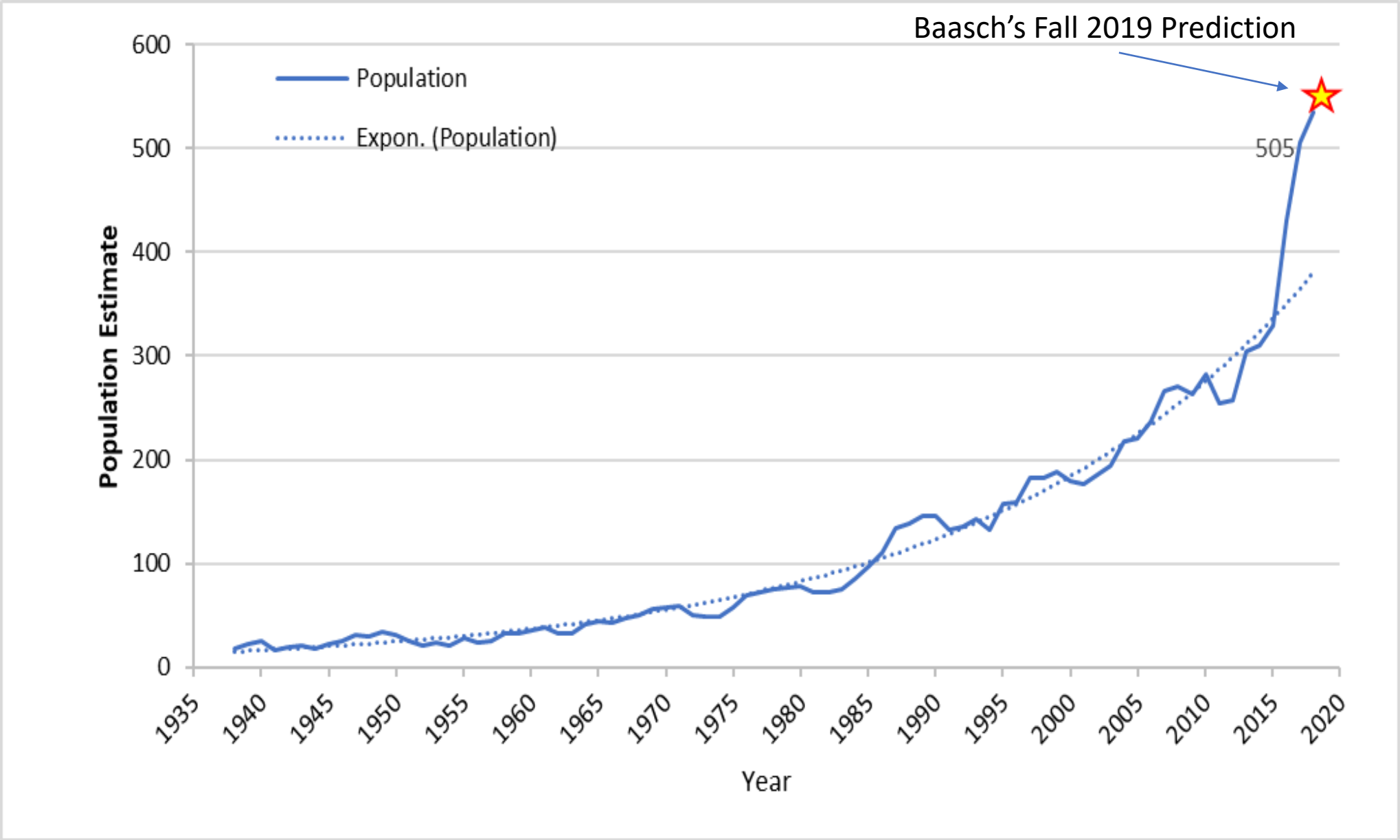
2019 Target Species Updates

Mallory Jaymes, Kari Mohlman, Kaley Keldsen
Wildlife Biologists

2019 Whooping Crane Update

Mallory Jaymes
Biologist

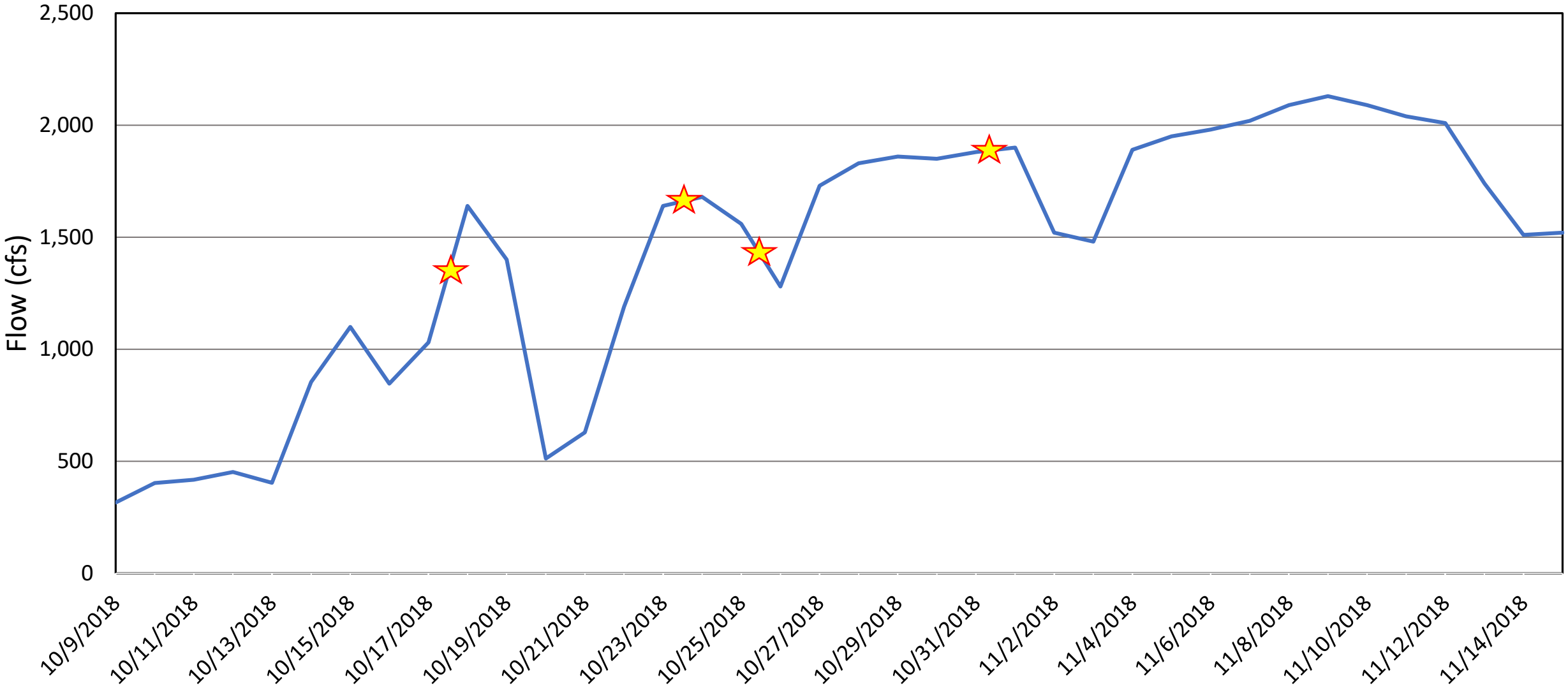

Baasch's Fall 2019 Prediction
Population
Expon. (Population)
505
Population Estimate
600
500
400
300
200
100
0
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year

General Stats- Fall 2018

- Unique Cranes
  - 21
- Crane use Days
  - 90
- Unobstructed Channel Width
  - Range 283 - 1,152 feet
  - Average 742 feet

Fall 2018

Flow at Grand Island (Line) VS Whooping Crane Use (Stars)

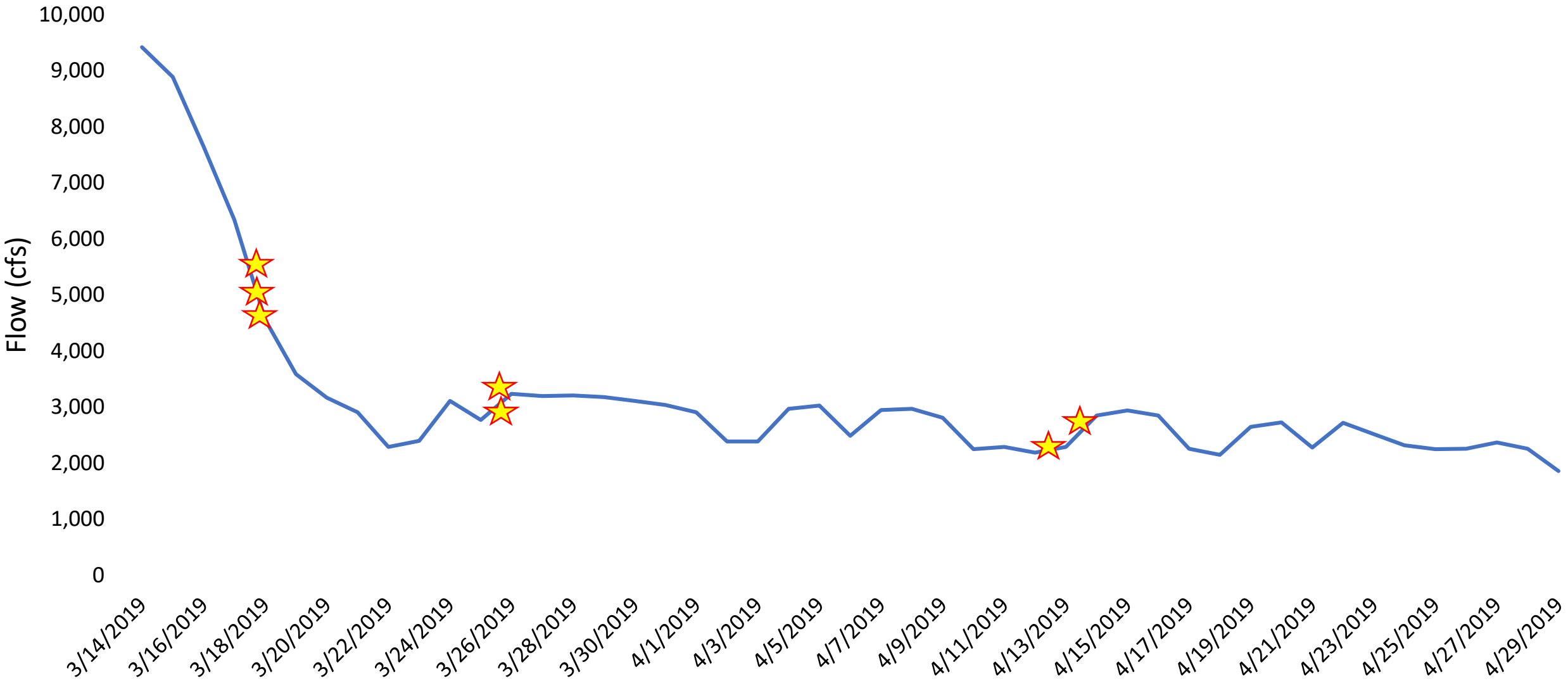


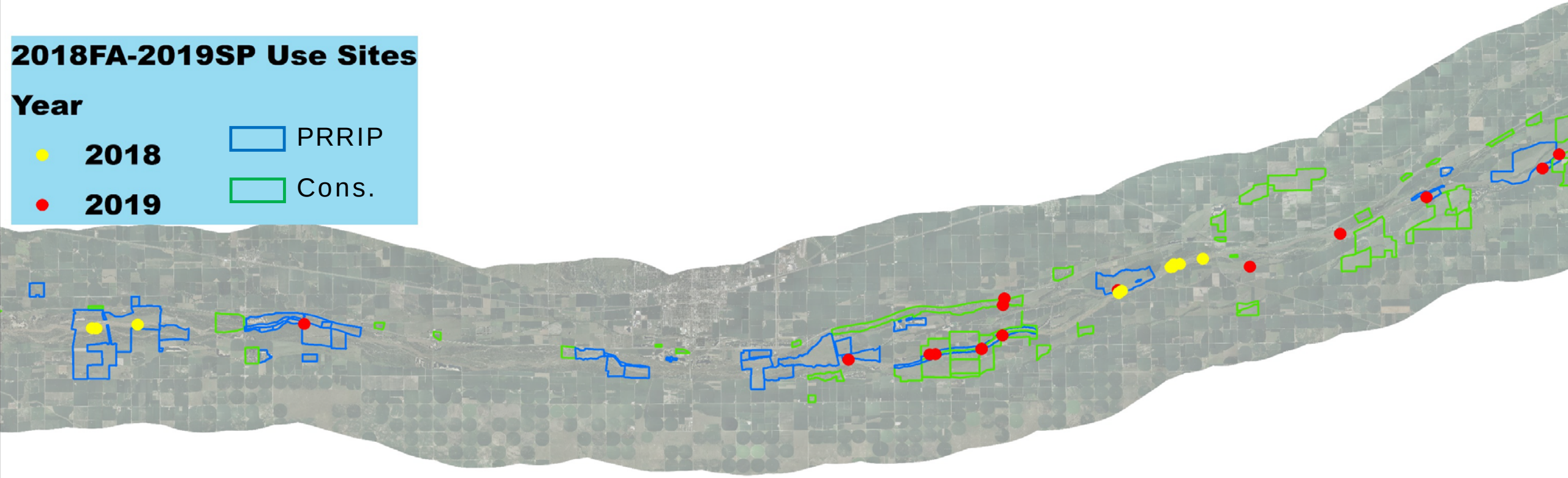
General Stats- Spring 2019

- Unique Cranes
  - 9
- Crane use Days
  - 71
- Unobstructed Channel Width
  - Range 65-1,261 feet
  - Average 699 feet

Spring 2019

Flow at Grand Island (Line) VS Whooping Crane Use (Stars)



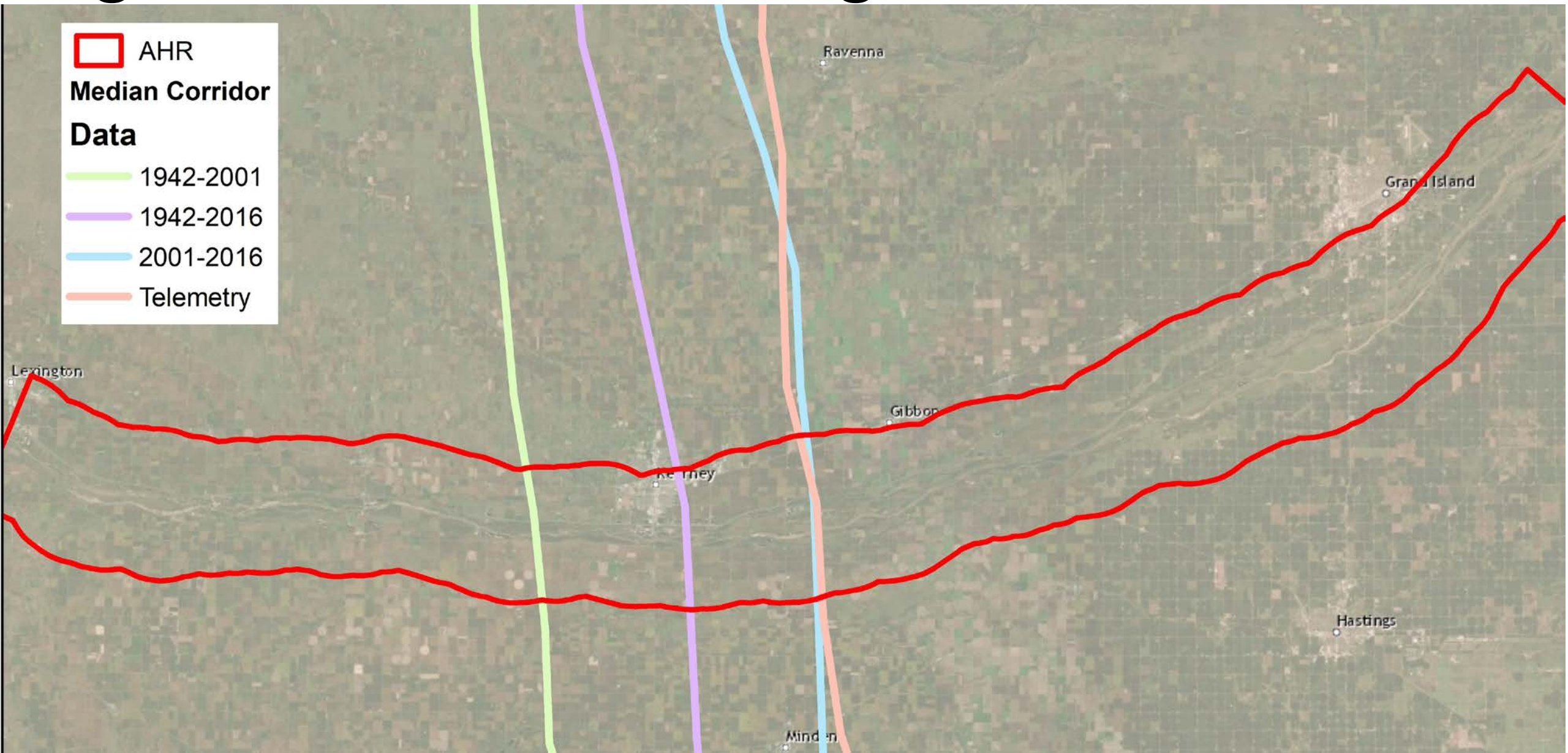


PRRIP Lands – 45% (17/38)

