

Periodic Status Reviews

Killer Whale and Streaked Horned Lark

Hannah Anderson, Listing and Recovery Section Manager

Gary Wiles and Derek Stinson, Wildlife Biologists

Wildlife Program

Diversity Division

WAC Requirement

- Currently 45 listed species
- WAC 232-12-297 requires that we review the status of listed species every five years to determine if they require:
 - Uplisting (e.g., sensitive to endangered)
 - Downlisting (e.g., endangered to threatened)
 - Delisting (i.e., removal from list)
 - No change in status

As Defined by WAC 232-12-297

- 1) Endangered:** “seriously threatened with extinction throughout all or a significant portion of its range within the state.”
- 2) Threatened:** “likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats.”
- 3) Sensitive:** “vulnerable or declining and is likely to become endangered or threatened in a significant portion of its range within the state without cooperative management or removal of threats.”
- 4) None of the above:** does not need to be listed



PSR Process

- Press Release Feb 2014, 2015, 2016 - One year for interested parties to contribute information:



- Species demographics
 - Habitat conditions
 - Threats and trends
 - Conservation measures
 - New data since last status review
- Documents prepared with all contributed information
 - WDFW biologist, then external expert review
 - 90 day public comment period
 - Comments integrated and responses compiled
 - Periodic status reviews finalized

Today



- Separate presentations on:
 - Killer Whale (Gary Wiles)
 - Streaked Horned Lark (Derek Stinson)
- Time for questions after each species
- Decisions

Status of Killer Whales in Washington



NOAA



Gary Wiles, Biologist
Diversity Division, Wildlife Program

3 populations in Washington

Southern residents

West coast transients

Offshores



Southern Resident Killer Whales



- Highly stable social organization: J, K, L pods
- Pod size: 15-60 whales
- Diet dominated by chinook salmon
- Habitat: coastal waters
- Distribution: Salish Sea, outer coast

Top: Astrid van Ginneken, Bottom: Center for Whale Research

Transient Killer Whales



Michael Colahan, Island Adventures Whale Watching and Pangea Pictures

- More fluid, social organization
- Smaller pods; pods are temporary
- Diet is mostly marine mammals, especially harbor seals
- Squid
- Habitat: shallow and deeper waters
- Cover larger distances than residents

Offshore Killer Whales



Craig Matkin

- Less studied
- Form groups of 2-70 whales, fluid
- Diet is believed to contain mostly sharks, but other fish too
- Heavy tooth wear
- Habitat: mostly deeper waters farther from the coast
- Extensive movements



Rod Palm

Listing Status

	Southern residents	Transients	Offshores
State status	Endangered	Endangered	Endangered
Federal status	Endangered	-	-
Critical habitat	Yes	-	-
MMPA protections	Yes	Yes	Yes
Canada status	Endangered	Threatened	Threatened

Recovery Goals for the Southern Residents

Federal objectives to downlist to threatened status

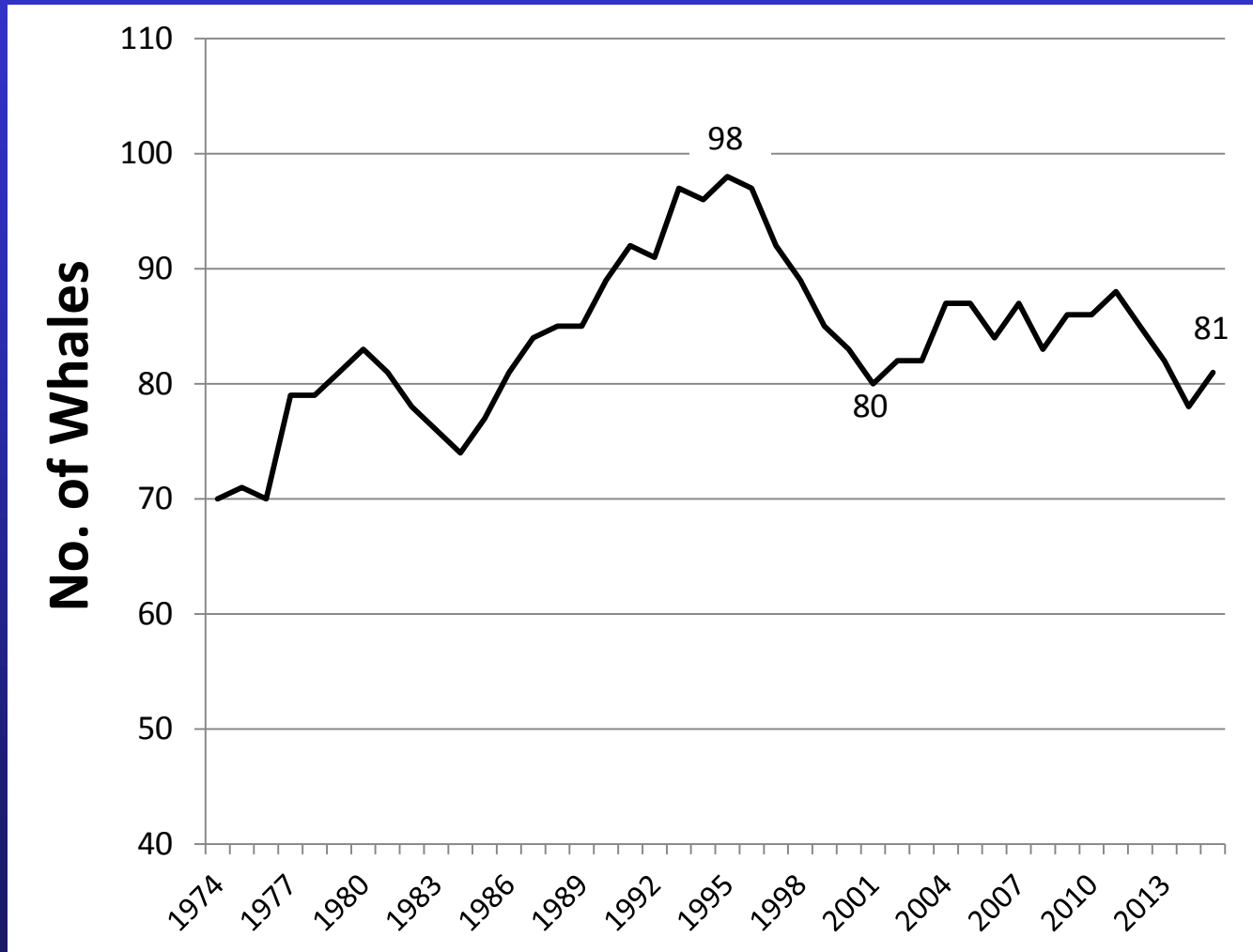
- Average of 2.3% growth per year for 14 years

