Pacific Americas Flyway

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Intermountain West Shorebird Survey

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Mono Lake

June 25, 2026
California Waterboard Workshop - Mono Lake

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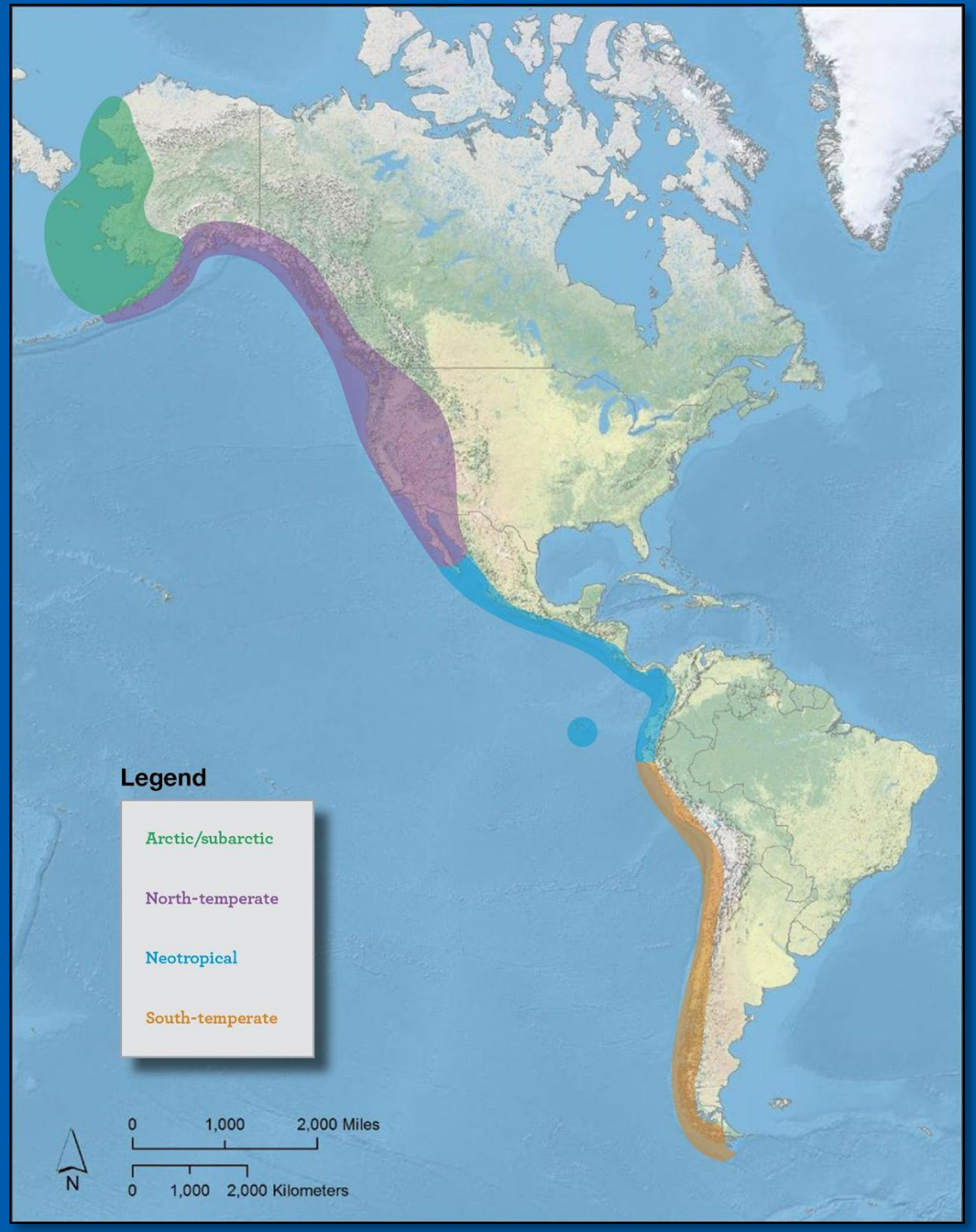
Migratory shorebirds are wetland network indicators



Project area for the Pacific Americas Shorebird Conservation Strategy. Map credit: Liling Lee/National Audubon Society.

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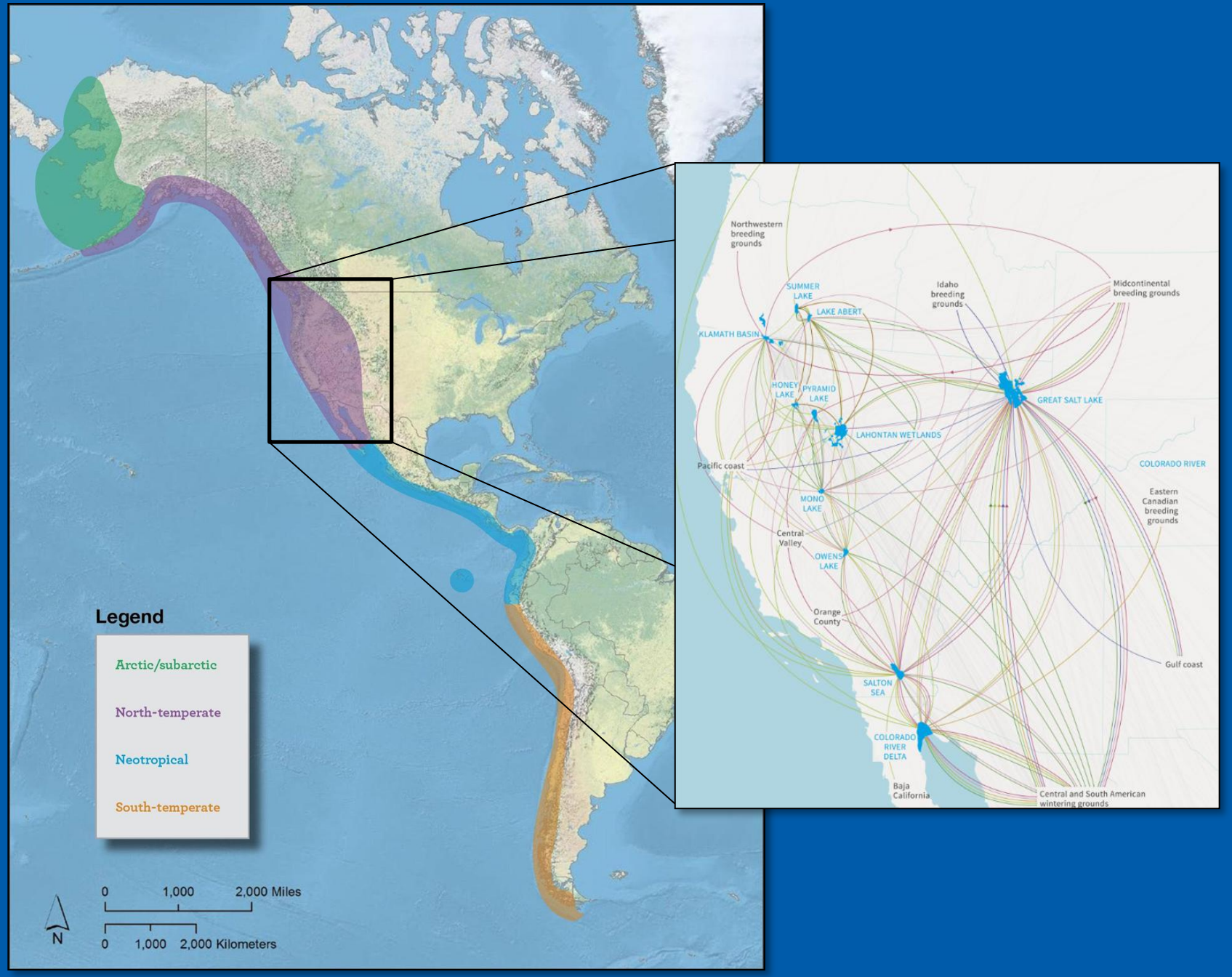
Migratory shorebirds are wetland network indicators

Saline lakes are essential nodes



Project area for the Pacific Americas Shorebird Conservation Strategy. Map credit: Liling Lee/National Audubon Society.

