

2021 Plover and Tern Report

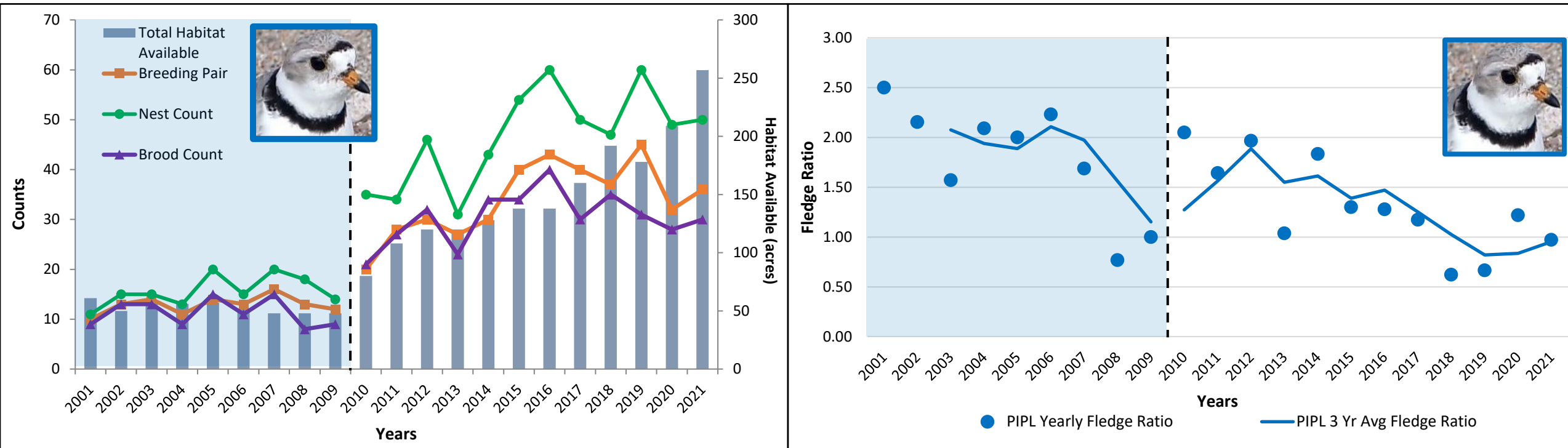


Kari Mohlman
LTPP Project Lead



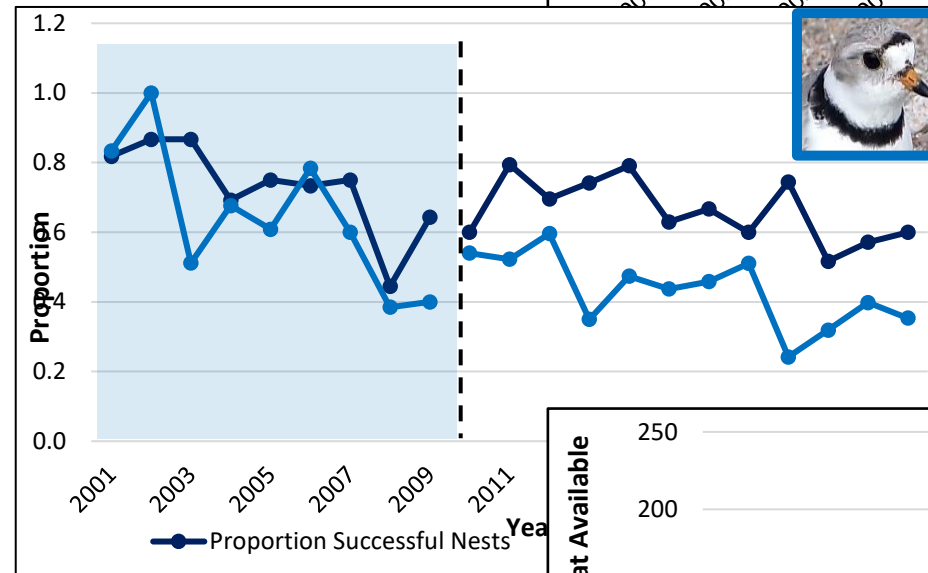
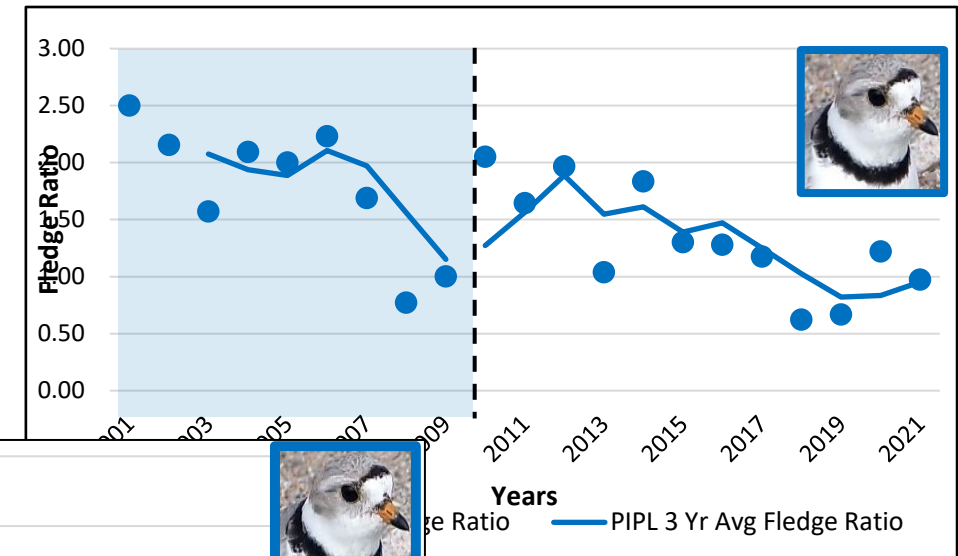
PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Data Comparability

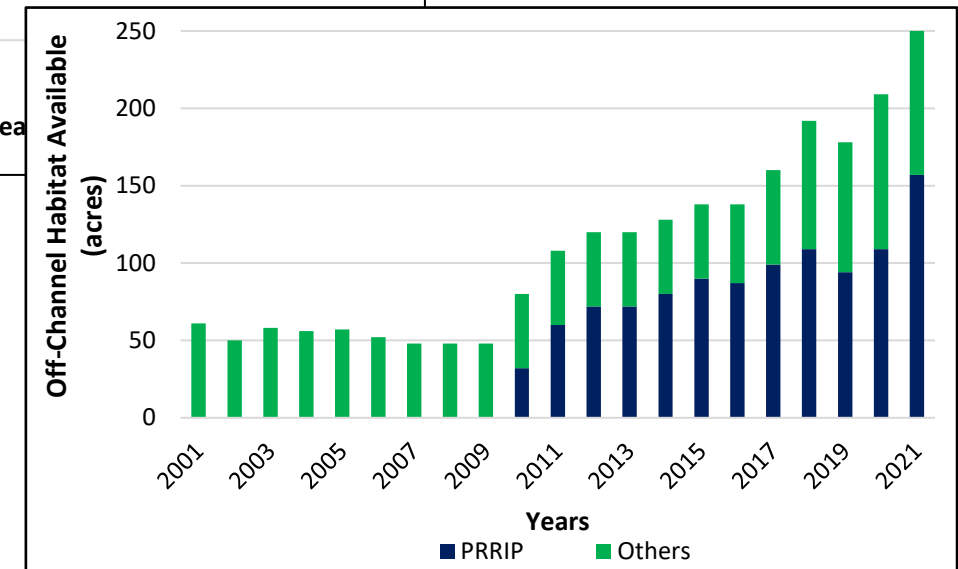


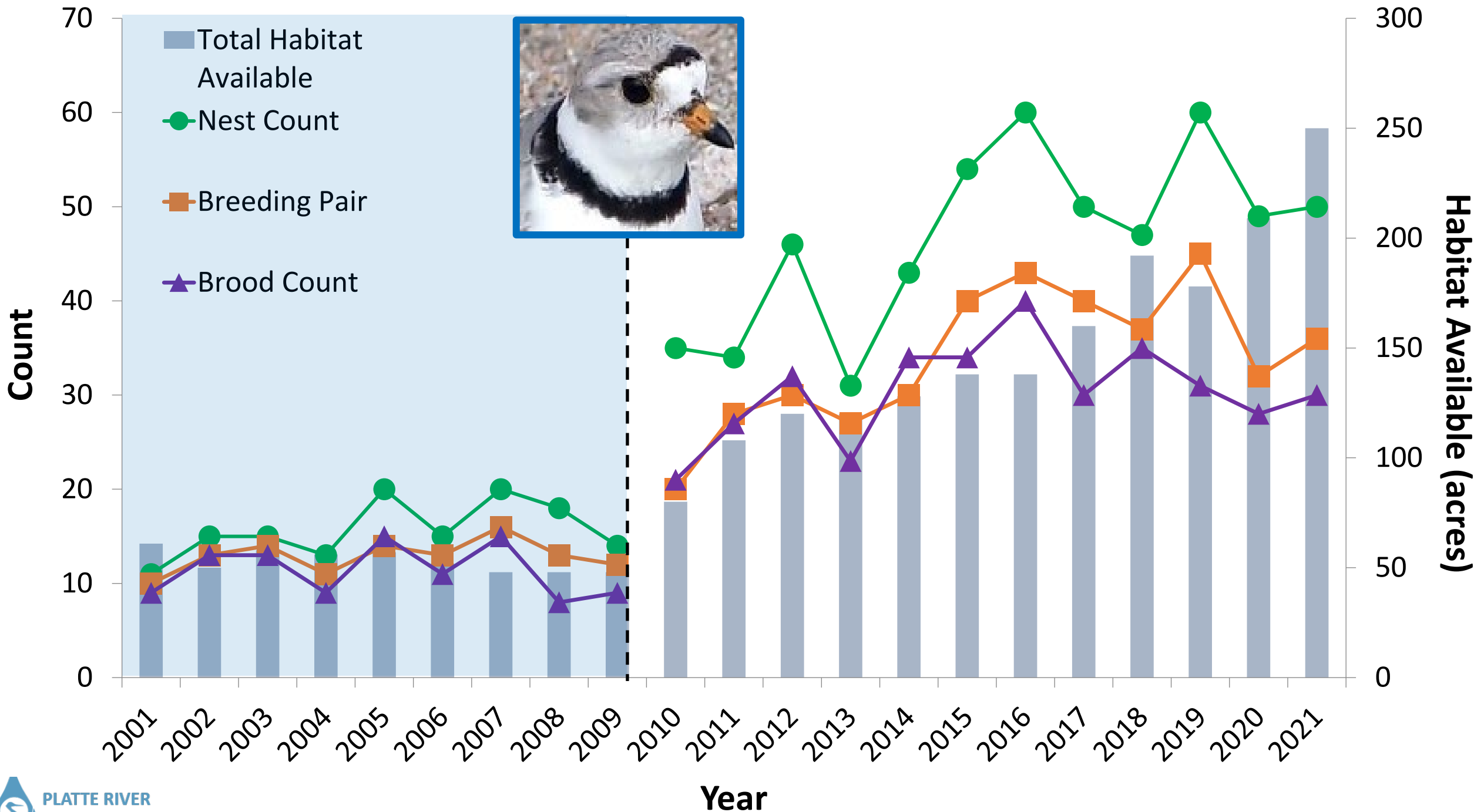
Major Protocol Changes- 2010

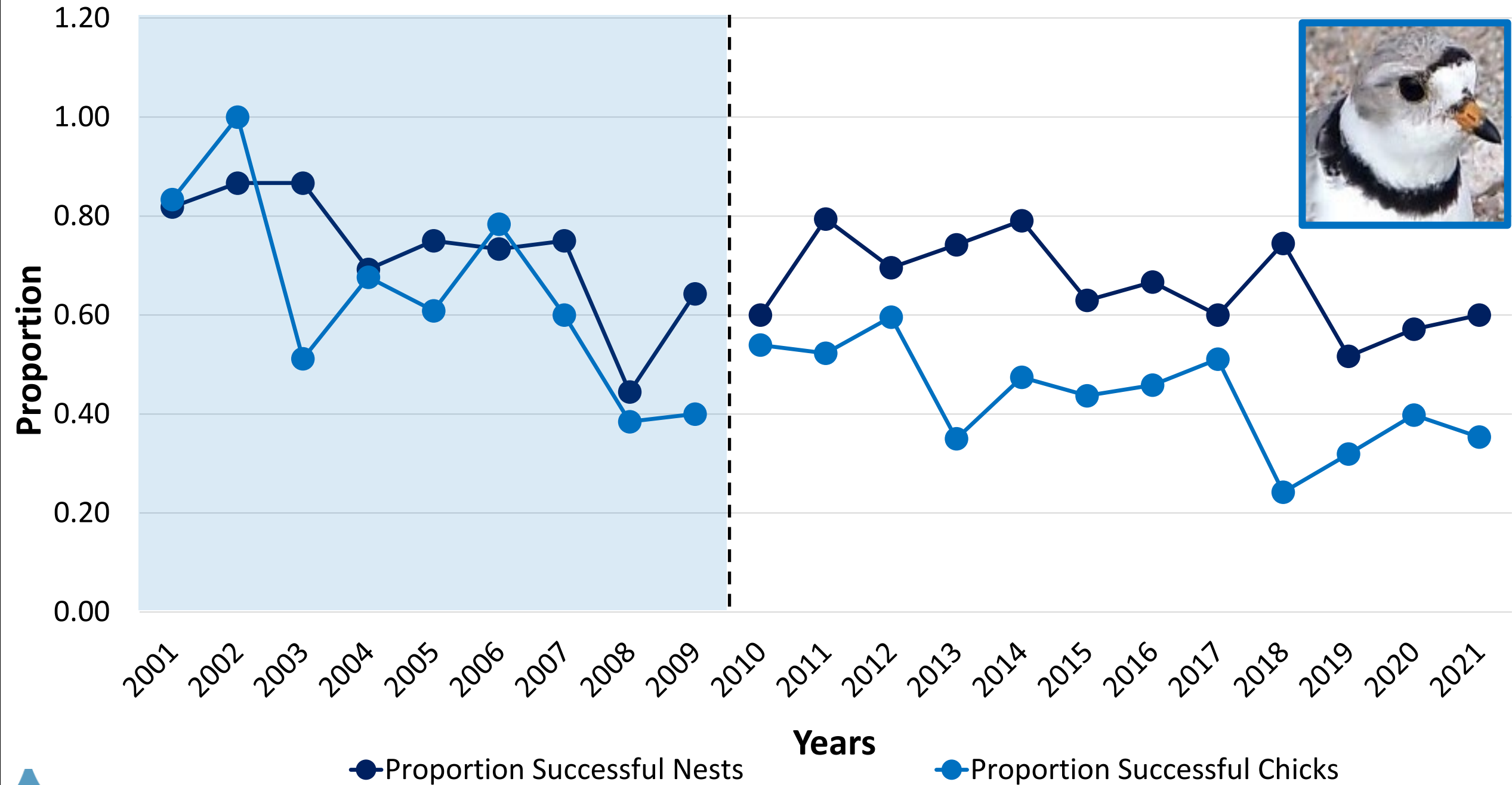
- Fledge age increased
 - PP: 15 day → 28 day fledge age
 - LT: 15 day → 21 day fledge age
- Effort Increased
 - River surveys increased
3 → 7 per season
 - Inside and outside monitoring
 - Banding and resighting
- Additions of OCSW Sites
- Biweekly access to restricted sites