Federal objectives to delist

- Average of 2.3% growth per year for 28 years



Southern Resident Population Status



Transient and Offshore Status

Transients

- About 500 animals
- Increasing trend, due to recovering marine mammal prey

Offshores

- About 300 animals
- Stable trend



NOAA Fisheries

Factors Affecting the Species

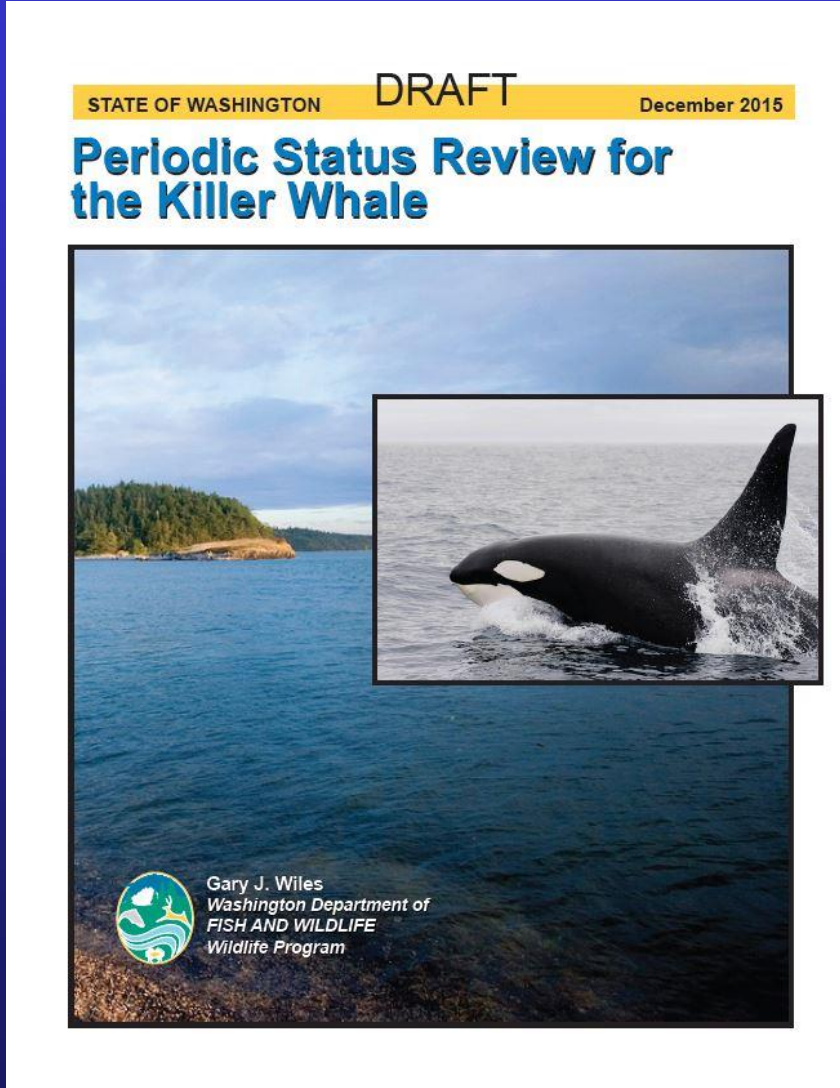
- Declines in prey availability
 - Salmon
- Chemical contaminants
- Vessel interactions and sound
- Potential oil spills
- Small population size
- Climate change

Recent Conservation Actions

- Salmon management, recovery
- Critical habitat
- Whale watching regulations
- Population monitoring
- Research
- Oil spill prevention, response
- Outreach
- Environmental cleanup



Recommendation



Retain killer whales
as a state
endangered species

Public Comments/Concerns

- Support for continued endangered listing (13)
 - Includes petition w/ 25,824 names
- Opposition (1)
- Neutral (4)



Questions?



