

**The Friends of Nachusa Grasslands  
2016 Scientific Research Project Grant Report  
Due June 30, 2017**

1. Please save this form to your desktop with a unique file name that includes “Friends 2016 Science Grant Report” and your last name.
2. Complete the form using the headings in bold as your guide.
3. Save the file as a Word document or a PDF.
4. Attach the file to an e-mail, and send it to: nachusafriendsscience@gmail.com no later than June 30, 2017.
5. The subject of the e-mail should be “2016 Scientific Research Grant Report” and your last name.
6. After your research project is complete, please contact Friends so that we may learn from and publicize the outcomes as appropriate.

**Name:** Julia Brockman

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**2016 grant amount:** \$2,000

Please answer the following questions with 1- to 2- sentence summaries:

**Research Project Topic:** My research investigated the effects of environmental, management, and human disturbance variables on bison habitat selection at Nachusa Grasslands. I quantified the effects of these variables across seasons and at 2 scales: the patch scale and the enclosure scale.

**Research Project Purpose:** Identifying which variables affect bison activity and how strongly will help to guide future management at Nachusa Grasslands and throughout the eastern United States.

**Research Project Outcomes to date:** Land cover type best explained bison habitat selection consistently across seasons and scales with bison showing a strong preference for partial restorations. Bison selected for recently burned prairie with the exception of Summer 2015 at the enclosure scale and bison selected for areas closer to disturbed areas at the patch scale but did not show a strong trend at the enclosure scale.

**Describe how the grant funds you have received from the Friends of Nachusa Grasslands have been used in regard to the above topic, purpose, and/or outcomes:** Grant funds have been used to travel from Carbondale to Nachusa Grasslands to conduct field work.

**Describe how your project has benefited the work and goals of Nachusa Grasslands:** Presentations to staff and members at Nachusa Grasslands have identified areas of high bison activity and potential causes for this high activity. I also submitted my

thesis as a final report with bison management recommendations including further investigation into vegetation to identify fine-scale differences between land cover types; the continued variation in burn season and the implementation of longer fire return intervals in some areas; and the use of mowing, fire, fertilizer, and salt licks to draw bison away from areas of high human activity and overgrazed areas.

**Describe how your findings can be applied to challenges in management practices for restoration effectiveness and species of concern:** Identifying where bison spend time will help to inform outreach and education efforts as well as concurrent and future research investigating the effect of bison on other species. In addition, recommended management is aimed at creating structural and species diversity supporting increased wildlife habitat.

**Please list presentations/posters you have given on your research:**

*Poster Presentations*

Brockman, J. C., C. K. Nielsen, and J. W. Walk. 2015. Habitat selection and human avoidance of reintroduced bison in northern Illinois. 75th Midwest Fish & Wildlife Conference, Indianapolis, Indiana.

*Oral Presentations*

Brockman, J. C., C. K. Nielsen, and J. W. Walk. 2015. Habitat selection of reintroduced bison in northern Illinois. Friends of Nachusa Annual Meeting, Nachusa Grasslands, Franklin Grove, Illinois.

Brockman, J. C., C. K. Nielsen, and J. W. Walk. 2015. Habitat selection of reintroduced bison at Nachusa Grasslands. Nachusa Science Symposium, Nachusa Grasslands, Franklin Grove, Illinois.

Brockman, J. C., C. K. Nielsen, and J. W. Walk. 2016. Habitat selection of reintroduced bison in northern Illinois. 76th Midwest Fish & Wildlife Conference, Grand Rapids, Michigan.

Brockman, J. C., C. K. Nielsen, and J. W. Walk. 2016. Habitat selection of reintroduced bison in northern Illinois. 52<sup>nd</sup> Annual Meeting of the Illinois Chapter of the Wildlife Society, Makanda, IL.

Brockman, J. C., C. K. Nielsen, and J. W. Walk. 2016. Habitat selection of reintroduced bison in northern Illinois. SIU Natural Sciences Student Research Symposium, Carbondale, IL.

**Have you submitted manuscripts to scientific journals? If so, which ones? If not, do you anticipate doing so? (Please keep us informed on publications.)**

I have not yet submitted manuscripts but intend to do so.

**Optional: Offer suggestions for improving the application and award process for future Friends of Nachusa Grasslands Scientific Research Grants:**