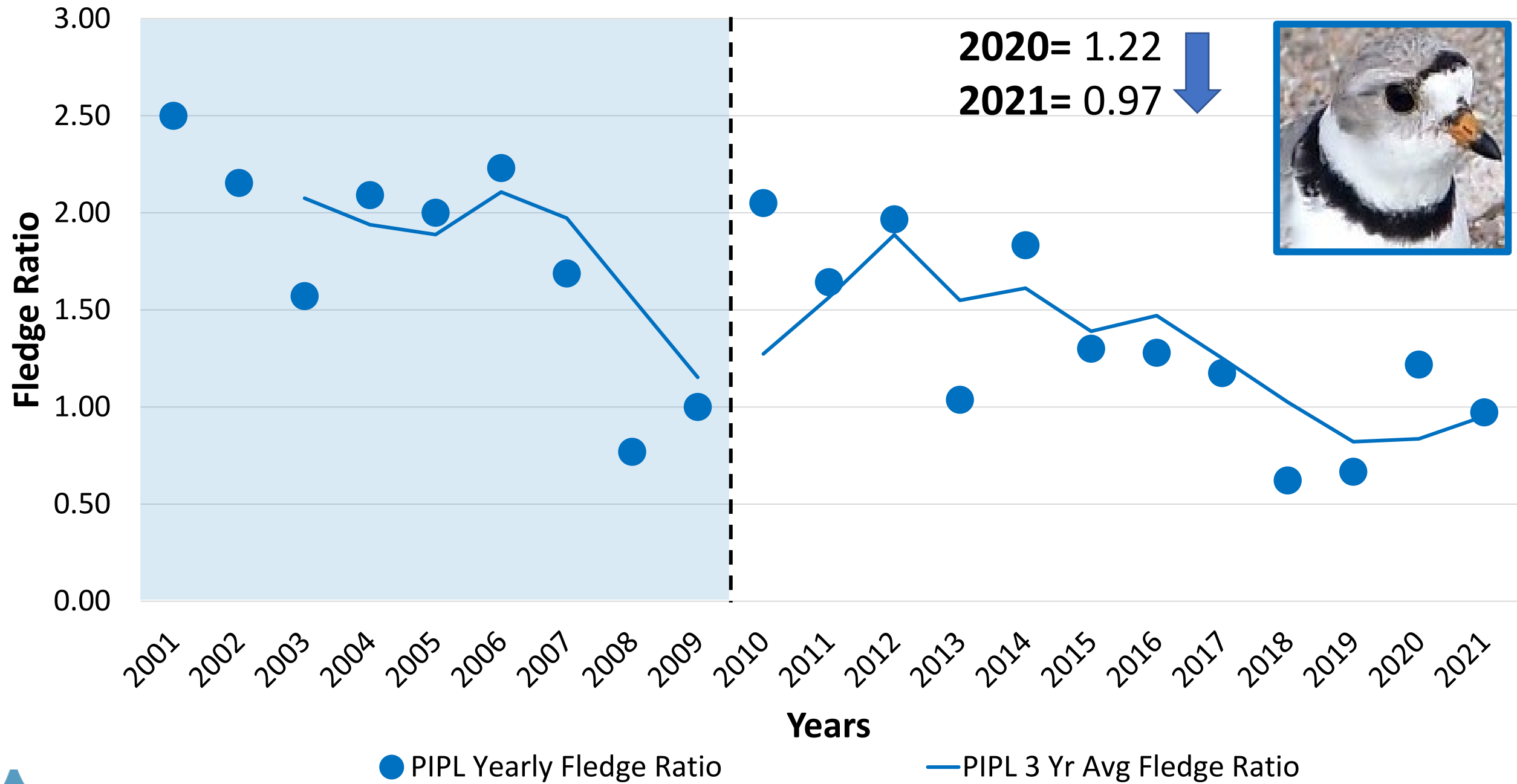


In 2009 USGS supplemented monitoring at some sites (inside monitoring) and began banding.





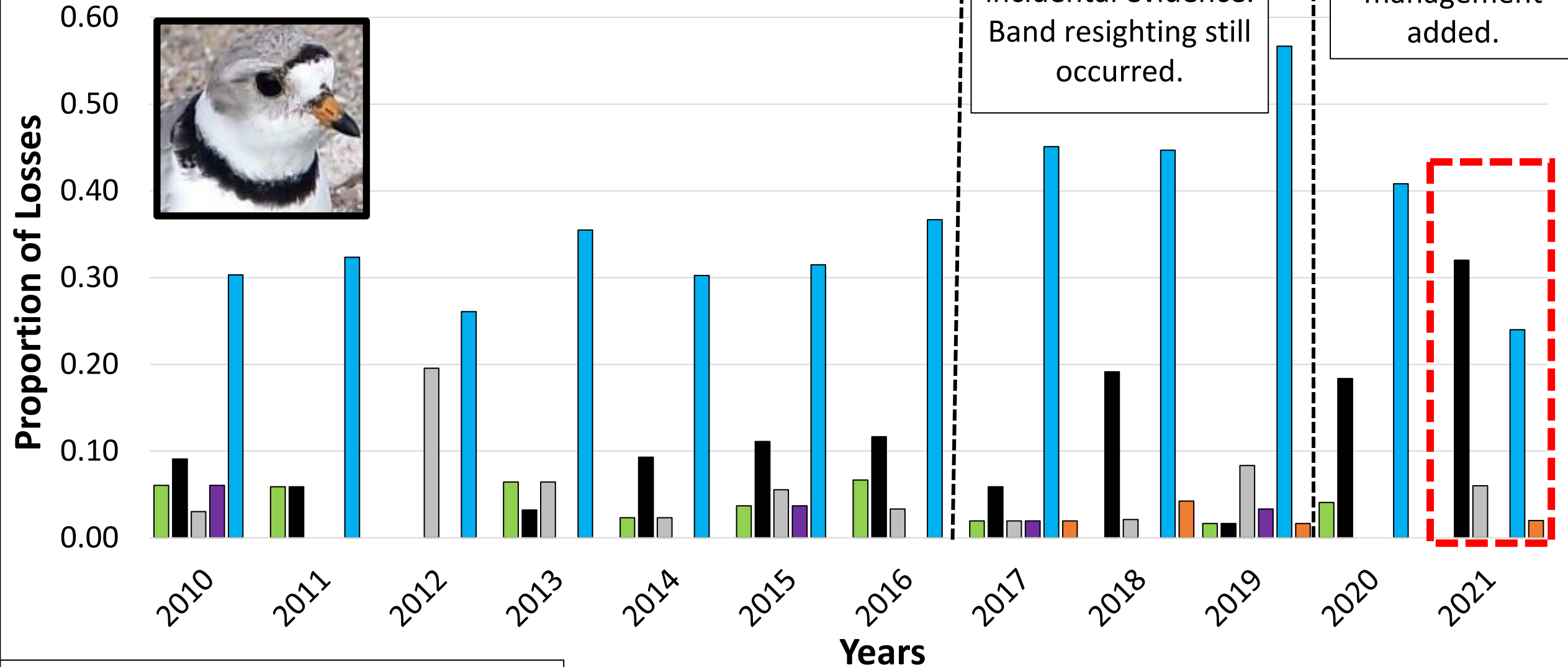




2010-2016: Inside and outside monitoring semi-weekly at all sites with nesting. River surveys semi-monthly. Banding occurred.

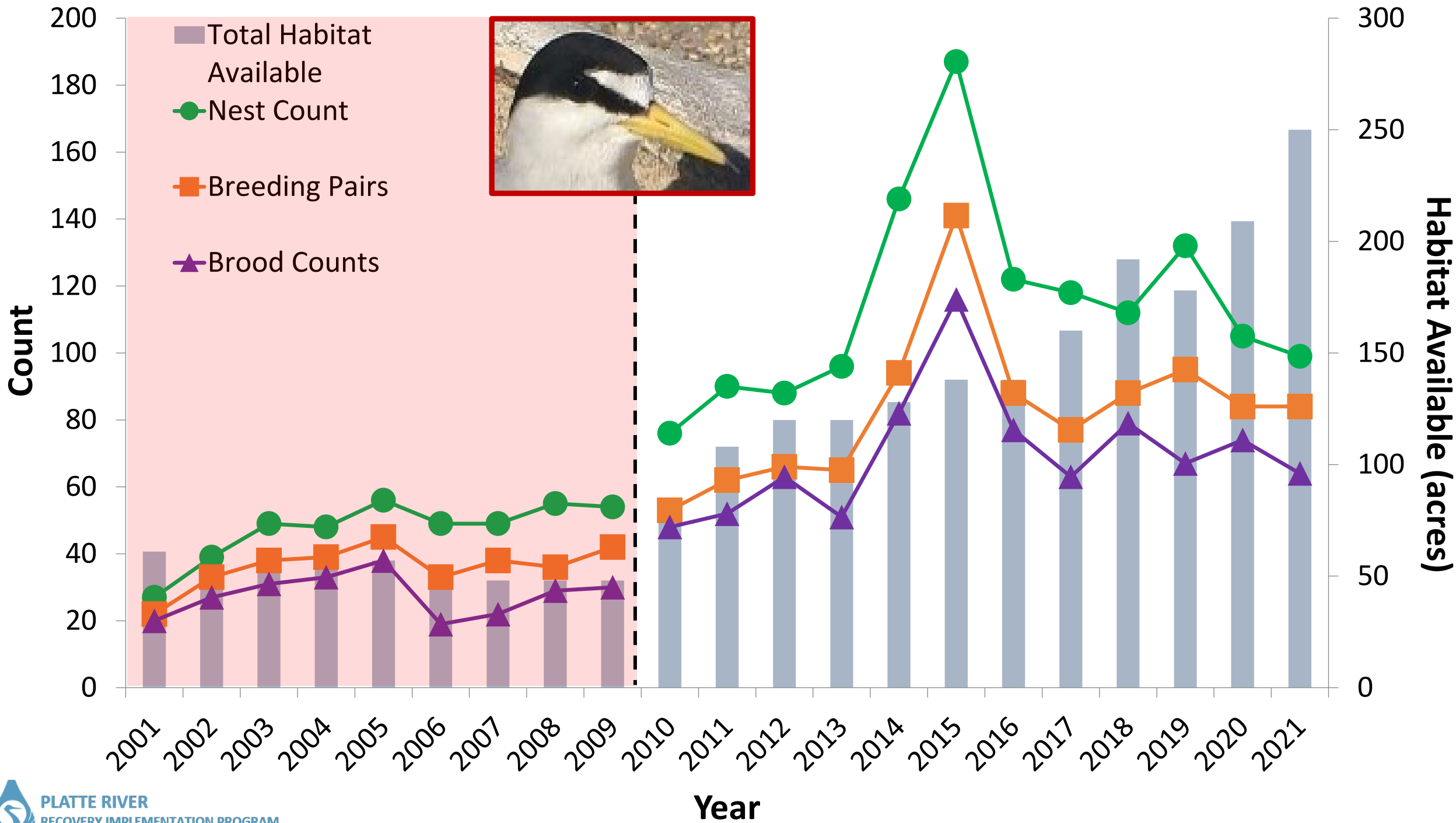
2017-2019: Outside monitoring/ river surveys, and incidental evidence. Band resighting still occurred.

