upper Midwest caused significantly higher seed costs than originally estimated.

- Some fields will require a year or more to ‘rot down’ before planting equipment can be used in them.
- Herbicide costs varied widely from original estimates. Some herbicide applications were done by a contractor where our conditions were too rough for our equipment.

Figure 1 – Map of the 165 acres slated for NWSG restoration using the 2013 award from GOS.

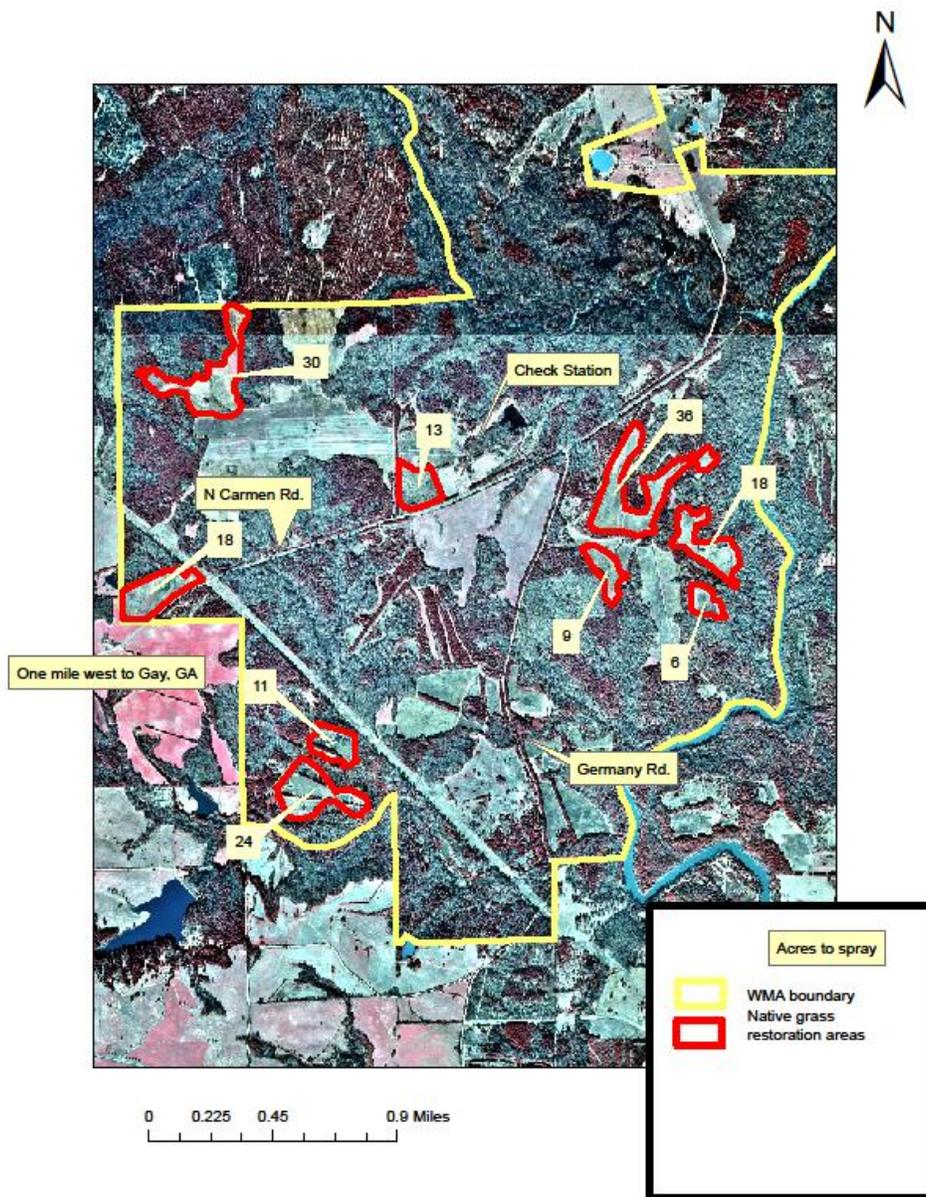


Figure 2. Several controlled burns have been conducted in native season grass restoration areas in 2013 and 2014, including this one conducted by the Nongame season fire crew on Joe Kurz WMA in February 2014. Grassland bird species documented using these habitats include this grasshopper sparrow (below) captured by Charlie Muise on the Joe Kurz WMA banding station. Other priority species found using NWSG areas on Joe Kurz WMA include LeConte's Sparrow, Eastern Meadowlark, Sedge Wren, Loggerhead Shrike, Northern Harrier. Even a Connecticut Warbler paid a visit to the restoration area and was banded in the fall of 2013.