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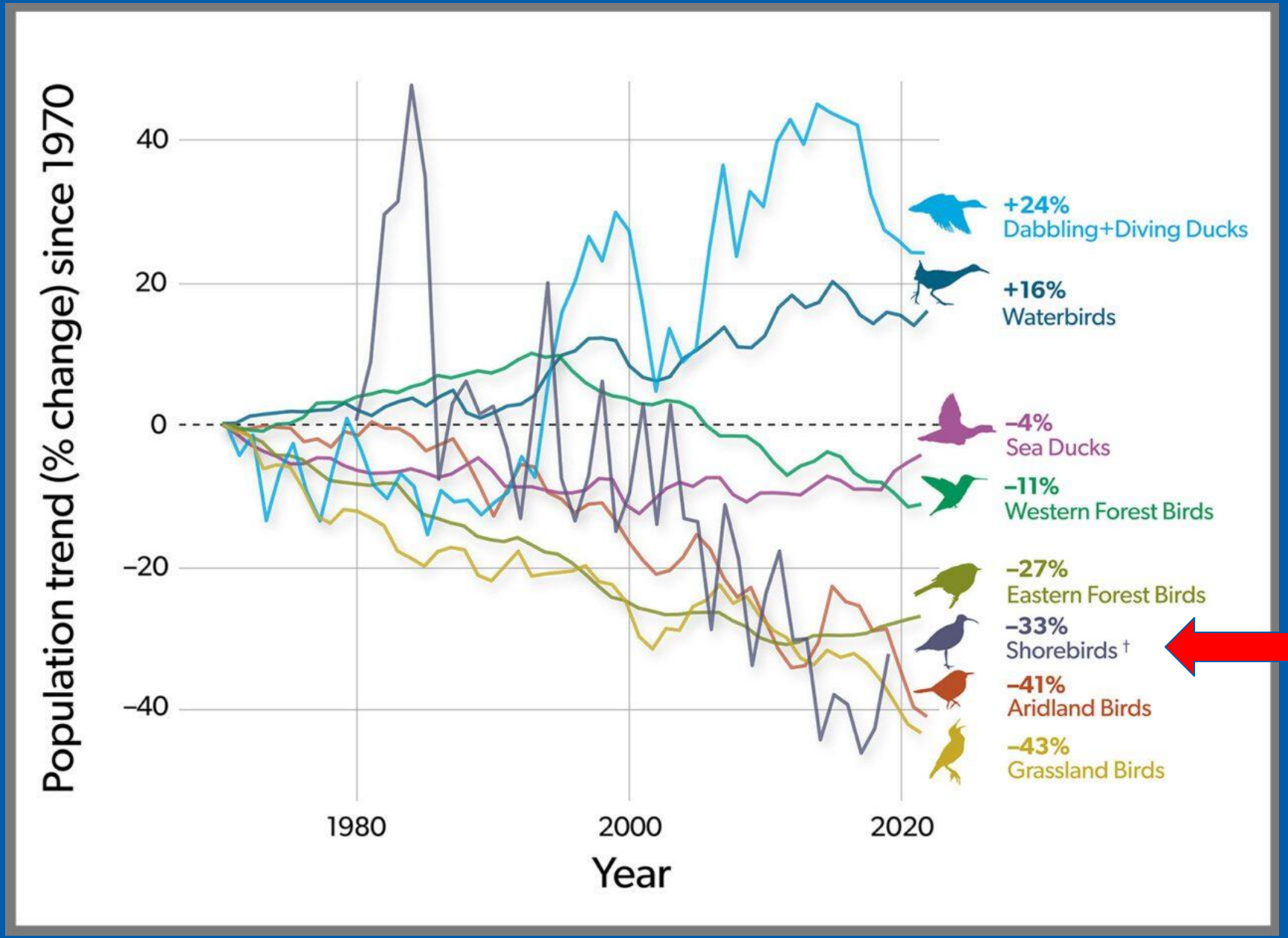

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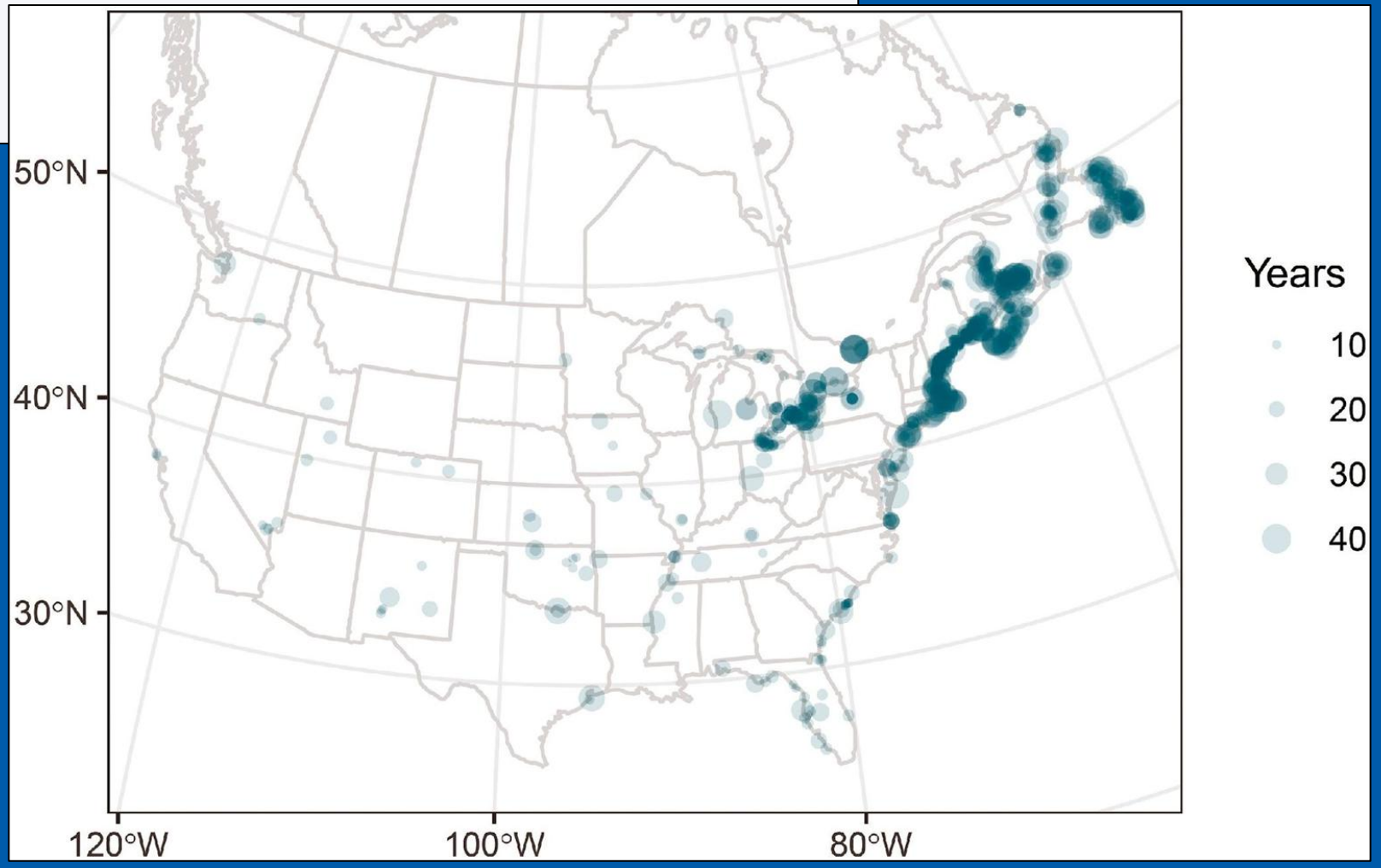
https://www.stateofthebirds.org/2025/

† Shorebirds trend since 1980

North American shorebirds are declining faster than we ever imagined

A new study, based on nearly 40 years of community science data, shows many shorebird species in North America have declined by half in recent decades

30 March 2023 AOS



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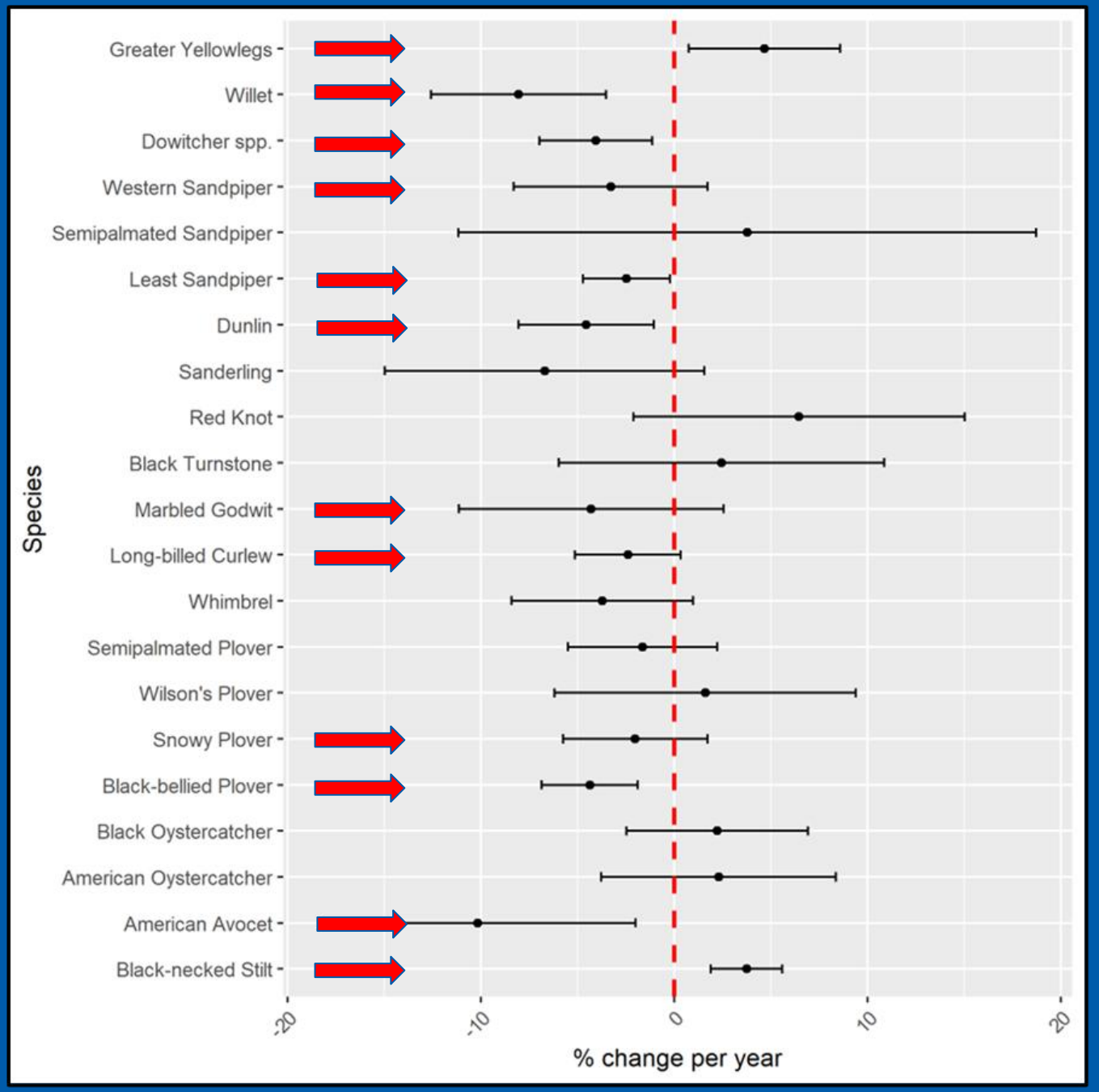
Pacific Americas Flyway Trends

