

**The Friends of Nachusa Grasslands
2018 Scientific Research Project Grant Report
Due June 30, 2019**

1. Please save this form to your desktop with a unique file name that includes “Friends 2018 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, 2019.
5. The subject of the e-mail should be “2018 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: Megan Garfinkel

Address: 845 W. Taylor St (MC 066), Chicago IL 60607

Phone: 215-260-4529

E-mail: mgarfi2@uic.edu

2018 grant amount: \$3000

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

Research Project Topic: Prairie birds in agriculture: Examining the use of surrounding agricultural habitat by birds that live in prairies

Research Project Purpose: To determine if grassland and prairie birds provide services or disservices on nearby agricultural fields through consumption of pest or beneficial arthropods. I continued my original study by collecting more fecal samples from birds in prairie and adjacent agricultural fields, and conducting a DNA analysis to determine the species of arthropod prey in the birds’ diets.

Research Project Outcomes to date: In 2017, I collected 131 fecal samples from birds captured at three sites at Nachusa Grasslands, and three other smaller prairies. I have extracted the DNA from these samples myself instead of sending them all to an outside lab, and have begun the process of having the DNA sequenced and analyzing those data.

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: I have used the grant funds to pay for the analysis of the bird fecal DNA samples. I used the funds both to purchase supplies used in the extraction of DNA from the fecal samples, and also to pay for DNA sequencing through the University of Illinois at Chicago’s DNA services facility.

Describe how your project has benefited the work and goals of Nachusa

Grasslands: This project helps to demonstrate the amount of influence prairies have on the larger agricultural landscape. This information will be useful to help educate stakeholders such as farmers, as well as the public, on the large-scale benefits of prairie restorations.

Describe how your findings can be applied to challenges in management

practices for restoration effectiveness and species of concern: The fecal DNA data on bird diets tells us more about the key resources used by grassland bird species, many of which are declining. This will allow us to determine the best ways to continue to maintain healthy prairie bird populations at Nachusa Grasslands and elsewhere.

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

I have presented my findings in a poster at the Ecological Society of America (ESA) conference in August 2018, and have also given presentations at the Friends of Nachusa Grasslands Science symposiums, as well as an invited talk for the Will County Audubon Society (February 2019). I have also presented my research at the University of Illinois at Chicago Ecology and Evolutionary Biology weekly seminar.

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 submitted a manuscript to *Ecology Letters*, and if it is not accepted there I will send it to the journal *Ibis*. I have mostly completed the preparation of a second manuscript, which I will likely submit to the journal *Agriculture, Ecosystems, and Environment*.

Optional: Offer suggestions for improving the application and award process for future Friends of Nachusa Grasslands Scientific Research Grants: No suggestions, I thought the process was straightforward and easy to navigate.