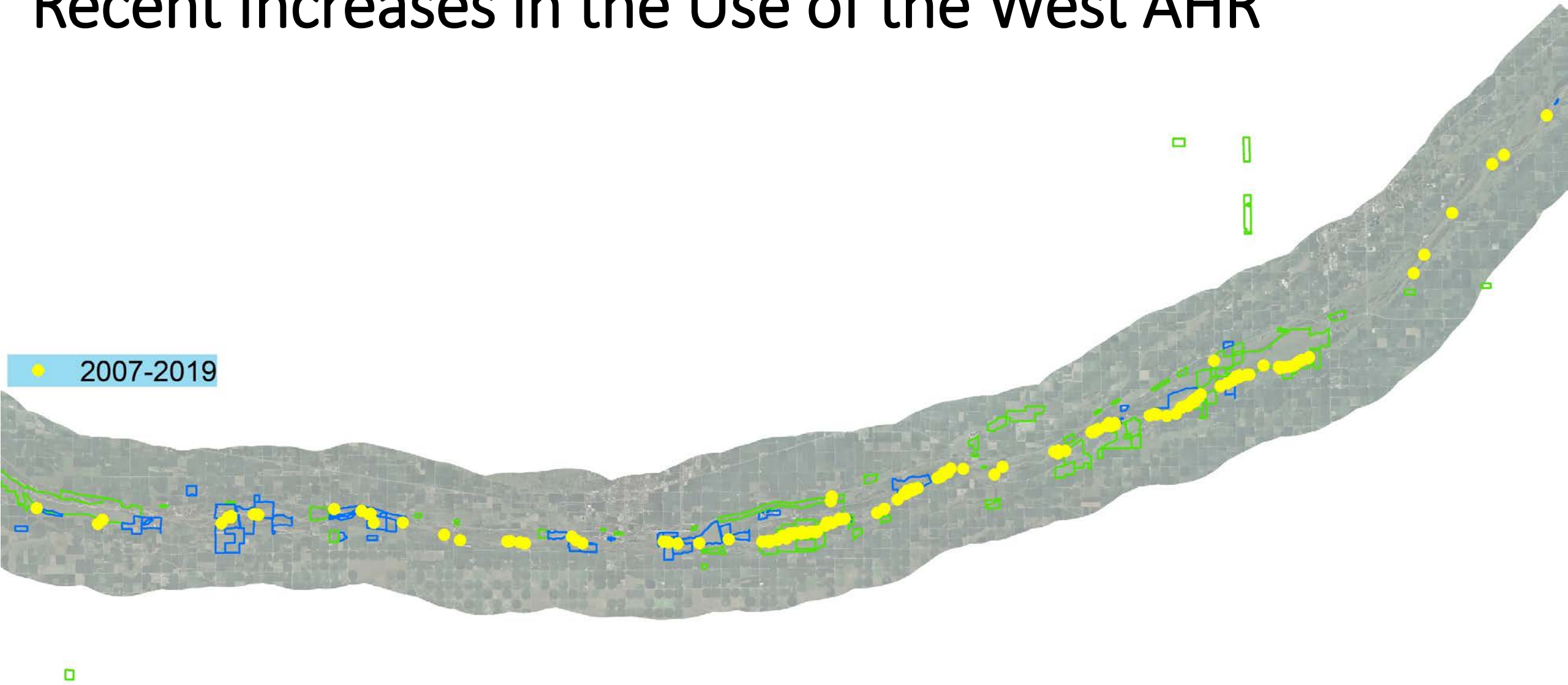
Conservation Lands – 34% (13/38)

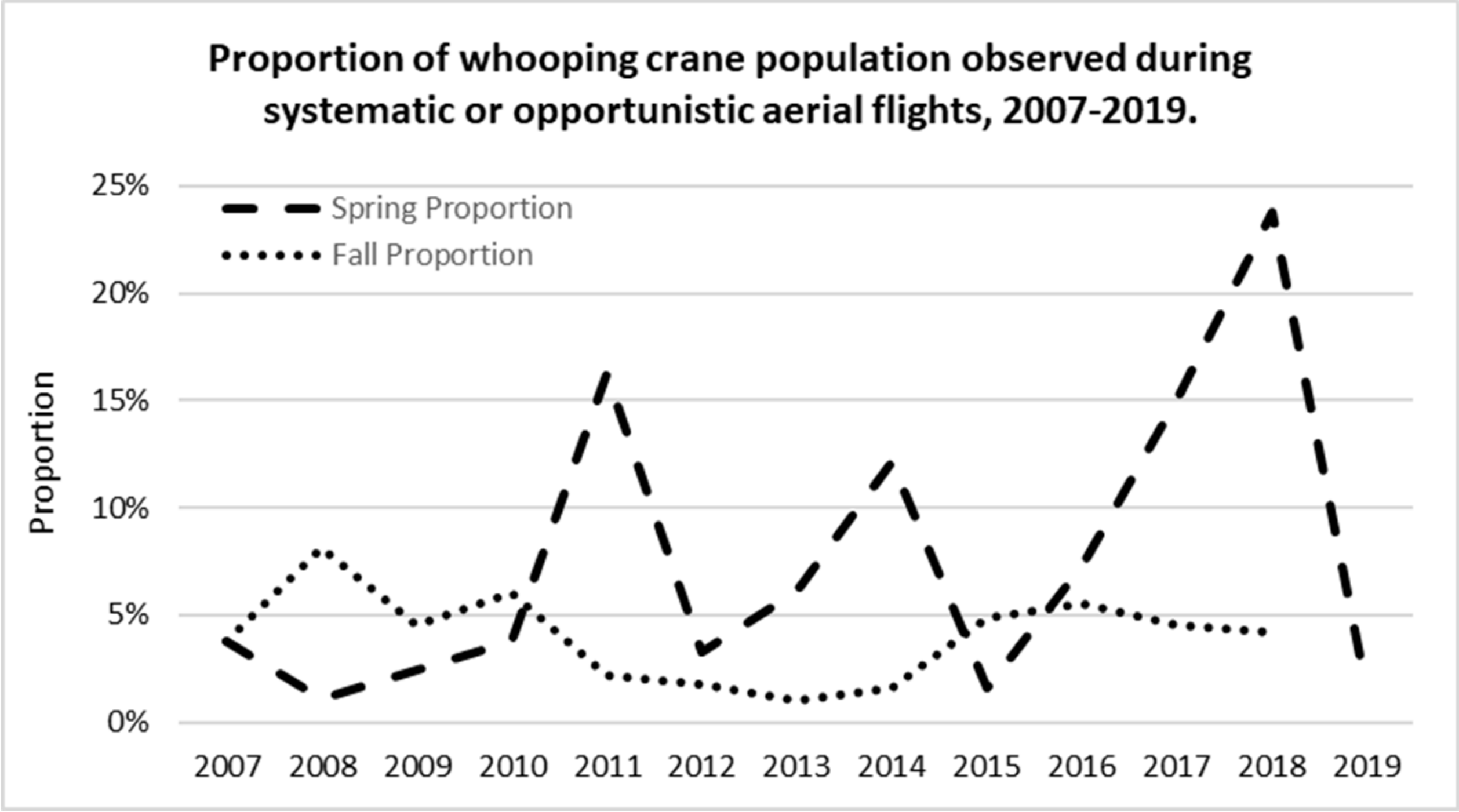
Non-conservation Lands – 21% (8/38)

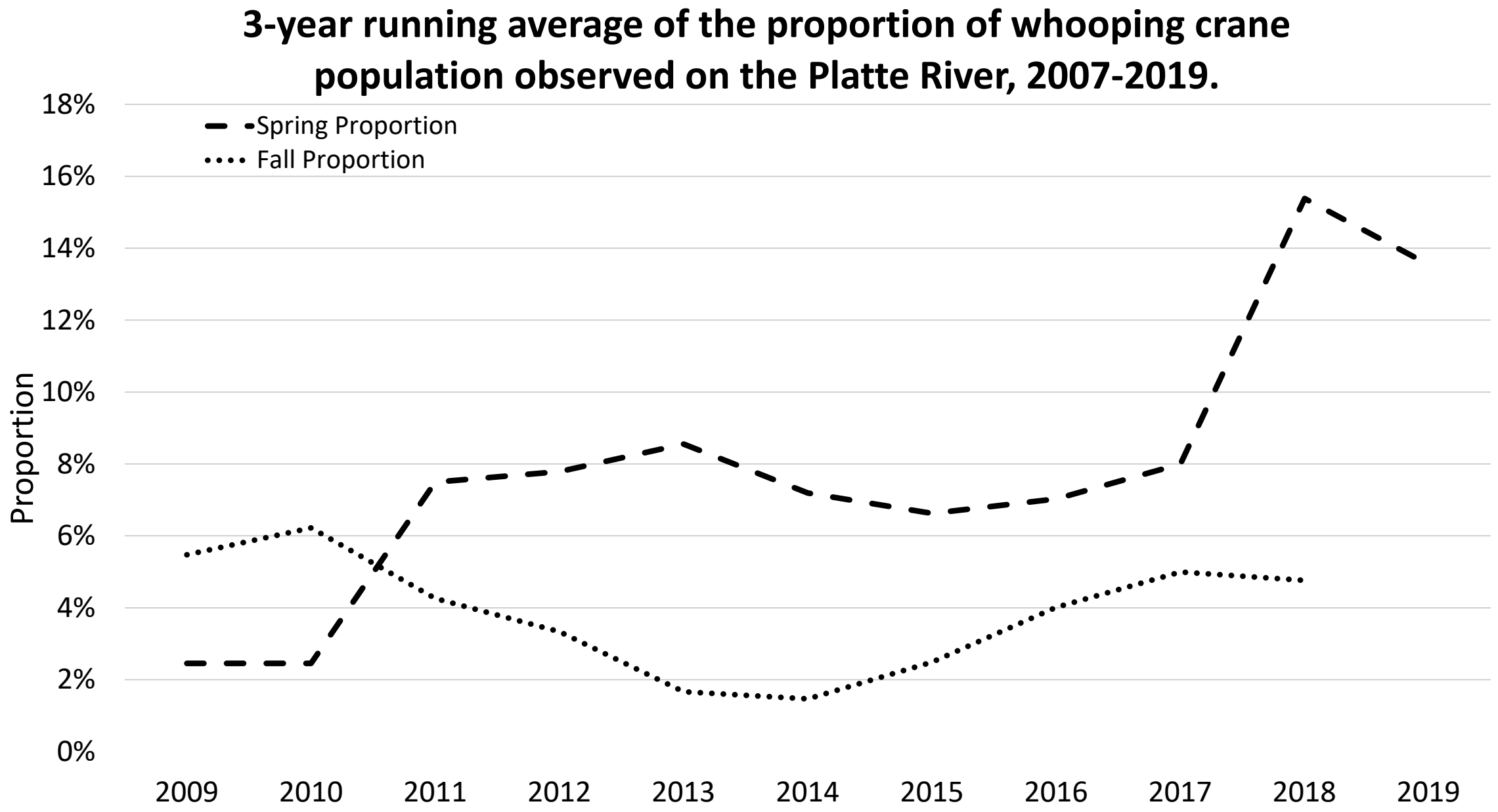
Migration Corridor Trending East



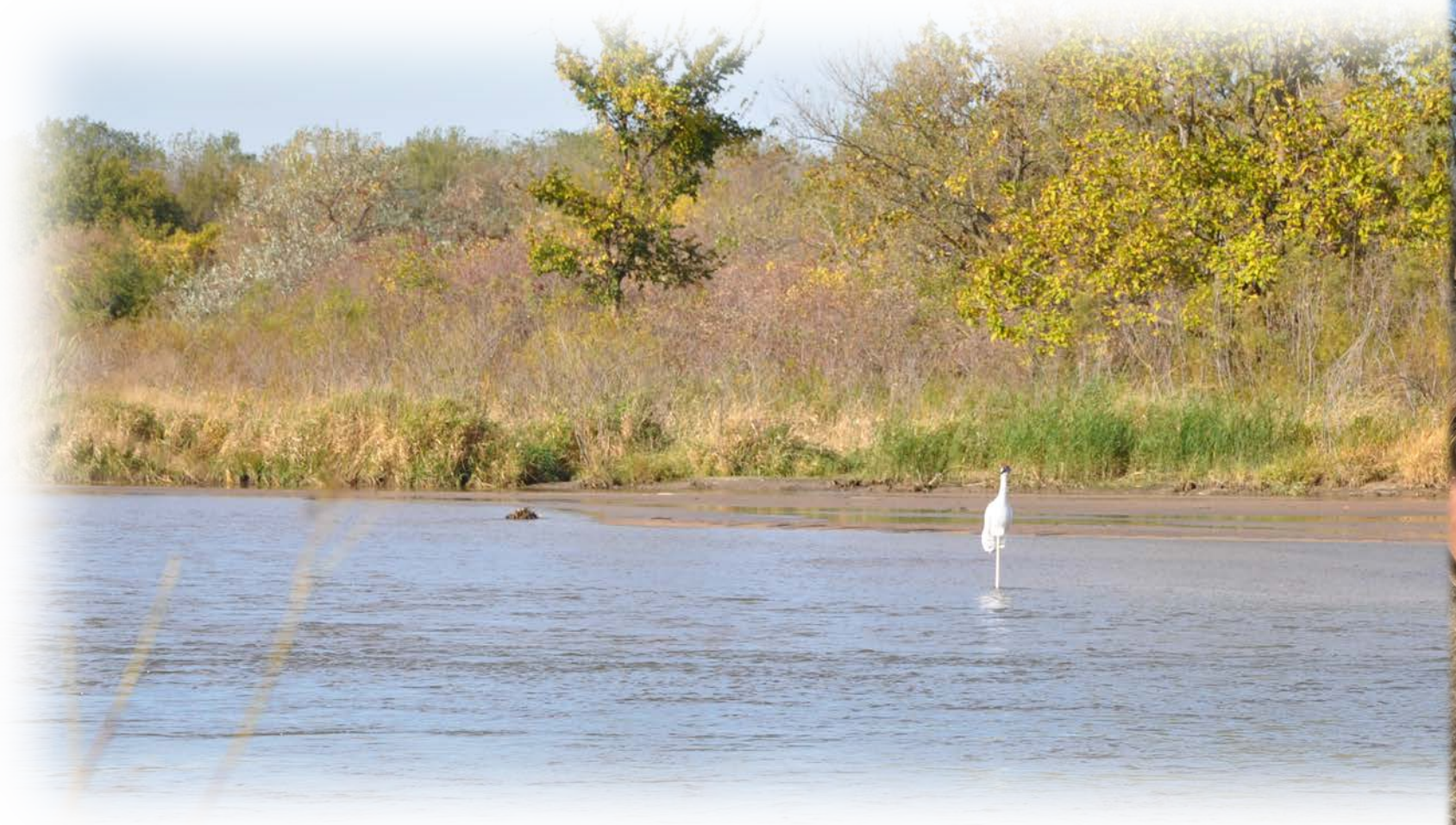
Recent Increases in the Use of the West AHR