2012 - 2021

Reiter et al. 2025:
https://doi.org/10.1093/ornithapp/duaf076



Pacific Flyway Shorebird Survey
Shorebirds Count!

PROYECTO DE AVES PLAYERAS MIGRATORIAS
Conectando comunidades de América

MIGRATORY SHOREBIRD PROJECT
Connecting communities of the Americas

Tipping Point Species Alerts:
Red Orange Yellow
Known >50% Population Declines

https://r2rbirds.org/tipping-point-species/

Conservation Designations

Vulnerability, Population Trends

CA: Species of Greatest Conservation Need†
CA: Species of Special Concern*
US: Birds of Conservation Concern^

Snowy plover†*^	**American avocet†^**	**California gull†*^**
Black-bellied plover†	**Willet†^**	**Black-crowned night heron***
Long-billed dowitcher†	**Marbled godwit†^**	**Great blue heron†*^**
Greater yellowlegs	Long-billed curlew†*^	**Eared Grebe**
Lesser yellowlegs†^	**Wilson's phalarope**	
Whimbrel†^ Pectoral sandpiper†^ Red knot†^ Short-billed dowitcher†^		*Falconidae* **American peregrine falcon†*,** prairie falcon*^, merlin*

*Species in **BOLD** common at Mono Lake; others uncommon but regular*

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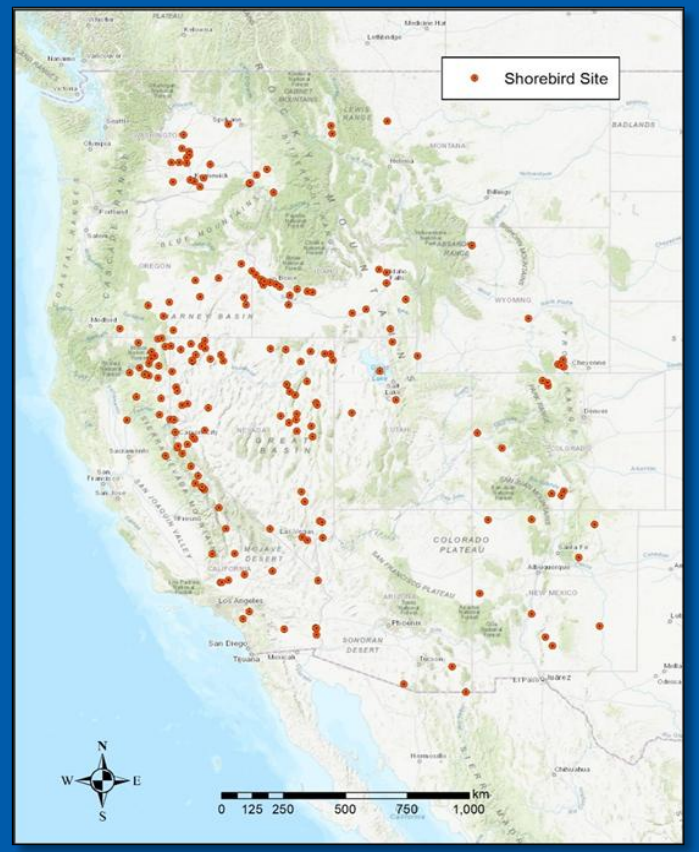
Intermountain West Shorebird Survey