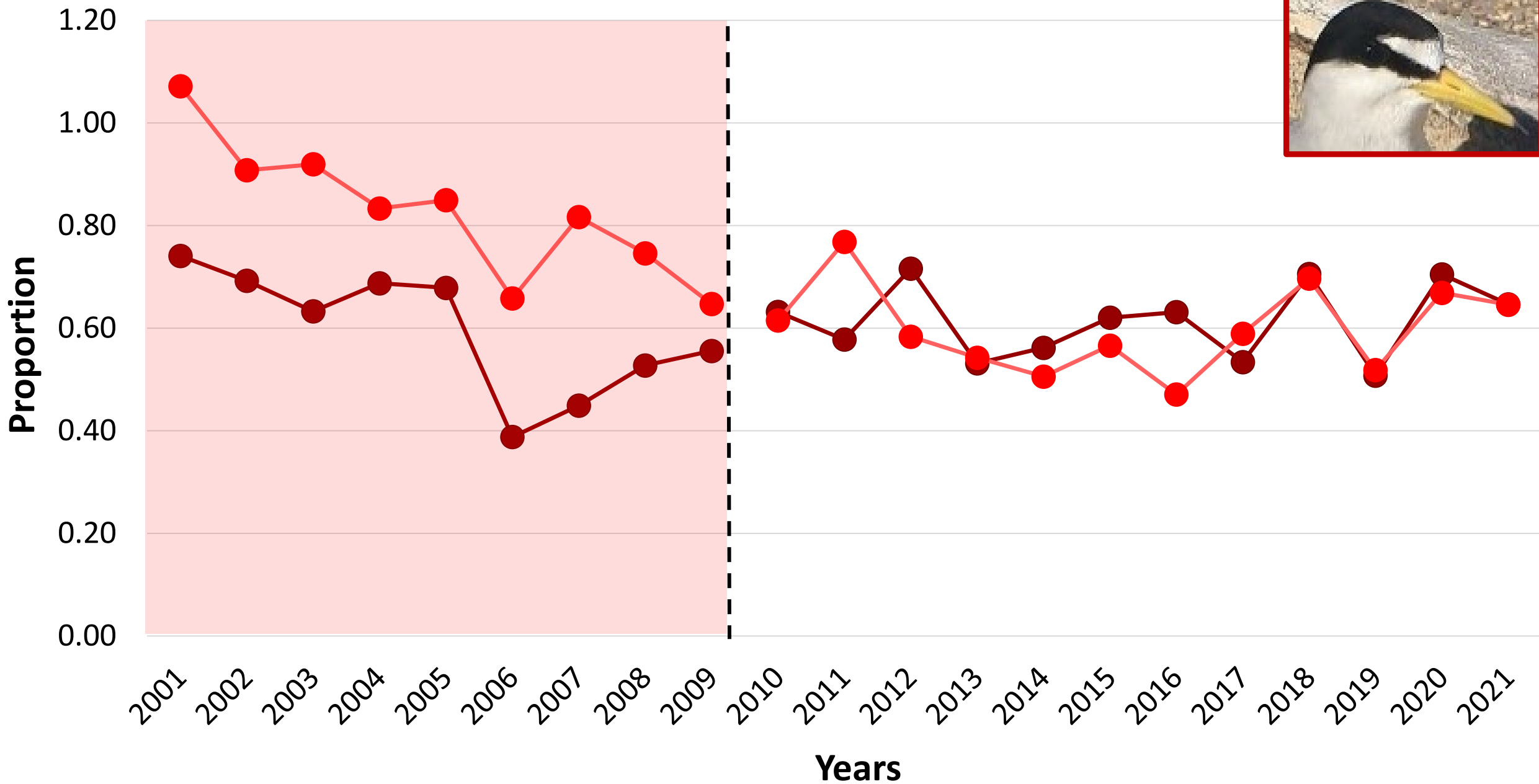
2020-2021: Additional monitoring and management added.



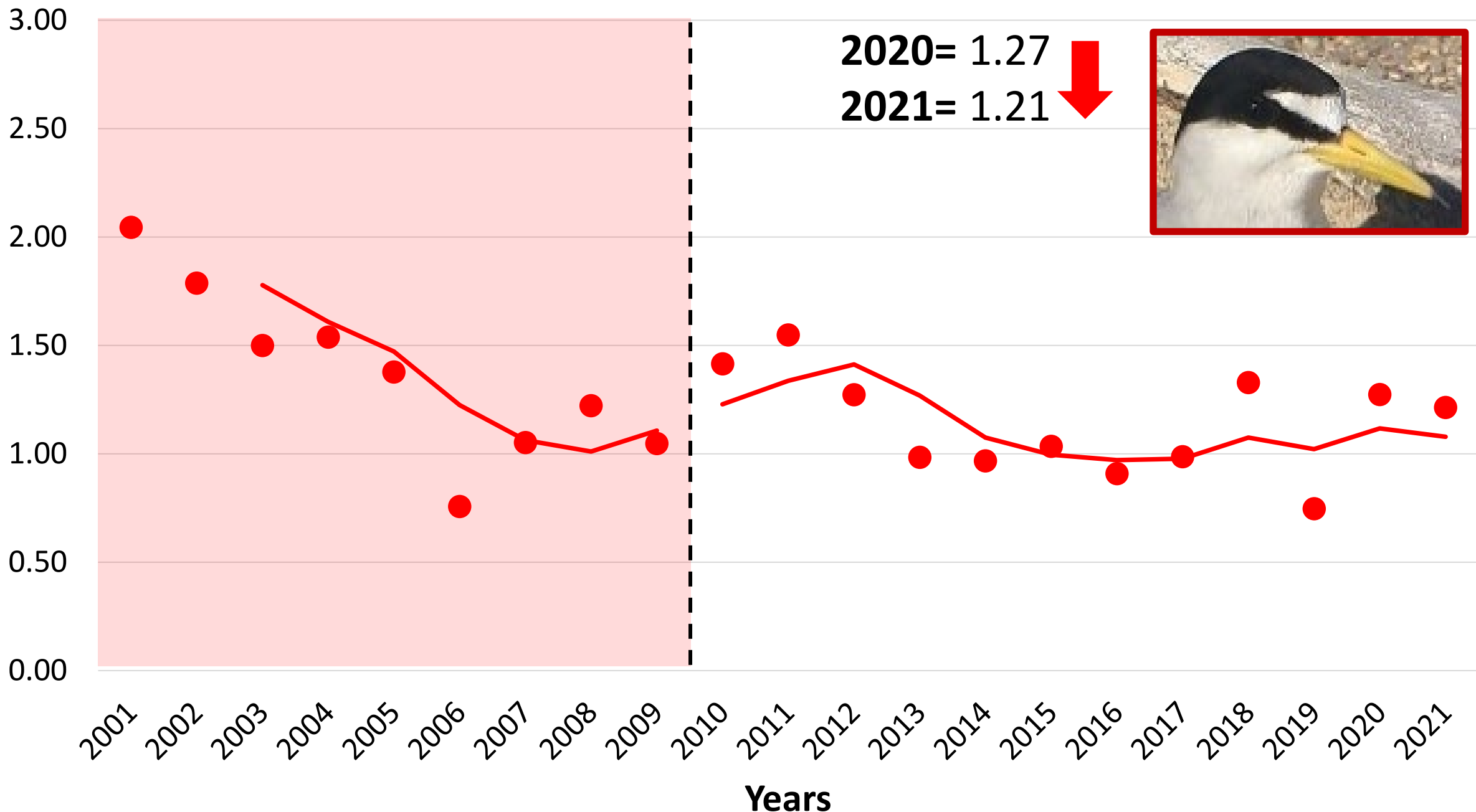
Losses are nest and brood losses combined. Each loss represents a unique reproductive attempt.

FA FP FW FF FUNK UNK





Fledge Ratios



● LETE Yearly Fledge Ratio

— LETE 3 Yr Avg Fledge Ratio



2010-2016: Inside and outside monitoring semi-weekly at all sites with nesting. River surveys semi-monthly. Banding occurred.



2017-2019: Outside monitoring/ river surveys, incidental evidence, and resighting.

2020-2021: Additional monitoring and management added.

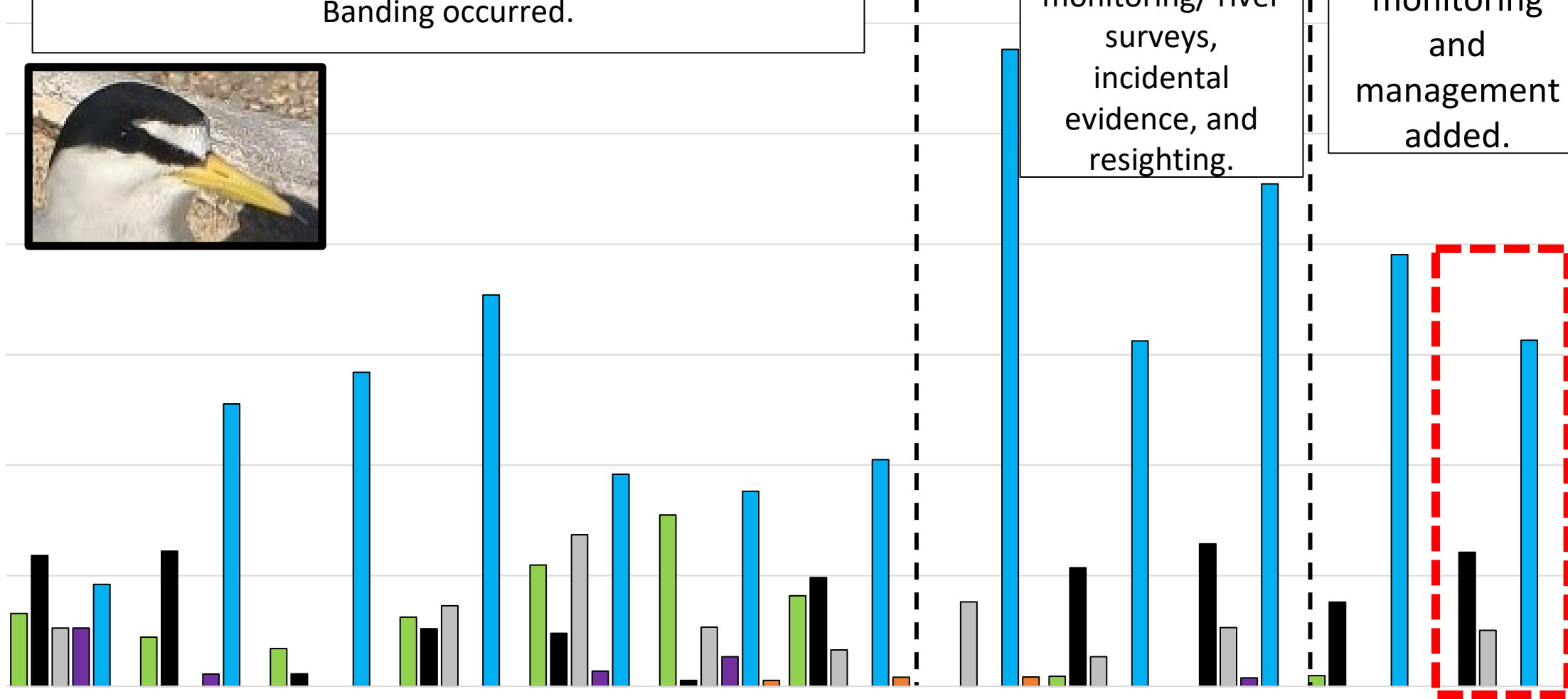
Proportion of Losses

0.60
0.50
0.40
0.30
0.20
0.10
0.00

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Years

FA FP FW FF FUNK UNK



Clarification

Overall success and mortality numbers will not match
“Additional Predator Monitoring” section

Overall Reproductive Data

- Includes Program and Non-Program OCSW sites
- Ex:
Total PP Nests= 50

Additional Monitoring Section

- Program managed OCSW sites
- Subset of overall numbers
- Ex:
Total PP Nests= 36

Questions?





