

Predator Monitoring and Management- Predator and Target Species Response



Presentation Topics-

- **Review EBQ's**
- **2021 Season**
 - Monitoring Results
 - Predation Impact
 - Additional Monitoring and Management
- **Looking Forward**
- **Discussion Questions**



Extension Big Questions—Maintenance Learning

- #8—Predation effect on PP productivity?



Impact



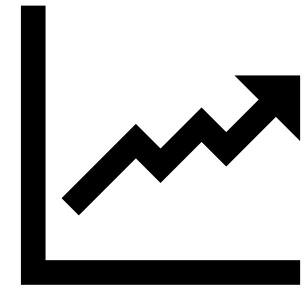
ID



OR



Timing



**Population Viability
Models**

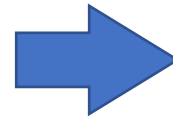
- #9—Management effectiveness at mitigating PP losses due to predation?



Effectiveness



Develop predator management



PP Response

2021 Plover and Tern Monitoring Results

- 250 acres OCSW habitat
- Nesting = $\text{PP} = 10$ of 17 OCSW sites
 $\text{LT} = 8$ of 17 OCSW sites
- AHR BPE = $\text{PP} = 36$
 $\text{LT} = 84$
- Fledge Ratio = $\text{PP} = 0.97$
 $\text{LT} = 1.21$
- Productivity varies by site
- Lowest proportion of FUNK losses since 2010