Clint Rivers, Eagle Wing Tours

Status of the Streaked Horned Lark in Washington



Derek Stinson, Biologist
Wildlife Diversity Division
Wildlife Program

Natural History

- Distinct coastal subspecies of Horned Lark
- A small songbird of open habitats
- Seed-eating, but chicks are fed insects
- Attempt 2-3 broods/season
- Adults often return to the same nesting area each year
- Winter in flocks in Willamette Valley or Lower Columbia islands



Natural History Cont'd

Streaked Horned Larks use large (≥ 300 ac) sparsely vegetated areas, like...



Columbia islands



Midway Beach



Range 74/76, JBLM



Olympia Airport

Natural History Cont'd



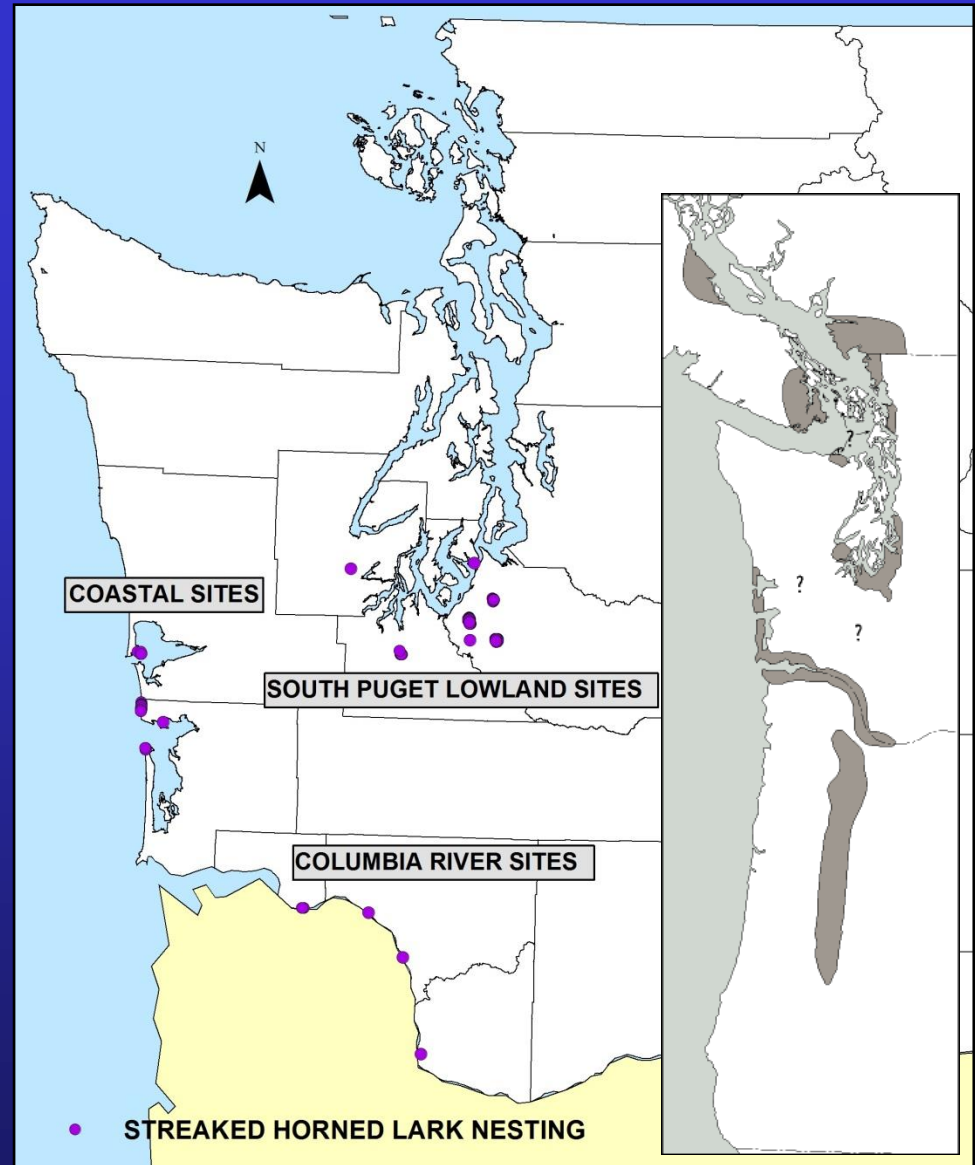
Streaked Horned Larks historically occurred from the Rogue Valley, north to Vancouver Island.



