

Beautiful Data, Ugly Problem: Citizen Scientists & Bird Collisions



Abbie Anderson, MSc Candidate, Conservation Sciences Graduate Program, University of Minnesota
Advised by: Dr. Rob B. Blair, Dept. of Fisheries, Wildlife and Conservation Biology & Extension
Partners: Joanna Eckles, Project BirdSafe volunteers, and Audubon MN

Overview

Thanks

Project BirdSafe

Learning by doing

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BirdSafe volunteers
Audubon Minnesota

Dr. Rob Blair
Student advisory committee
Conservation Sciences Graduate Program
University of Minnesota

A small brown and white speckled bird, possibly a sparrow, is lying on its side on a light-colored gravel surface. The bird's head is resting on the gravel, and its legs are extended. The background is blurred, showing a dark structure and a potted plant.

up to 1 billion birds,

1 Klem, 2009

Image: Stephen B. Hager, Augustana College



2–9% of total population₂
Migration matters₃
Mitigation matters_{4, 5, 6}

2 Loss et al, 2014

3 Borden et al, 2010

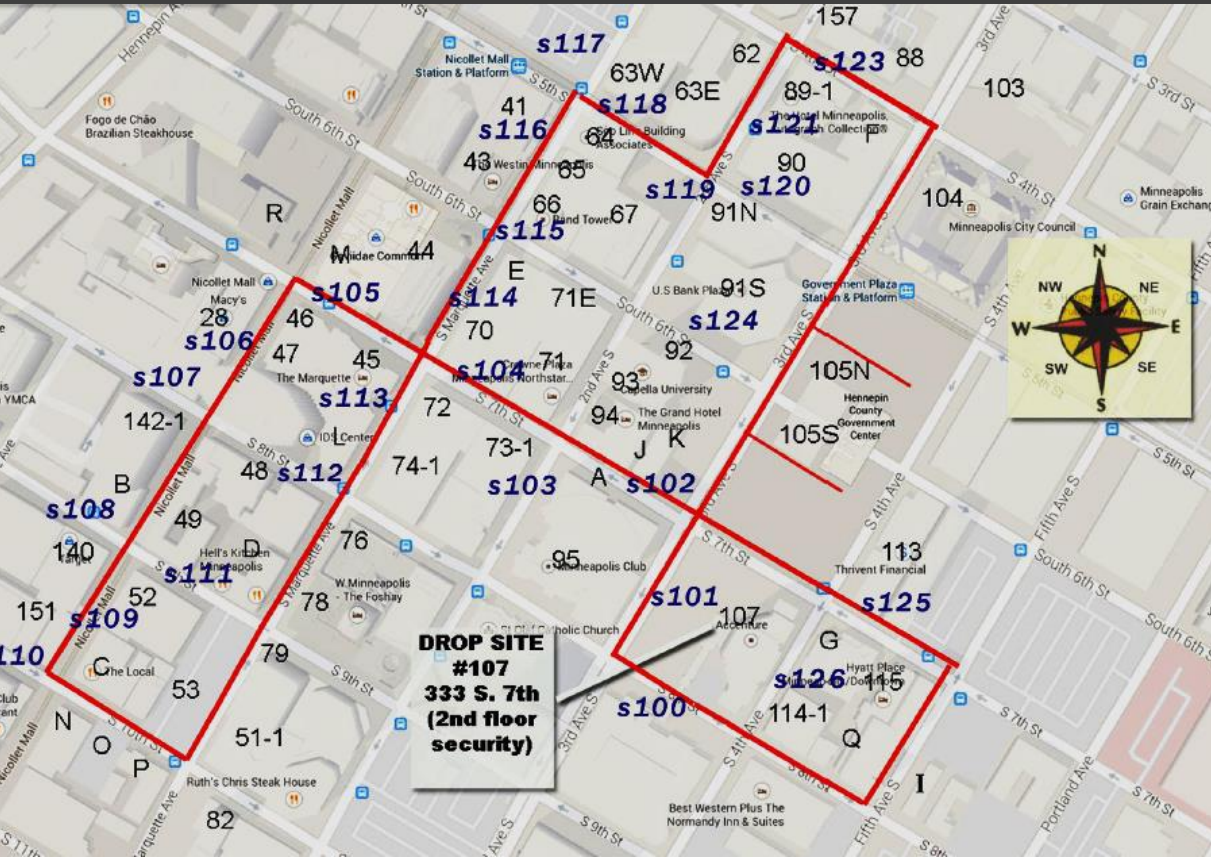
4 Kahle et al, 2016

5 Ocampo-Peñuela et al, 2016

6 Zink and Eckles, 2010

Image: National Audubon Society: Migration and Important Bird Areas

Downtown Minneapolis



Downtown St. Paul





2016 January

ten years of data

n = 4,765

20 < 4,765

Image: Stendig calendar, The Financial Times Limited 2017

**Learning
by doing**
analyze the data

Image: Francois Portmann, via Audubon





Image by Natalia Ocampo-Penuela, via ABA blog





Explanatory variables

**Explanatory
variables**