2021 Least Tern & Piping Plover Predator Monitoring Results

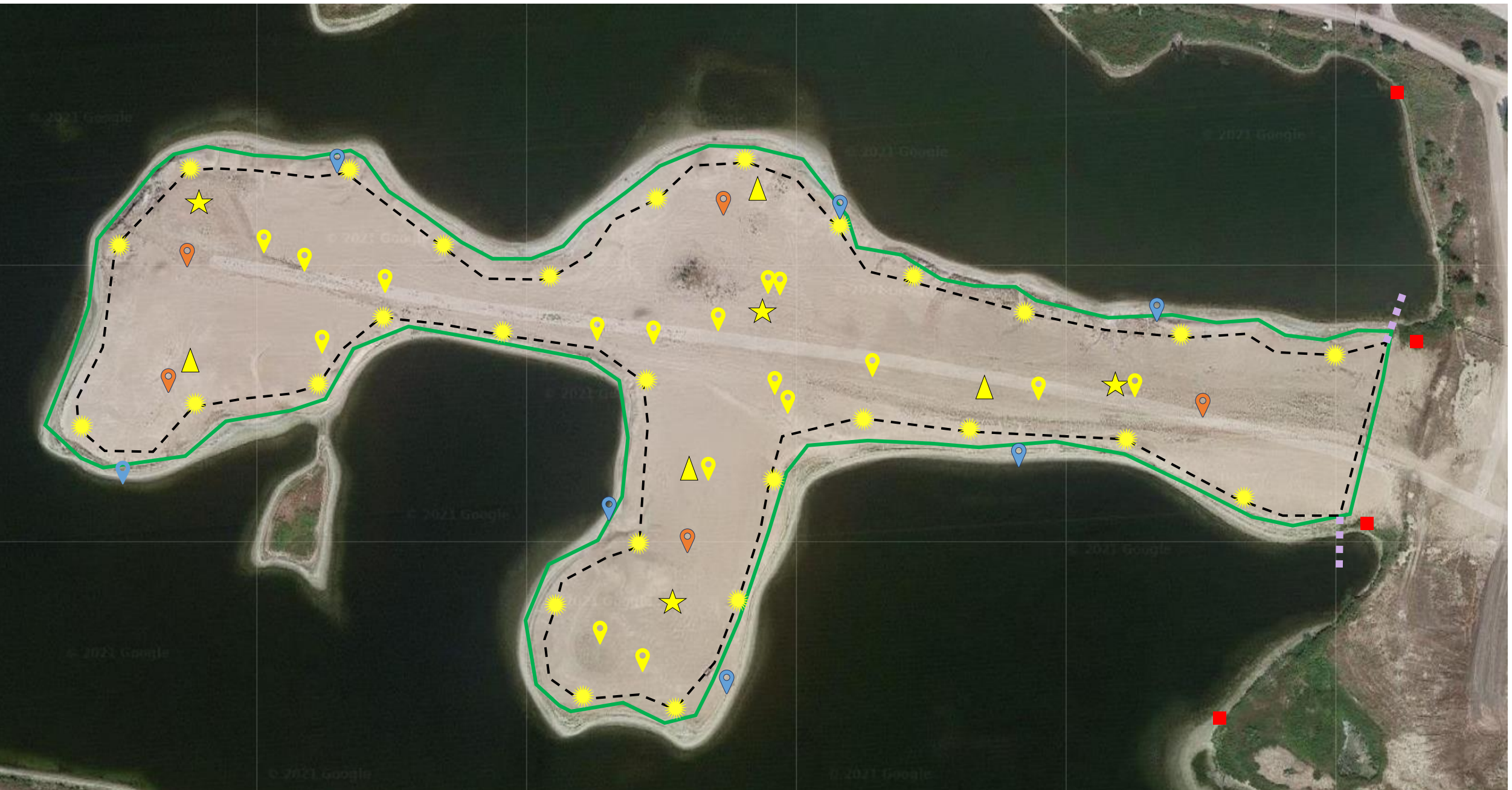
Kaley Keldsen
Predator Research Lead

Presentation Topics

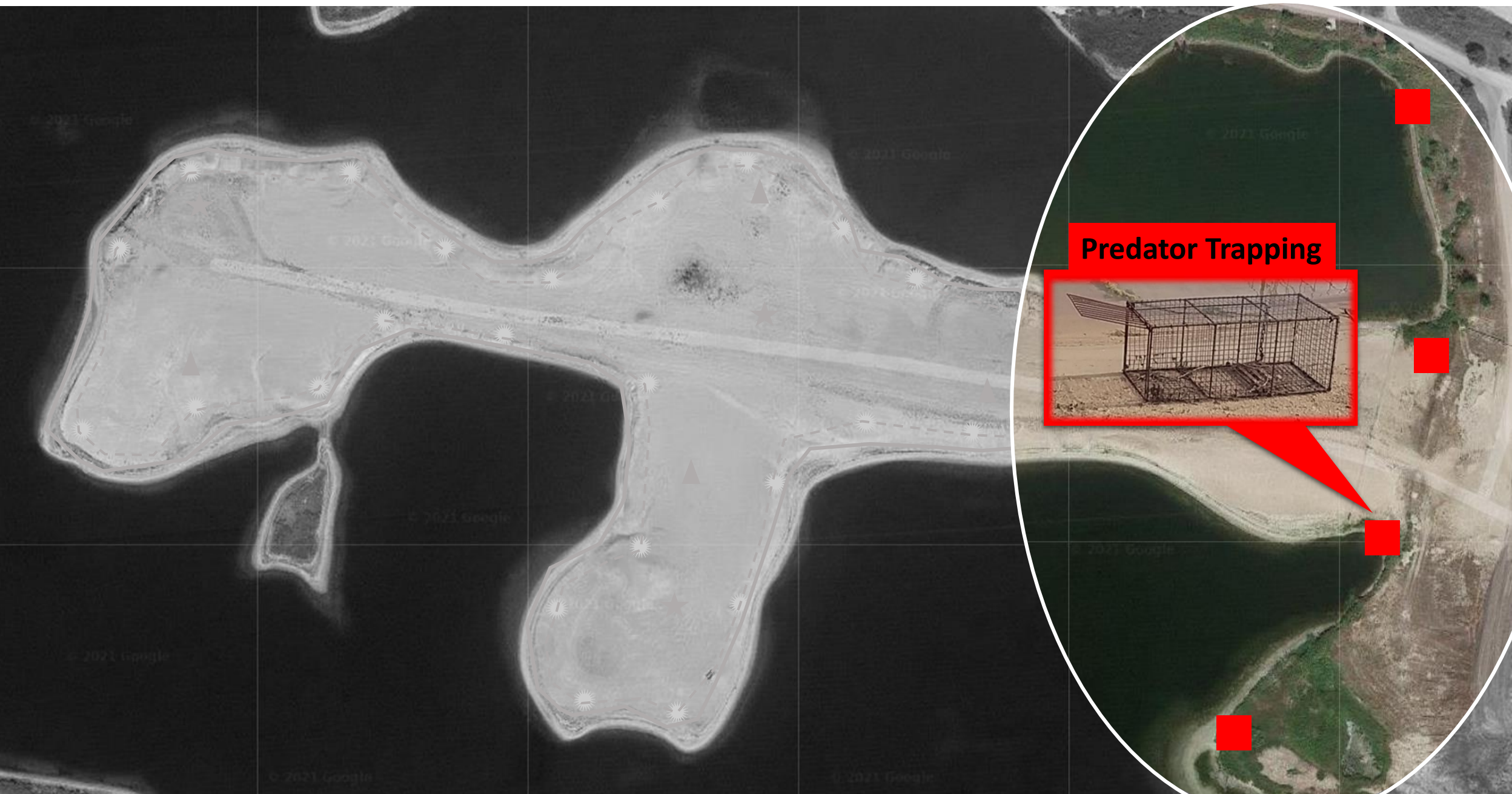
EBQ's

- #8—How much of an effect does predation have on PP productivity?
- #9—How effective is Program management at mitigating losses of PP productivity due to predation?
- Predator Management—*Implementation*
- Predator Response—*Effectiveness*
- Target Species Response—*Impact on Productivity*

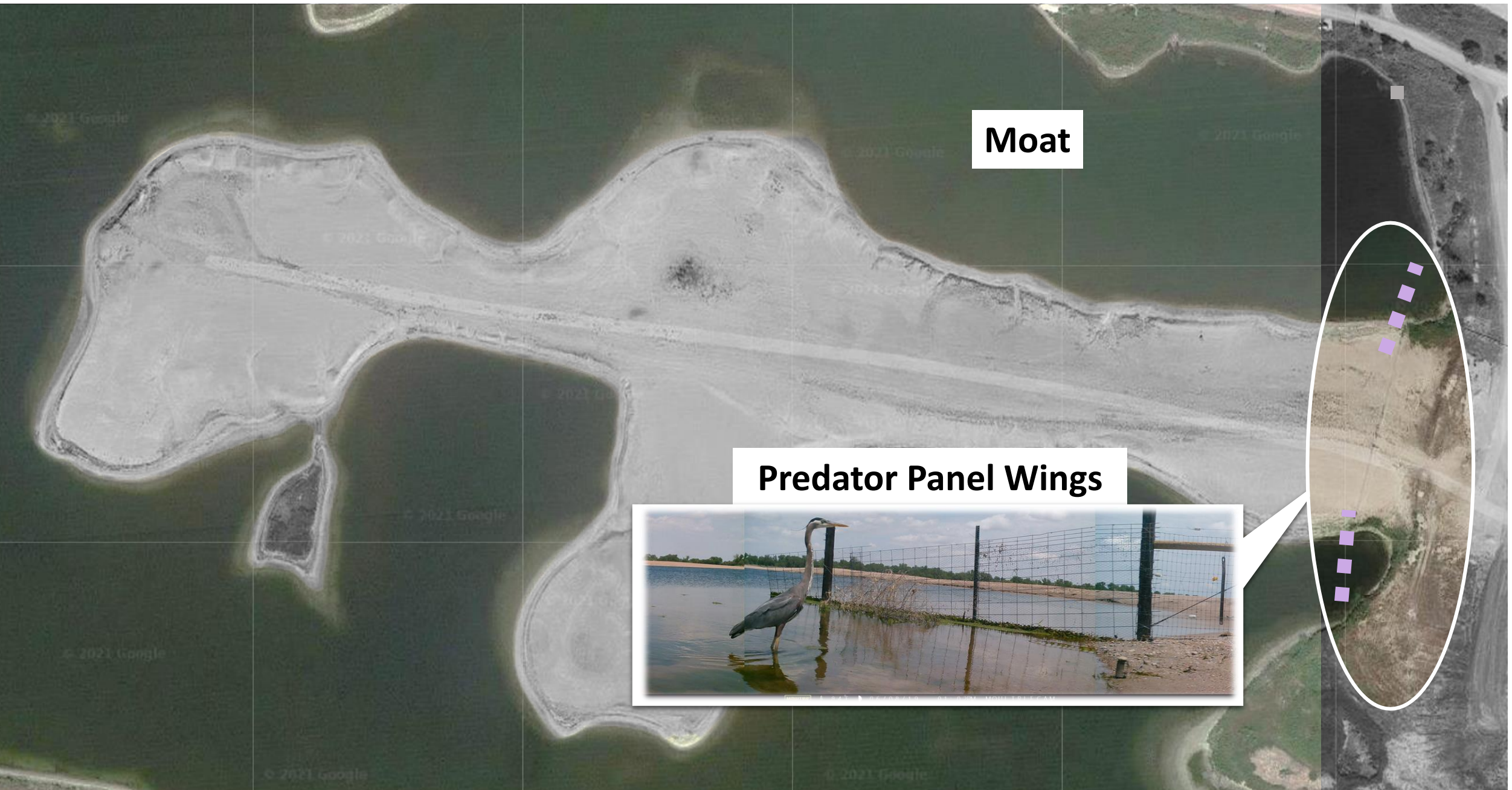
Additional Predator Management and Monitoring



