



Plovers in a Changing World

Maddy Schwarz, Snowy Plover and Least Tern Director

Overview

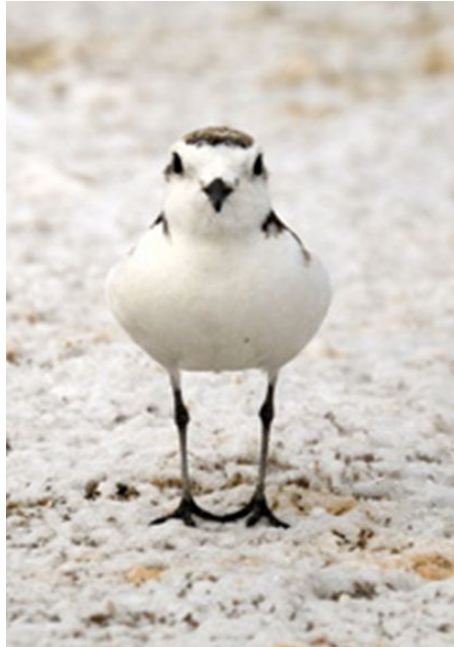
- Part 1: Snowy Plovers
 - Identification
 - Biology
- Part 2: Habitat and Threats
 - South Bay habitat
 - Threats
 - Tidal marsh restoration
- Part 3: 2024 SNPL Breeding
 - Overview
 - Most productive ponds
- Part 4: The Larger Management Context
 - Oyster Shells
 - Predator Control
- Part 5: Get Involved



Part 1: Western Snowy Plover

Western Snowy Plover (*Charadrius nivosus nivosus*)

- Small ground-nesting shorebird
- ~ 6 inches tall



Adults

Breeding: dark neck, crown, and ear patches



Adults cont.