measure

theory

literature

merge

application

**Explanatory
variables**

measure

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BirdSafe datasheet

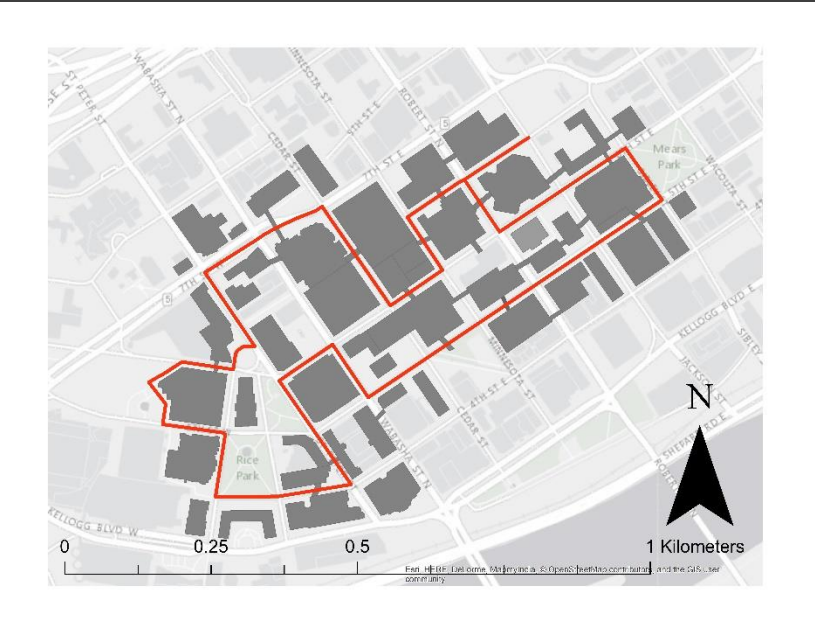


digitize sample units



merge w land cover

Project BirdSafe – St Paul Route Map Updated: March 2015



A photograph of two male runners on a red running track. They are both wearing white t-shirts and blue shorts. The runner on the left is seen from the back, reaching out with his right hand. The runner on the right is seen from the side, reaching out with his left hand to receive a baton. A dark grey arrow-shaped graphic with the word "merge" in white lowercase letters is positioned above the baton. The background consists of green grass, trees, and a brick building under a clear sky.

merge

Image: U.S. Air Force photo/Airman 1st Class Benjamin Gonsier

A close-up photograph of a person's hand wearing a pink nitrile glove, gently holding a small, vibrant yellow bird. The bird has a bright yellow head and chest, with darker greenish-yellow feathers on its wings and back. The background is a blurred city street at dusk or night, with a building featuring a large sign that reads "NEW RISEN" in white letters. The scene is lit with the warm glow of city lights and the cool tones of twilight.

**Learning
by doing**
engage the public

Image: Francois Portmann, via Audubon



Image: *Impact* by artist Miranda Brandon



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Re-Cap

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