Additional Predator Management



Additional Predator Management



Moat

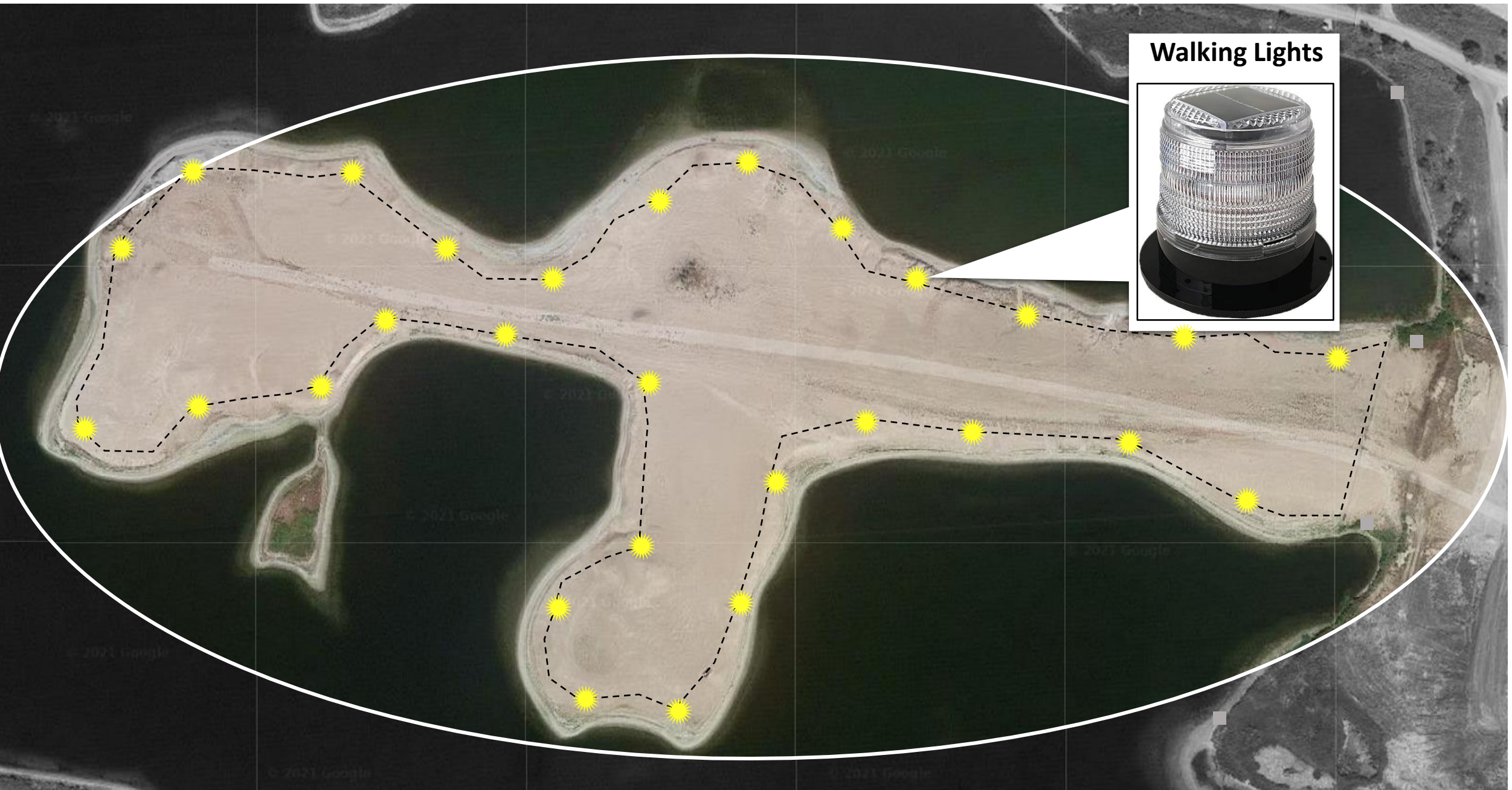
Predator Panel Wings



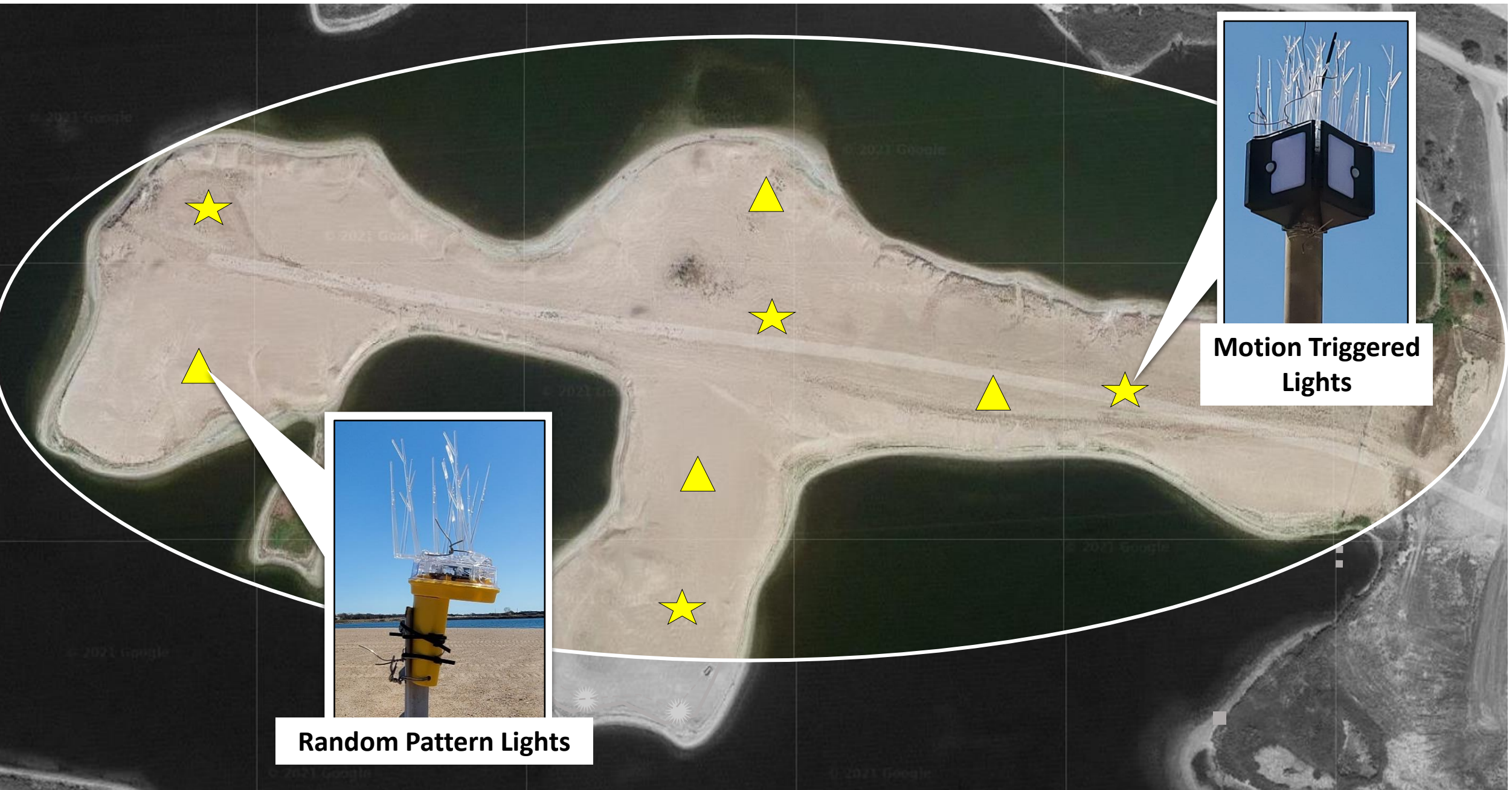
Additional Predator Management



Additional Predator Management



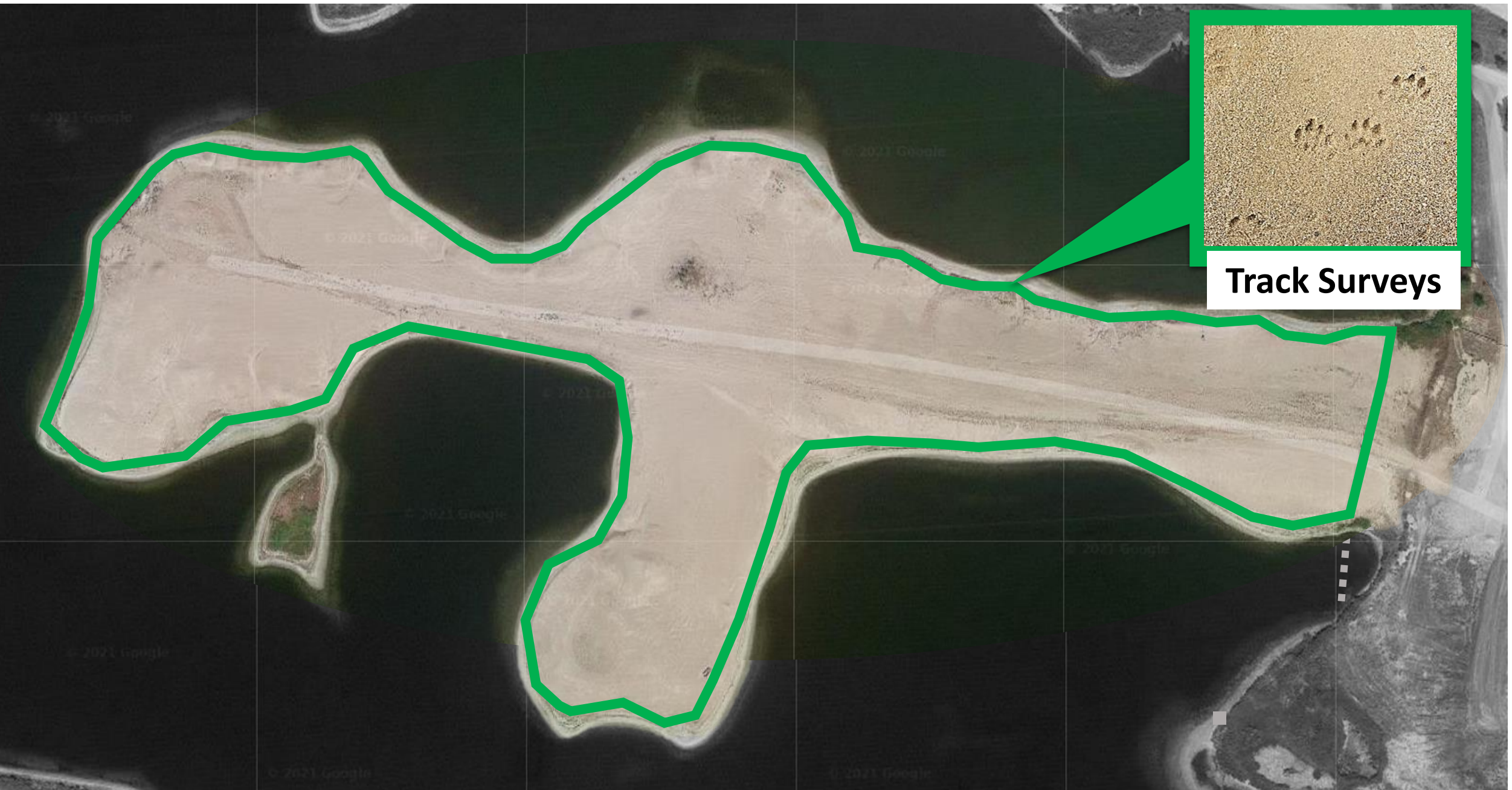
Additional Predator Management



**Motion Triggered
Lights**

Random Pattern Lights

Additional Predator Monitoring



Track Surveys

Additional Predator Monitoring



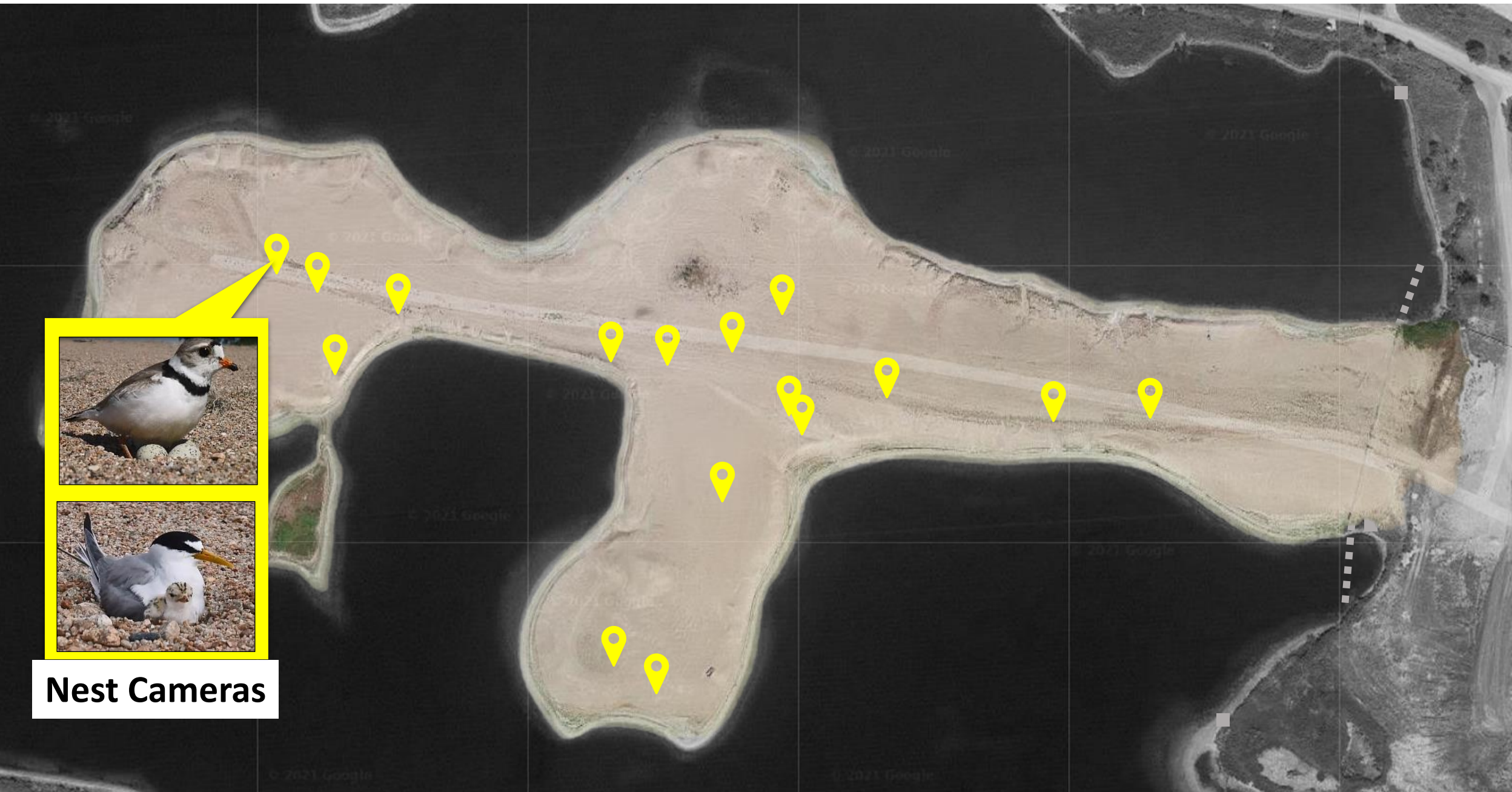