Non-breeding: markings faded or absent



Chicks

Precocial, cryptic coloration, fledge at 28-33 days

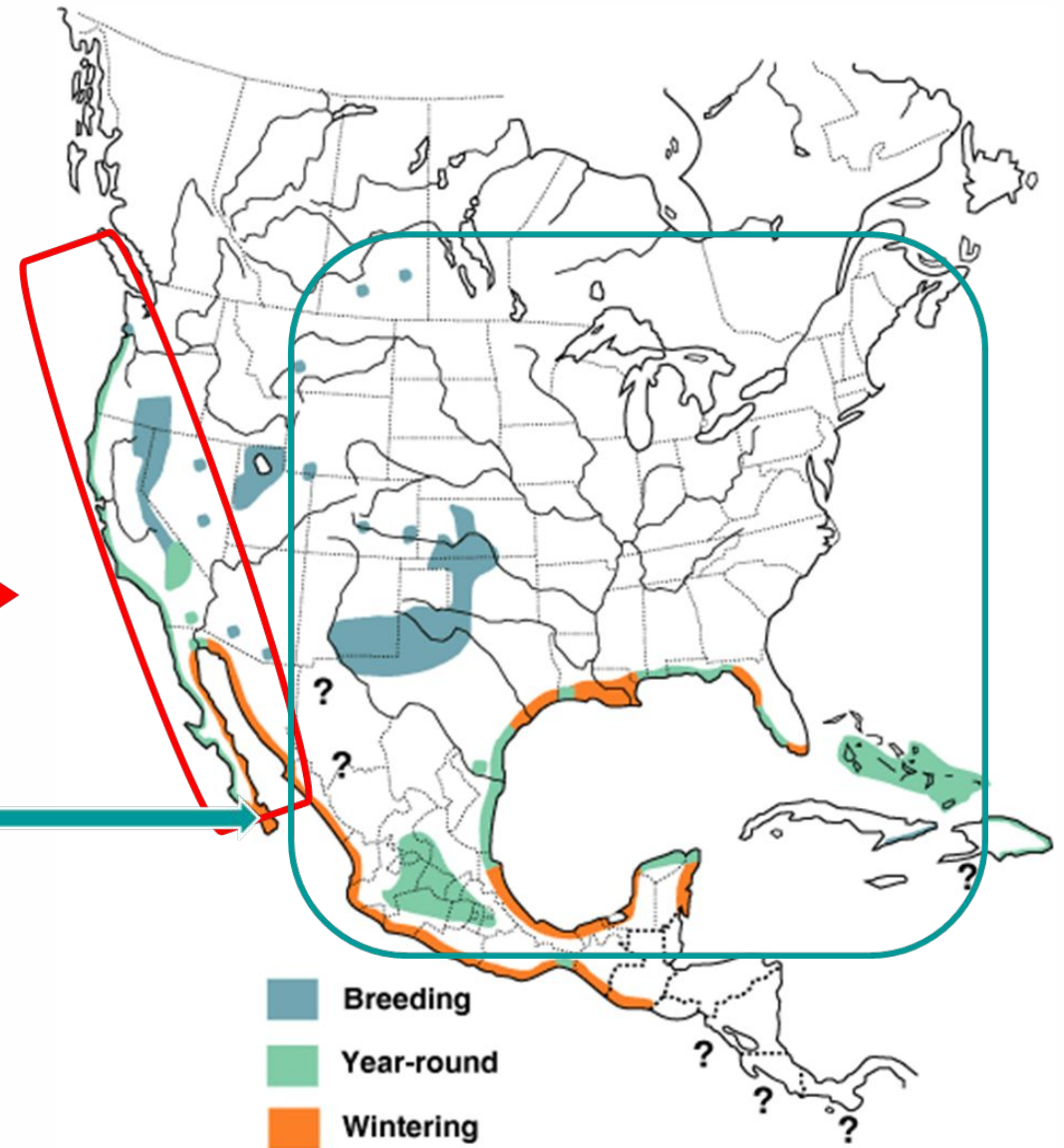


Species Range

Pacific Coast Western
Snowy Plover



Interior population



Range and Habitat

Rangewide



- Dune-backed sandy beaches
- River bars
- Salt panne



San Francisco Bay



- Salt panne in salt ponds
- Levees
- Dredge material

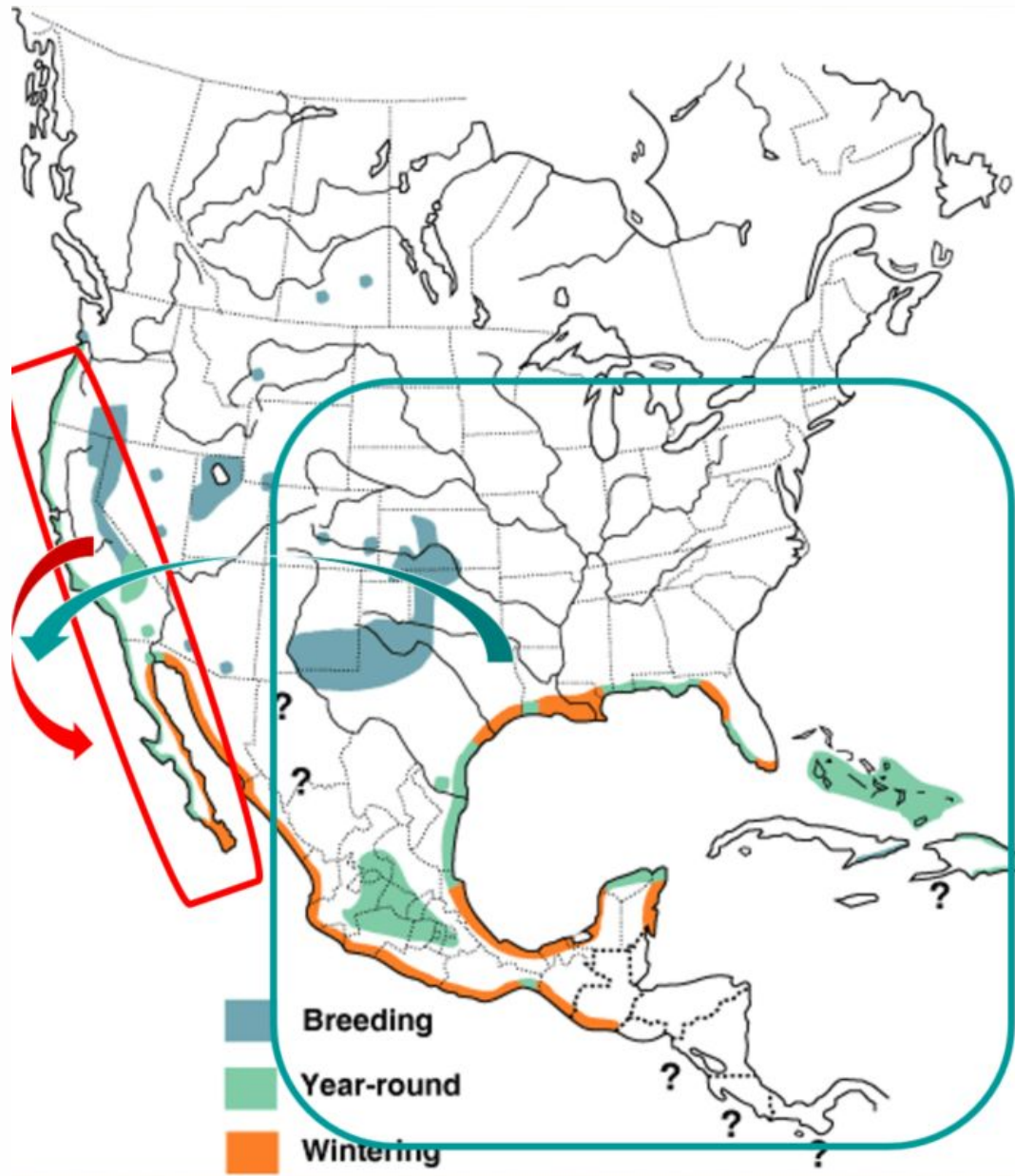
Migration

Pacific Coast pop

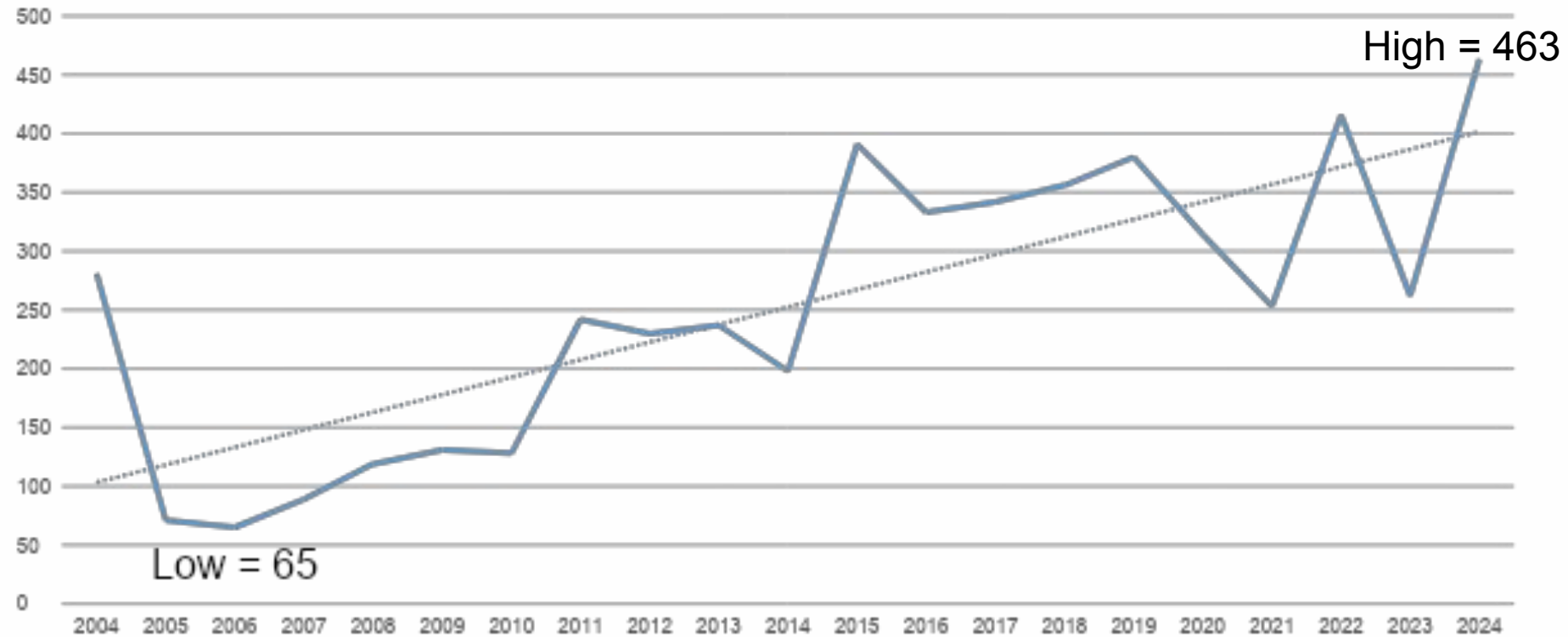
- Stays within range
- May migrate north or south to coastal site

Interior pop

- Winter on Pacific or Gulf Coast



Bay Area Winter Plover Numbers



Based on surveys in January each year

Life history: Non-Breeding



- Often return to same wintering grounds
- Roost in loose flocks
- Both coastal and interior birds use coast

Life history: Non-breeding cont.