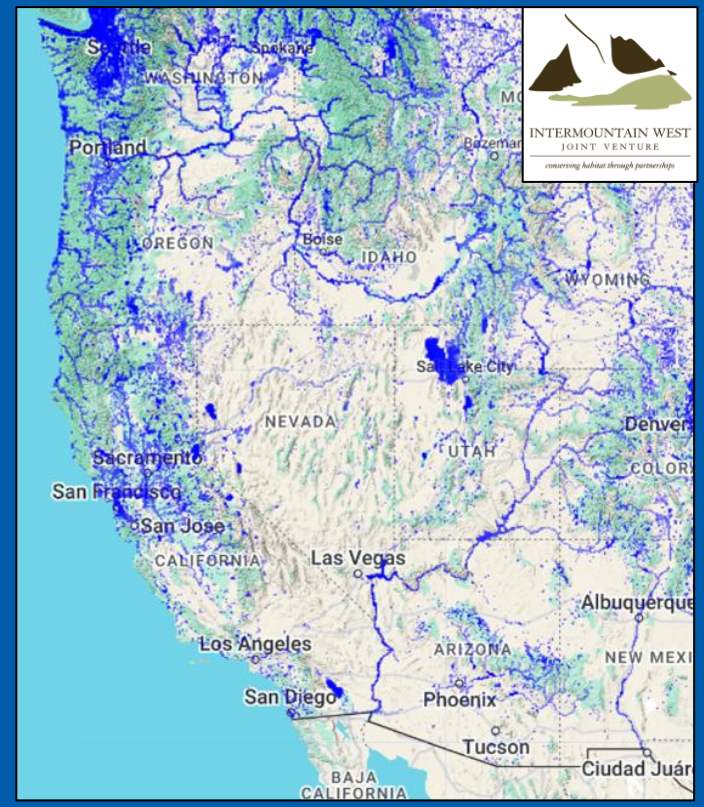


30-year trends for shorebirds and wetlands during spring and fall migration

Pacific Flyway Project: **1989-1995**

IMWSS: **2022-2025**

imwss.org



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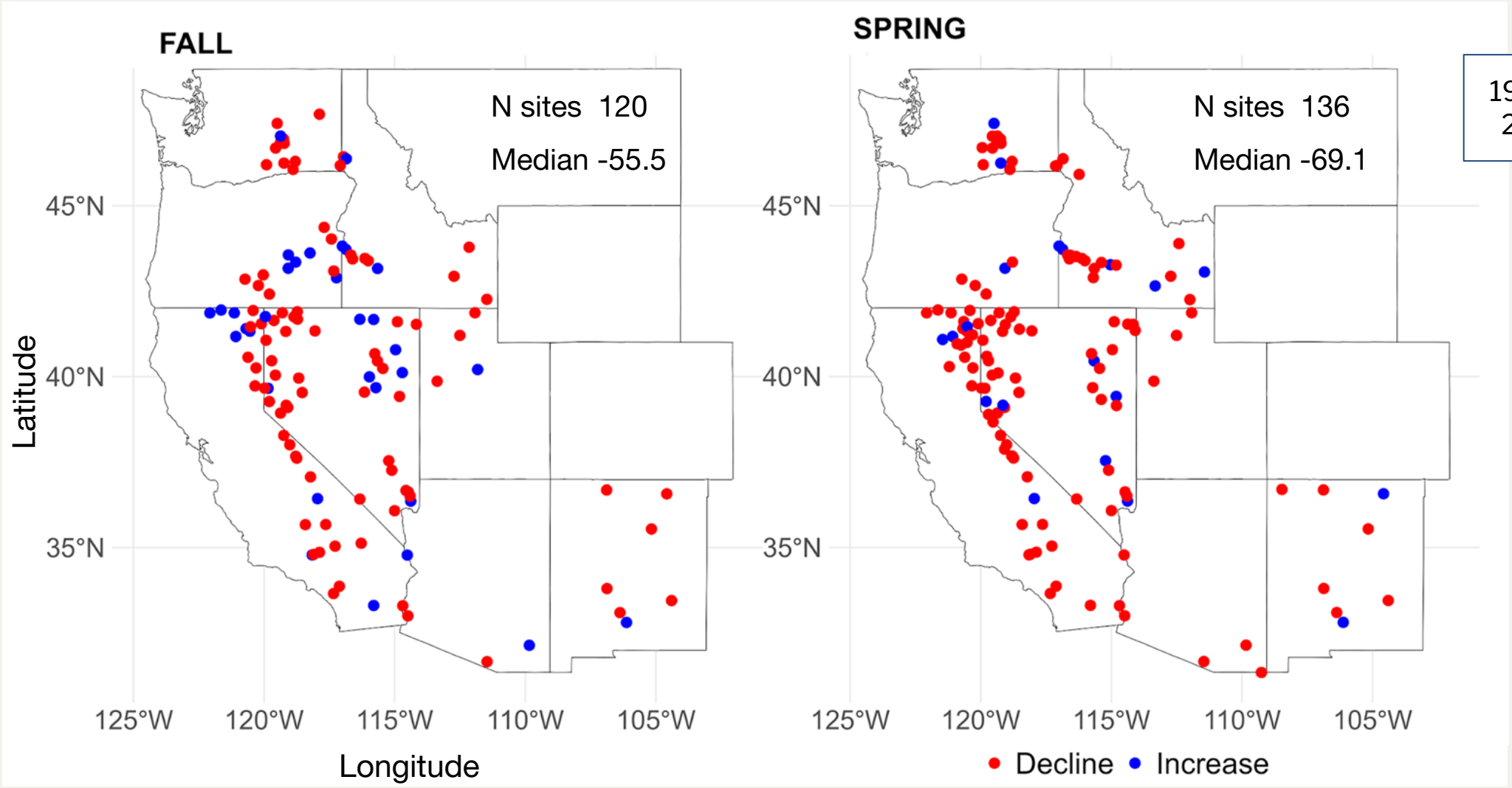
Overall shorebird abundance has significantly decreased

-37.4% fall (95% CI: −43.2 to −31.0)

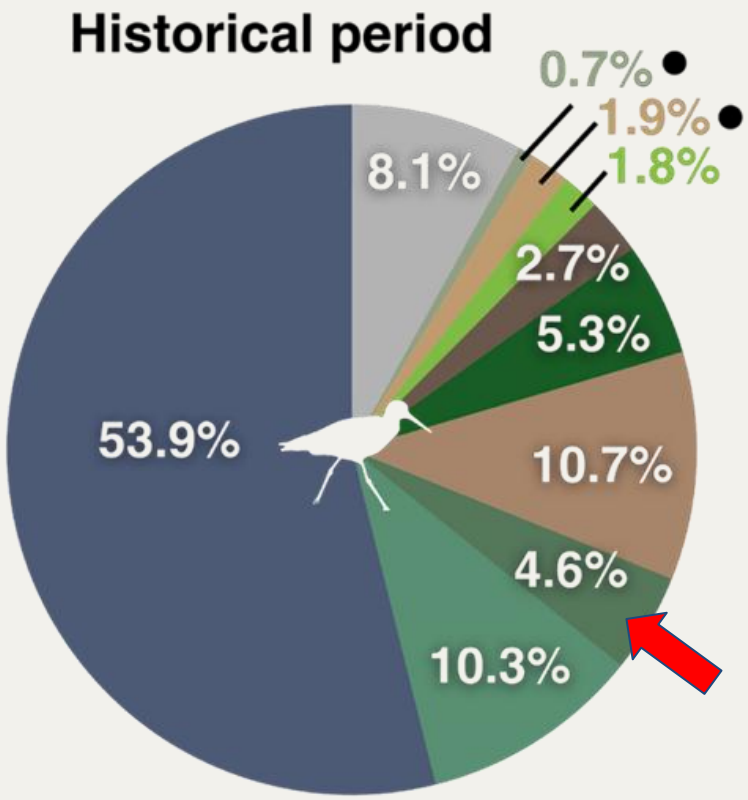
-53.9% spring (95% CI: −58.7 to −48.6)



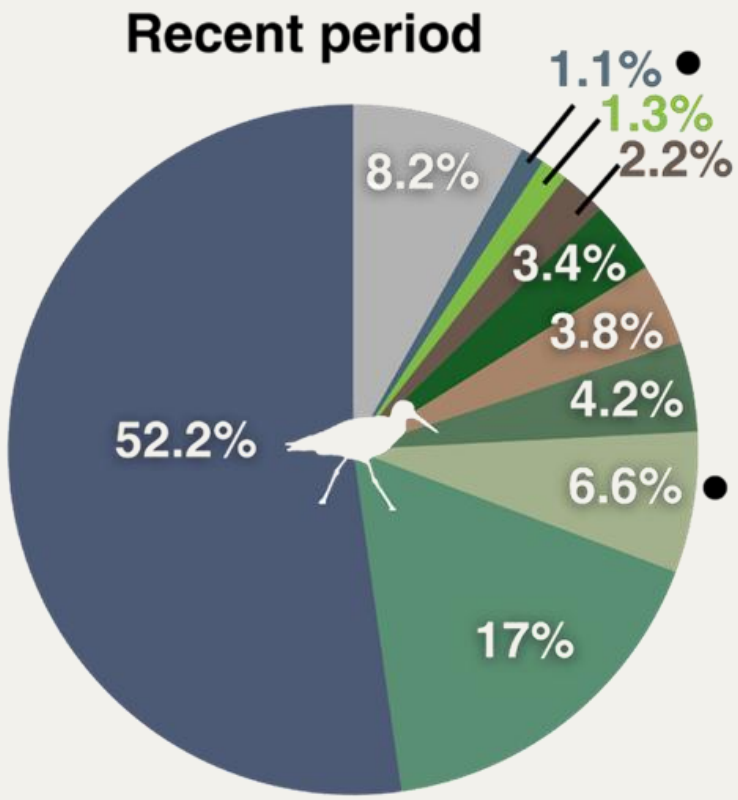
1994-1995 &
2022-2025

Saline lakes are critical for shorebirds

91.9%



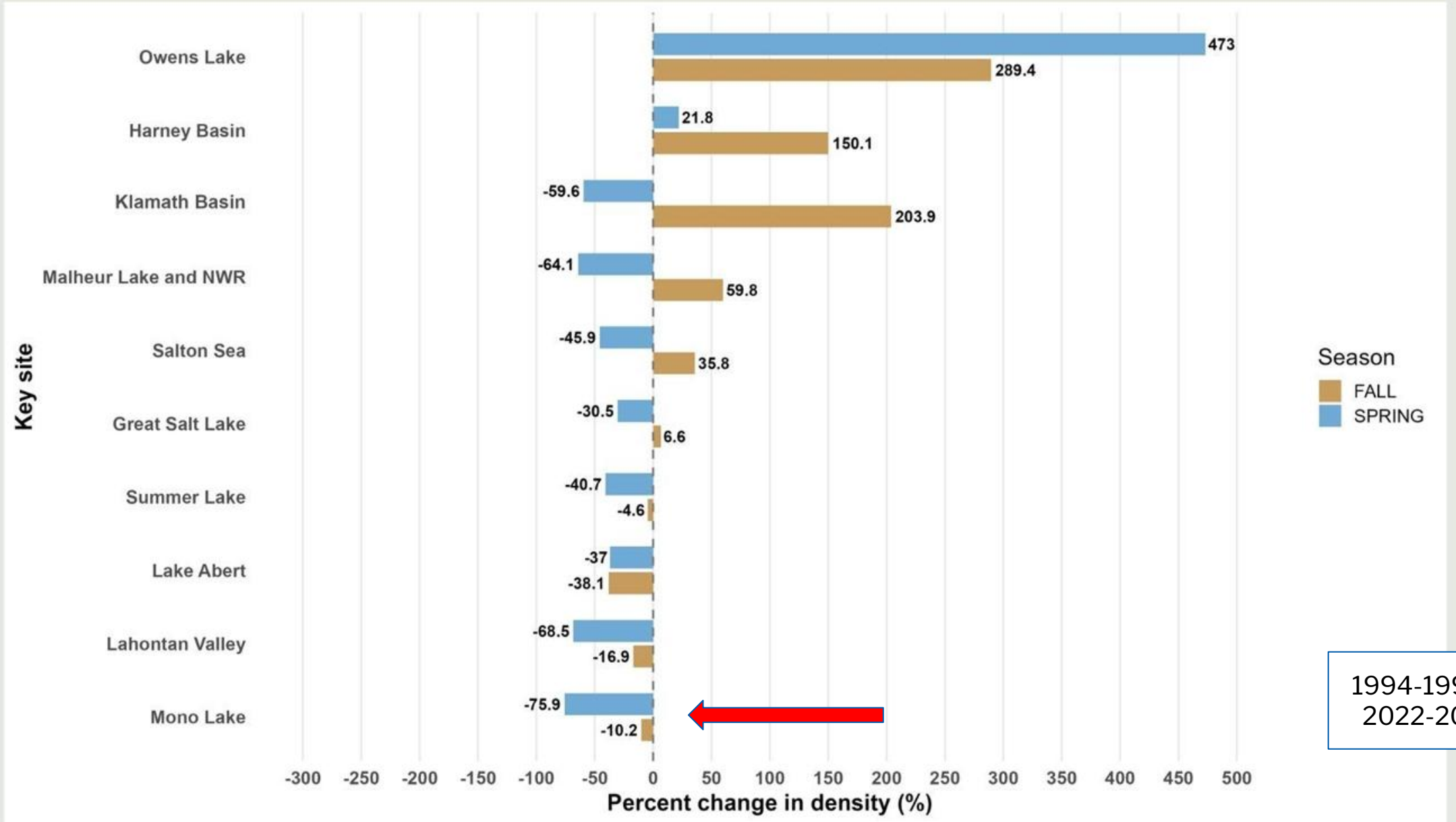
91.8%



Site
- Great Salt Lake
- Salton Sea
- Owens Lake
- Mono Lake
- Lake Abert
- Lahontan Valley
- Summer Lake
- Malheur Lake and NWR
- Klamath Basin
- Goose Lake
- Lake Lowell - Deer Flat NWR
- Others