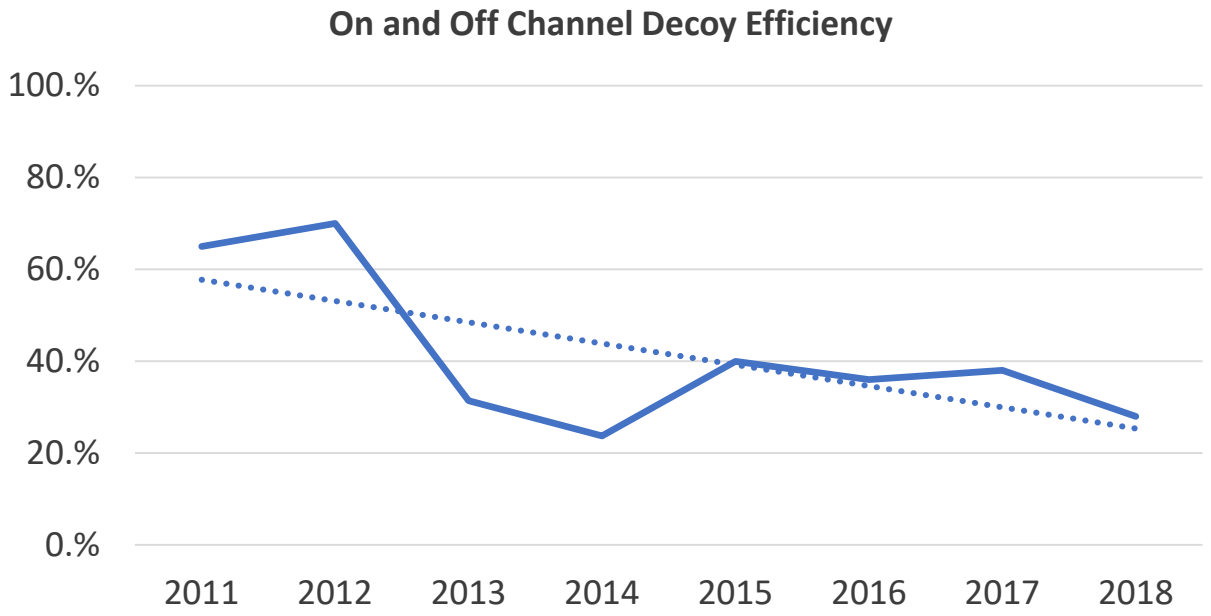

Proportion of whooping crane population observed during systematic or opportunistic aerial flights, 2007-2019.
Spring Proportion
Fall Proportion
Proportion
25%
20%
15%
10%
5%
0%
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

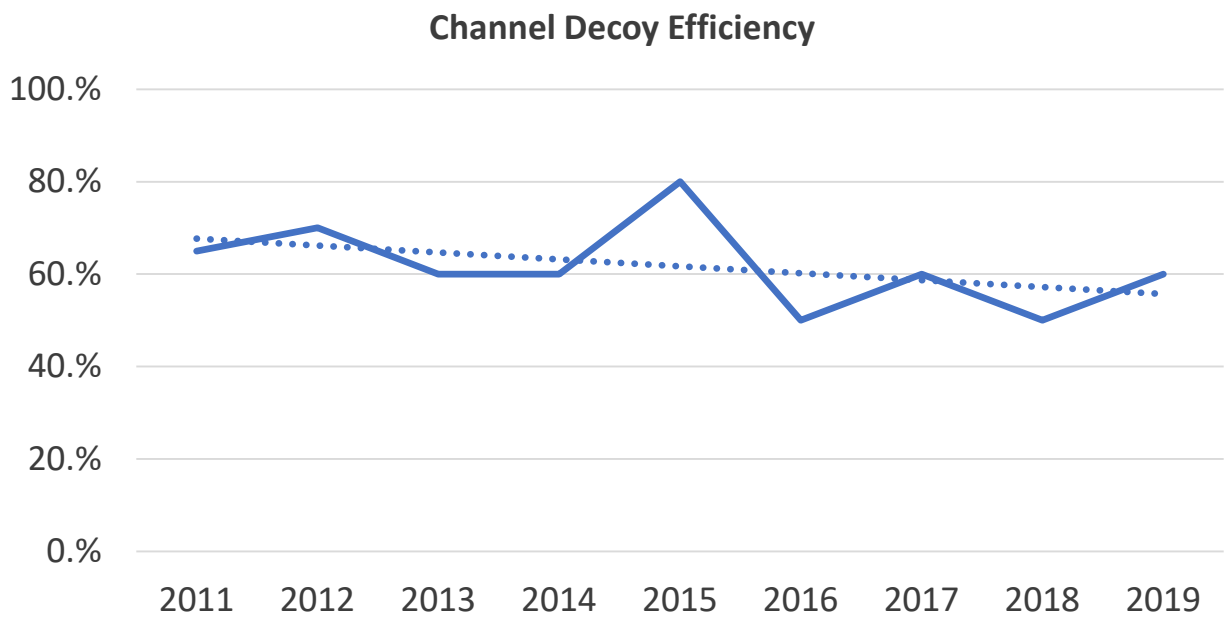

3-year running average of the proportion of whooping crane population observed on the Platte River, 2007-2019.
Spring Proportion
Fall Proportion
Proportion
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

Jensen
©2011

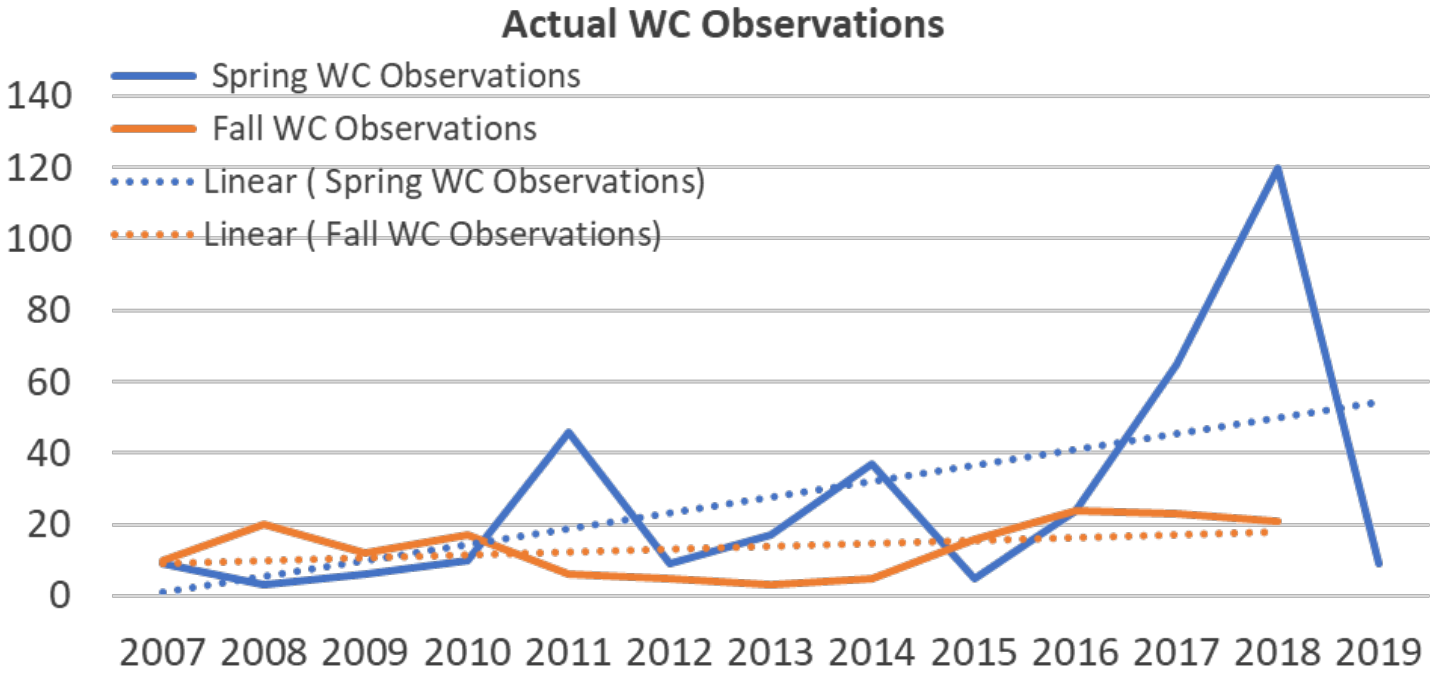


Decoy Spotting Efficiency

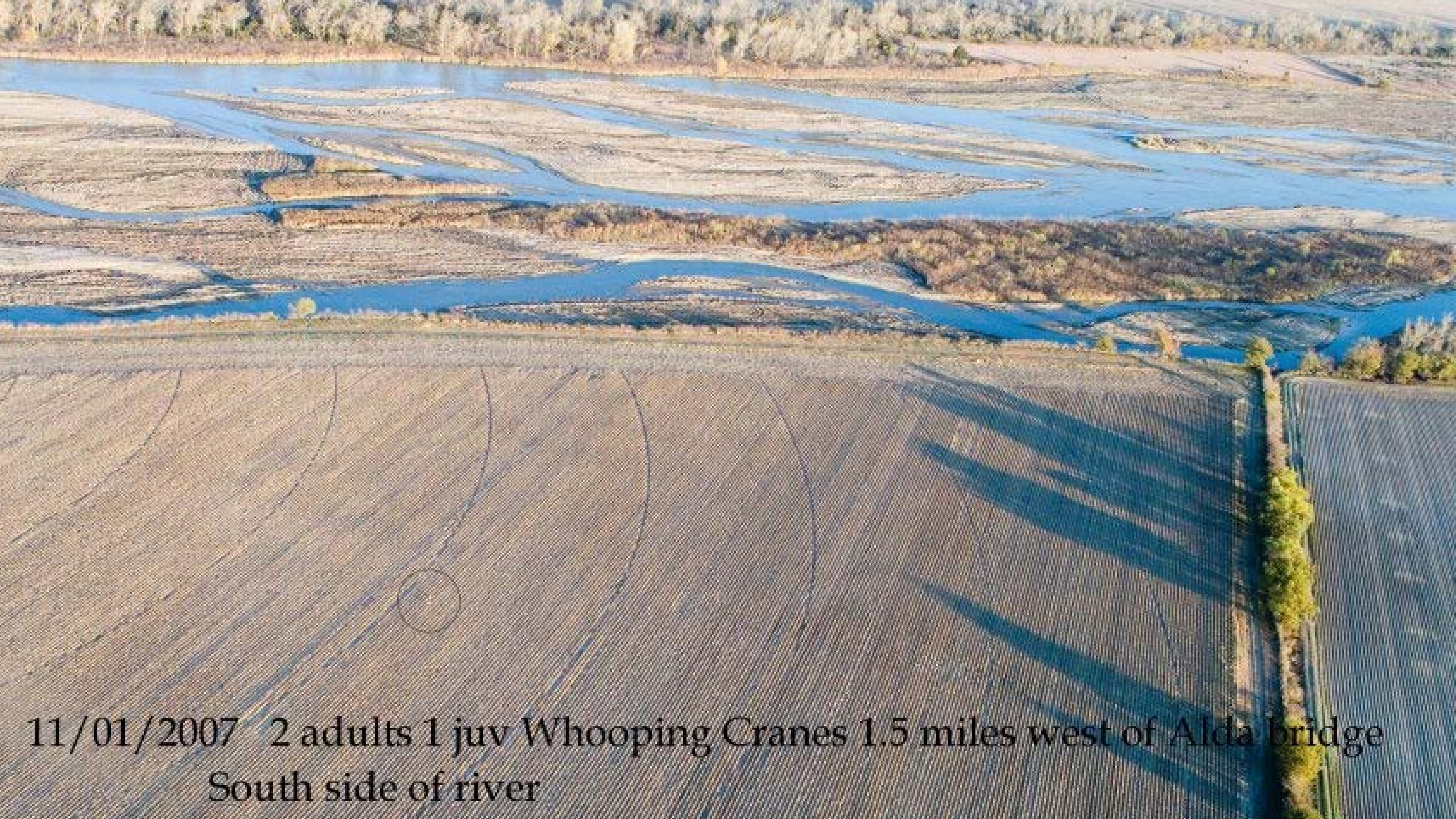




Actual Whooping Crane Spotting Efficiency



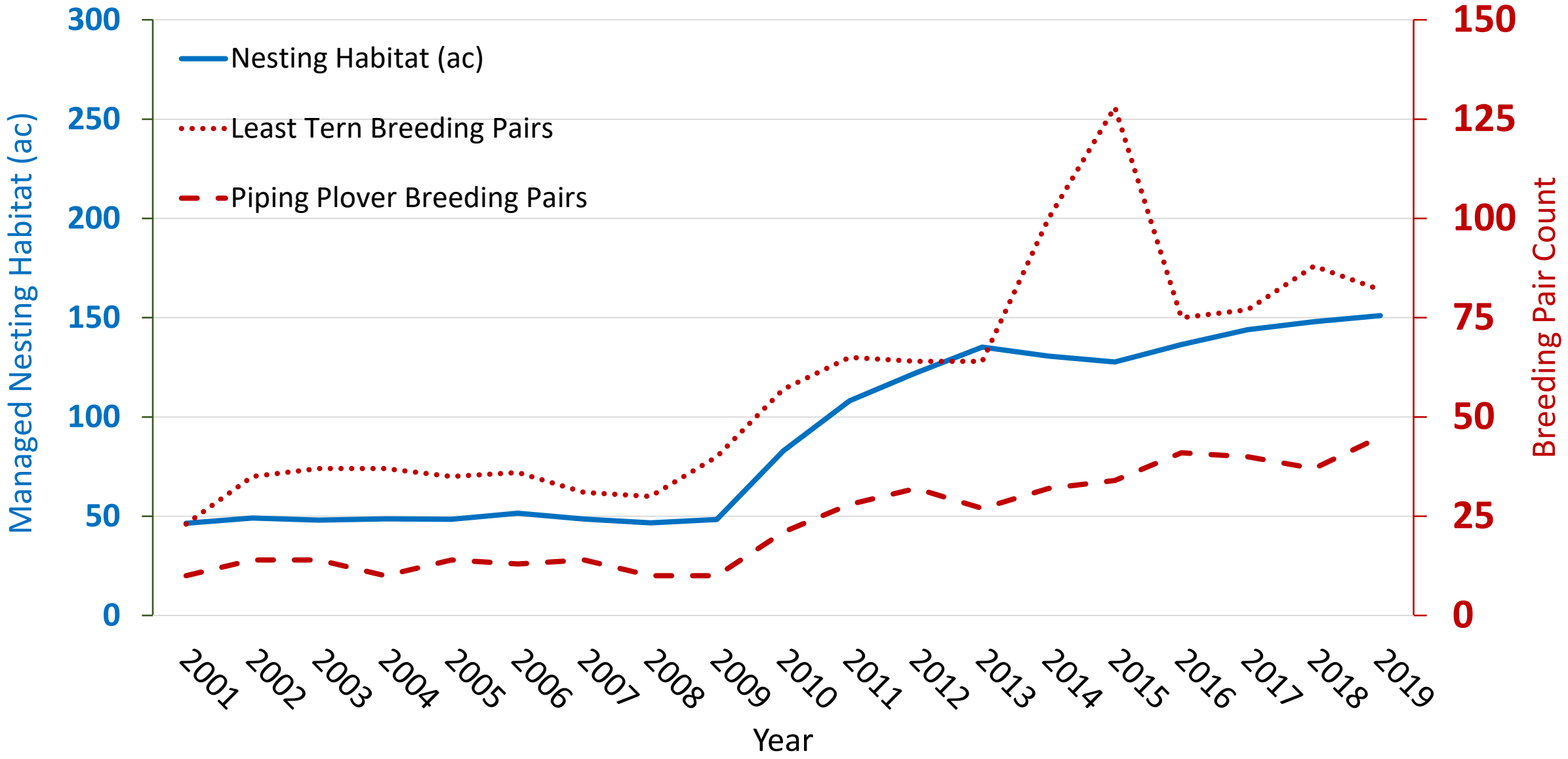
Proportion of USFWS Reported Cranes Detected by PRRIP	**91.0%**
Proportion of USFWS Reported Groups Detected by PRRIP	**98.1%**