- Wintering habitats are VERY important
 - Rest
 - Forage
 - Fat reserves for next year

Life History: Breeding

- March 1 – September 15
- Cryptic coloration to blend in



Nests

- 1-3 egg clutch, cryptic coloration
- Incubation \approx 30 days



Incubation

- Adults share incubation duties

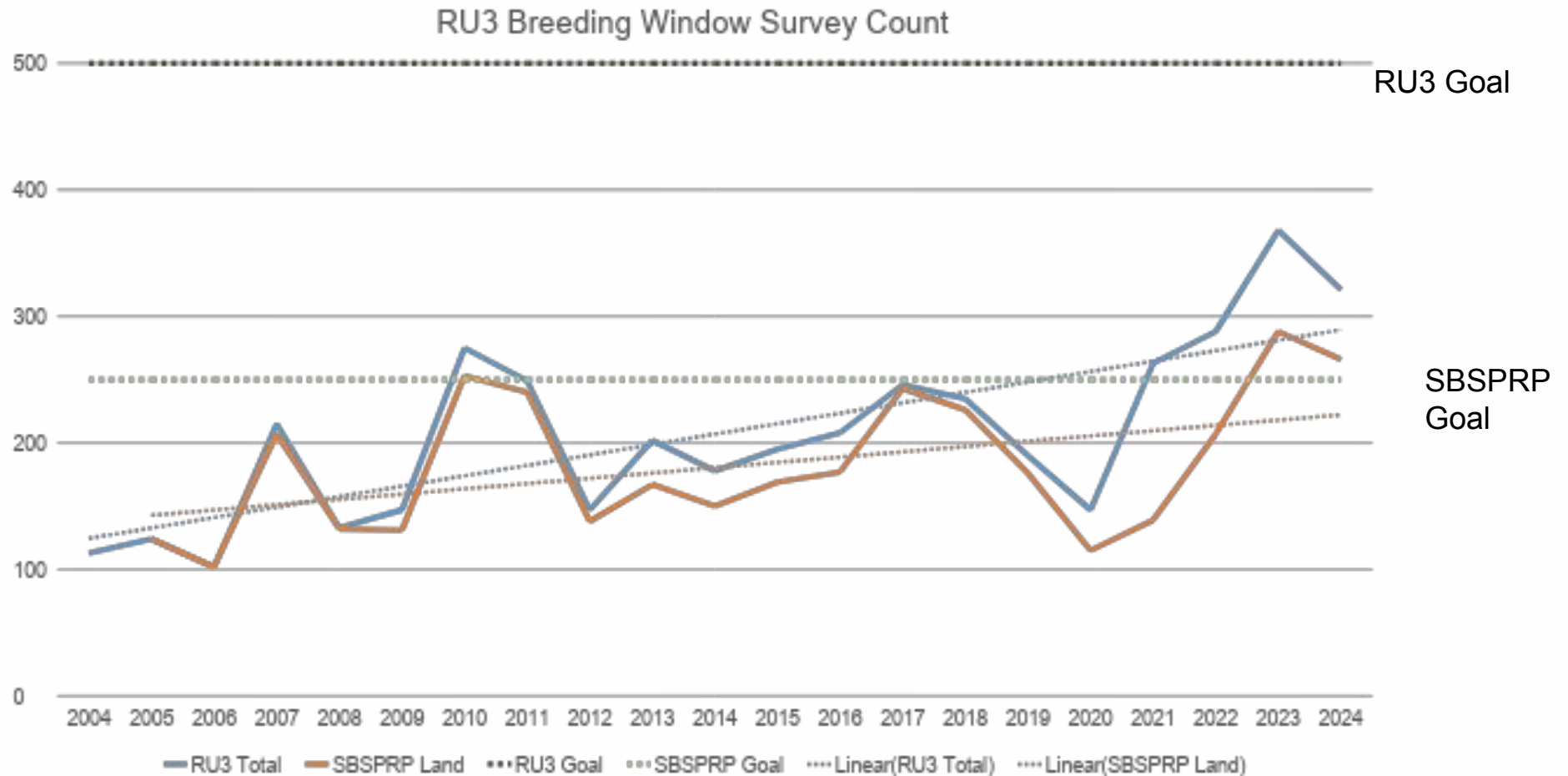


Chick-rearing




- Males attend chicks:
 - Lead
 - Brood
 - Don't actively feed
- Young chicks freeze in place if threatened
 - <2 weeks
- Older chicks run away if threatened
 - >2 weeks

SF Bay Breeding Population



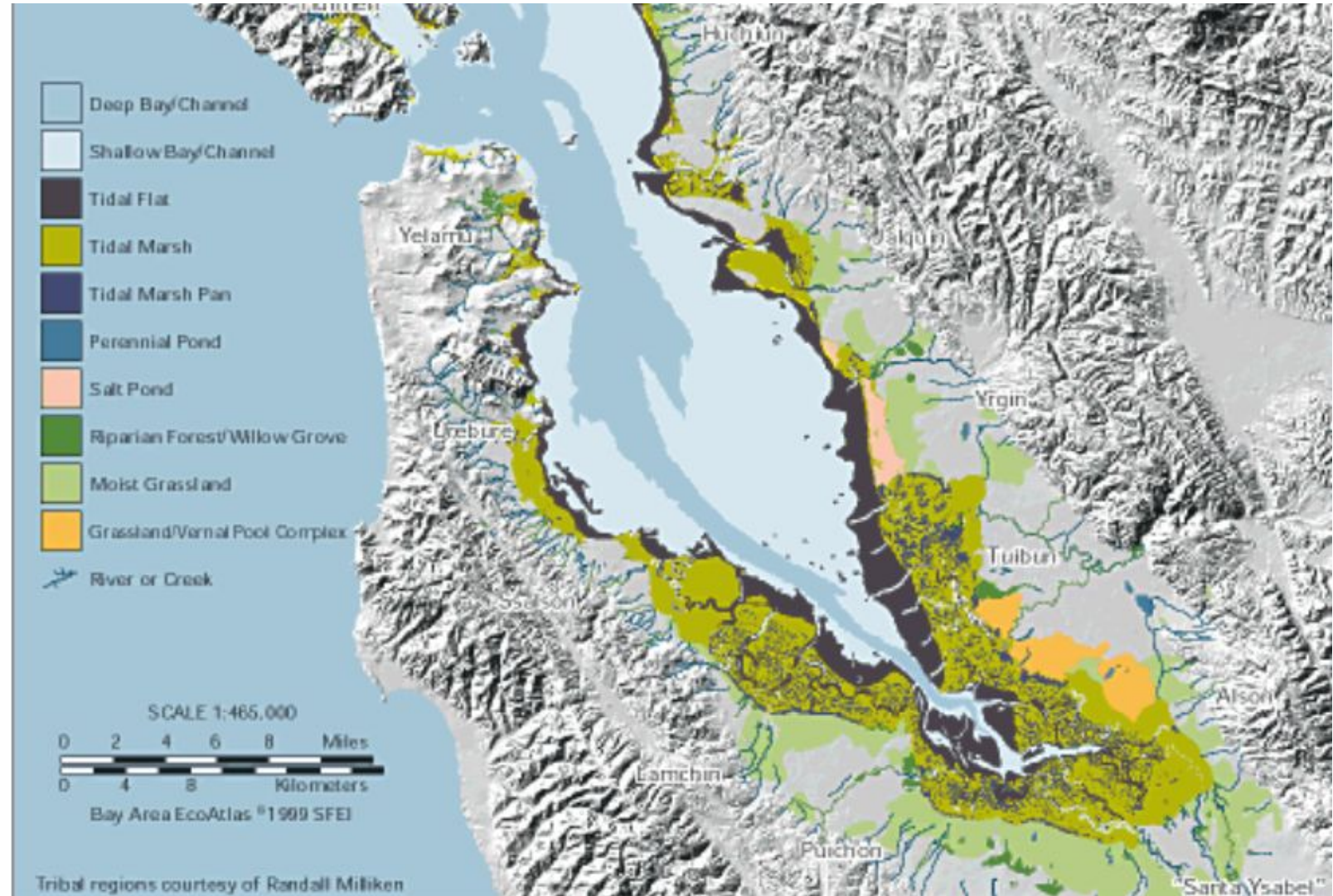
Based on surveys in May of each year

An aerial photograph of San Francisco Bay and the surrounding urban areas. The map is overlaid with various colored polygons representing different habitat types. The colors include shades of green, brown, orange, red, and purple. The text "Part 3: Habitat and Management" is overlaid on the map in a white, sans-serif font.