Figure 3. The tractor purchased using 2008 GOS funds was used heavily throughout both the Joe Kurz and Sprewell Bluff WMA projects. Work included spraying exotic pasture grasses, harvesting seed, putting in firebreaks, spraying woody encroachment and running a tree planter.



Sprewell Bluff WMA – Longleaf underplanting and groundcover restoration

Funds requested and distribution

Sprewell Bluff Budget	Unit cost	Acres	GOS request	Spent as of 3/2014
Prescribed fire	\$15/acre	321	\$1,685	Planned 2015
Triclopyr herbicide	\$135/acre	321	\$8,988	\$43,335
Grass plugs, 250/acre	\$0.25/plug	181	\$3,959	Not needed, shifted into herbicide cost
Grass planting	\$0.20/acre	181	\$3,167	Not needed, shifted into herbicide cost
Longleaf plugs 500/acre	\$0.12/plug	210	\$2,205	\$5,040
LL planting costs	\$0.10/plug	210	\$1,837	\$9,120
Total as of 3/2014		321	\$21,841	\$57,495

About 320 acres of Sprewell Bluff WMA near Double Bridges Road is undergoing restoration back to the pine woodland habitats that were once found on the property.

Longleaf pine/shortleaf pine/post oak woodlands were once common in the area according to landlottery maps from the 1820s, and likely supported a variety of species that today are rare and declining. The goal of this project is to restore these habitats and we hope, restore many of the wildlife species that depend upon them such as Bachman’s Sparrow, Sherman’s Fox Squirrel, Northern



Bobwhite, Brown-headed Nuthatch, Red-headed Woodpecker and others. The picture above right depicts the desired end result of this restoration effort, this woodland has already been restored elsewhere on Sprewell Bluff.

As a first step the site was marked by Nongame personnel for a thin to remove offsite tree species that have encroached on the site as a result of fire suppression. Following marking the site was logged in the spring of 2013. In the photo below you can see logging equipment

loading the trucks and get a feel for the openness of the habitat following logging, plenty of room for native grasses and longleaf pine. Larger site appropriate hardwood and pine were left.

Following the logging nonmerchantable hardwood sprouts needed to be controlled to promote groundcover and prepare the site for longleaf and shortleaf planting. Herbicides were applied by Nathan Klaus and Ashley Harrington during the week of September 2nd 2013. After years of research and experimentation we have found combining



two different types of selective herbicides at low rates can result in good control of woody competition, no damage to residual trees, and no damage to native grasses. This project represents the first time we have used this combination on a large scale. It is worth noting that herbicides were applied using a tractor bought with GOS funds from 2008.

With woody control in place we could plant longleaf with confidence, knowing that they will have good survival. The week of January 27th we planted 32,000 trees, 10,000 shortleaf pine and 22,000 longleaf pine using the GOS purchased DNR tractor and our seasonal fire crew. Good rains have followed and as long as they continue through the summer we anticipate good survival of the tree seedlings. A controlled burn is planned for either 2015



or 2016 to help control woody sprouts.

Significant deviations

– The possibility to plant native grasses was included in our original grant proposal. We knew there was an agricultural history to this site and were unsure what sort of seedbank remained. However during the summer of 2013 we have already found excellent groundcover response to the herbicide release and believe planting native grasses will be unnecessary. Funds originally intended for grass planting were shifted to cover the substantial herbicide costs associated with this groundcover restoration.

- Shortleaf Pine was also included in the planting mix.

- The controlled burn may be put off until 2015 or later depending on need. The purpose will be to control hardwood sprouts, and favor longleaf pine. For now the herbicide treatment is giving excellent results and the controlled burn is not needed this year.