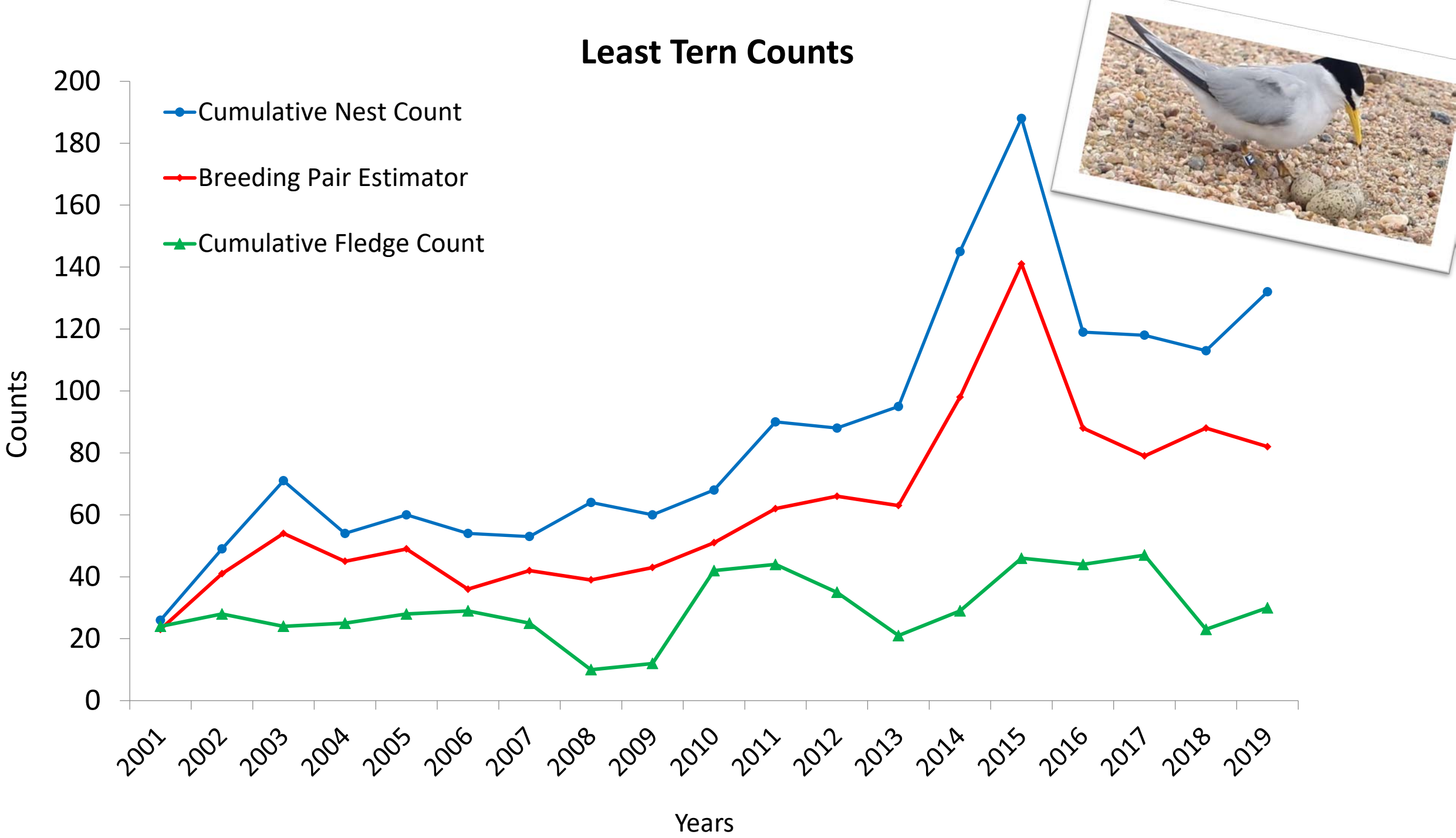

11/01/2007 2 adults 1 juv Whooping Cranes 1.5 miles west of Alda bridge
South side of river

2019 Least Tern and Piping Plover Update

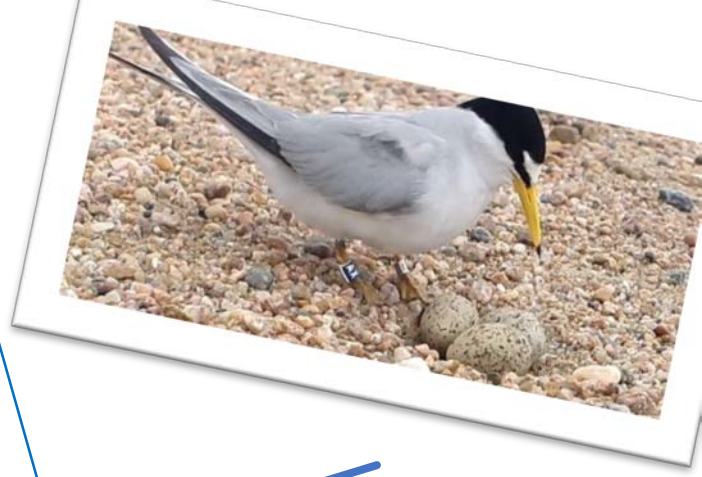
Kari Mohlman
Biologist

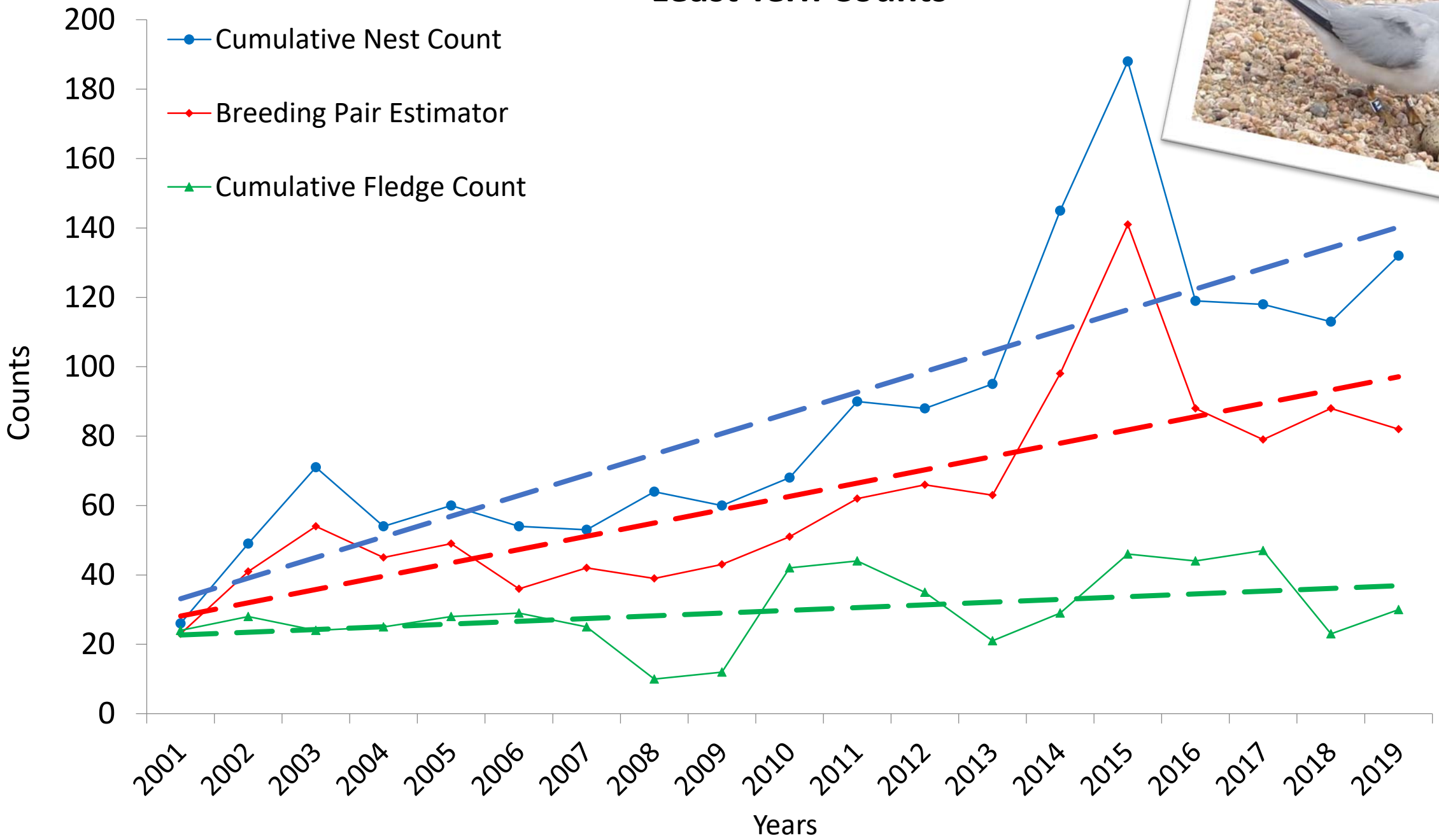
Interior Least Tern and Piping Plover Breeding Pairs Versus Nesting Habitat Availability, 2001-2019



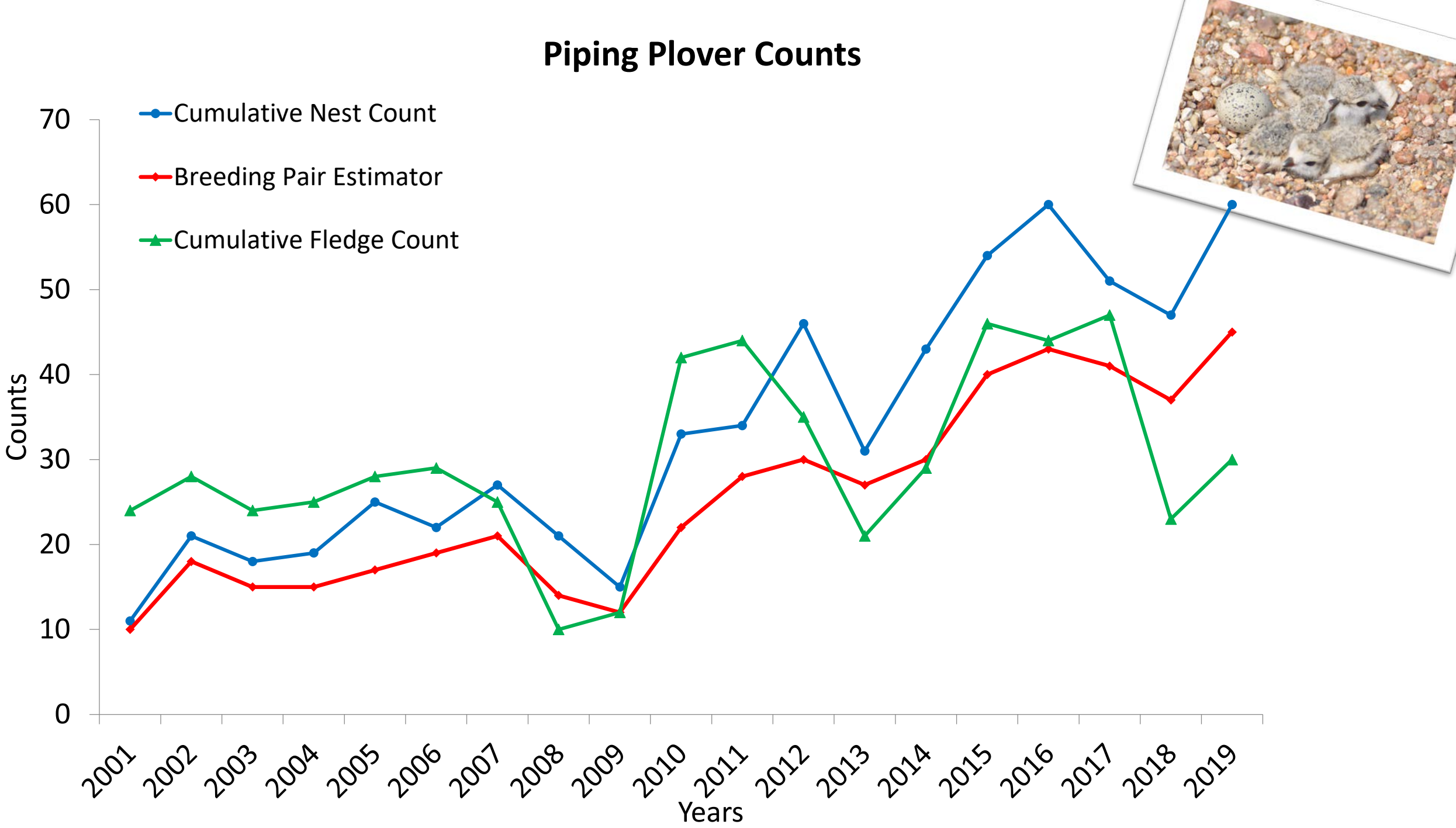

Least Tern Counts
Cumulative Nest Count
Breeding Pair Estimator
Cumulative Fledge Count
Counts
0
20
40
60
80
100
120
140
160
180
200
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Years