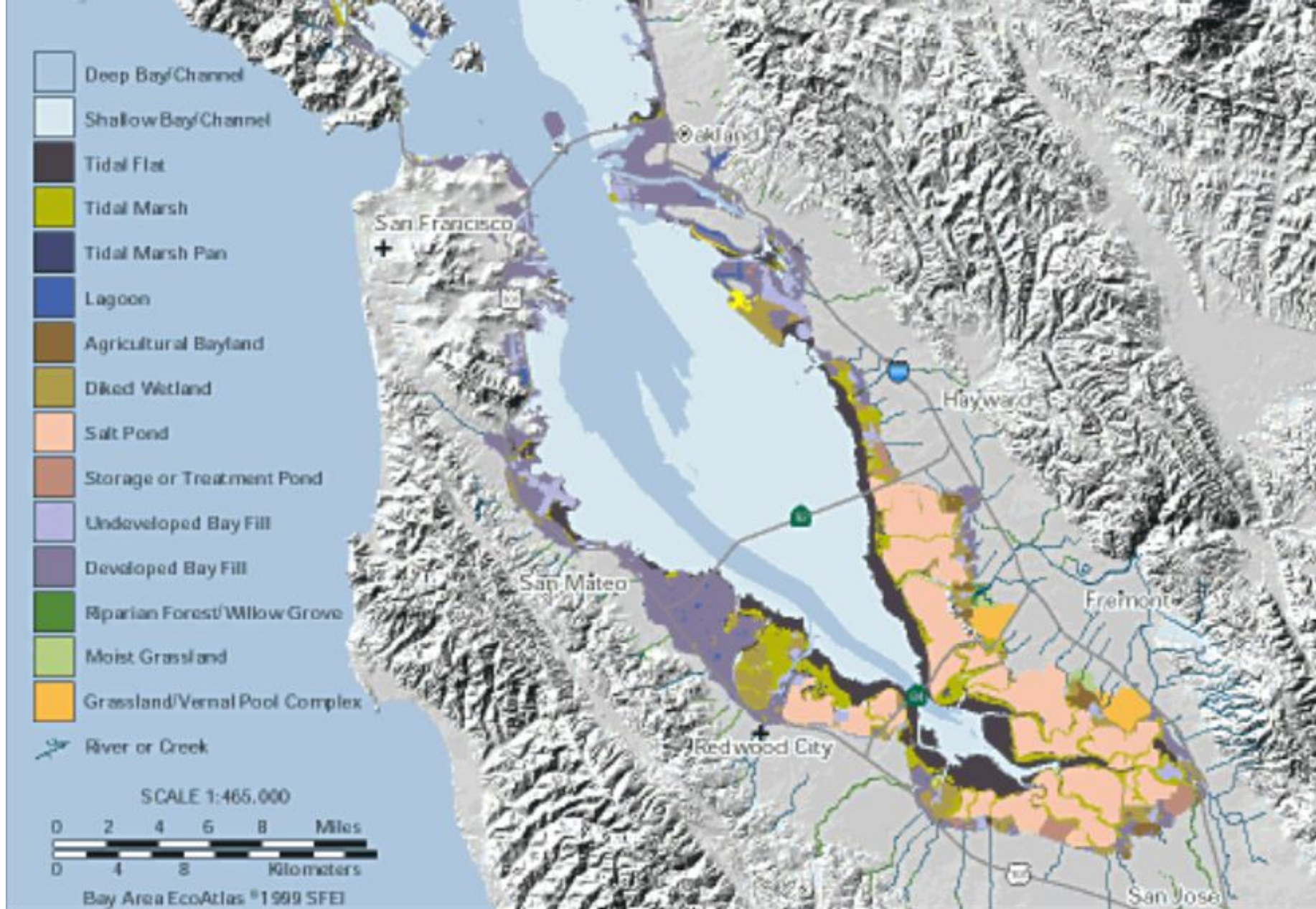
Part 3: Habitat and Management

Historical South Bay

- Complex network of sloughs and marshes
- Limited salt pan at the far south end
- Not much plover or tern habitat

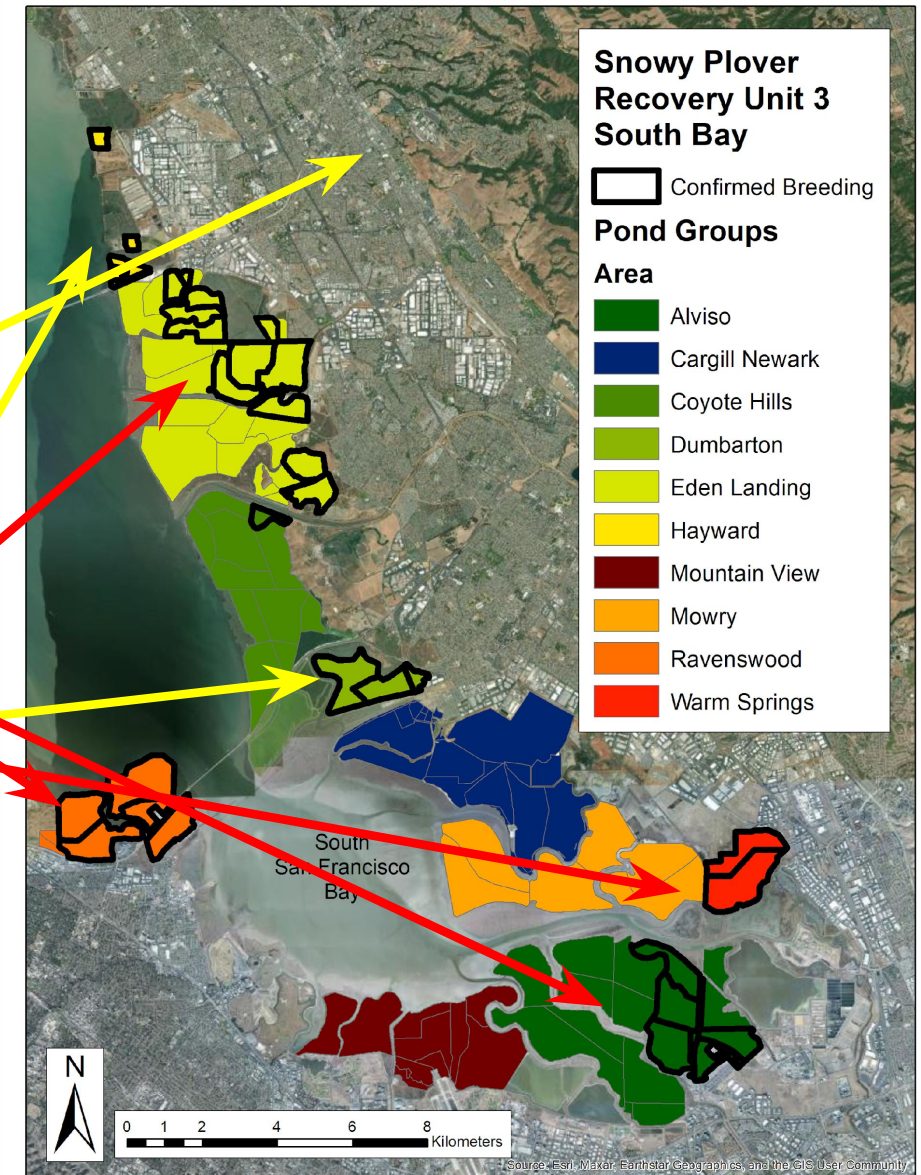






Snowy Plover Sites in the South SF Bay

- Ravenswood - Menlo Park
- Alviso and Mtn View - San Jose, Sunnyvale, Mtn View
- Warm Springs - Fremont
- Dumbarton - Newark
- Coyote Hills - Fremont
- Eden Landing - Hayward
- Hayward Shoreline - Hayward