- Key sites in only one period

PERCENT CHANGE - KEY SITES



1994-1995 &
2022-2025

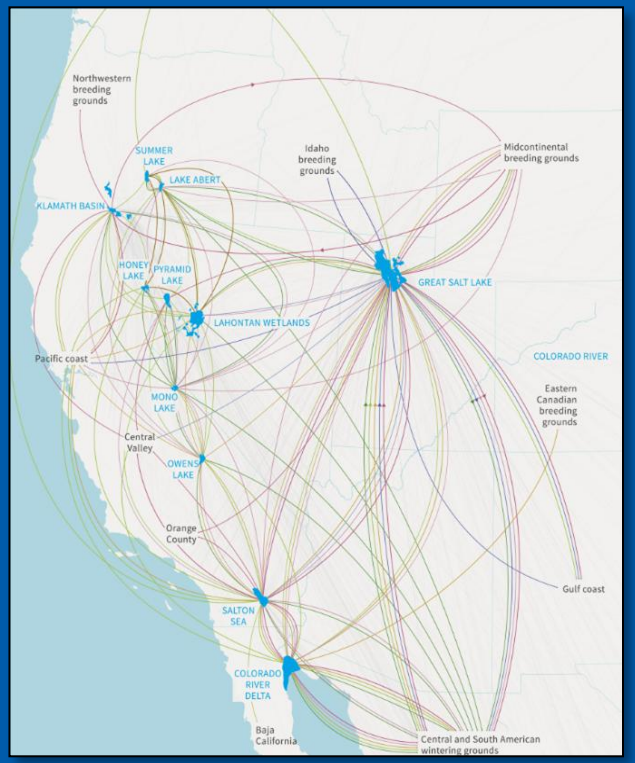
CHANGES IN SURFACE WATER LEVELS - SITES

KEY SITES **FALL** -41.87% **SPRING** -19.98%

FALL	SWL	COUNT
Owens Lake	11000.75	549.31
Harney Basin	-84.22	116.96
Klamath Basin	-54.69	194.55
Salton Sea	-13.54	81.20
Malheur Lake	**-74.16**	24.55
Great Salt Lake	**-44.87**	-16.09
Summer Lake	**-58.68**	-18.81
Lake Abert	**-41.03**	-45.58
Mono Lake	7.45	-5.76
Lahontan Valley	108.05	-32.49

SPRING	SWL	COUNT
Owens Lake	445.85	748.38
Harney Basin	-33.17	31.68
Klamath Basin	-52.11	-63.69
Salton Sea	-13.38	-41.71
Malheur Lake	**-47.95**	-69.35
Great Salt Lake	**-39.71**	-16.64
Summer Lake	**-16.09**	-42.08
Lake Abert	**-41.57**	-37.04
Mono Lake	5.25	-80.02
Lahontan Valley	40.86	-70.98

Flyway Perspectives



The Bad News

- Long-term declines for most IMW shorebirds
- Functional decline of a wetland network
- Unreliable resource availability at most sites

The Good News

- Shorebirds returned to key sites when wet
  - Strategic water management shows promise
- Conservation networks working at scale

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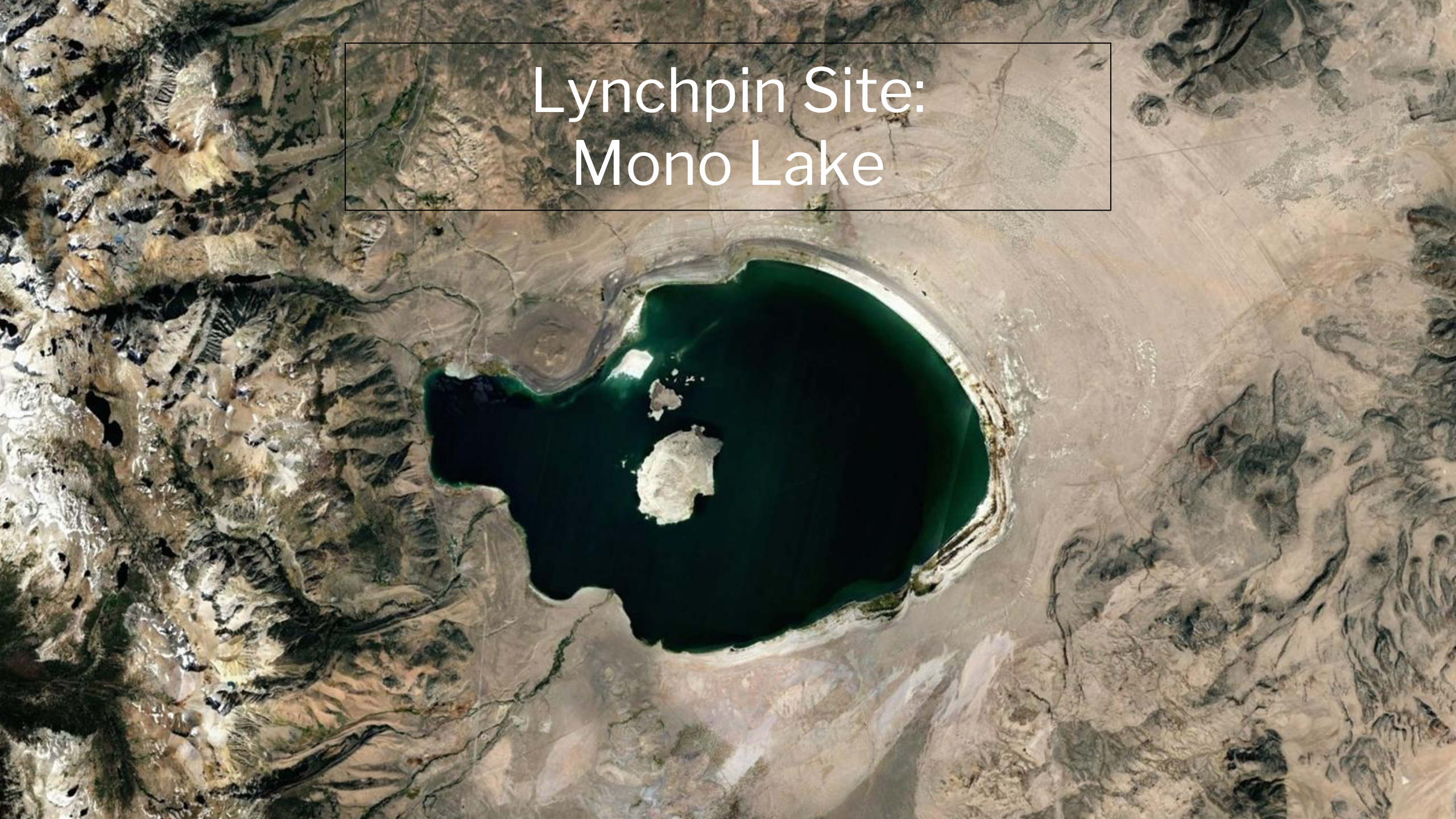
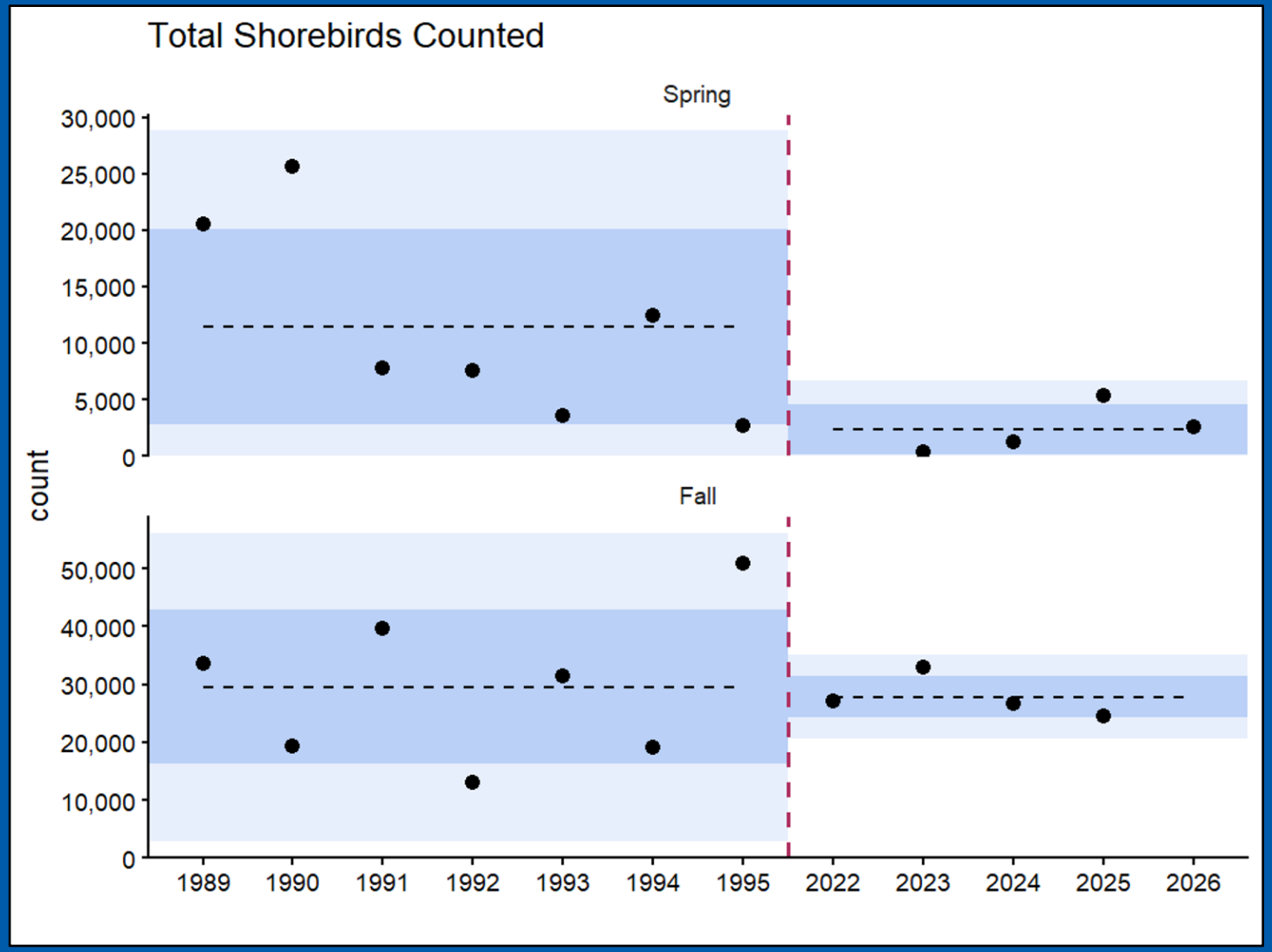
Lynchpin Site: Mono Lake