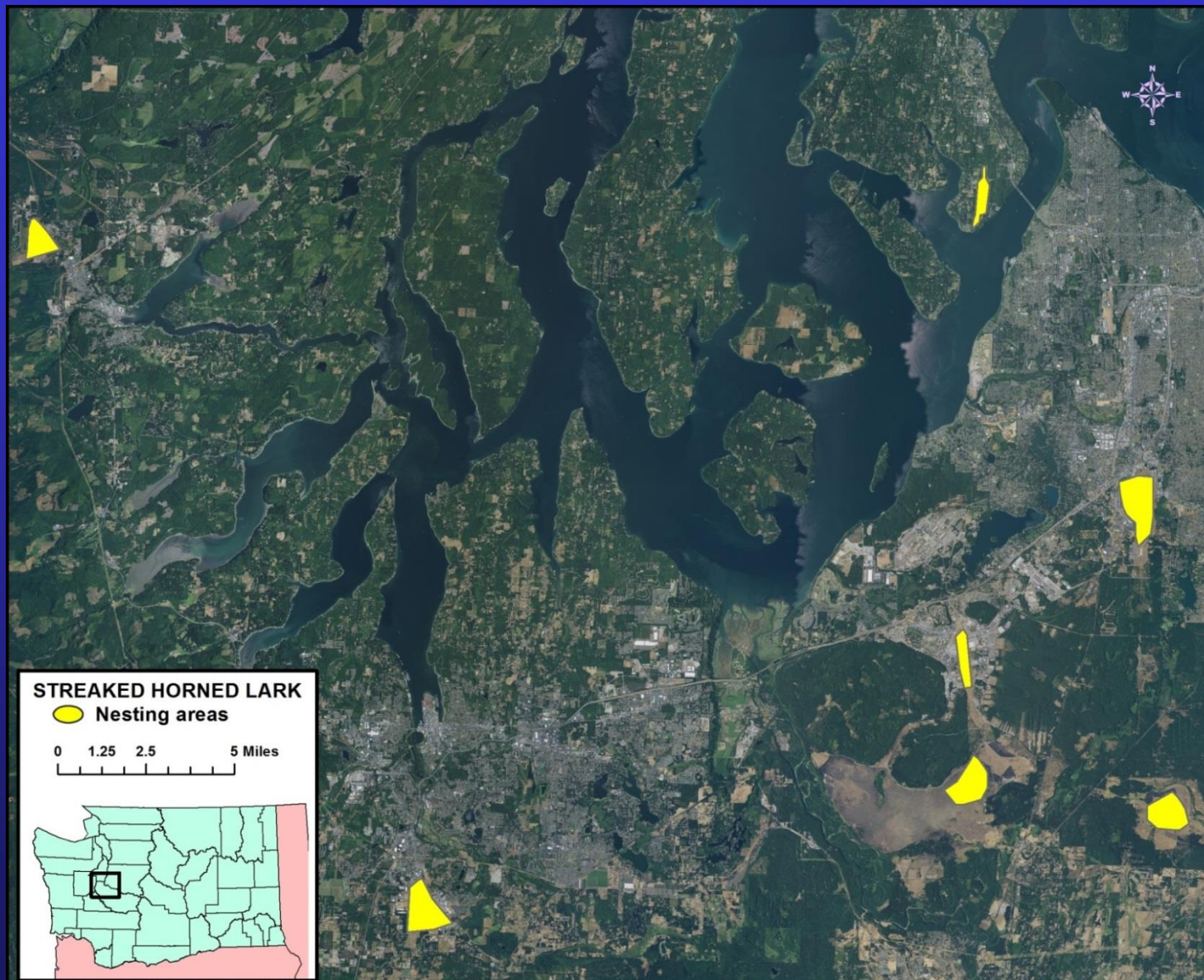
Natural History Cont'd



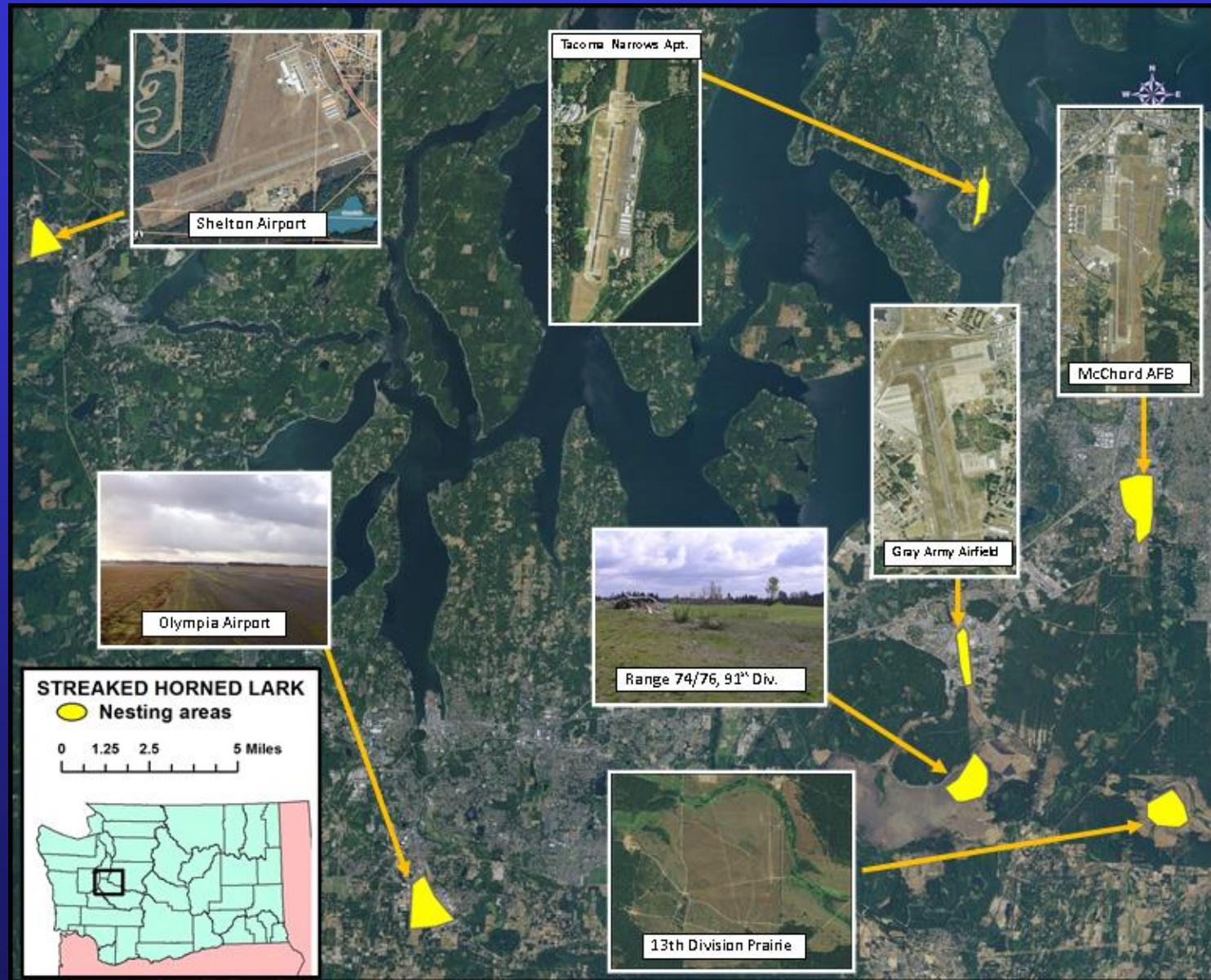
Streaked Horned Larks are now restricted to the Willamette Valley, South Puget lowland, beaches of Pacific and Grays Harbor counties, and lower Columbia sites.