Additional Predator Monitoring



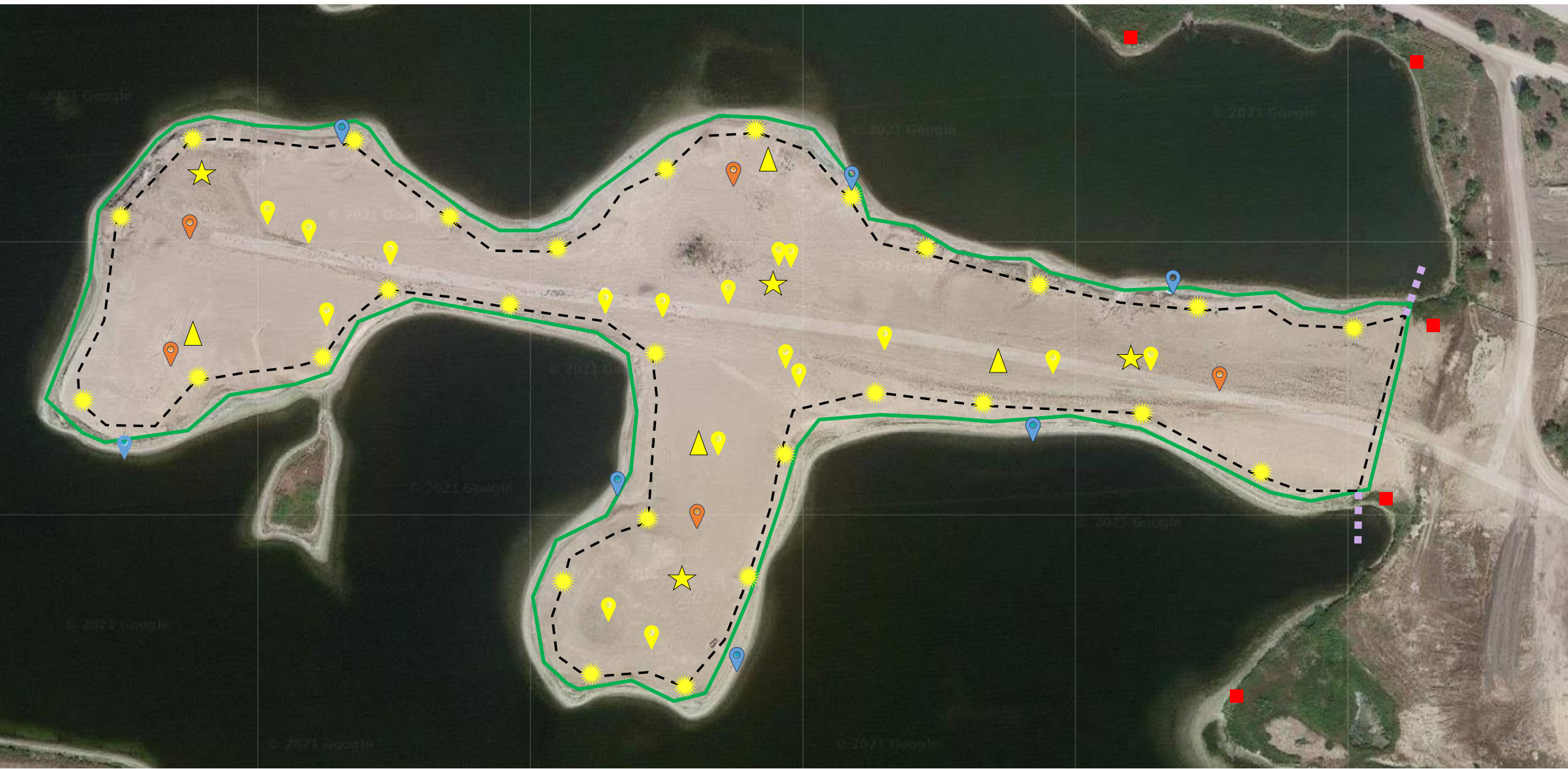
Additional Predator Monitoring



Nest Cameras

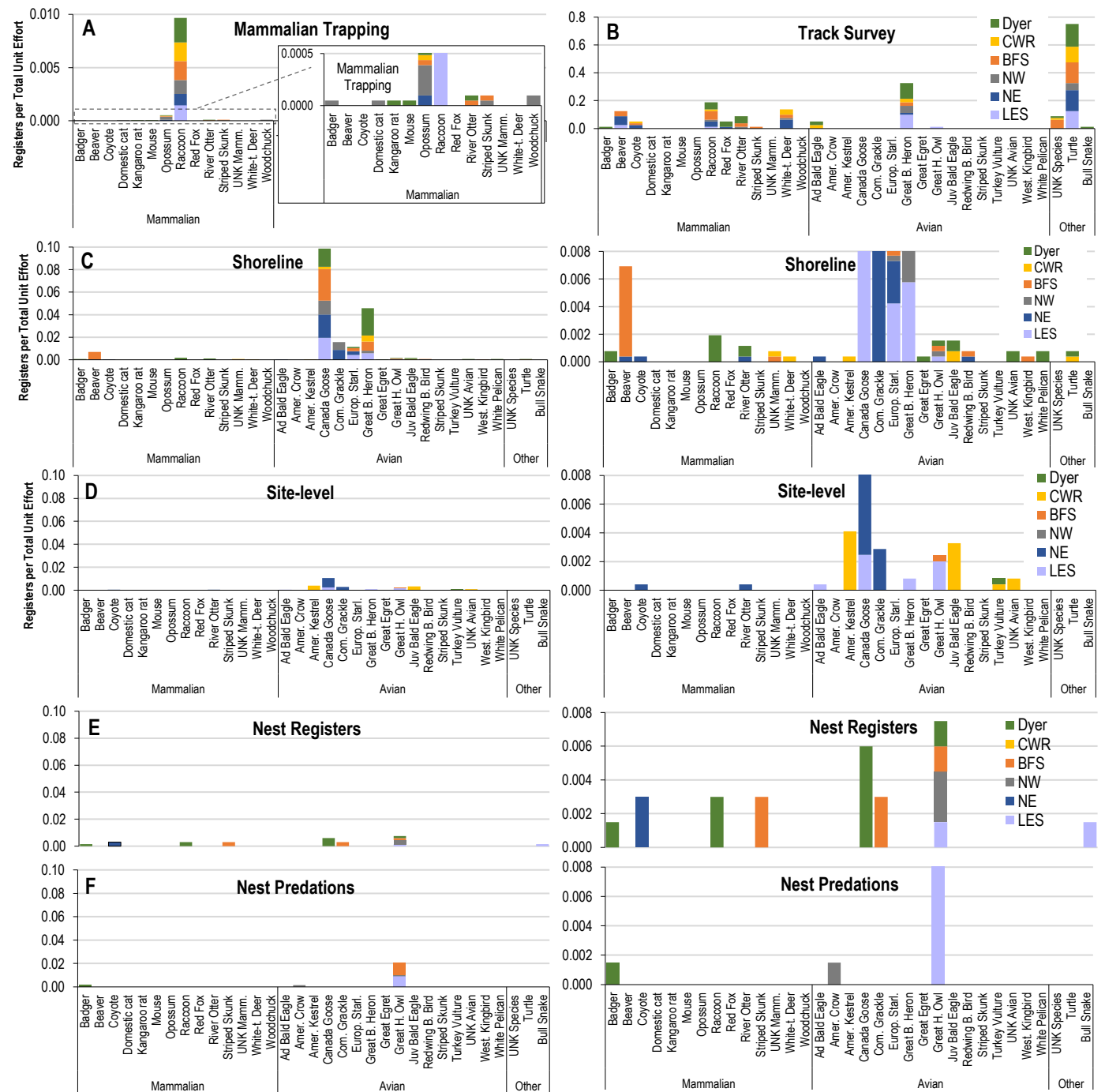


Additional Predator Management and Monitoring

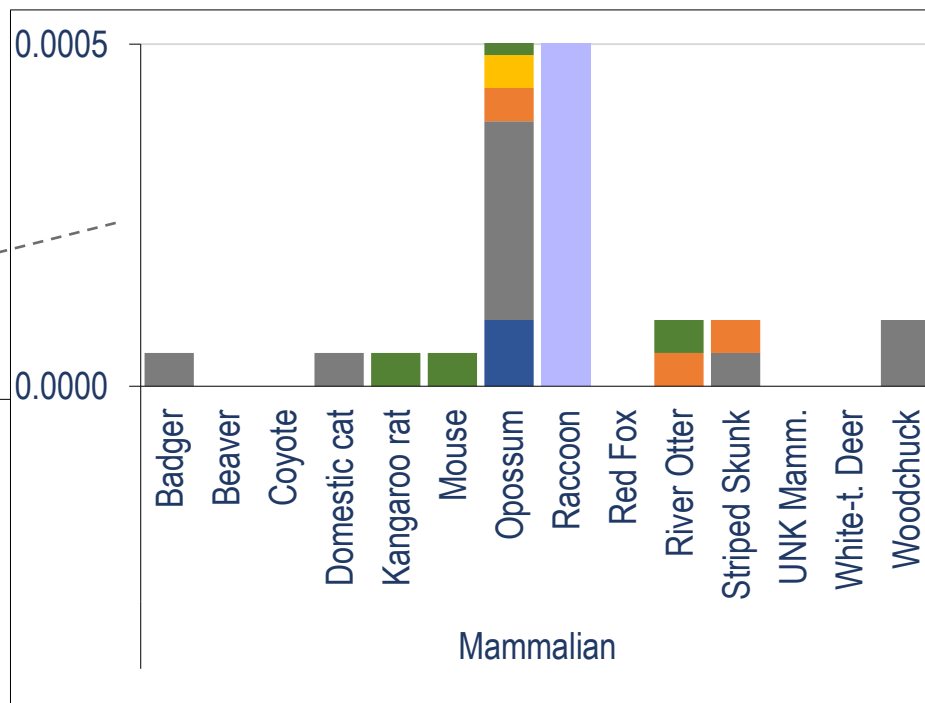
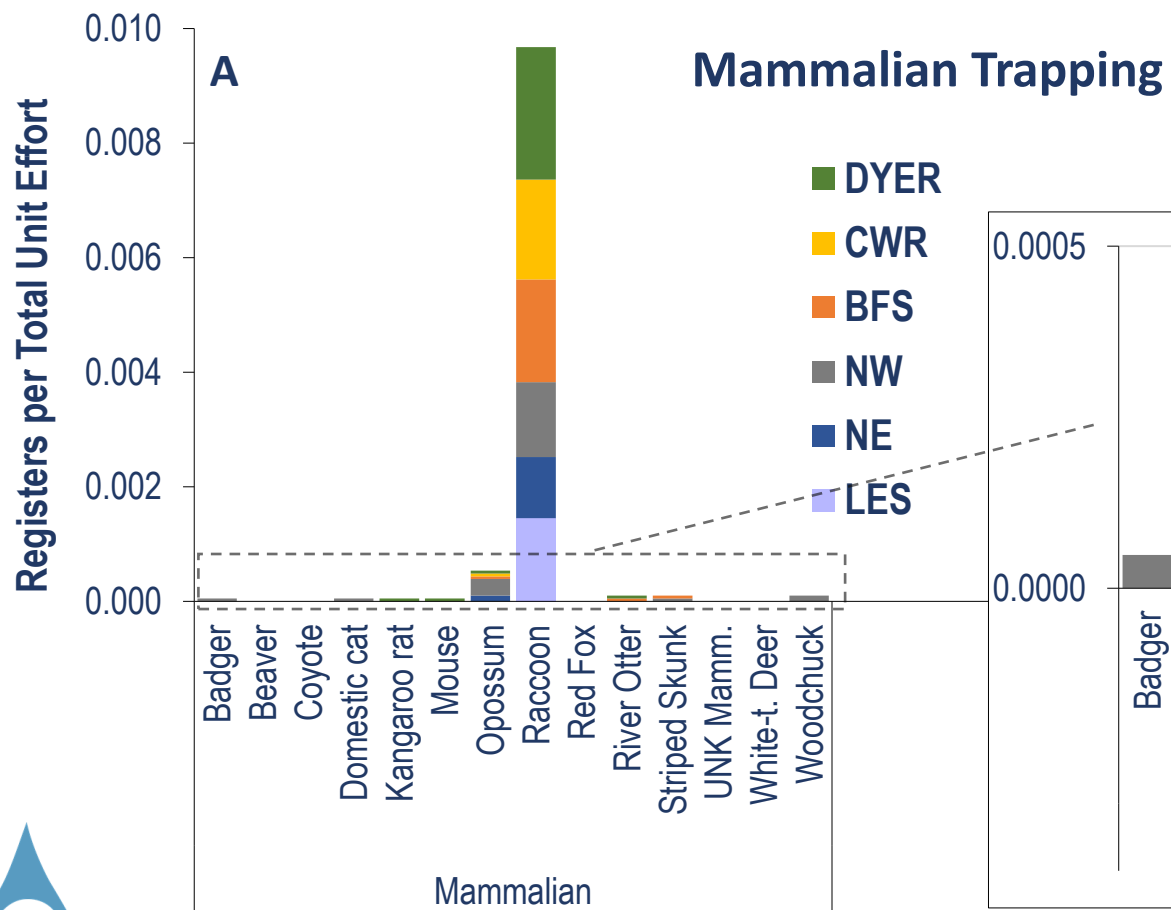


Predator Response— Effectiveness of Barriers

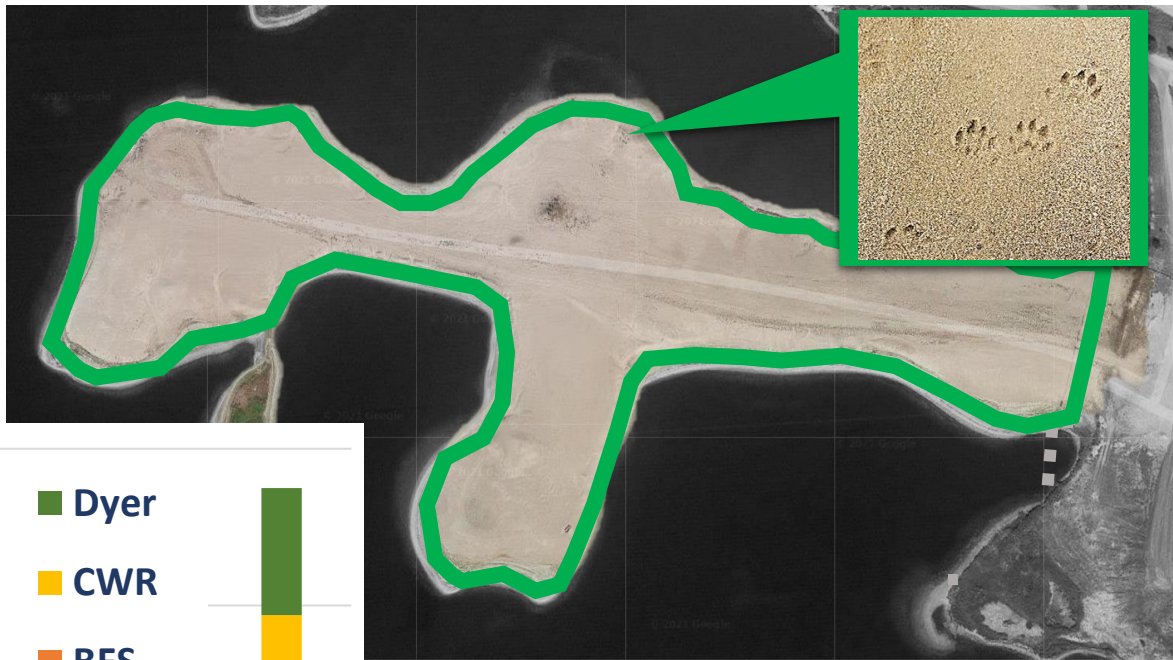
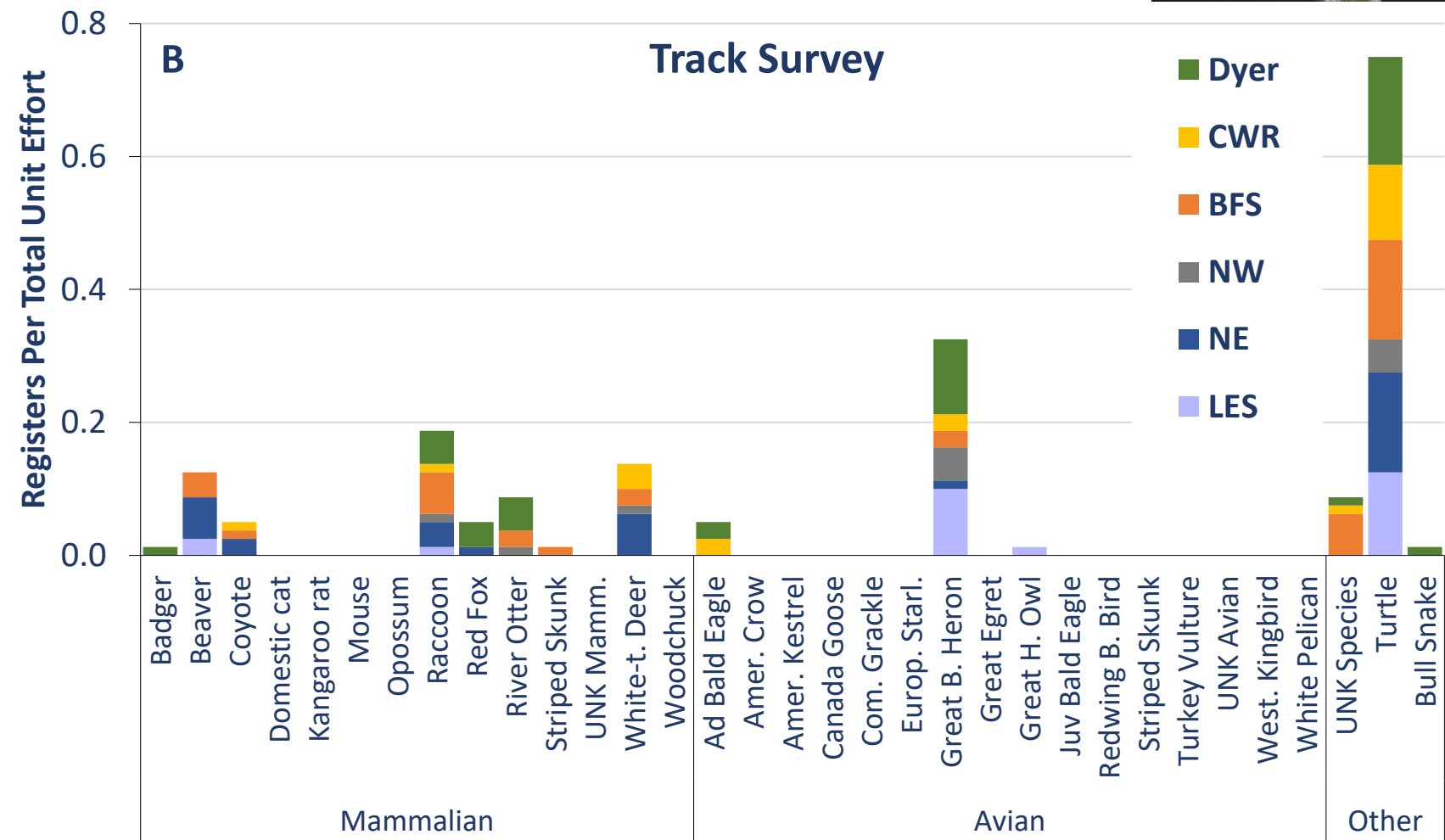
What's New in 2021 Report? Panel Figure #33