Least Tern Counts

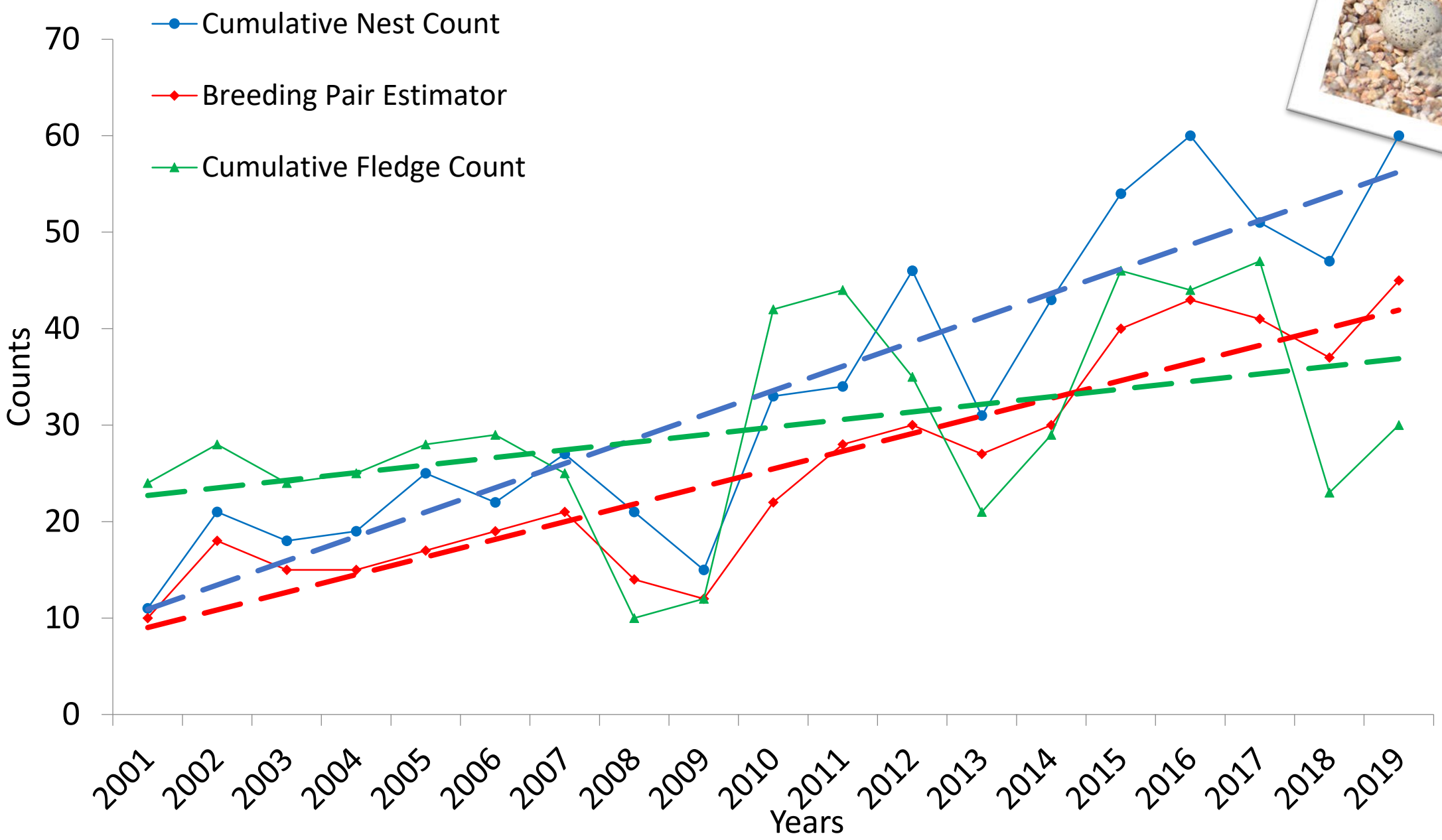


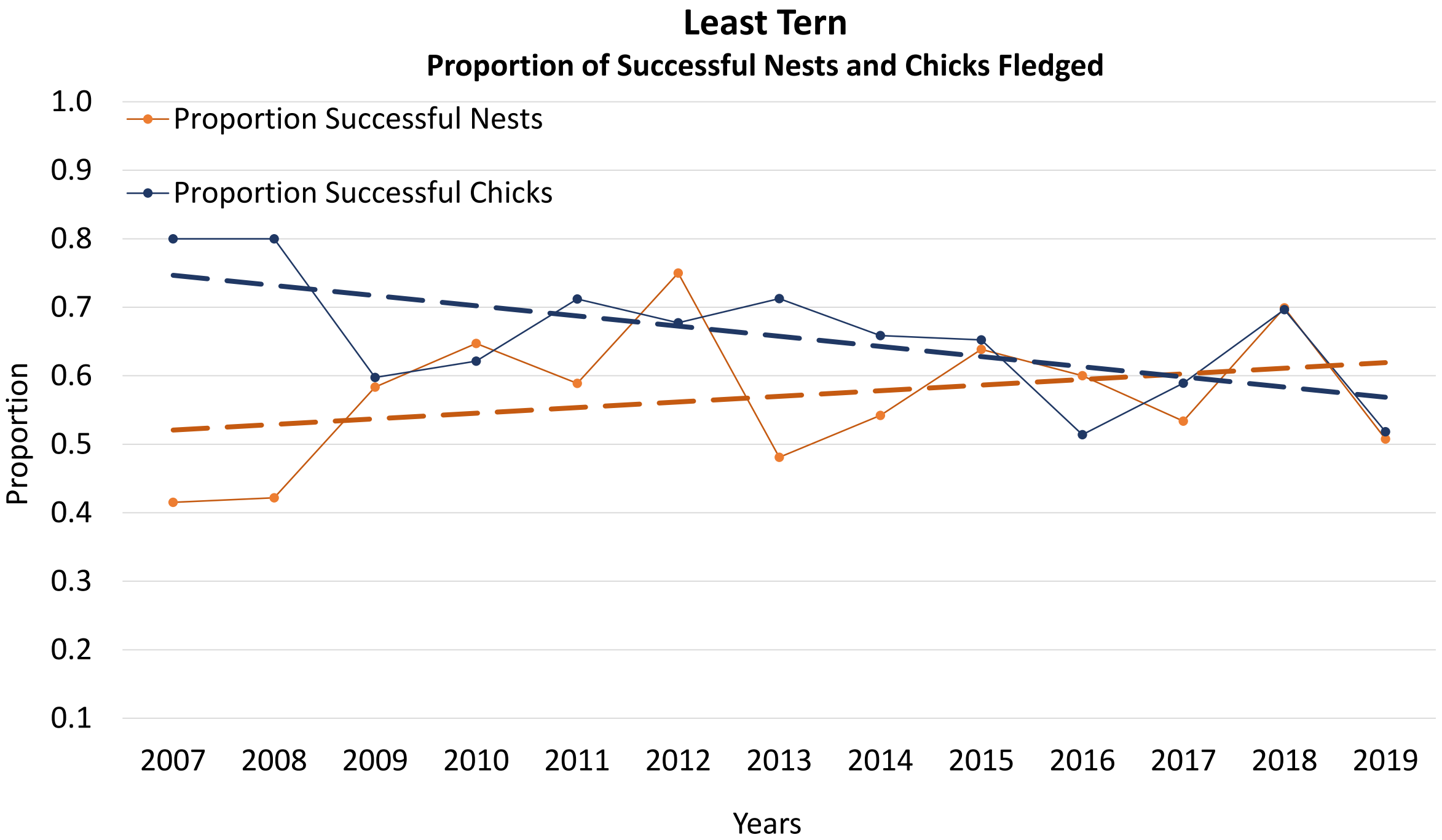


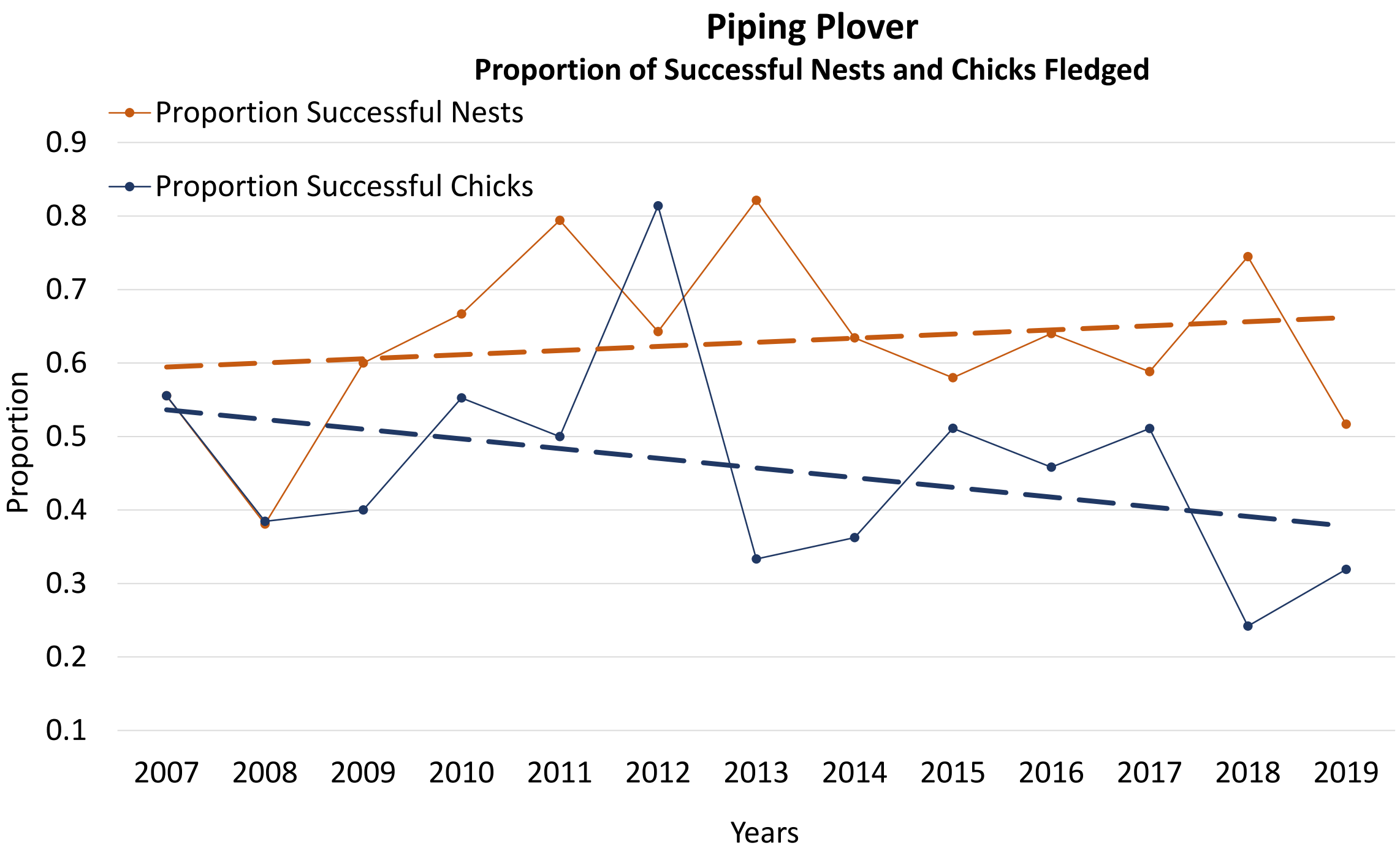
Piping Plover Counts



Piping Plover Counts

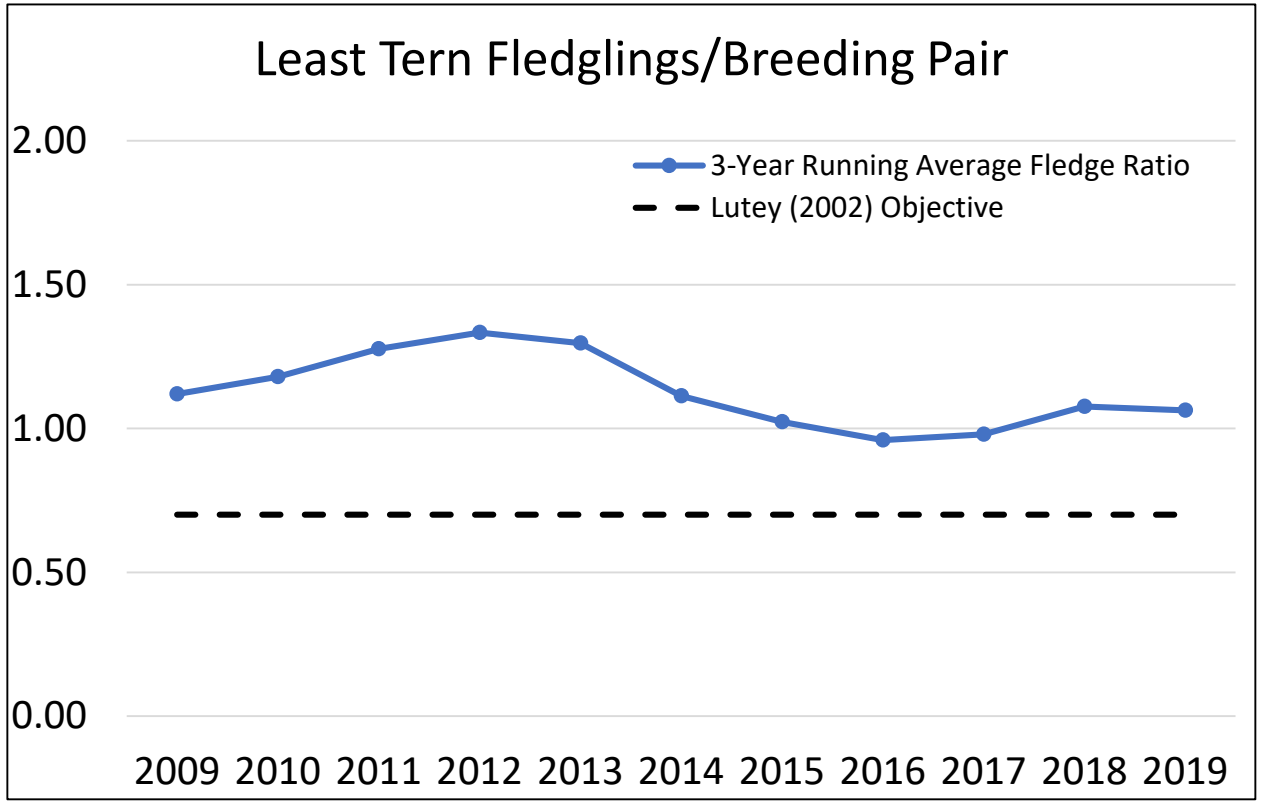


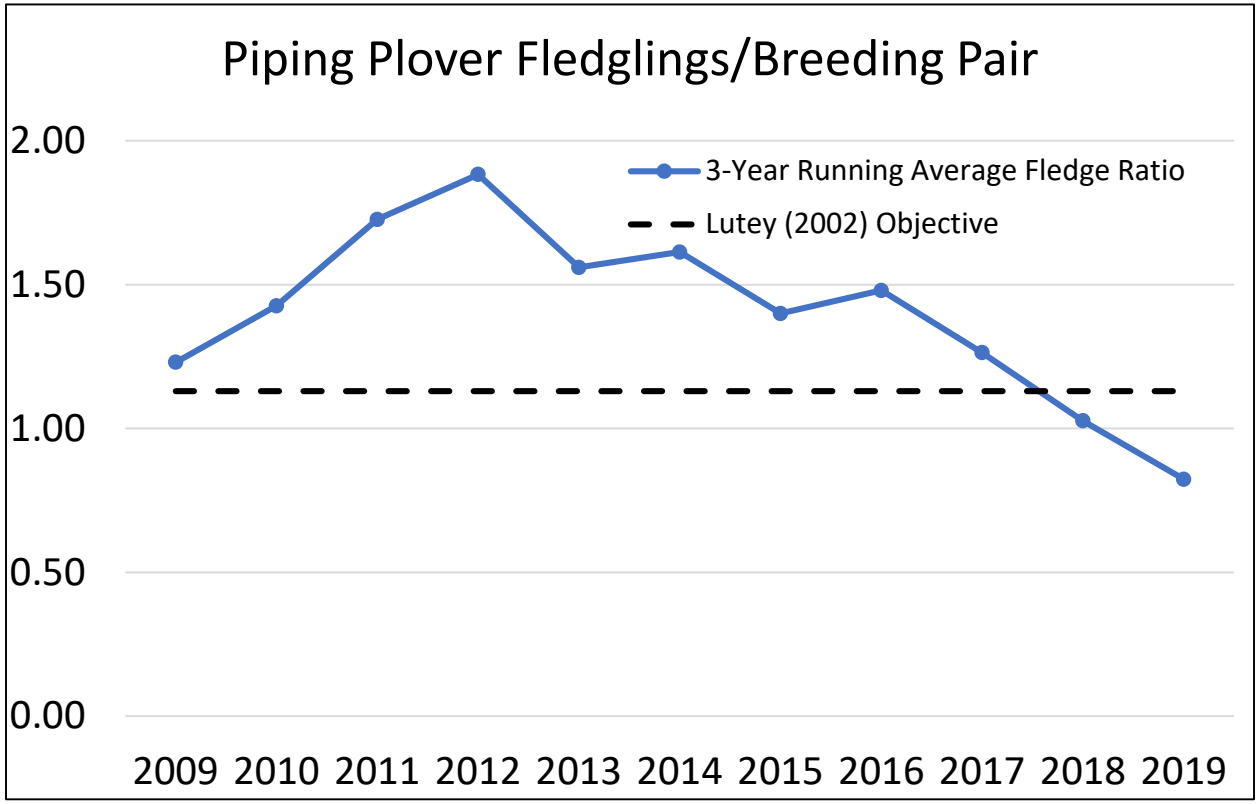

Least Tern
Proportion of Successful Nests and Chicks Fledged
Proportion Successful Nests
Proportion Successful Chicks
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Proportion
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Years


Piping Plover
Proportion of Successful Nests and Chicks Fledged
Proportion Successful Nests
Proportion Successful Chicks
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Proportion
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Years

Least Tern and Piping Plover

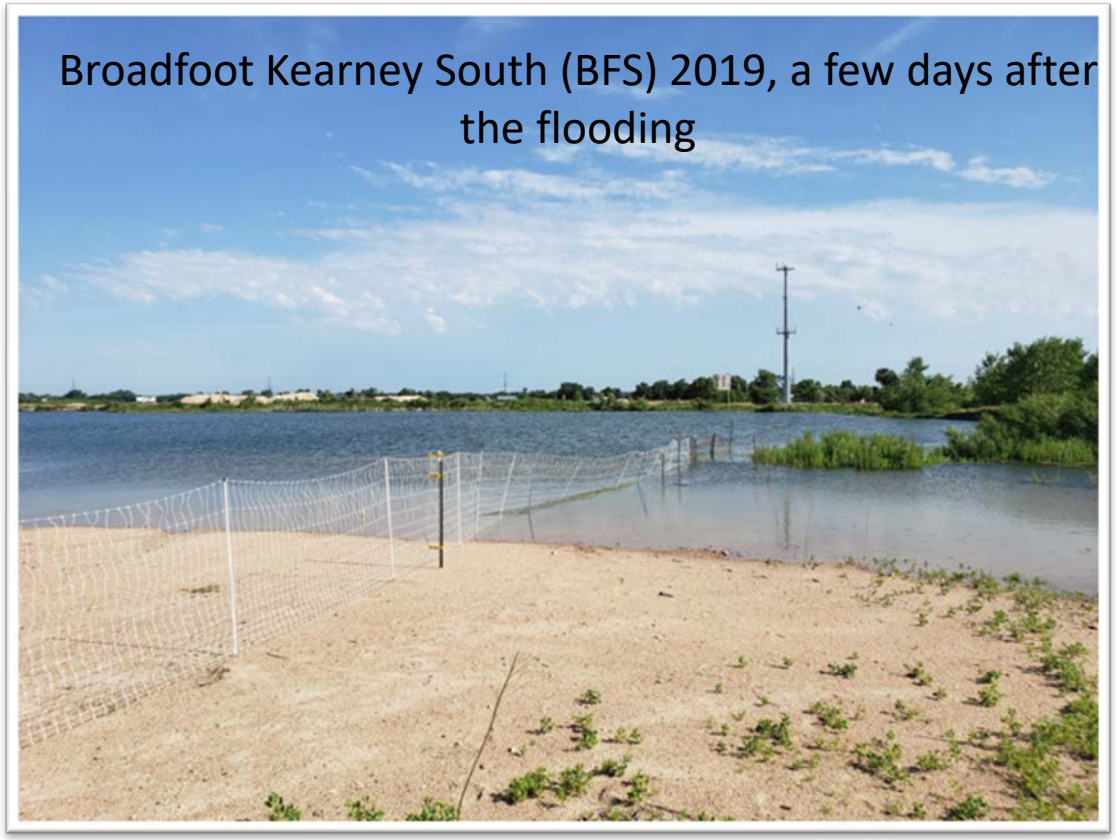
3-Year Running Average Fledge Ratios





Unknowns and Failed Nests

- Total Failed and Unknown for Both LT and PP across all sites:
  - Failed UNK= 42
  - Failed Predated= 11
  - Failed Weather= 5 (hail, heavy rain, cold temperatures)
  - Failed Flooded= 3
  - Unknown= 32
    - Nest disappeared around hatch time (usually between visits)
    - Unable to see or visit nest again or within estimated hatch time