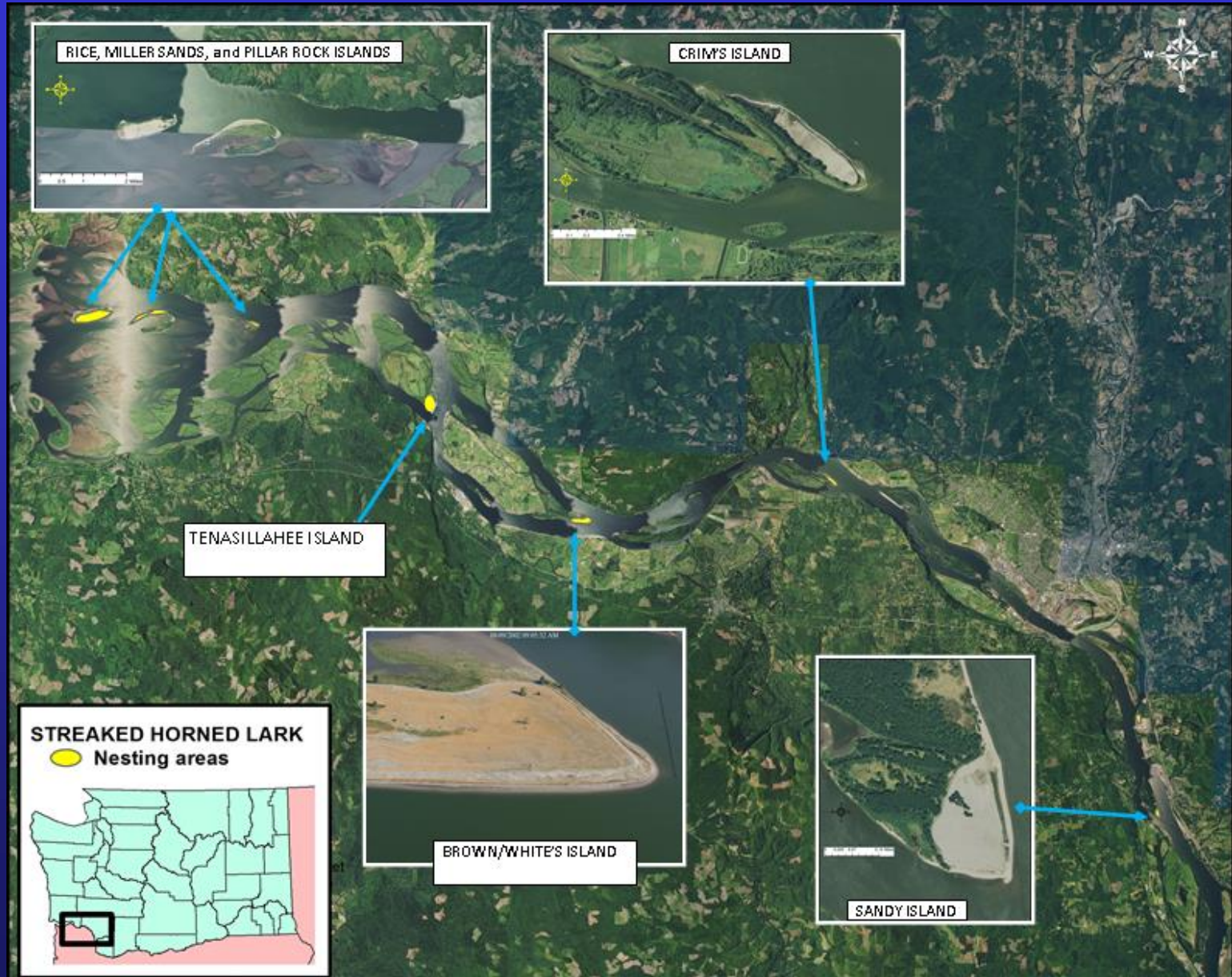
Breeding Areas: South Puget Lowland



Breeding Areas: South Puget Lowland



Breeding Areas: Lower Columbia River

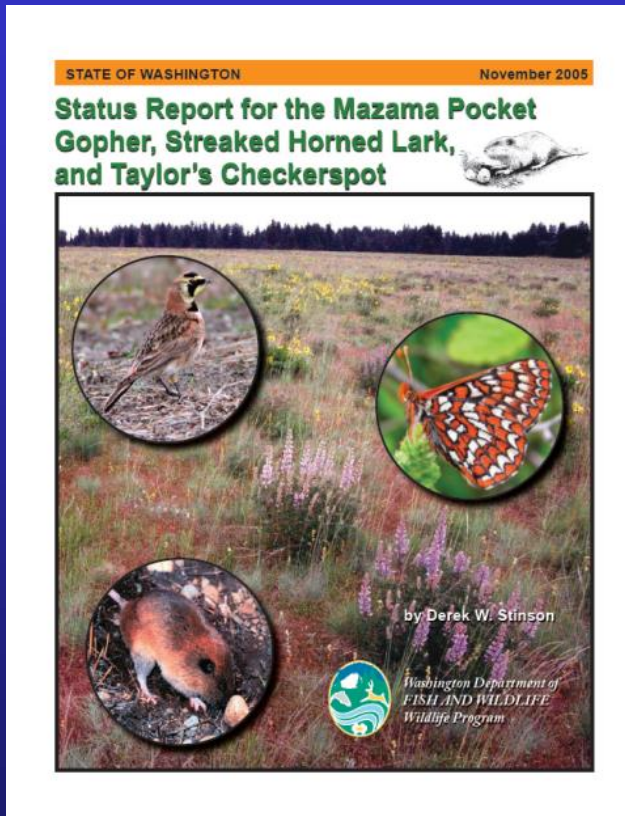