Intermountain West Shorebird Survey

Mono Lake



Dashed line is mean for time period.
Blue bands +/- 1 or +/- 2 SD

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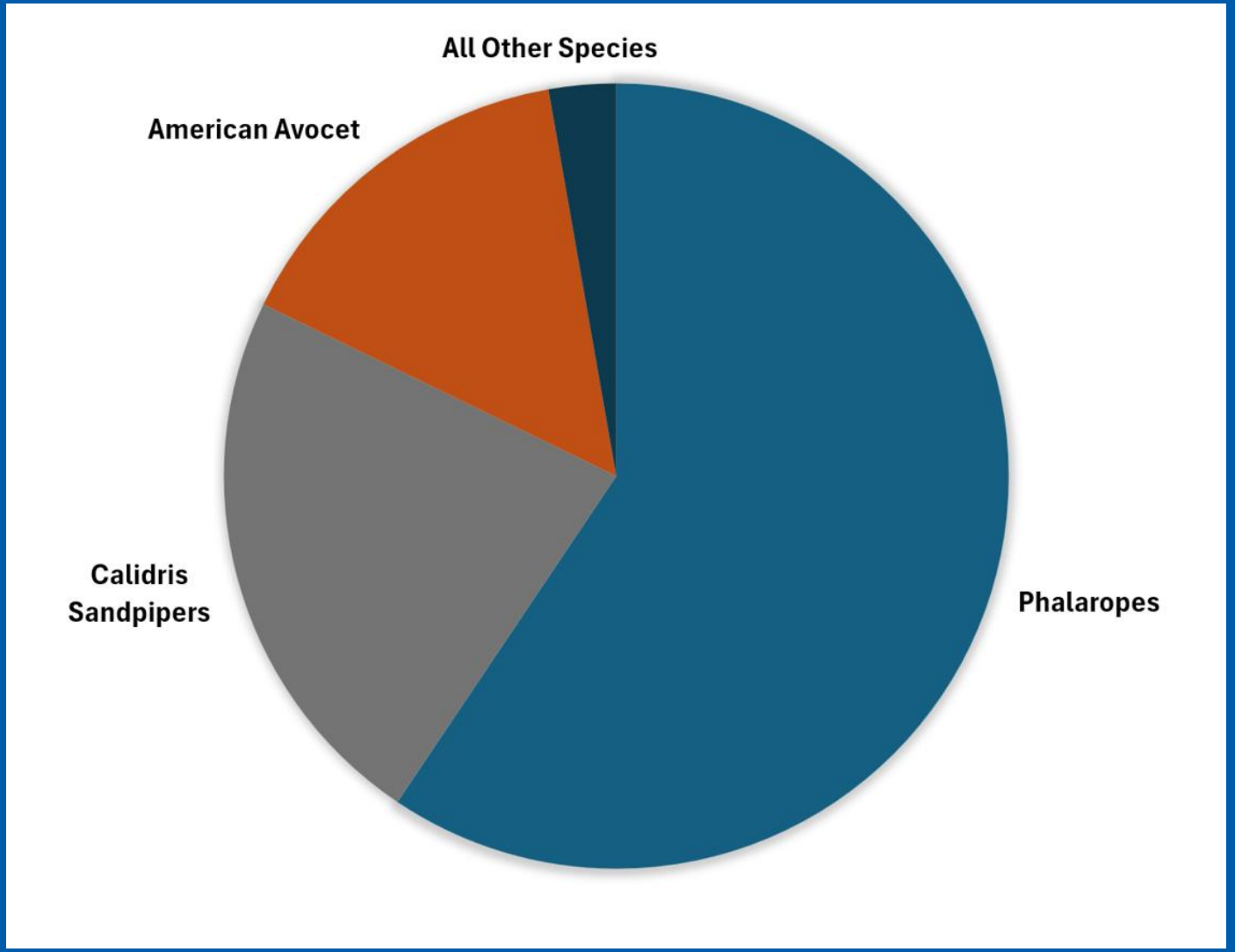
Intermountain West Shorebird Survey

