

ANNUAL REPORT: FY 2015 COOPERATIVE RECOVERY INITIATIVE DUSKY GOPHER FROG

Project Name: Dusky gopher frog breeding pond restoration and population establishment on the Mississippi Sandhill Crane National Wildlife Refuge

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Project Location: Mississippi Sandhill Crane National Wildlife Refuge

Project Goal: The long-term goal of the project is to create a dusky gopher frog metapopulation within the Mississippi Sandhill Crane National Wildlife Refuge

Expected Conservation Outcome of the Project: The project will contribute to the endangered dusky gopher frog recovery efforts by expanding the available habitat for the species and increasing the limited number of its breeding sites. The project will also contribute to the recovery of the endangered Mississippi Sandhill Crane by improving both its upland and breeding habitat.

Project Measureable Objectives (Year 3):

- Conduct prescribed burning of uplands surrounding dusky gopher frog release site (Sawdust Pond)
- Monitor hydrology at Sawdust Pond
- Complete installation of drift fence surrounding Sawdust Pond
- Release first group of metamorphic dusky gopher frogs at Sawdust Pond

How are objectives measured: Direct observation and accounting of management activities

Project Measureable Objectives (Long-term):

- Release metamorphic dusky gopher frogs into restored/created ponds for five years
- Document presence of calling male dusky gopher frogs
- Document evidence of dusky gopher frog breeding
- Establish a dusky gopher frog population

How are objectives measured:

- Metamorphic dusky gopher frog releases-- Observe and record numbers of released metamorphs
- Calling male dusky gopher frogs-- Use automated recorders to establish presence
- Evidence of breeding-- Survey release site and document presence of dusky gopher frog egg masses
- Population establishment-- Monitor the dusky gopher frog population through the use of a drift fence

Assessment of Short-term Performance (Year 3):

- **80 -- 89% conservation objective achieved**

Assessment of Long-term Performance this year:

- **Less than 70% conservation objective achieved**

Project Status:

Drift fence was constructed and improved at Sawdust Pond, the site selected as the current dusky gopher frog reintroduction site. Nearly 1,600 young tadpoles were obtained from researchers studying the primary dusky gopher frog breeding site on the DeSoto National Forest. Fifty cattle tanks were set up on the refuge and dusky gopher frog tadpoles were raised for release as metamorphic frogs. A total of 1,264 metamorphic dusky gopher frogs were captured from cattle tanks and 1,257 were released at Sawdust Pond in batches from May through July. Prescribed burns were conducted on 117 acres of upland adjacent to Sawdust Pond to continue to improve the habitat for adult dusky gopher frogs. The hydrology and water quality of Sawdust Pond was monitored by documenting rainfall, pH, temperature, and water level.

Future Actions:

In FY 16, we plan to continue to raise dusky gopher frog tadpoles in cattle tanks at the refuge and release metamorphic frogs at Sawdust Pond. For the first 7 months, a temporary technician (intern) will work at the refuge and coordinate with dusky gopher frog researchers on this effort. The feasibility of creating an additional pond in the vicinity of Sawdust Pond will be explored. Also in FY 16, we will complete the construction of the Sawdust Pond drift fence. Automated recorders will be placed at Sawdust Pond to determine if any male dusky gopher frogs are calling at the site. Audio recordings will be analyzed to document evidence of calling dusky gopher frog males and as a potential breeding indicator. A prescribed burn treatment of 250 acres of upland adjacent to Sawdust Pond will be conducted. Hydrology and water quality will continue to be monitored as described above.



Figure 1. Results of Sawdust Pond restoration work and drift fence construction, December 30, 2014.



Figure 2. Cattle tank set-up for raising metamorphic dusky gopher frogs, May 6, 2015.



Figure 3. Metamorphic dusky gopher frog in cattle tank minnow trap, May 6, 2015.



Figure 4. Metamorphic dusky gopher frog at Sawdust pond, May 29, 2015.