Predation

36 Unique predator presence/
predation events

- 15 = Documented predation events



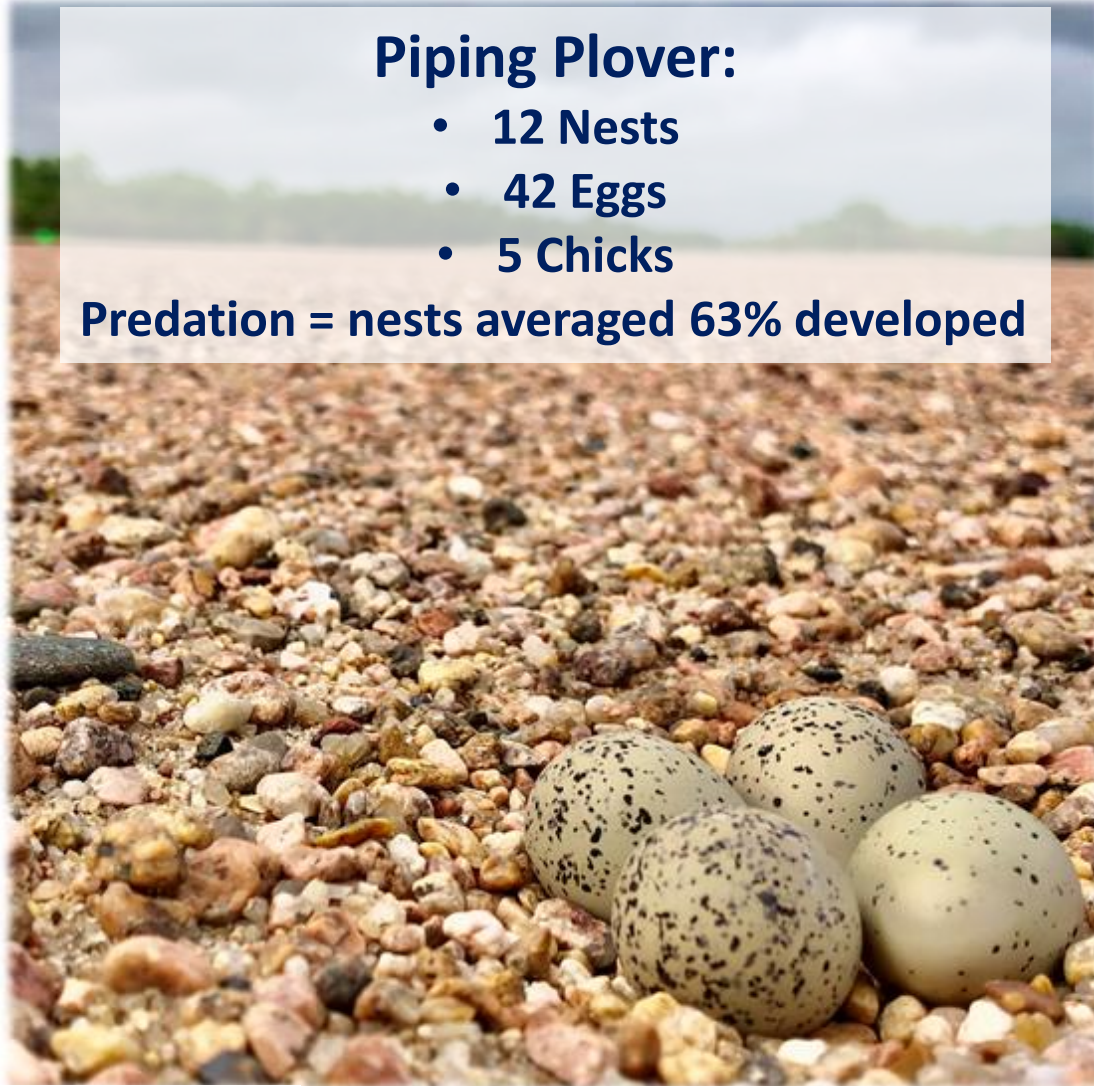
= 17 Total

Predation Impact

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

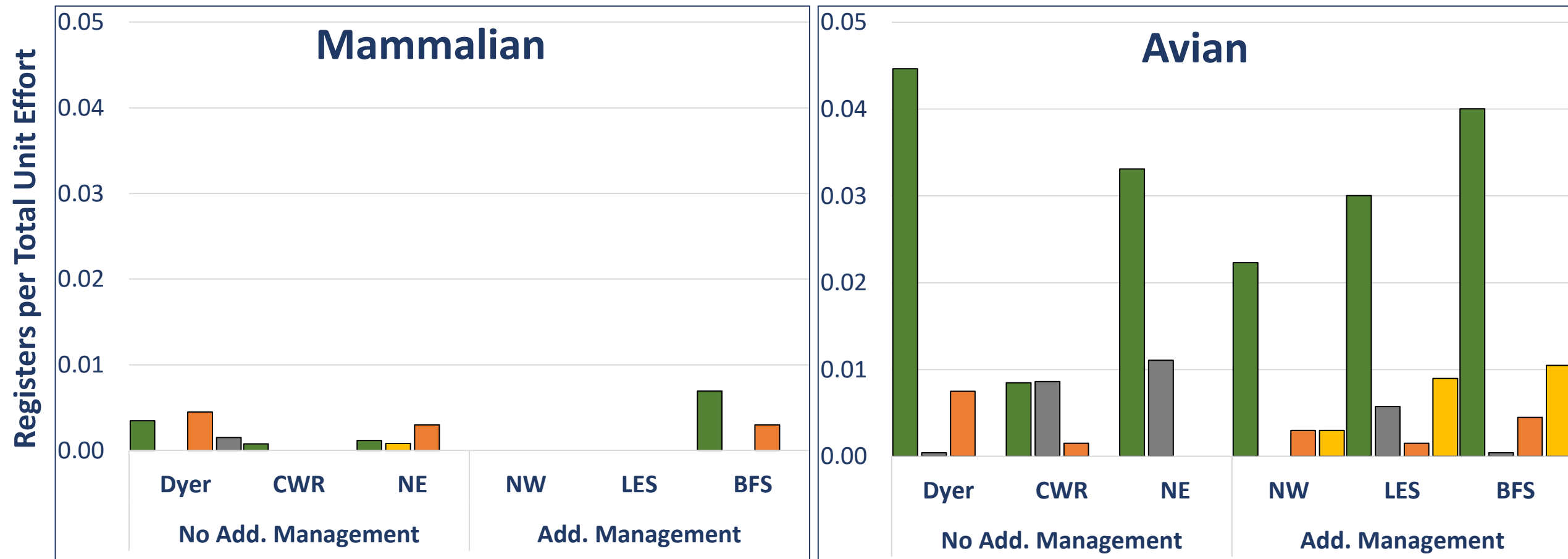


Able to fate 77% of eggs laid and fate 92% of chicks at camera-monitored nests

Additional Monitoring and Management



Effectiveness of Barriers



Looking Forward – *Short Term*

Continuing <i>Fencing and Lighting</i>	Interrupting <i>Other Maintenance Techniques</i>
PROS: Quantify: <ul style="list-style-type: none">• Mitigation effectiveness• Predation losses• PPL response	PROS: <ul style="list-style-type: none">• Possibly reduce predation• Test alternative techniques
CONS: Losses with no solutions tested	CONS: Unable to Quantify: <ul style="list-style-type: none">• Mitigation effectiveness• Predation losses• PPL response



Looking Forward – *Long Term*

PROS

CONS

Nest Caging

Taste Aversion

Artificial Nests

Artificial Chick Shelters

Discussion Questions

1. What other information could we gather that may help decision-making on how to deal with avian predators?
2. Any suggestions for improving implementation of predator management and monitoring of predator and target species response?
3. How do we better evaluate effectiveness of our predator management actions? How to best present for decision-making?