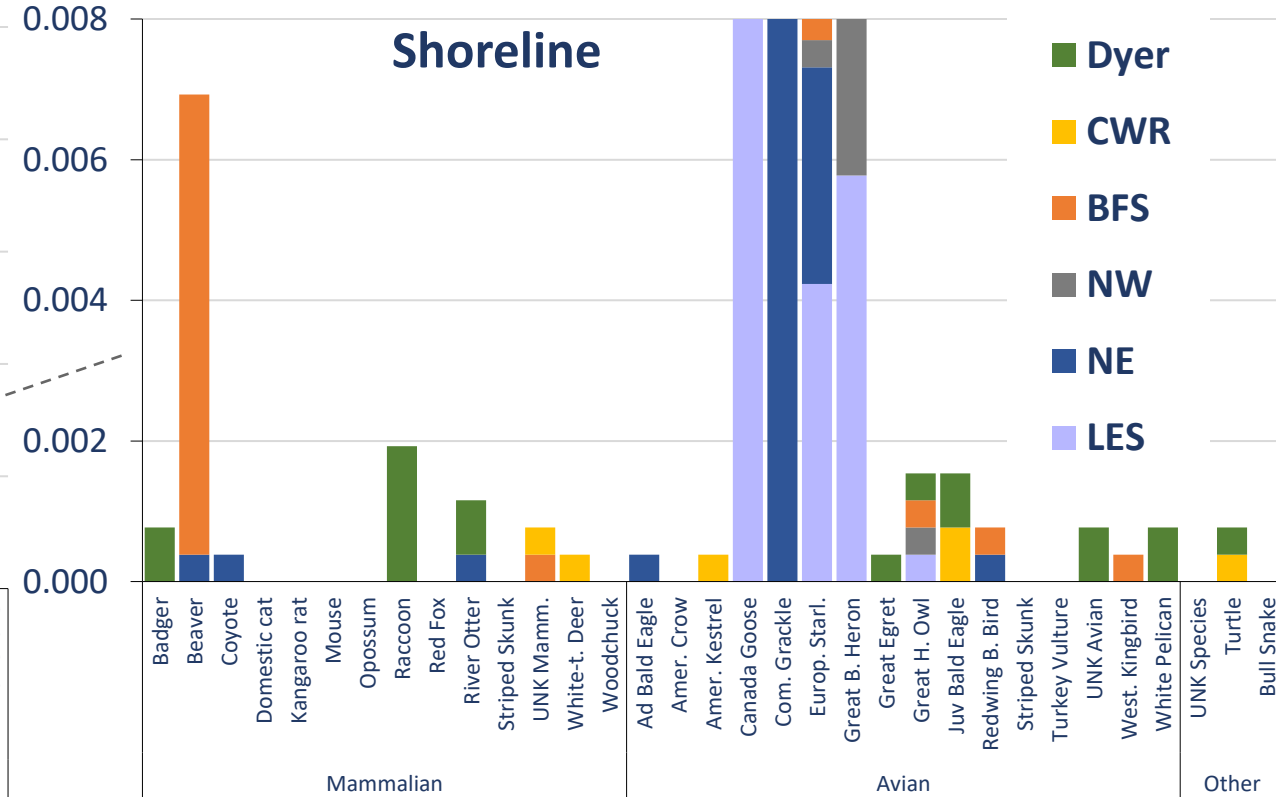
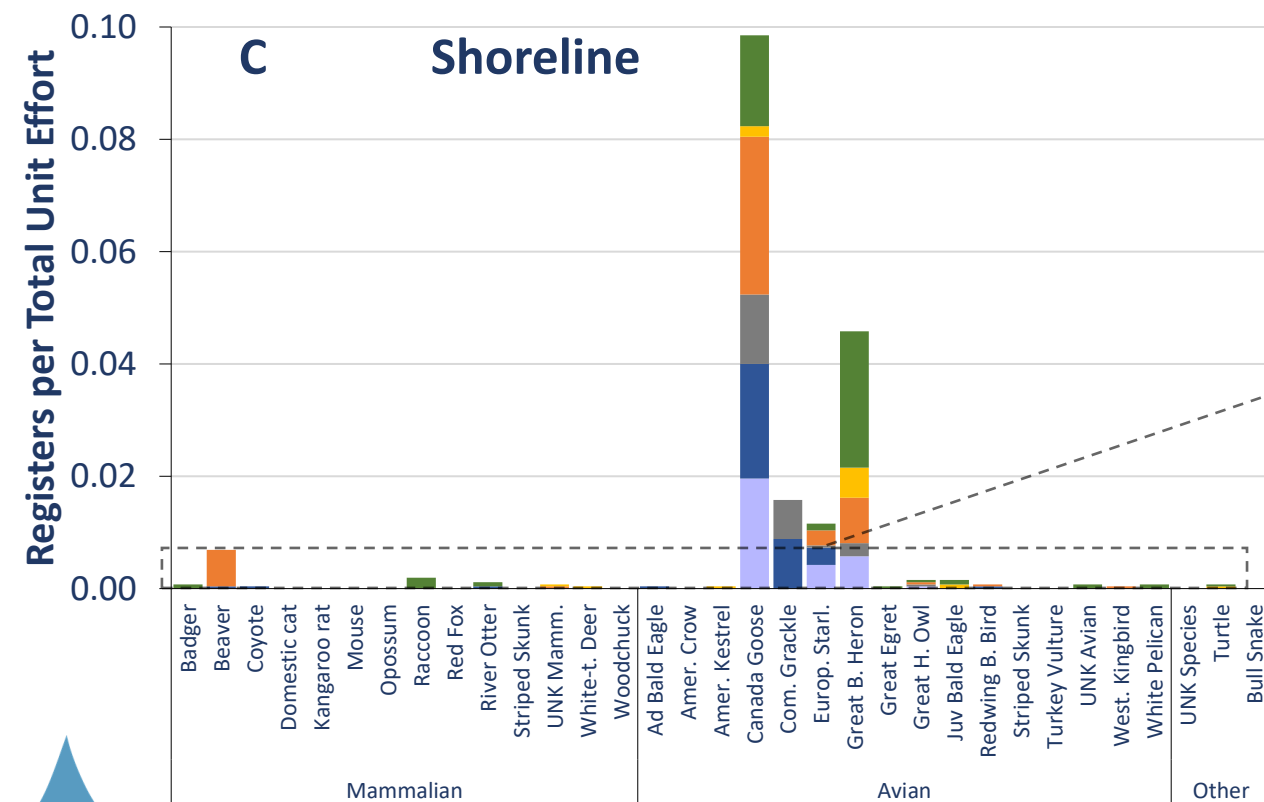
Predator Response— Effectiveness of Barriers



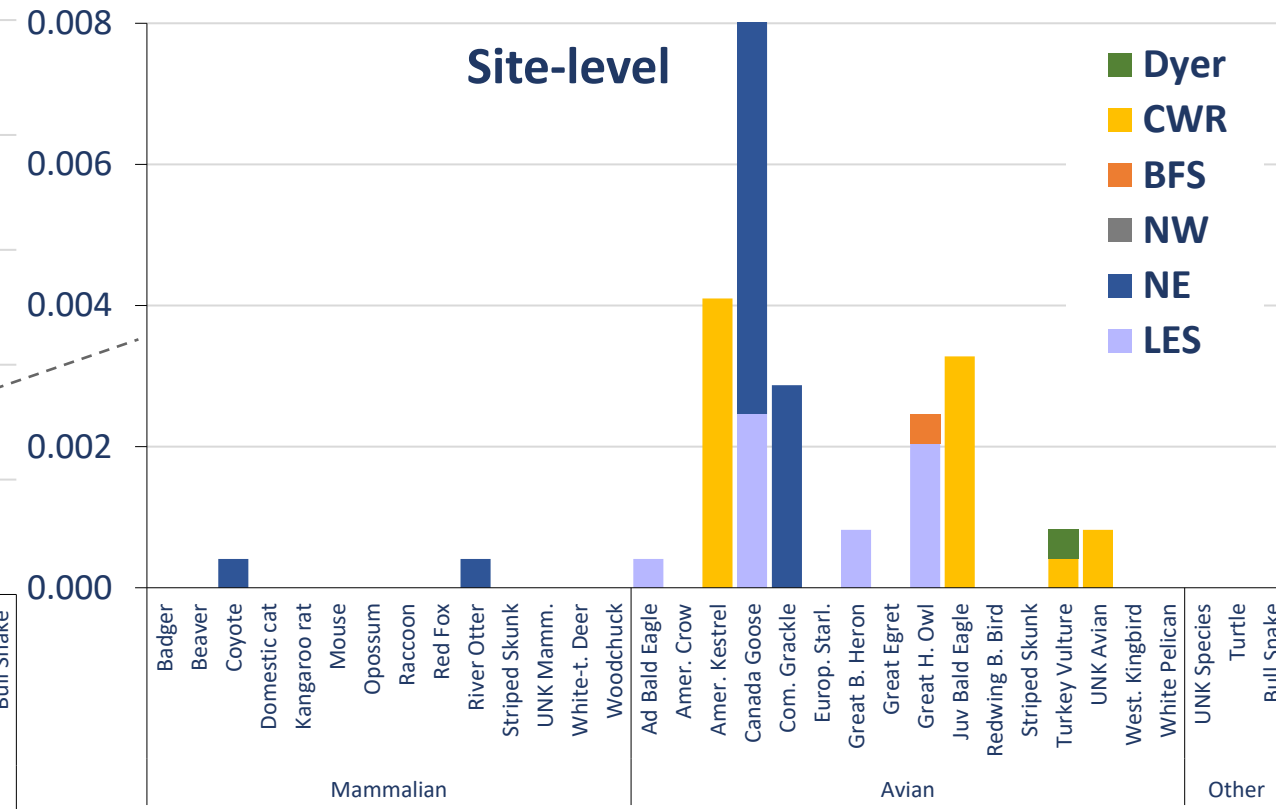
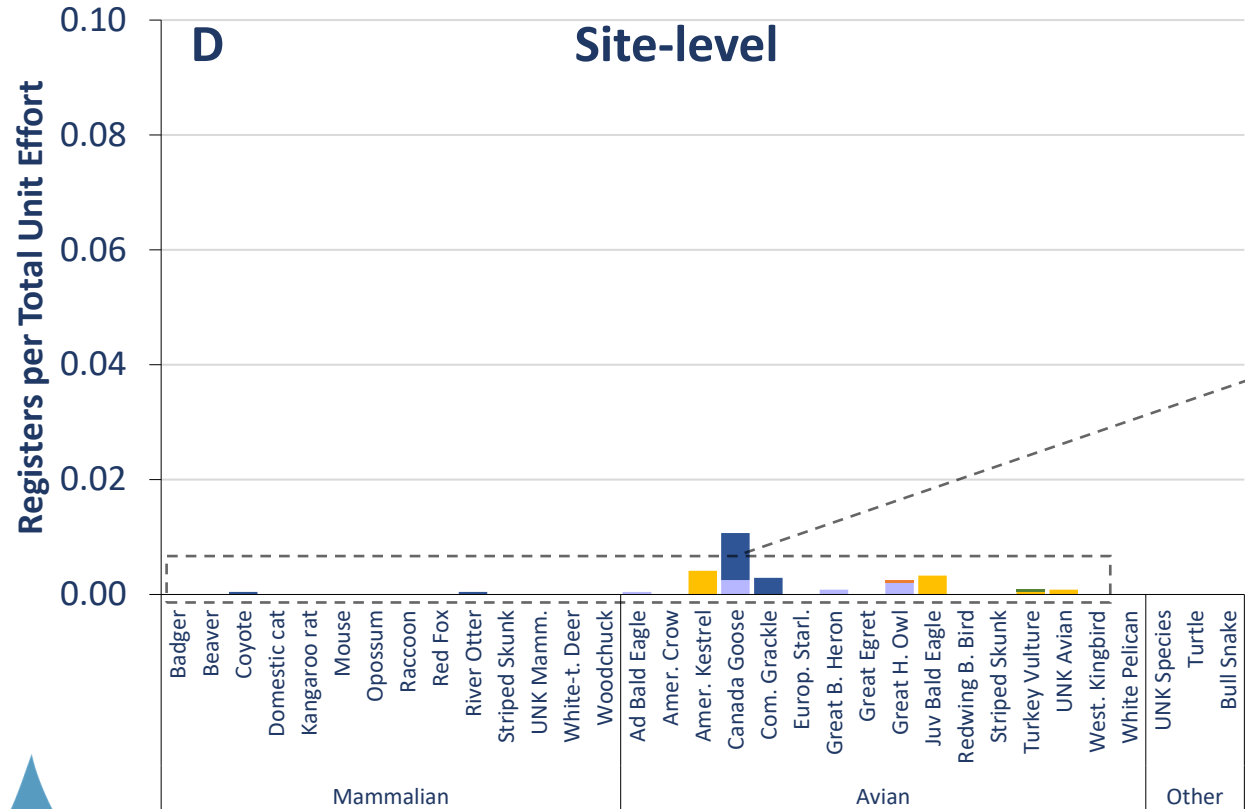
Predator Response— Effectiveness of Barriers