Catastrophic Events

- Leaman
  - Severe Flooding (2015)
  - Hailstorm (2015)

- Kearney Broadfoot South
  - Severe Flooding/Weather (2019)
  - Fox (2017 and 2019)

- Bluehole
  - Predation-coyote and fox (2016,2018, and 2019)
  - Flooding/Severe Weather (2015 and 2019)

2019 Band Resighting Results

Band Resighting Process and Importance

Resighting Results

- Interior Least Tern
  - 45 Adults recorded
  - 64% banded
- Piping Plover
  - 28 Adults recorded
  - 50% banded

C22

Presentation Topics

Predator Management Results

Predator Fence Camera Results 2017-2018

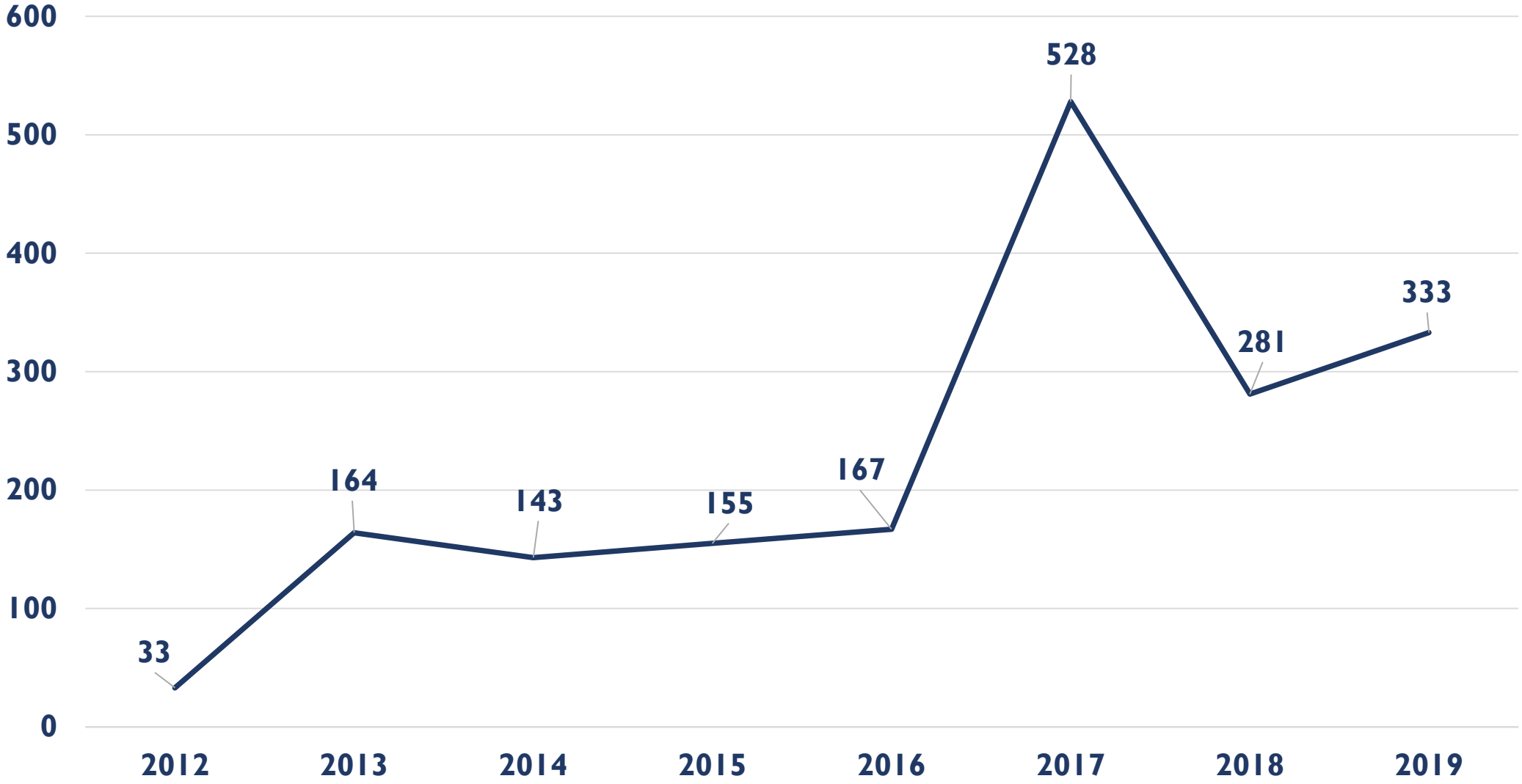
Nest Site Predator Camera Results 2017-2018

Nest Monitoring Camera Results 2019

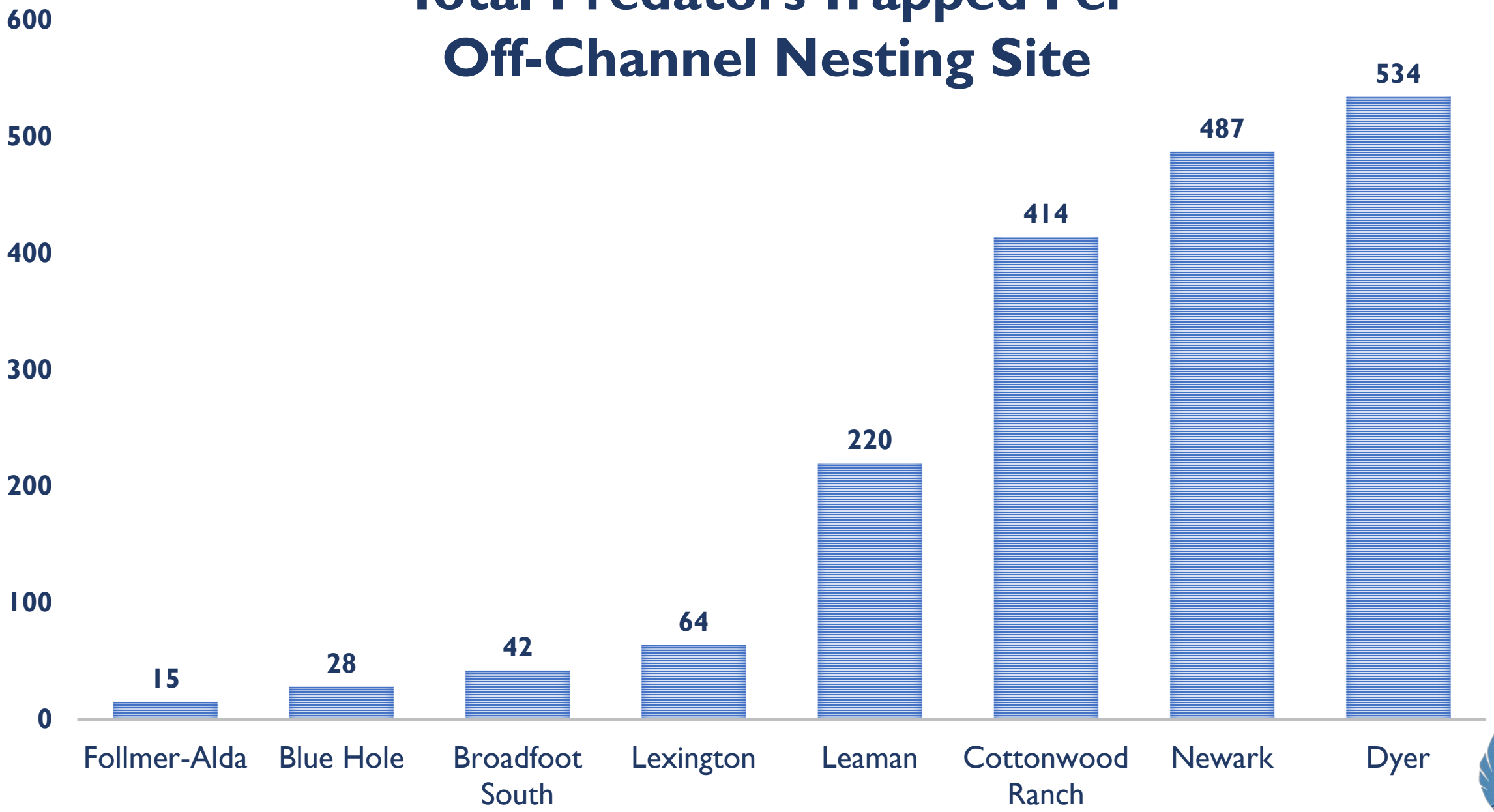
Kaley Keldsen
Wildlife Biologist

Predator Management

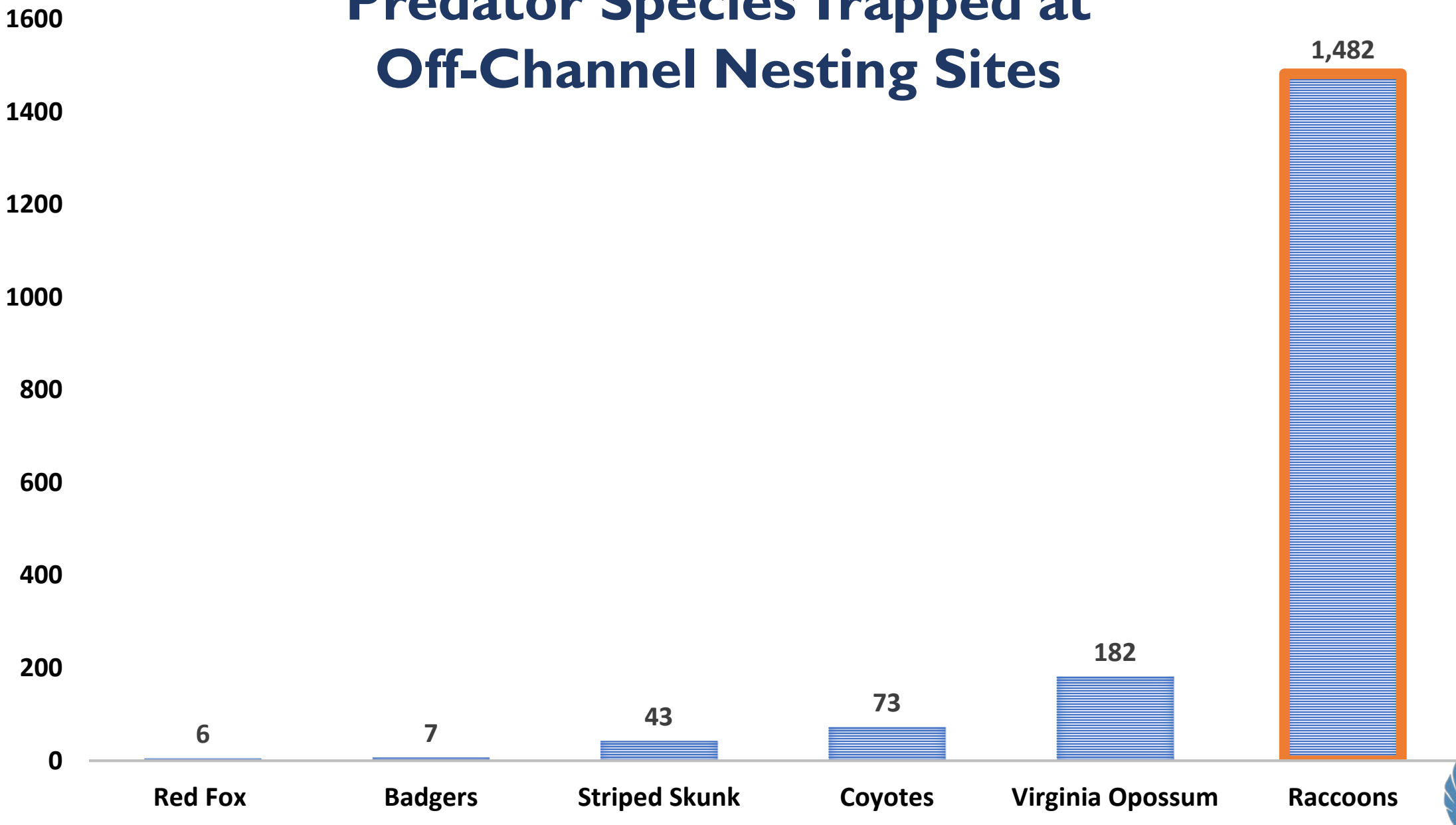
Cumulative Predator Trapping at Off-Channel Nesting Sites