Threats: Predators

Raptors, mammals, corvids



Threats: Disturbance



Threats: Habitat Loss

Invasive Plants



Development and Climate Change



South Bay Salt Pond Restoration Project

- Restore 15,000 acres of salt pond habitat
 - Open ponds up to tidal action
 - Vegetation grow, return to marsh
- At least 50 year project!



April 2008



September 2009

Salt Pond A21

South Bay Salt Pond Restoration Project: Impacts

Increased:

- Tidal Marsh habitat
- Environmental health
- Resiliency to Climate Change
- Public Access



Decreased:

- Dry pond breeding habitat
- Winter habitat for migratory shorebirds and waterfowl



Part 3: 2024 SNPL Breeding



Total Nests = 396

68 found as inactive

Total Nests Monitored = 328

2nd
highest
ever!

Failed = 138
42%

Depredated = 132
40%

Hatched = 177
54%

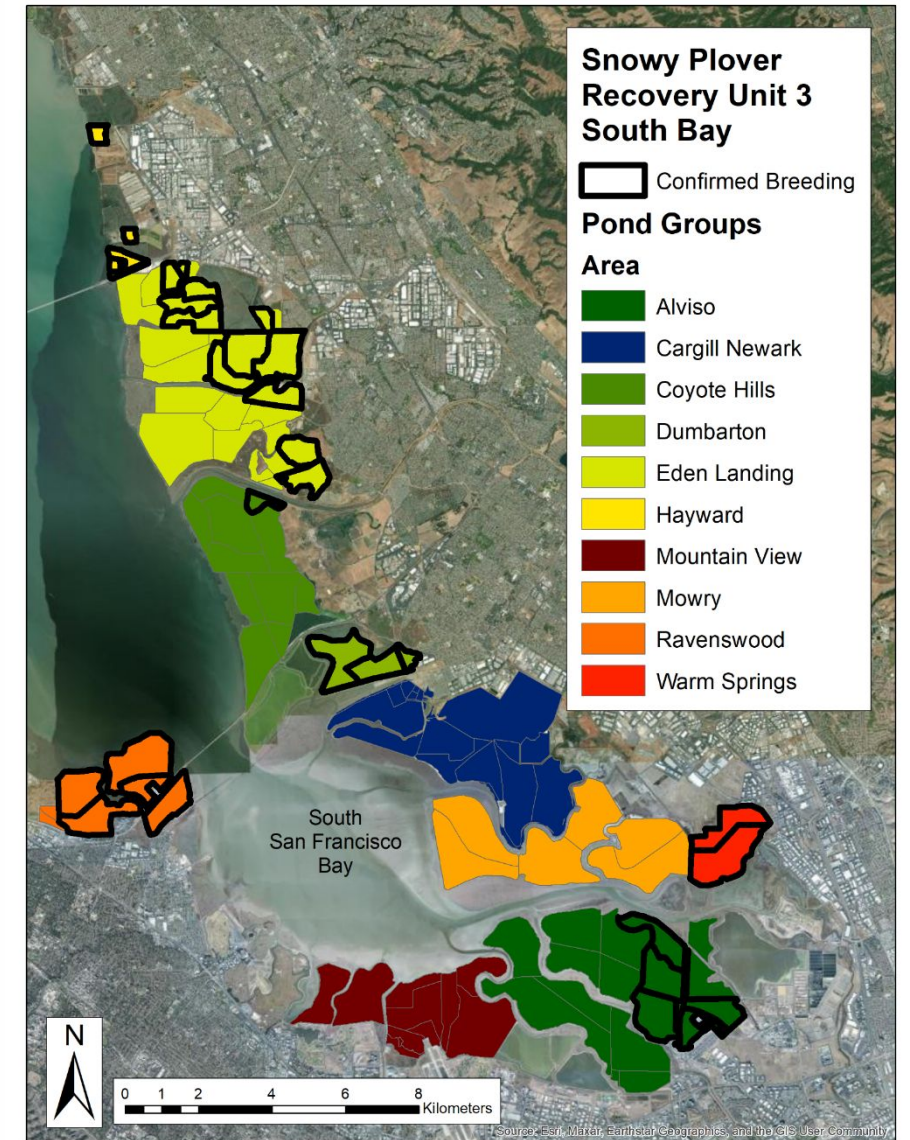
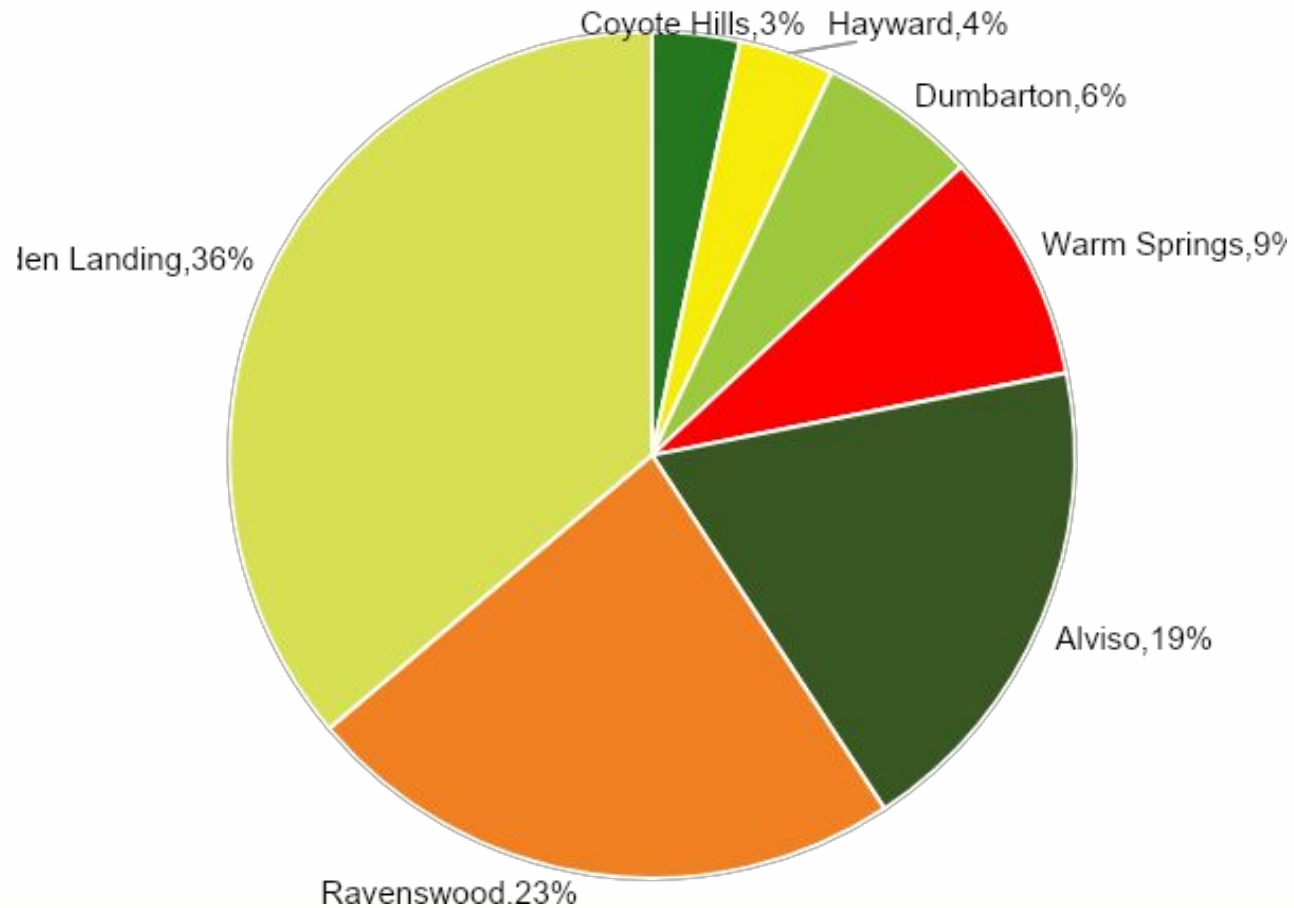
53%
average