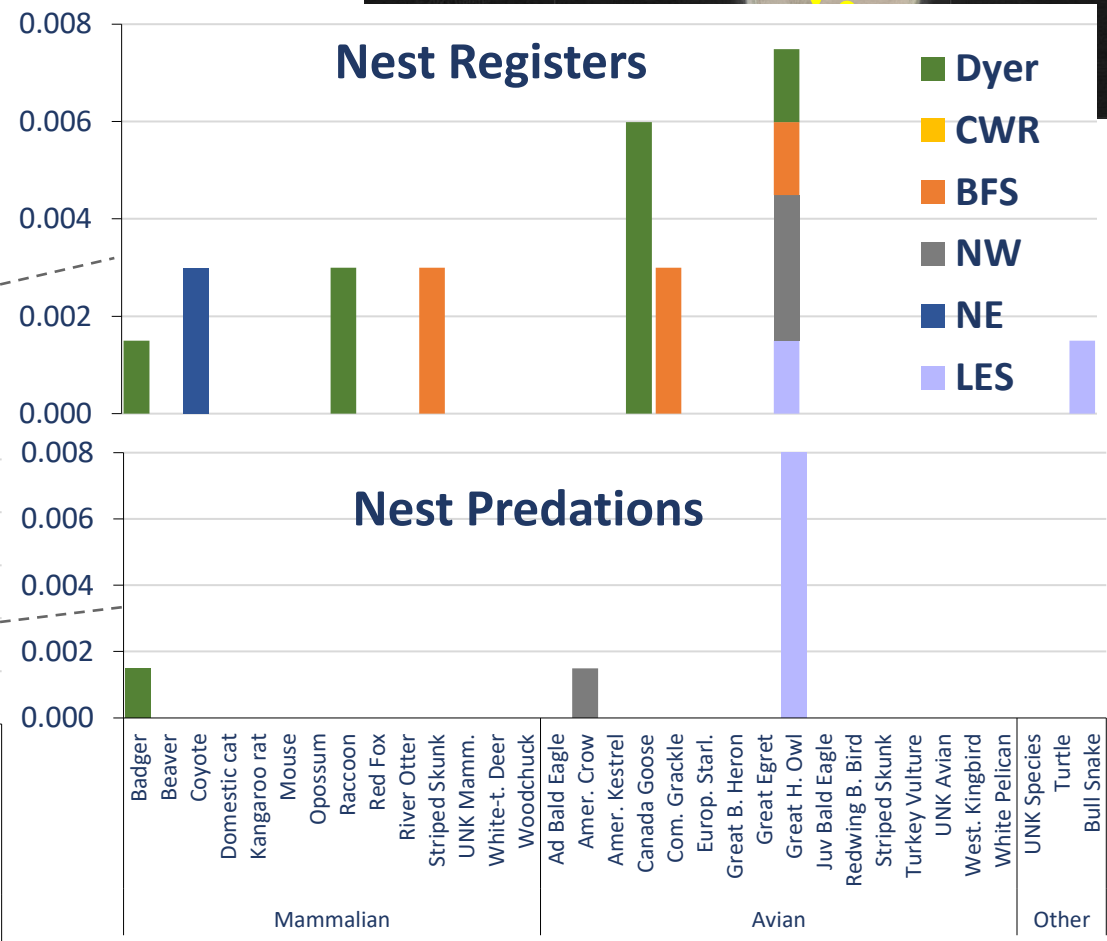
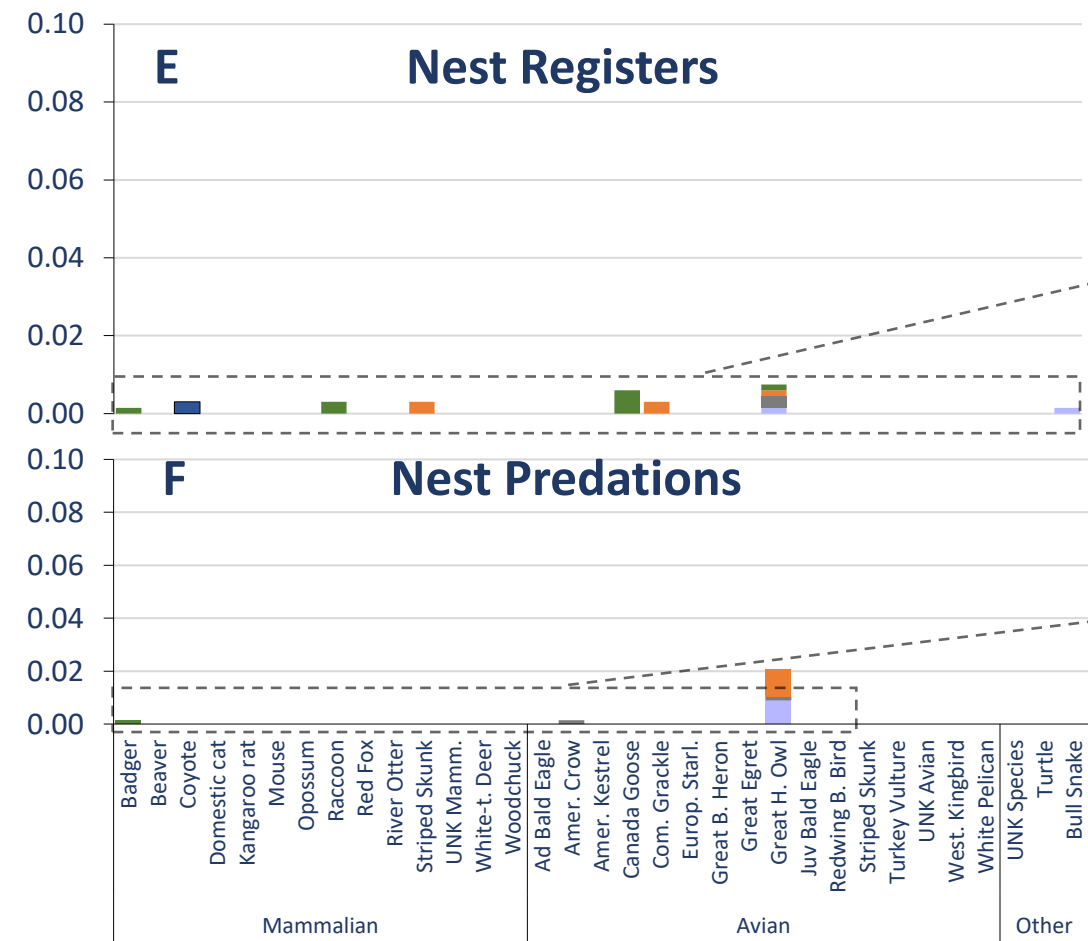
Predator Response— Effectiveness of Barriers



Predator Response— Effectiveness of Barriers

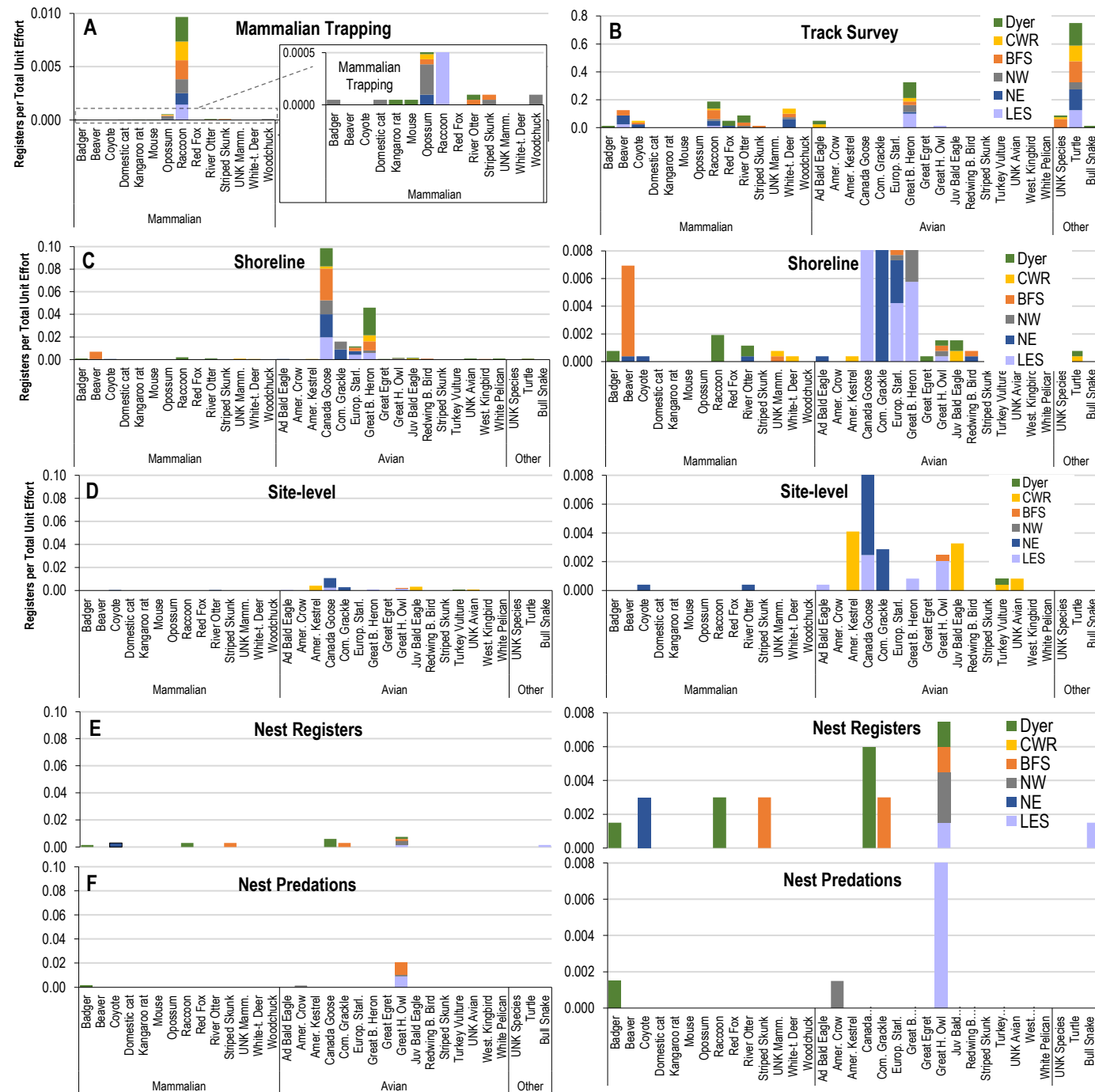


Predator Response— Effectiveness of Barriers



Predator Response— Effectiveness of Barriers

- Trapping = Raccoon
- Track survey = Turtle & GBH
- Camera Monitoring:
 - Avian presence ↑
 - Mammalian presence ↓



Target Species Response—Impact on Productivity

17 Total predation events

15 = Nest cameras

14



1



Target Species Response—Impact on Productivity

Piping Plover:

- 12 Nests
- 42 Eggs
- 5 Chicks

Predation = nests averaged 63% developed



Least Tern:

- 5 Nests
- 15 Eggs
- 0 Chicks

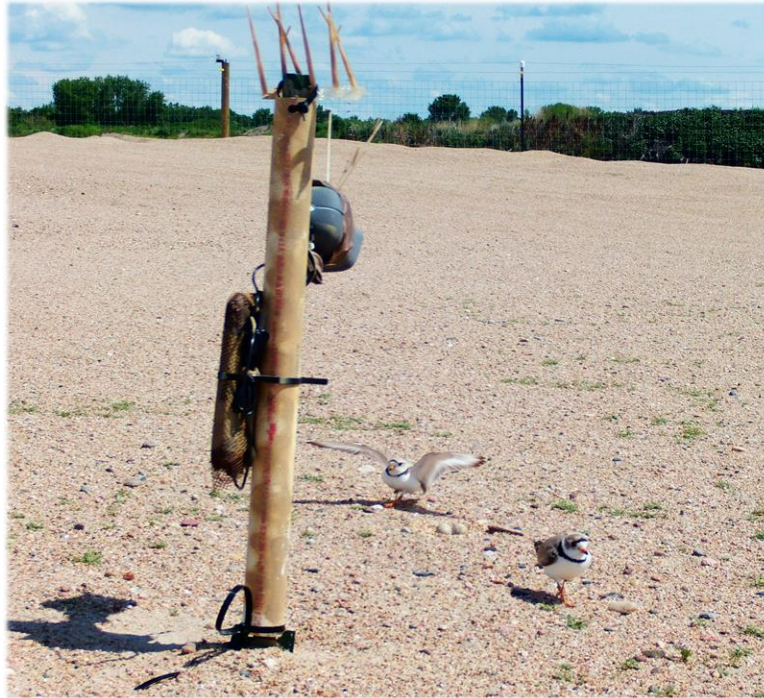
Predation = nests averaged 92% developed



→ Able to fate 77% of eggs laid and fate 92% of chicks at camera nests

EBQ's: #8—How much of an effect does predation have on PP productivity?

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#9—How effective is Program management at mitigating losses of PP productivity due to predation?

Impact:

- Nest Cameras:
 - GH Owls were the greatest threat = 88% of predation events
 - ↓ Failed UNK fates
- Plover: 12 Nests = 42 Eggs & 5 Chicks

Effectiveness:

- Lights
- Fences
- Management & monitoring
 - Zero avoidance
 - No negative impact on nest survival