Total Predators Trapped Per Off-Channel Nesting Site

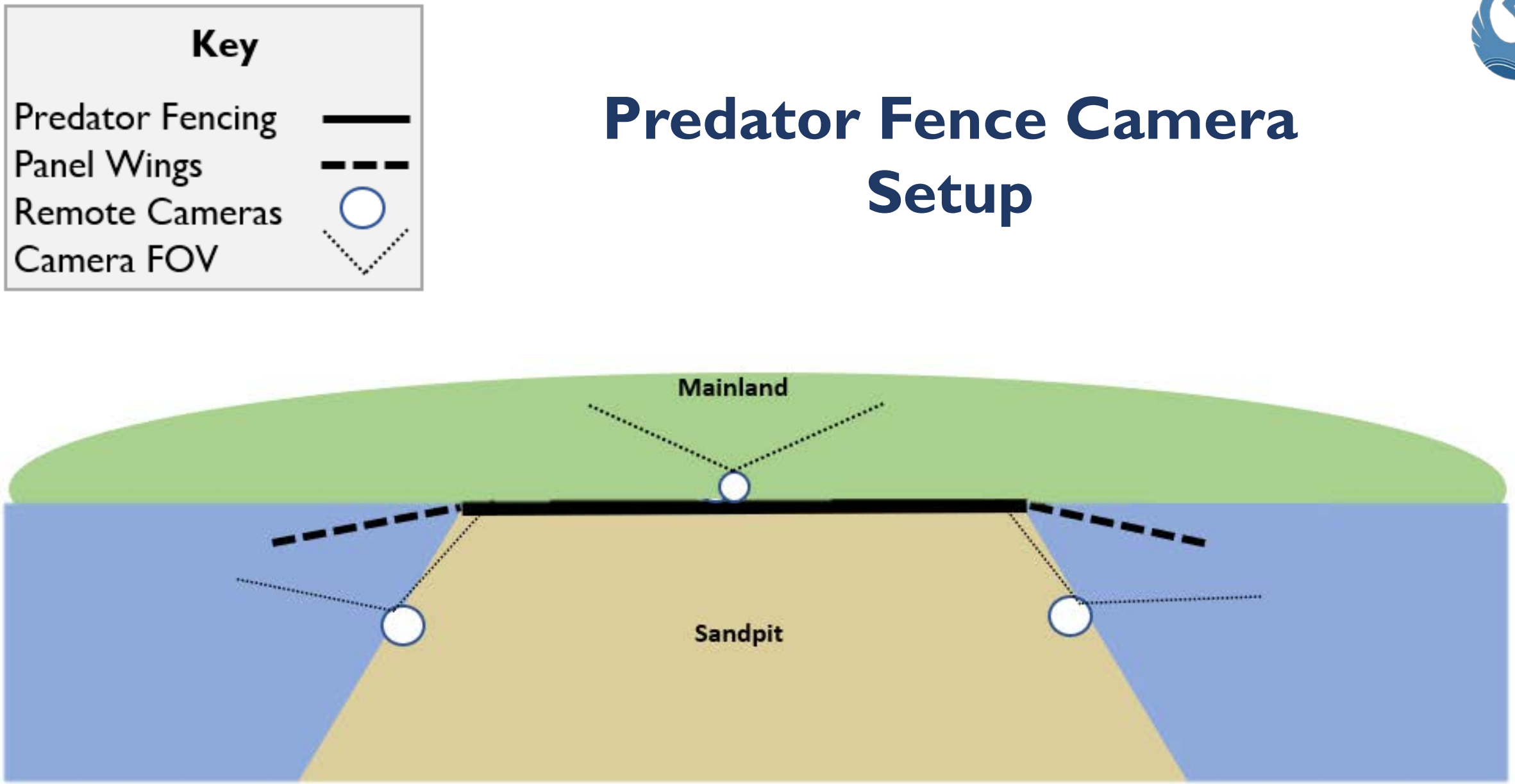


Predator Species Trapped at Off-Channel Nesting Sites

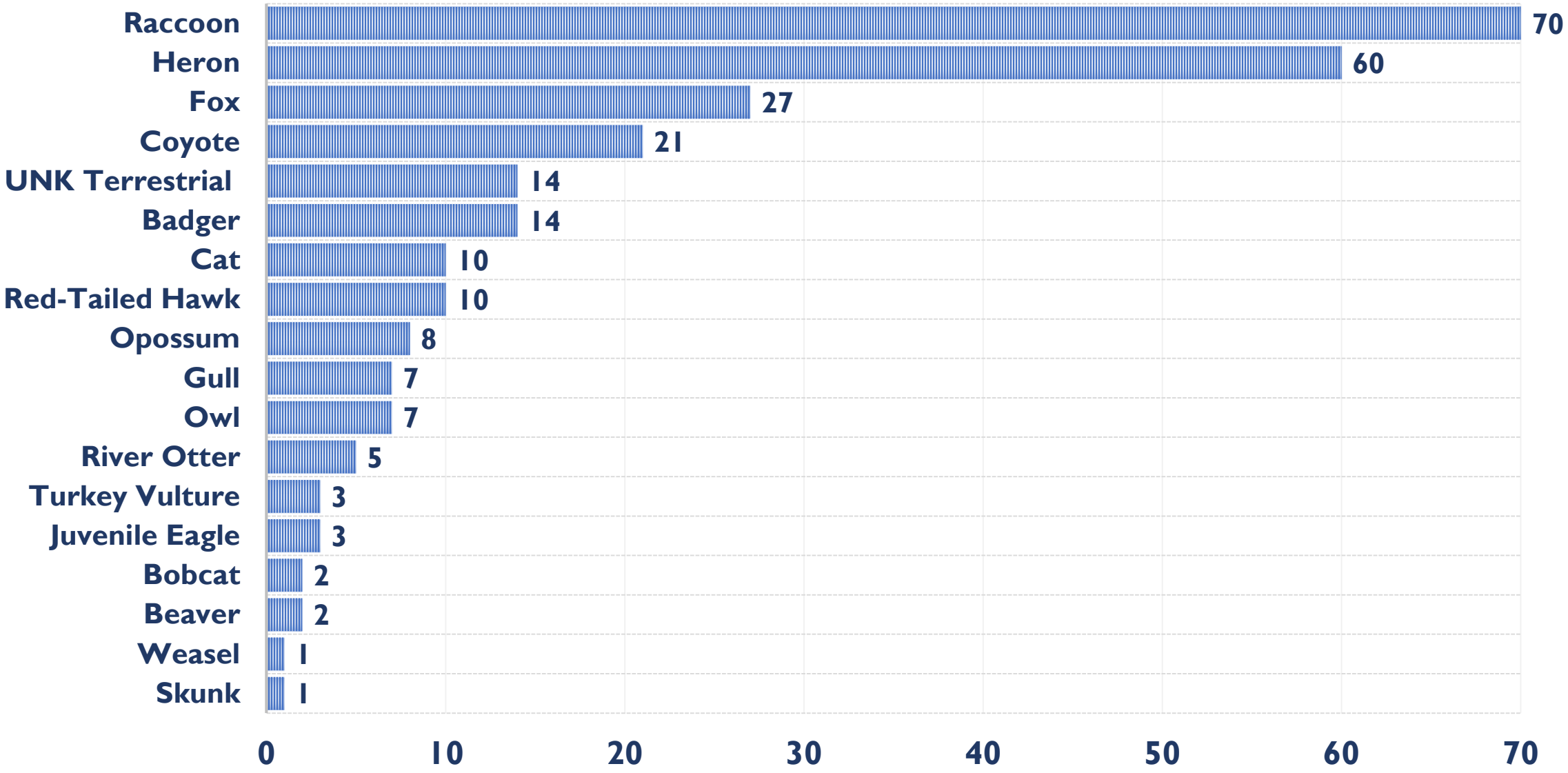


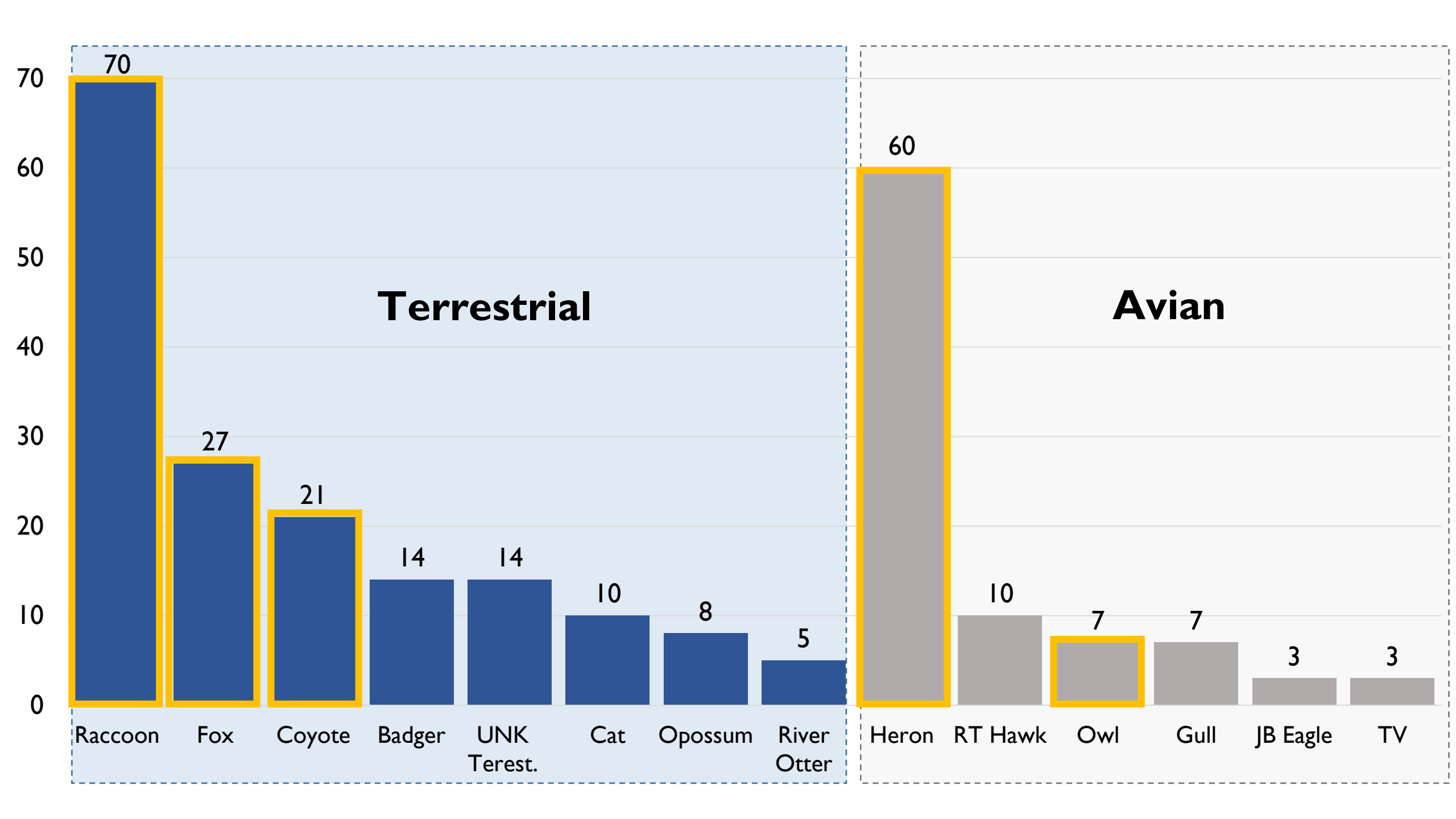
Predator Fence Camera Results 2017-2018

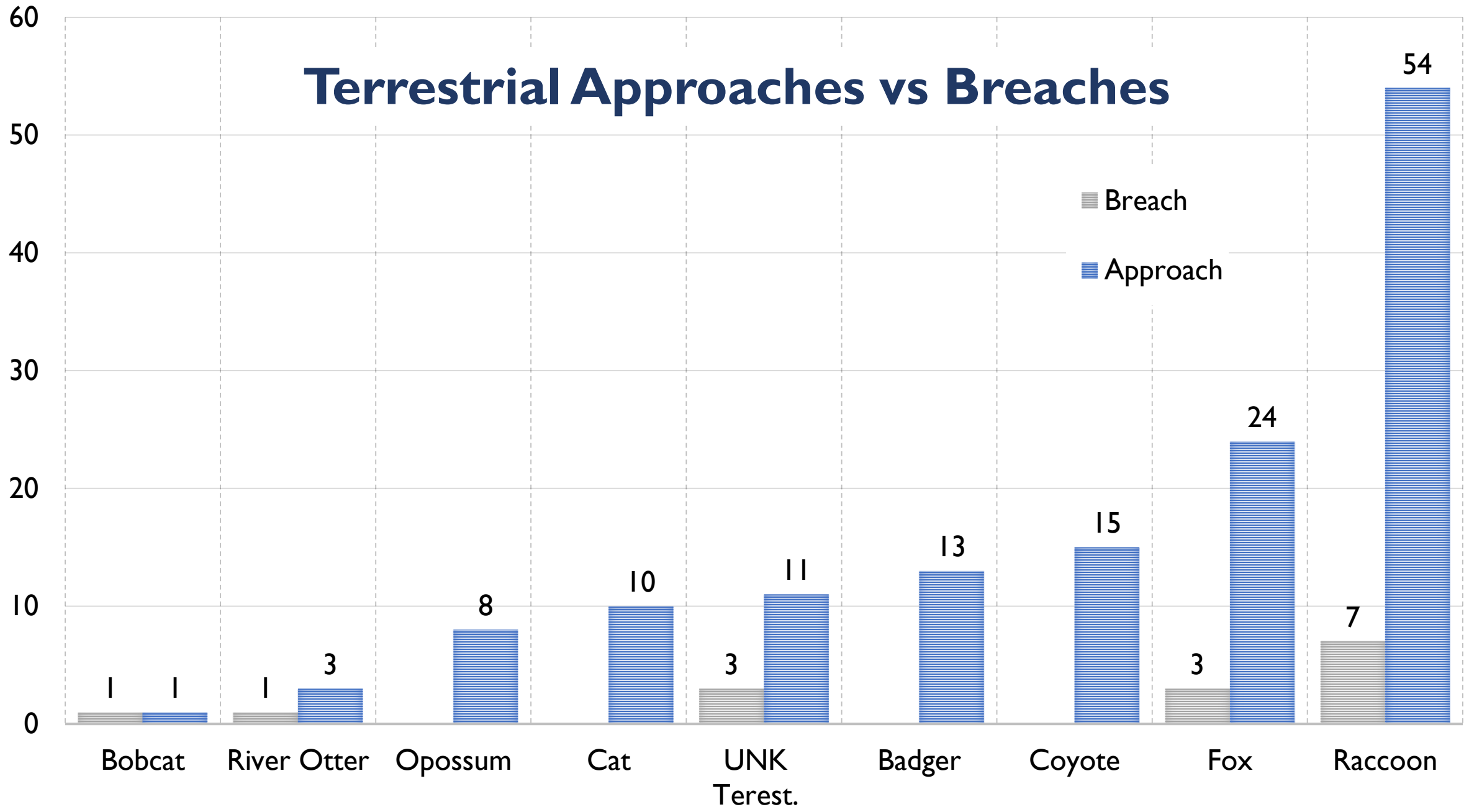
Predator Fence Camera Setup



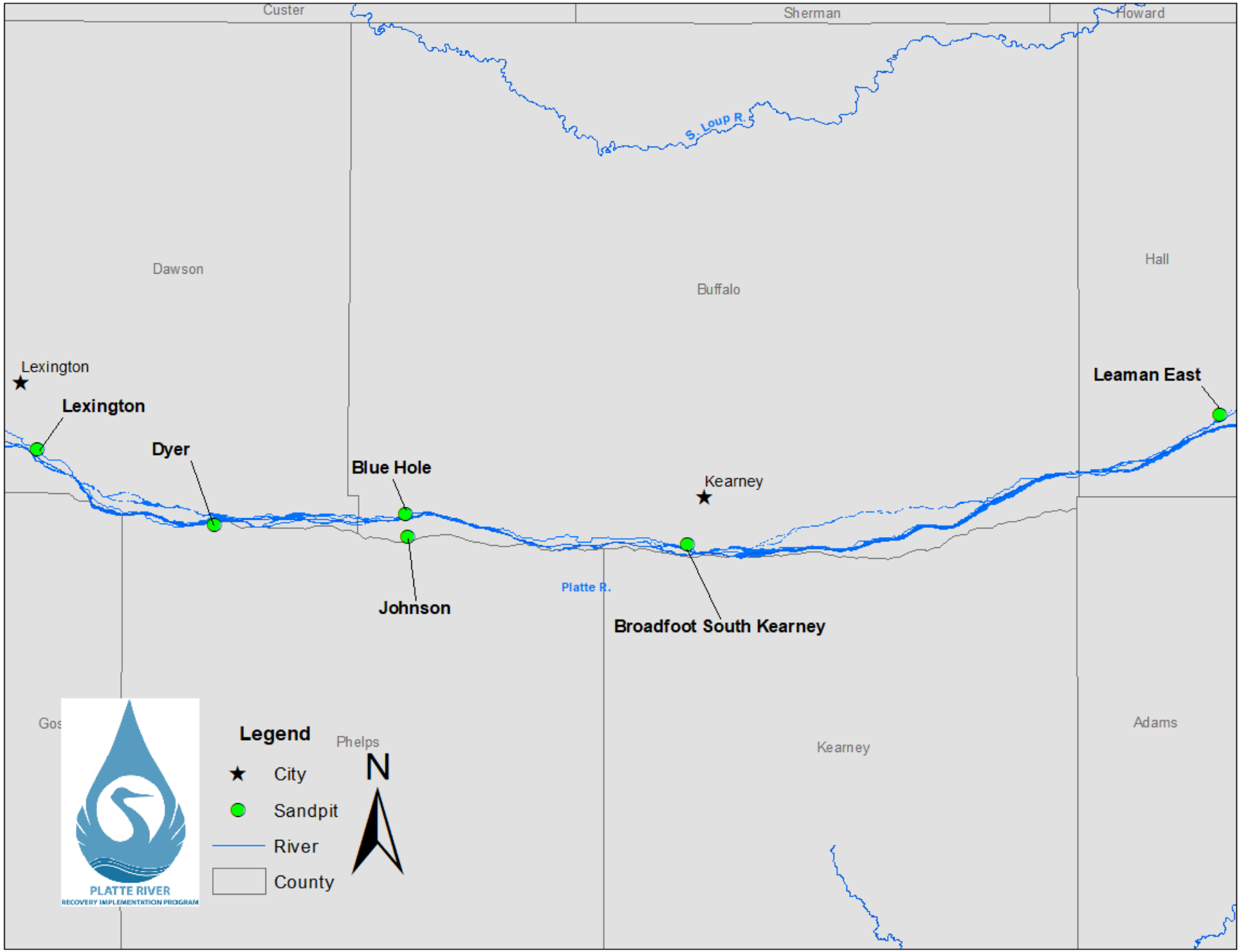
Total Terrestrial Predators Captured on Predator Fence Cameras in 2017-2018




70
60
50
40
30
20
10
0
Terrestrial
Avian
70
27
21
14
14
10
8
5
60
10
7
7
3
3
Raccoon
Fox
Coyote
Badger
UNK Terest.
Cat
Opossum
River Otter
Heron
RT Hawk
Owl
Gull
JB Eagle
TV