Failed to Hatch = 4, 1%
Abandoned = 1, <1%
Flooded = 1, <1%

Unknown Fate = 13
4%

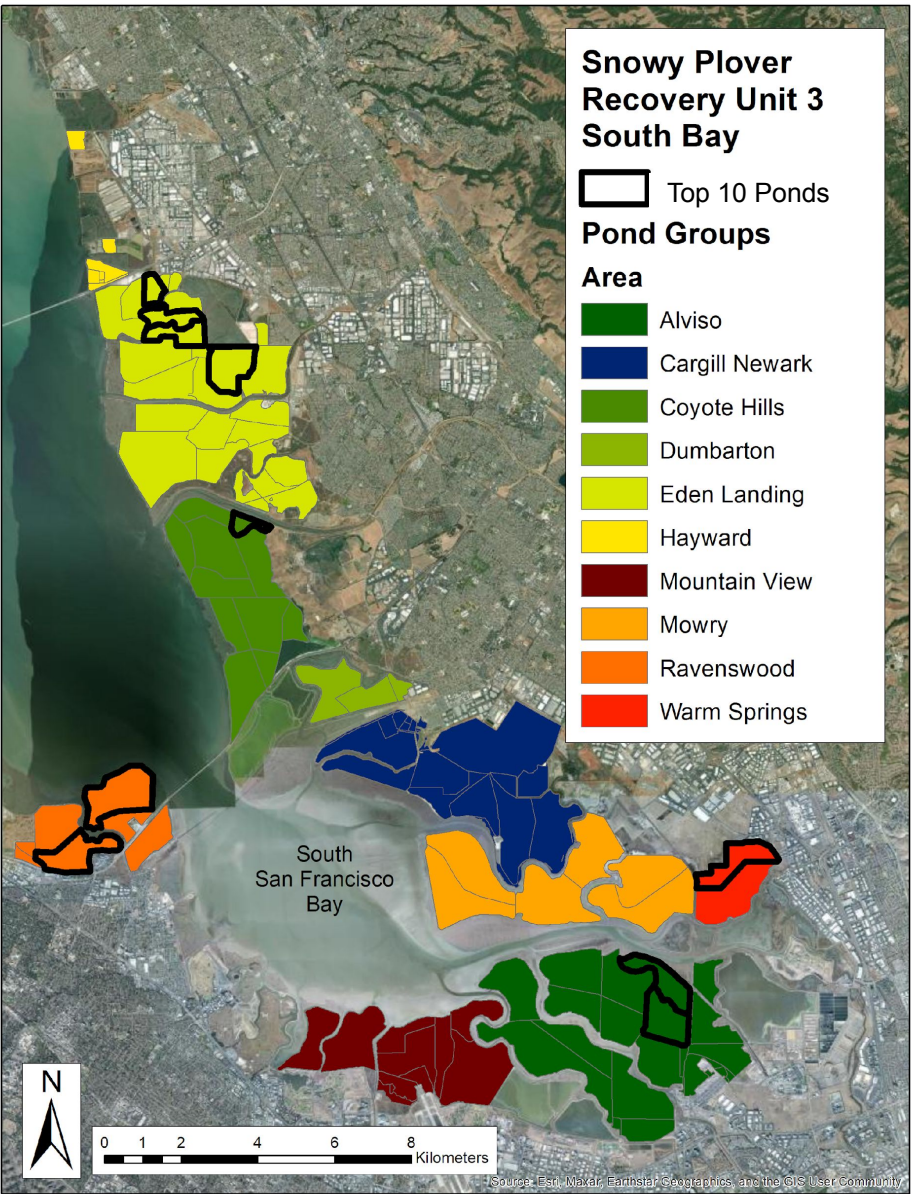
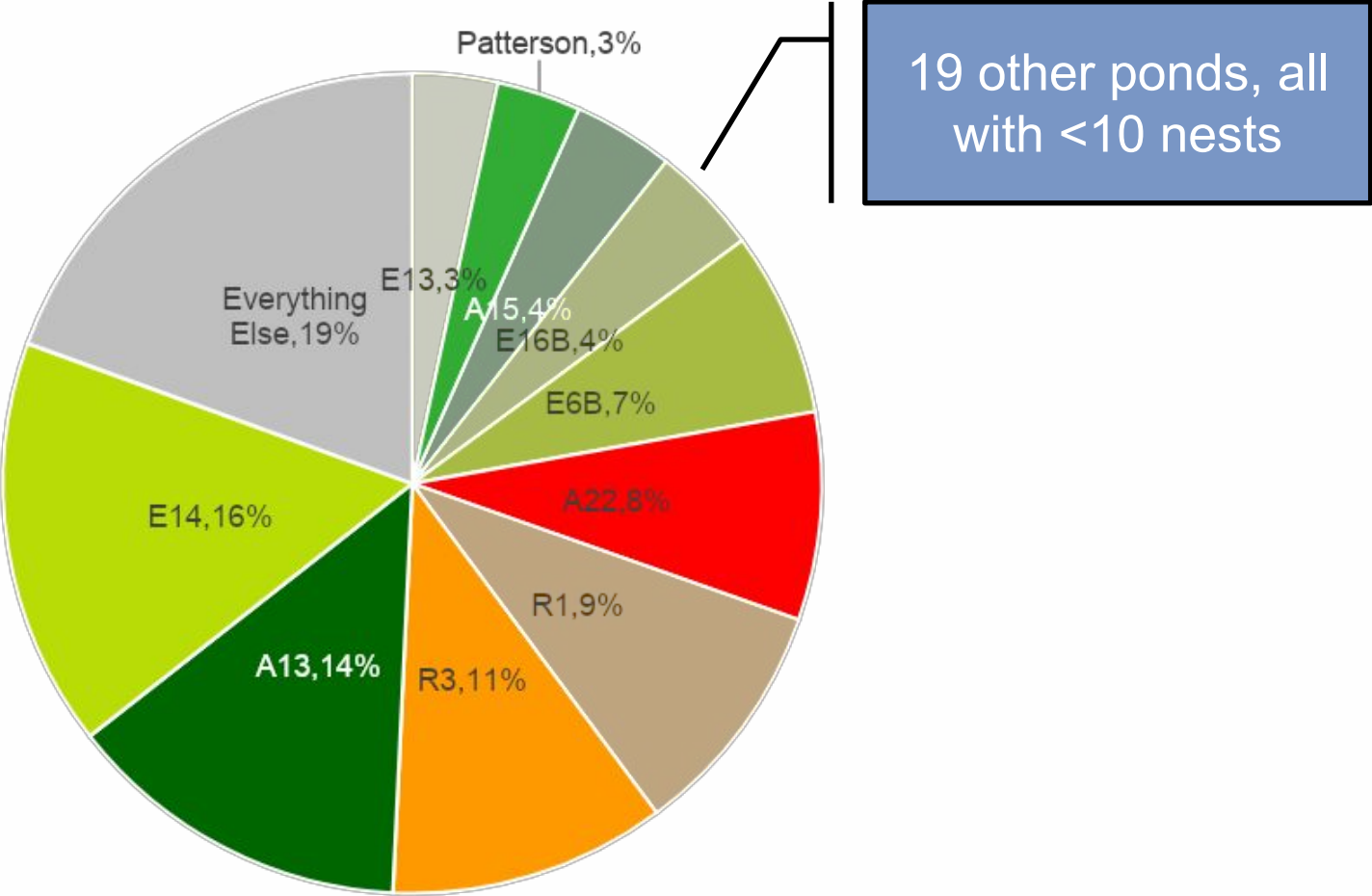
Breeding Distribution