Breeding Areas: Washington Coast



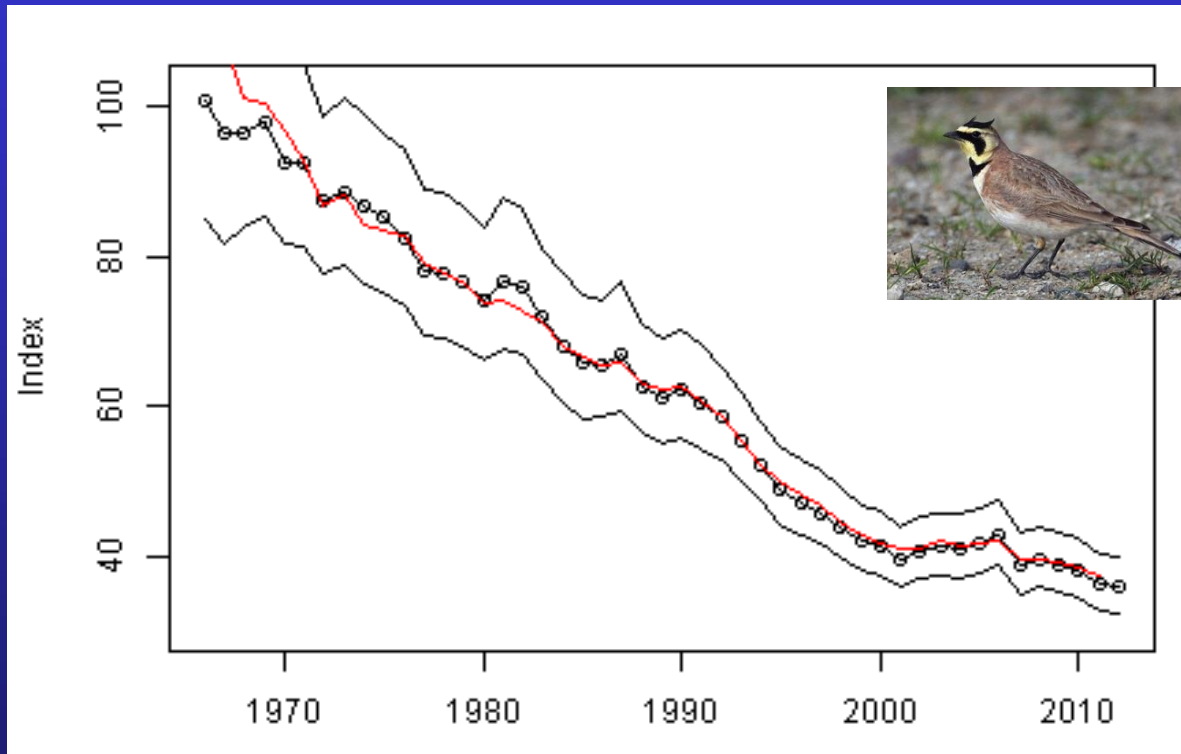
Current Legal Status

- **State:** listed as endangered in 2006
- **Federal:** listed as threatened in 2013; federal recovery plan being developed