Mono Lake Abundance



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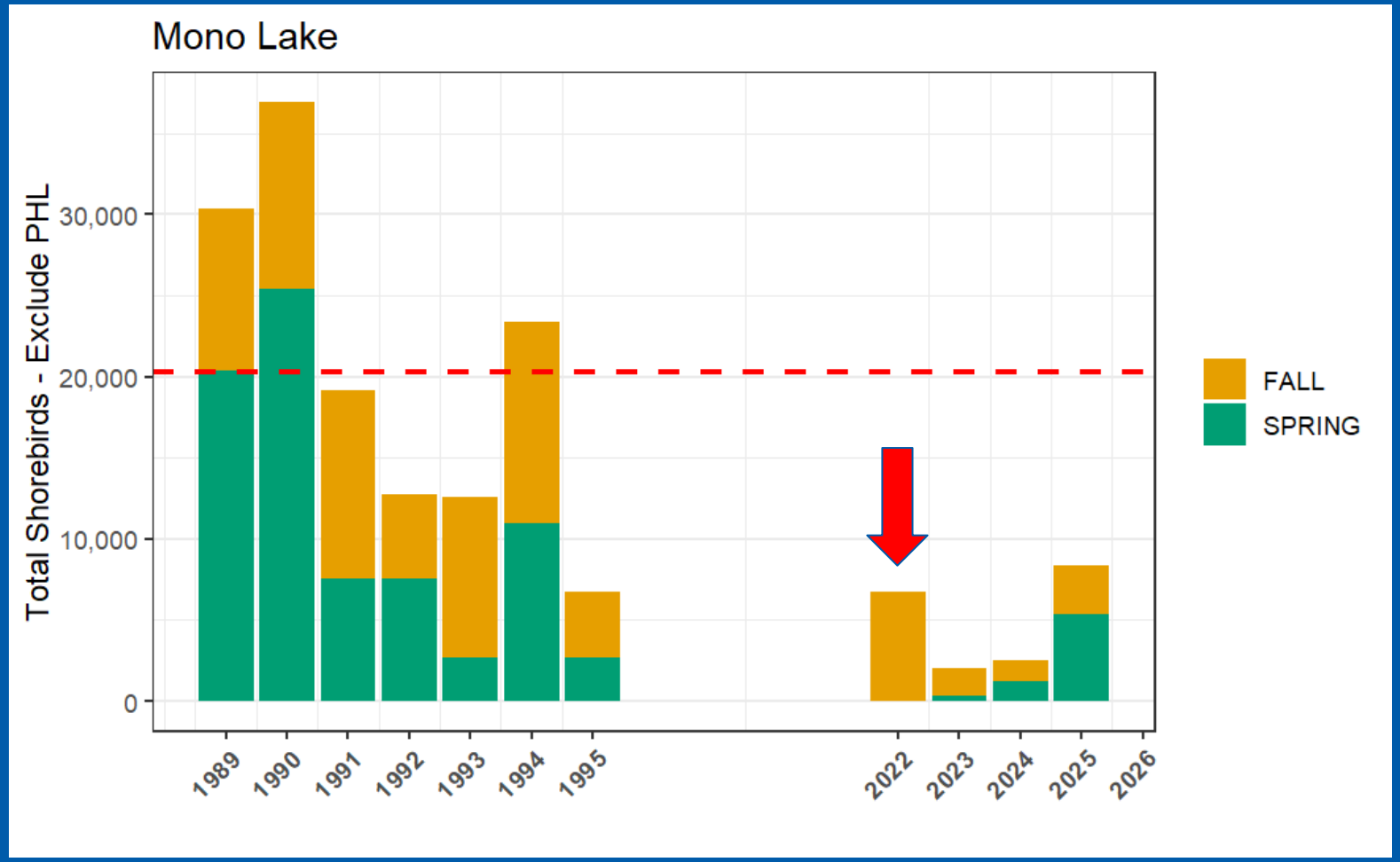
All shorebirds except phalaropes



Red line = mean for 1989-1995 only

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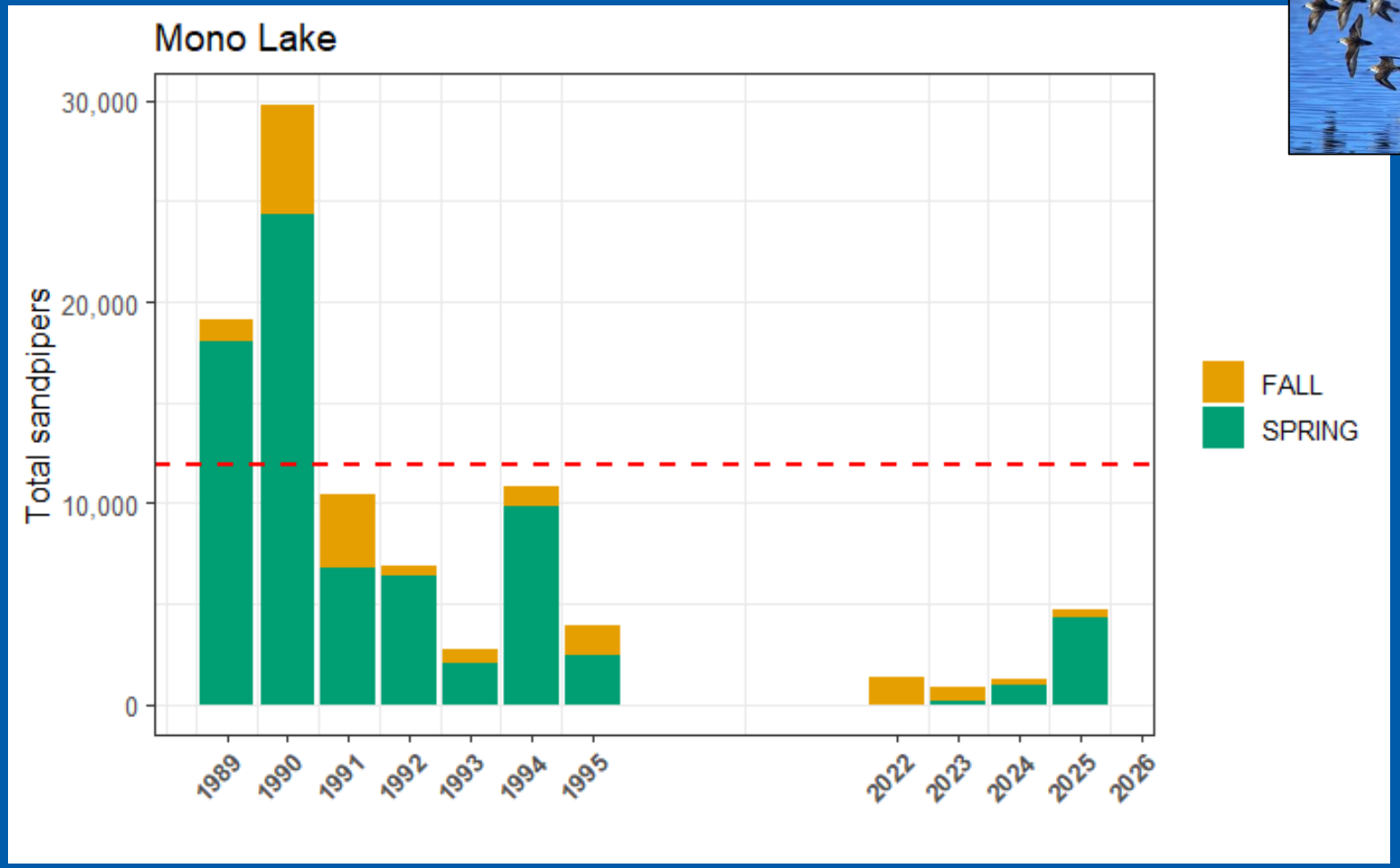
Calidris Sandpipers



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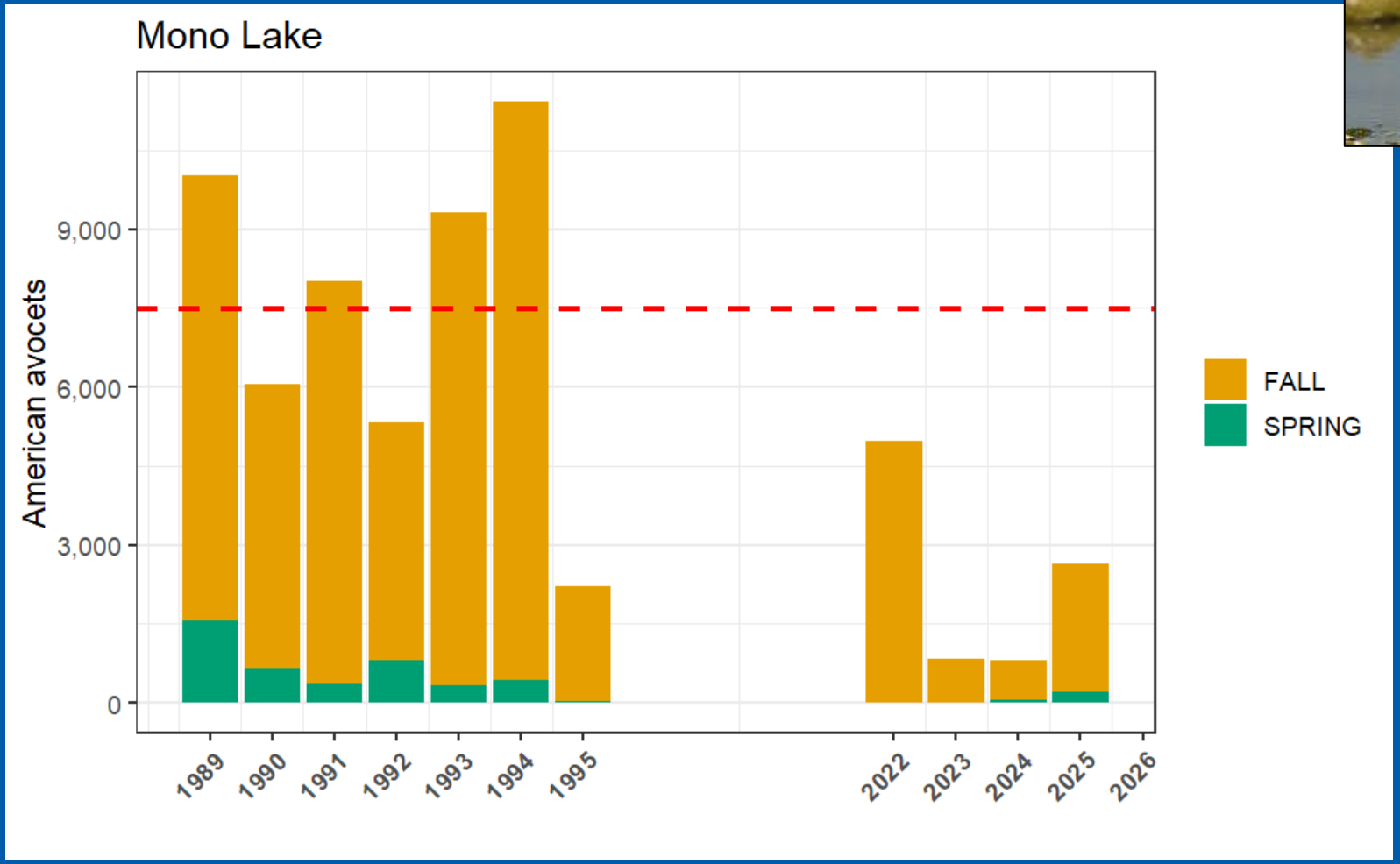
American avocets