Proportion of breeding activity by
Pond Group

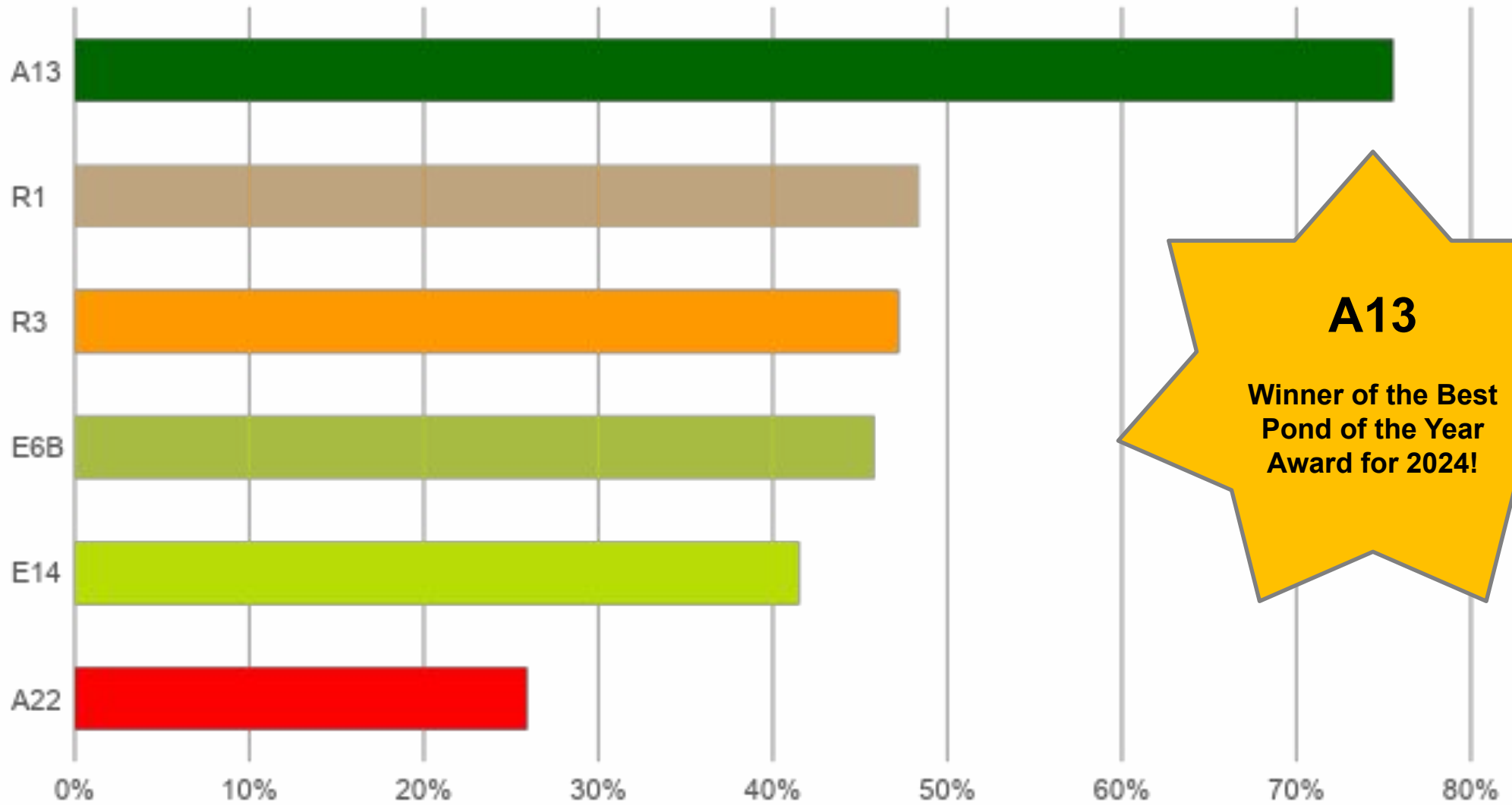


Least Tern Island – surveyed by EBRPD

Breeding Distribution by Pond



Most Productive Ponds by Hatch Rate



A13

**Winner of the Best
Pond of the Year
Award for 2024!**

Part 4: The Larger Context



South Bay Salt Pond Restoration Project: Phase I Habitat Enhancement

- Goal: Create high quality, dense breeding habitat
- Oyster Shell Enhancement at Eden Landing
 - Provide camouflage and cover