Population Status

Nationwide decline in grassland birds



Western Meadowlark



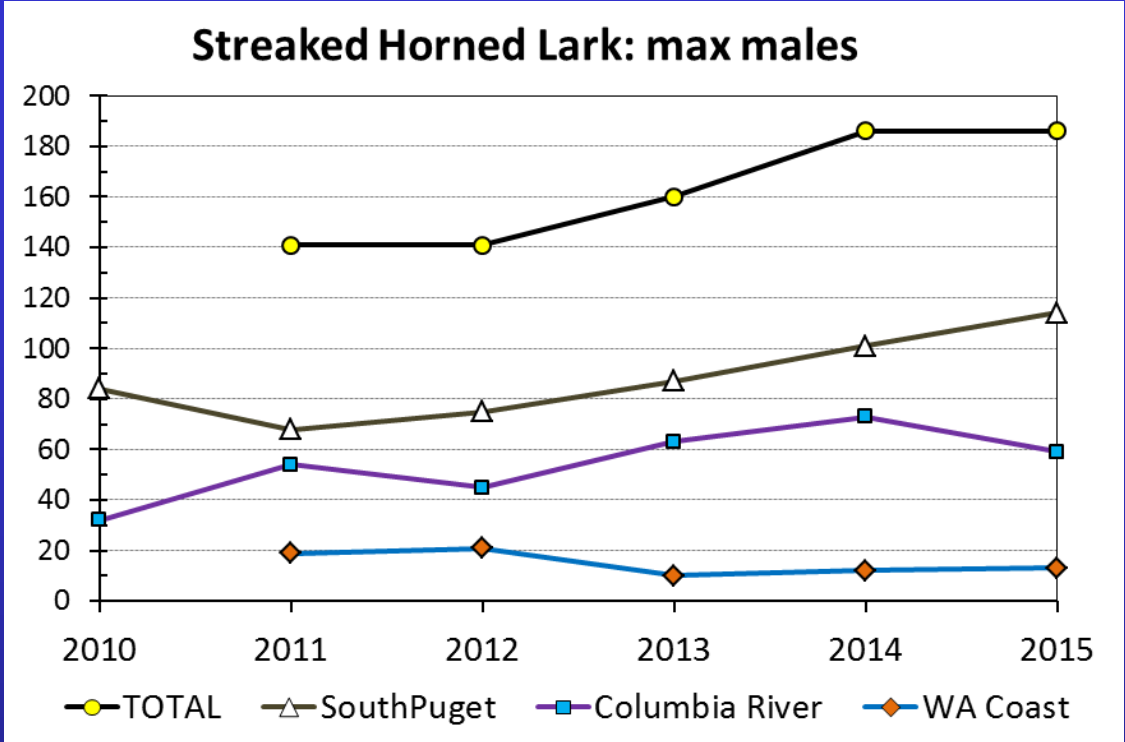
Oregon Vesper Sparrow

Survey-wide trend in Horned Lark detections in Breeding Bird Surveys, 1966-2012.