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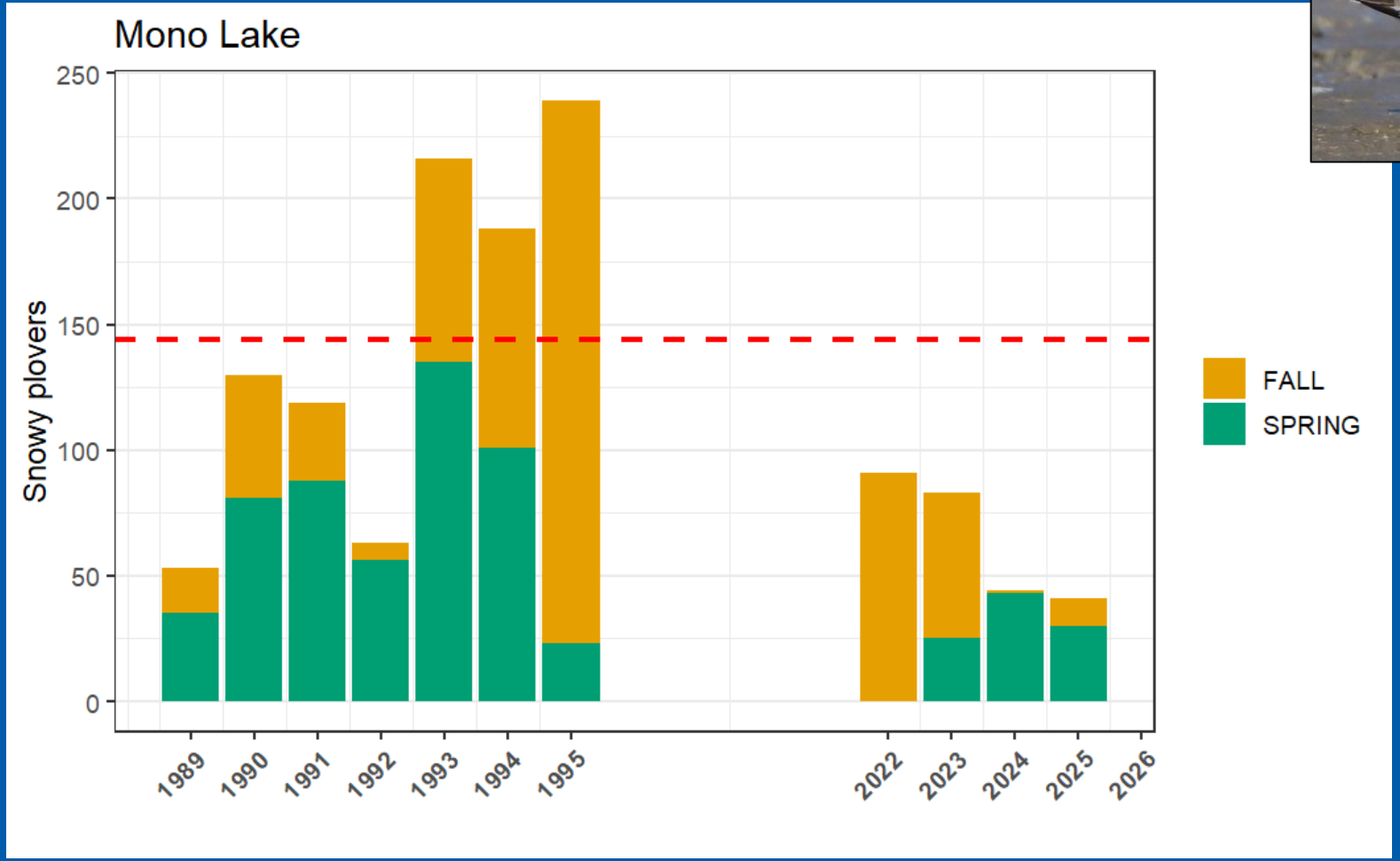
Snowy plovers



Red line = mean for 1989-1995 only

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Mono Lake Perspectives

The Bad News

- Local shorebird declines despite increase in water levels since 1989
- Mono Lake's stability is unique in the network

The Good News

- Declines likely related to Owens Lake restoration and broader population declines

Mono Lake is an essential node in the network, providing refuge when others blink on/off

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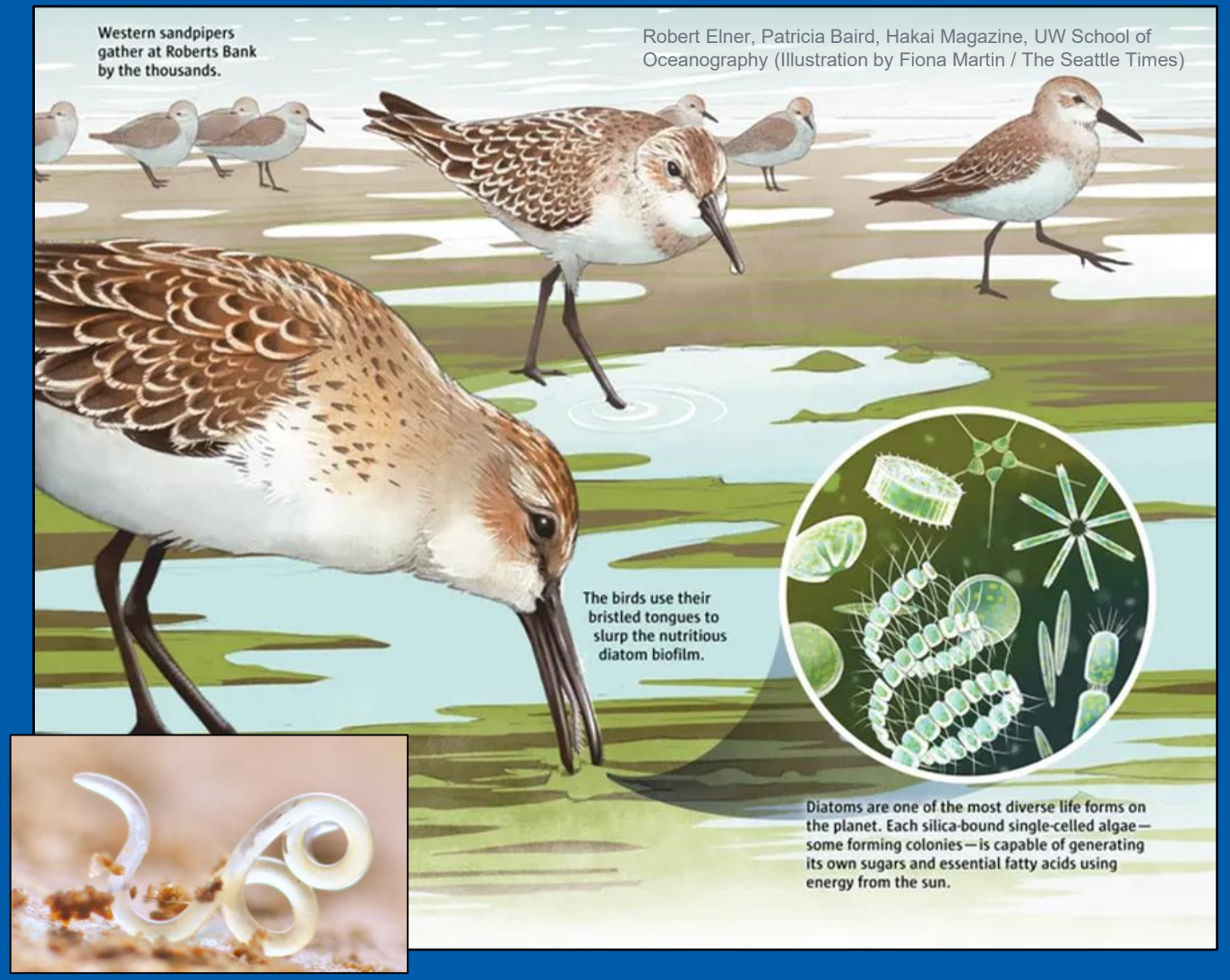

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SAGELAND COLLABORATIVE
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UtahState University
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TOGETHER FOR NATURE
BOISE STATE UNIVERSITY
INTERMOUNTAIN BIRD OBSERVATORY
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
MONTANA FISH, WILDLIFE & PARKS
OREGON Fish & Wildlife
NEVADA DEPARTMENT OF WILDLIFE
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