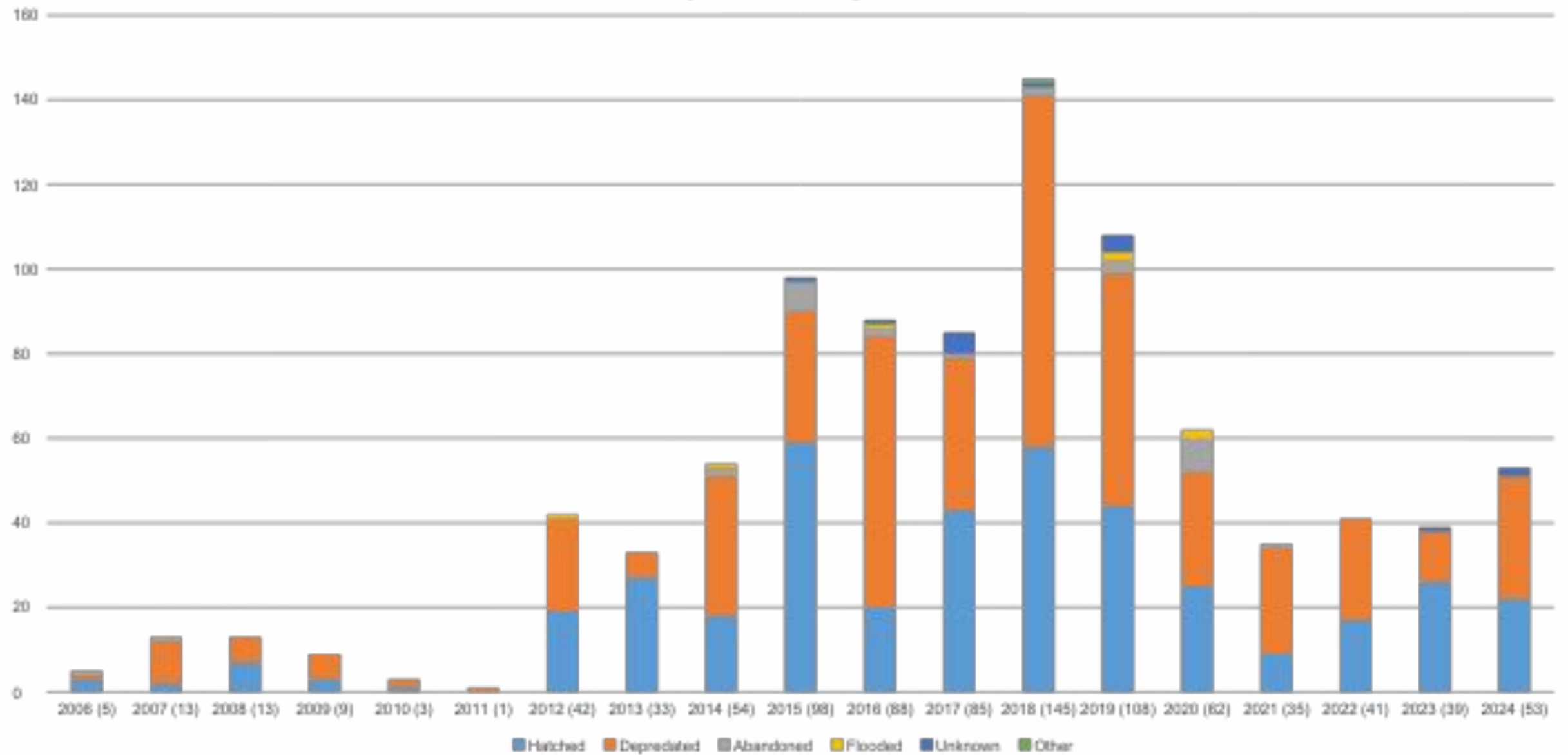
Oyster Shell Enhancement Visualizer



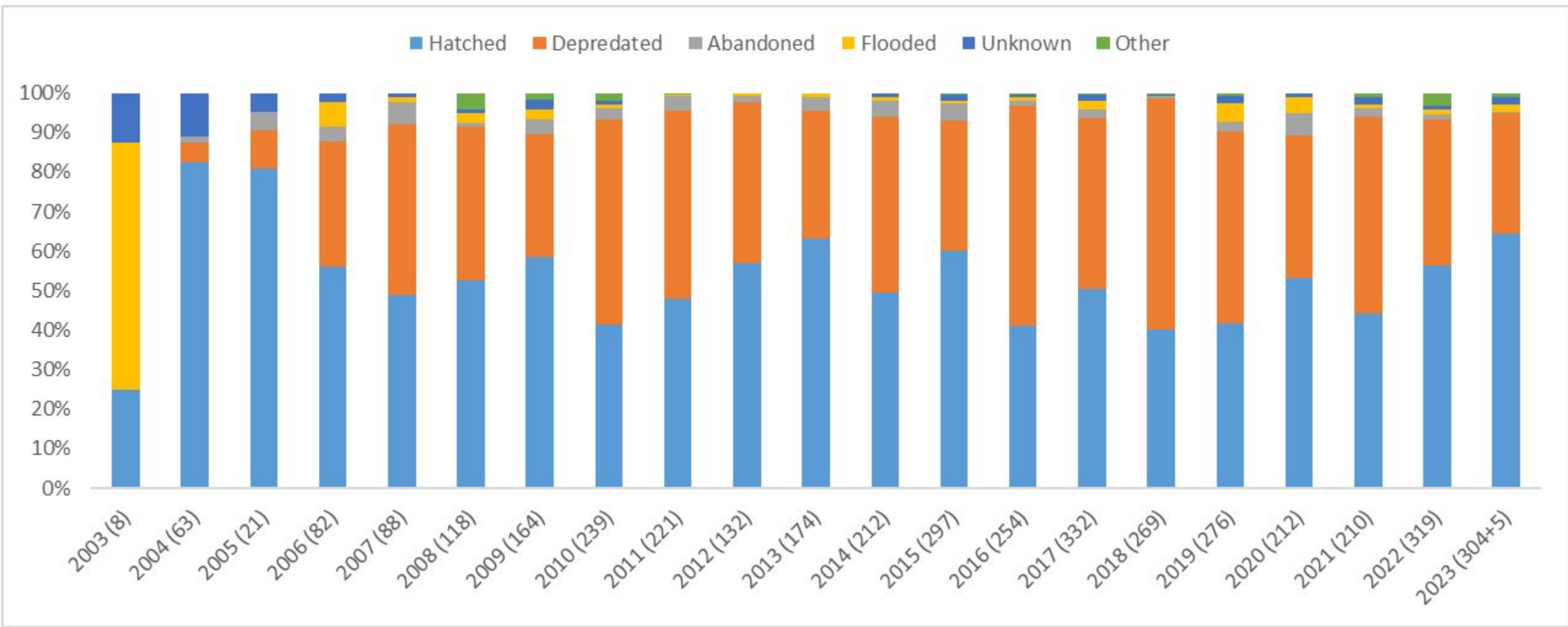
Oyster Shells at E14



Snowy Plover Nesting at E14



Snowy Plover Nest Success Across All Sites



Opportunity to expand



Increase predator control



A comparison

2023

Ravens
removed: 7
Hatch rate:
42%

2024

Ravens
removed: 109
Hatch rate:
75%



Part 5



Get Involved!

1. Volunteer



2. Be part of the solution

- Spread awareness about plovers
- Be responsible dog owners
- Be a responsible hiker



Stay connected!

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Email: mschwarz@sfbbo.org



RU3 Breeding Window Survey Count