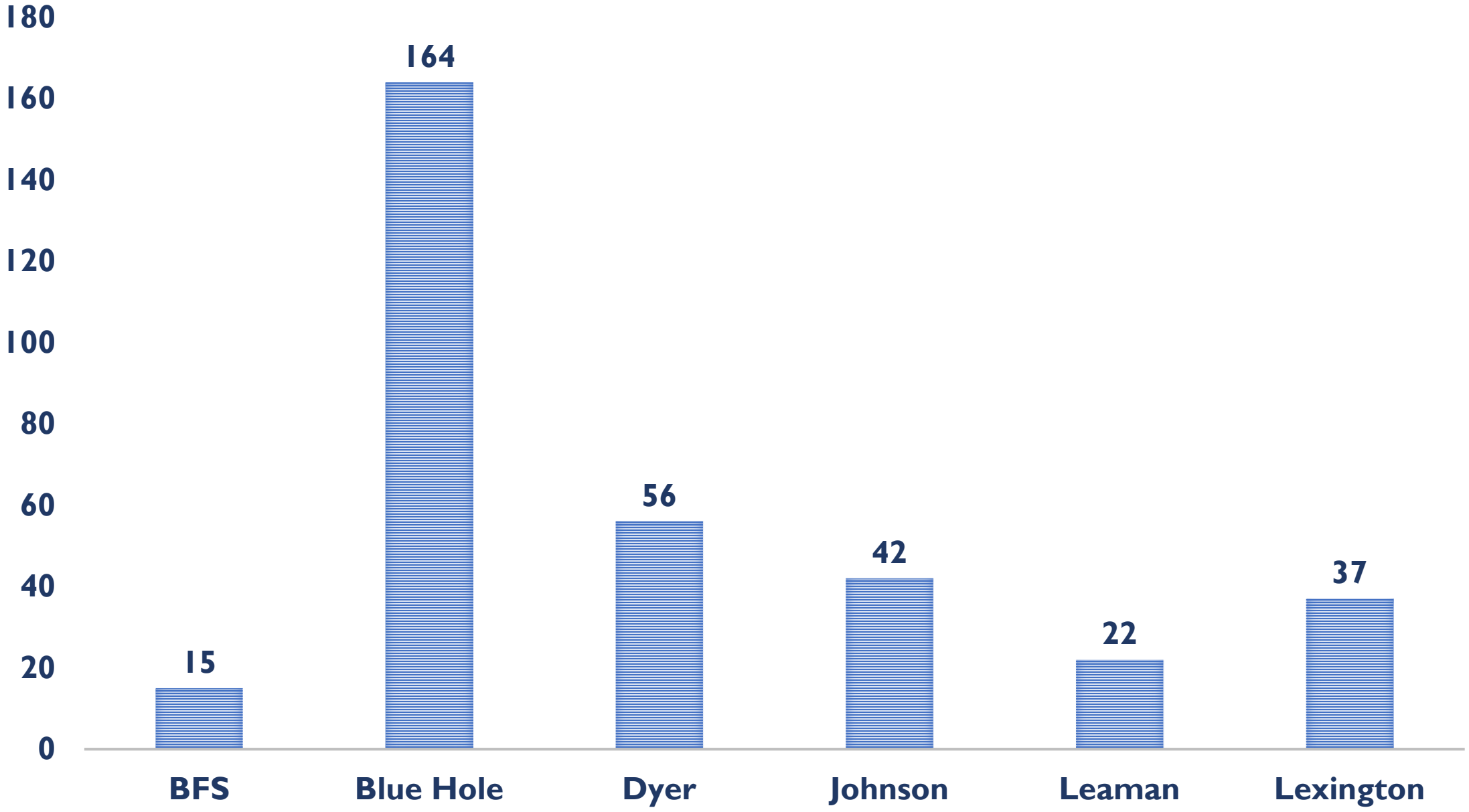

Terrestrial Approaches vs Breaches
Breach
Approach
60
50
40
30
20
10
0
1
1
1
3
8
10
3
11
13
15
3
24
7
54
Bobcat
River Otter
Opossum
Cat
UNK Terest.
Badger
Coyote
Fox
Raccoon

Nest Site Predator Camera Results 2017-2018


Custer
Sherman
Howard
S. Loup R.
Dawson
Buffalo
Hall
Lexington
Lexington
Dyer
Blue Hole
Kearney
Leaman East
Platte R.
Johnson
Broadfoot South Kearney
Gos
Phelps
Kearney
Adams
Legend
City
Sandpit
River
County
N
PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

etup

Predator Totals 2017-2018



60
50
40
30
20
10
0
1
Osprey
Barn
39
Great
orned
Owl
51
Juvenile
Bald
Eagle

Bushnell
M0490BFS
98 °F36 °C

Bushnell (M)0498 -2017 18:23:42

Predator Study Conclusion

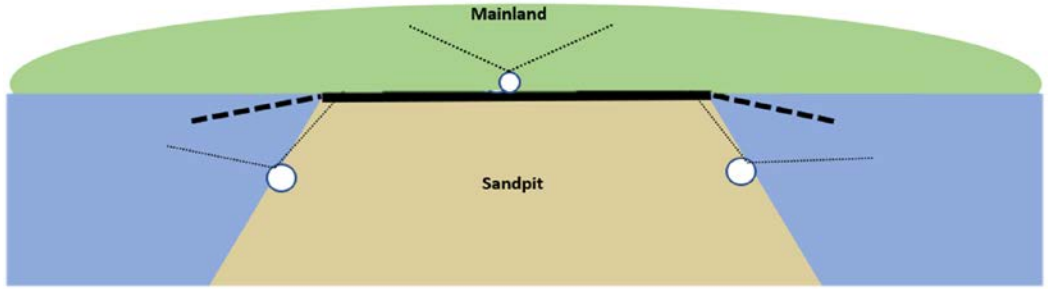
Nest Monitoring Camera

Results 2019

Past Research:

Outcomes:

Predator fence cameras



Terrestrial predator species composition

Effective at deterring terrestrial predators

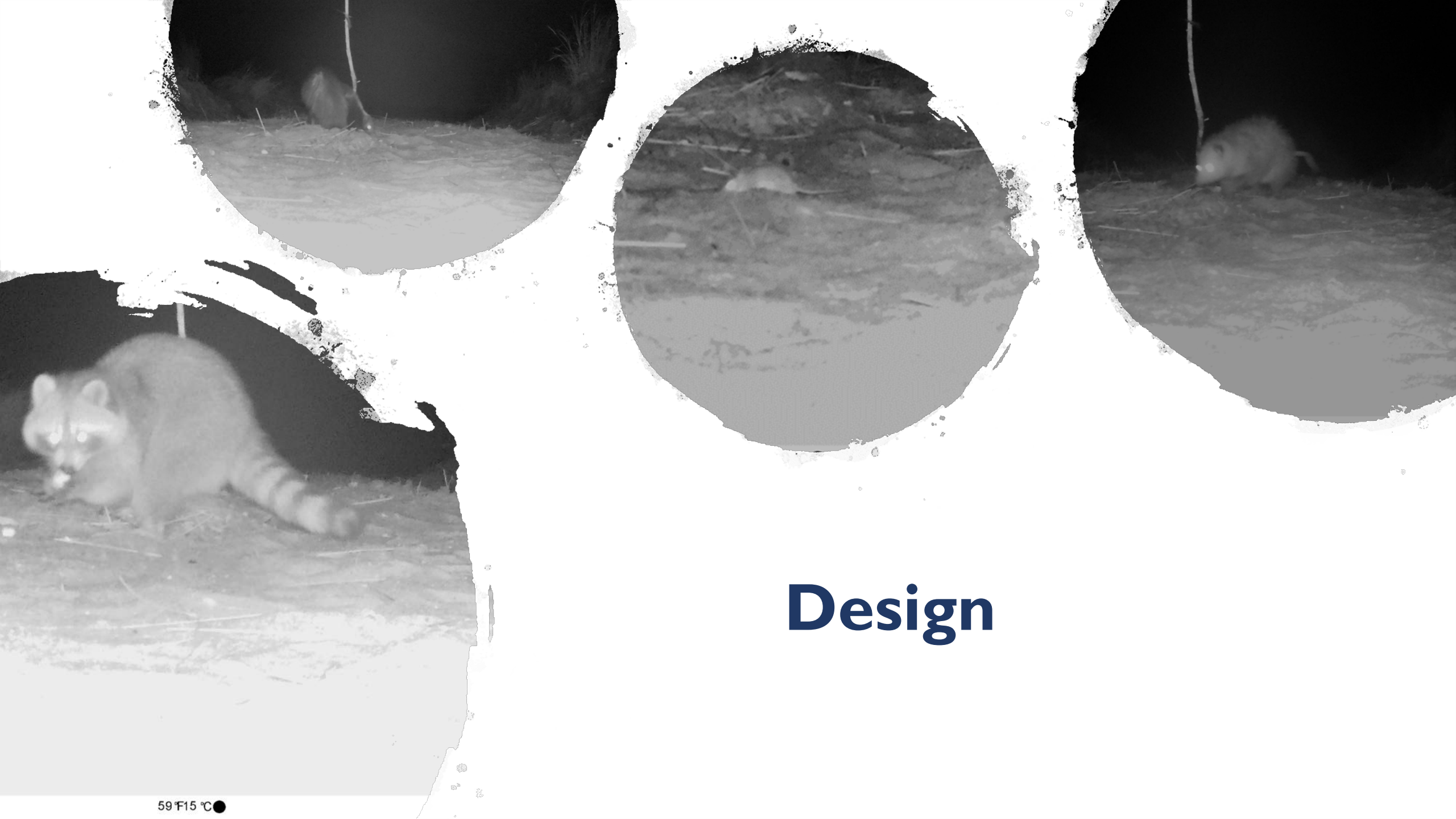
Nest site predator cameras

Predator species composition

Predator species activity

Remaining Question:

What species of predators are depredating Least Tern and Piping Plover nests?



Design

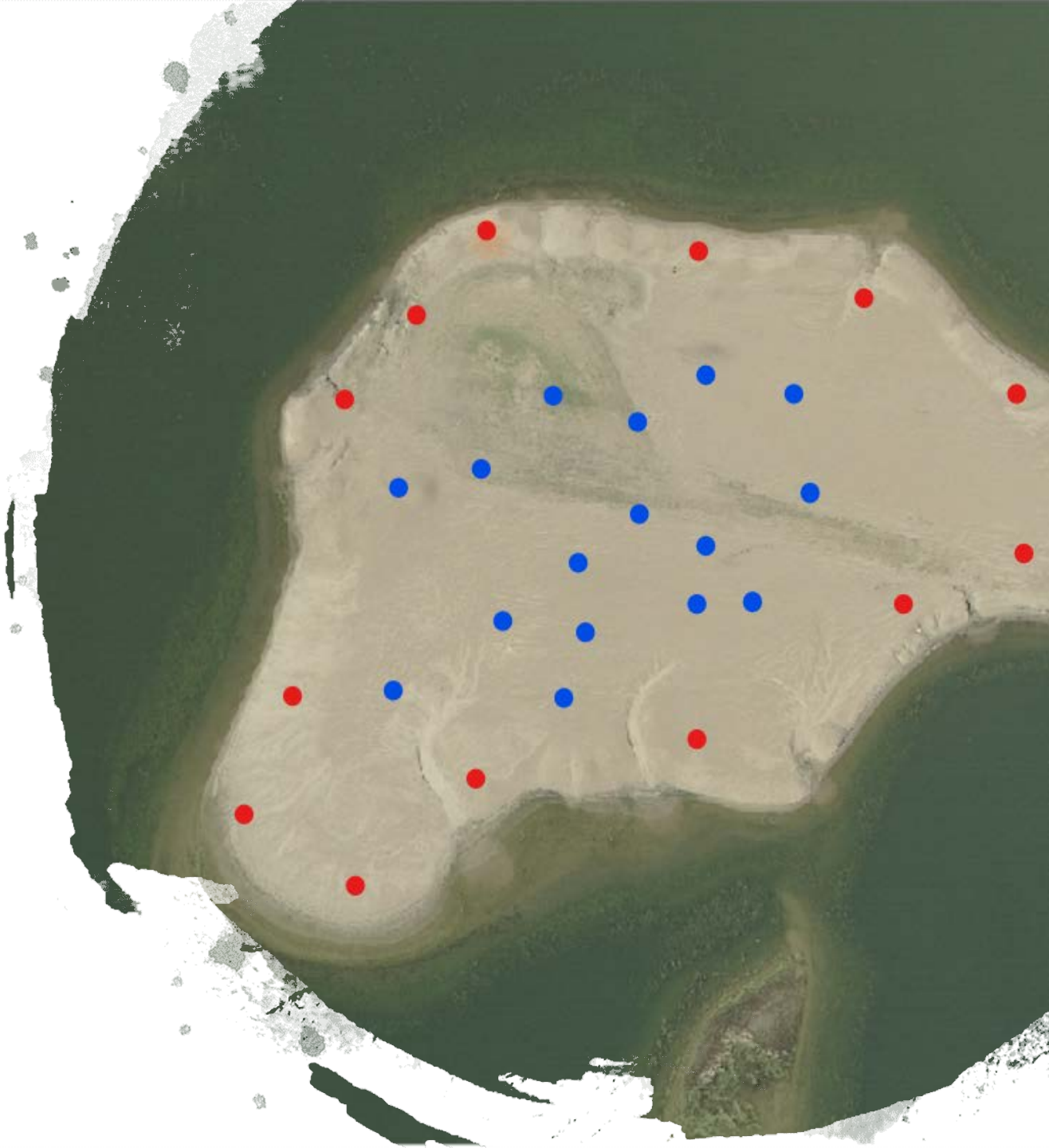
Design

Off-Channel Nesting Sites:

Newark West

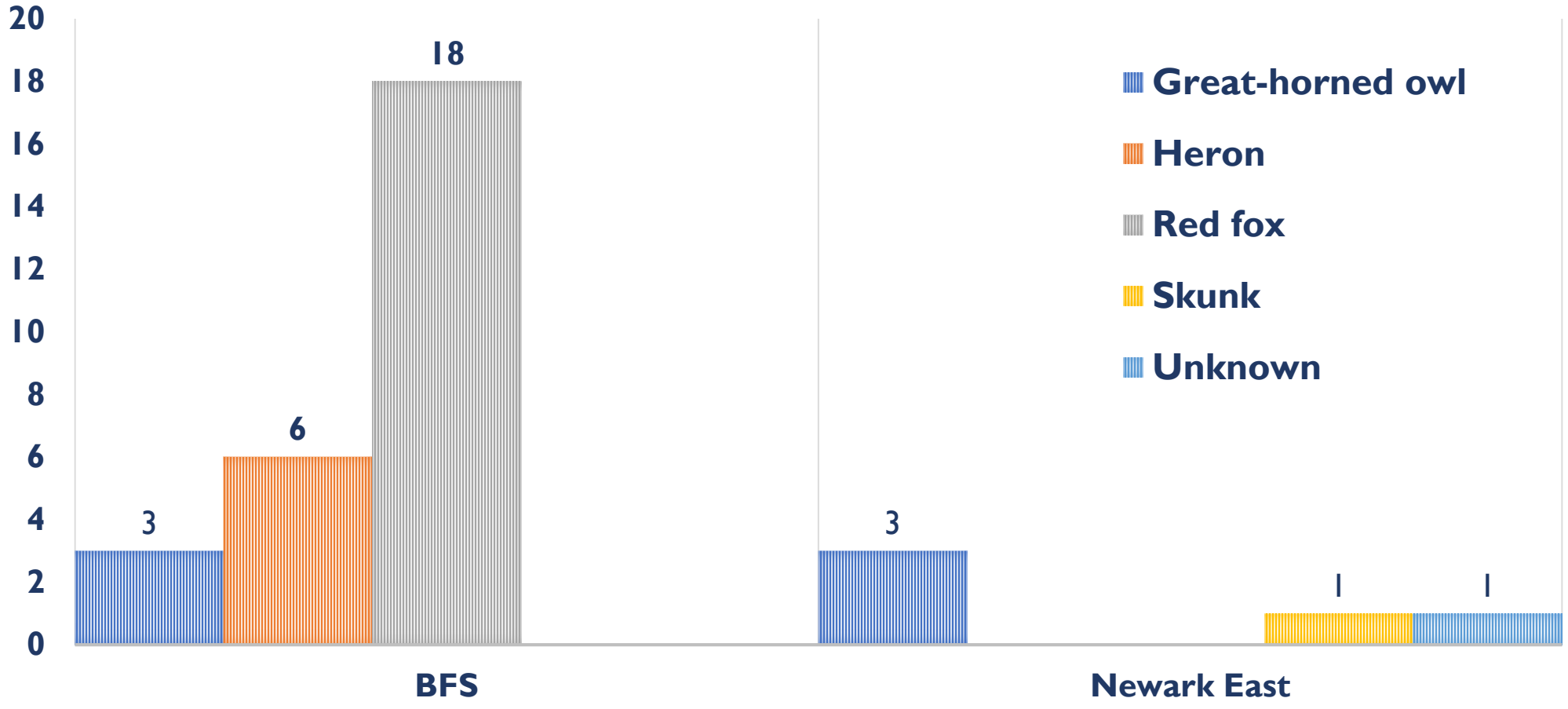
Newark East

Broadfoot South



Results

Predators Present At LTPP Nests



Implications

- Fox caches
- More cameras are needed—possibly different type of camera
- Will utilize the video and photo feature in the future

Interesting Findings

- Adult behavior after predation
- Pair behavior while incubating eggs
- Photo evidence:
  - Band Combos
  - Chicks at different ages

Questions?