Population Status cont'd

Washington:
~147 pairs

Rangewide:
585 – 800 pairs

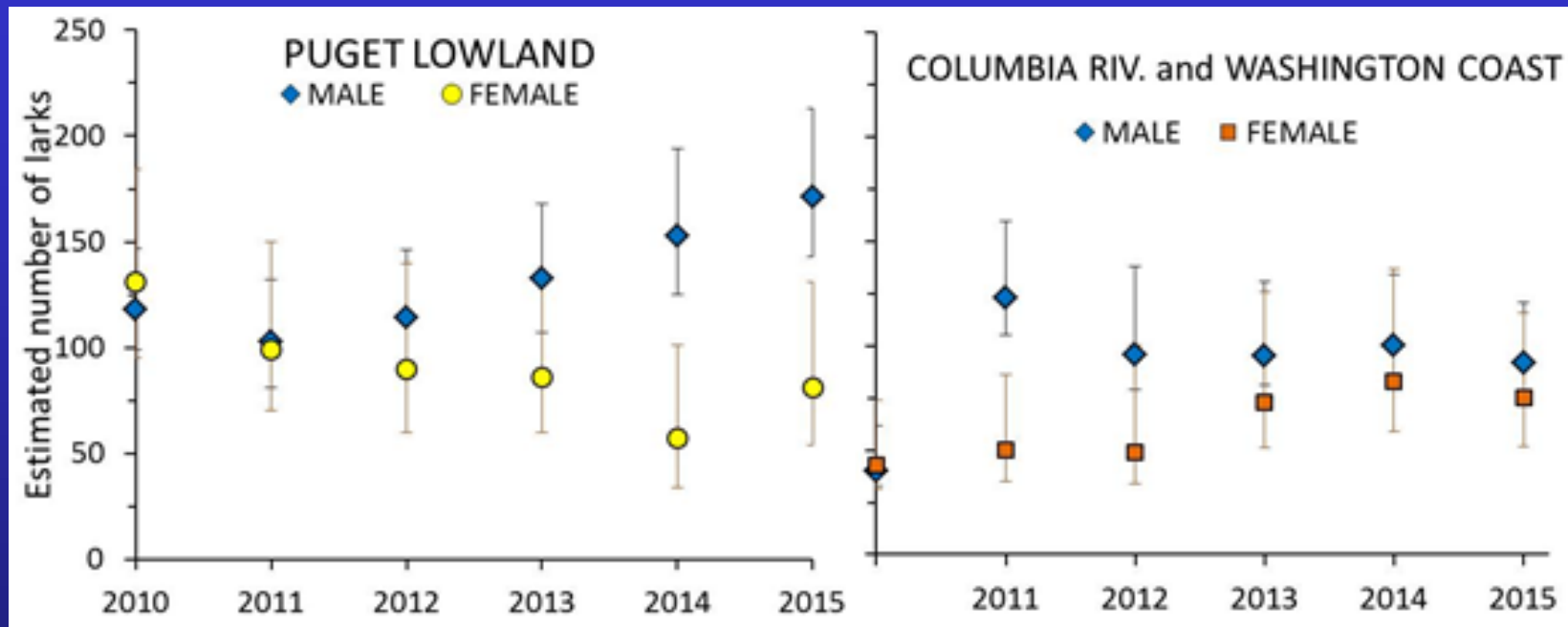


Streaked Horned Lark in regions: maximum males detected (includes OR river sites)

	WA Coast	Columbia River	South Puget Sound	Total
2010	-	40	84	124*
2011	19	72	68	159
2012	20	61	75	156
2013	13	82	87	182
2014	12	82	101	195
2015	13	59	114	186

Population Status Cont'd

Analysis suggests a divergence between male and female trends.

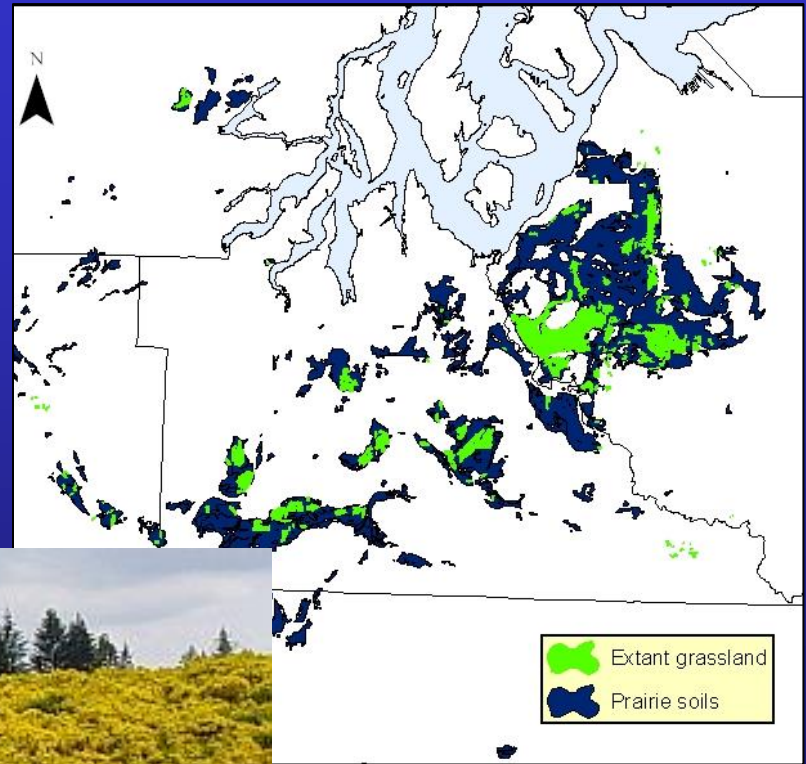


Small/declining populations more likely to exhibit male biased adult sex ratios (Donald 2007). Explanations?

- Females subject to higher mortality during migration, foraging, or incubation?
- Genetic?

Factors Affecting Streaked Horned Larks

- Loss of large open grassland sites
- Cessation of burning regime
- Invasion by trees, Scotch Broom, beach grass



Factors Affecting Streaked Horned Larks Cont'd

Demographic and genetic risks related to small population size

- Low genetic diversity
- Low hatchability at 13th Div. Prairie during 2007-2009 (inbreeding?)



Factors Affecting Streaked Horned Larks Cont'd

- Human disturbance during nesting season
(most nesting areas are managed for human purposes)



Factors Affecting Streaked Horned Larks Cont'd

- Human disturbance during nesting season
 - Life at an airport

Collision mortality?



Factors Affecting Streaked Horned Larks Cont'd

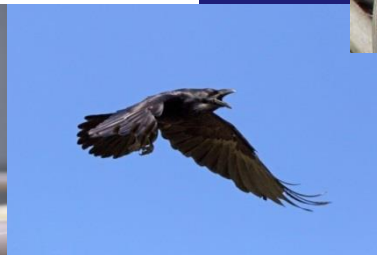
- Nest predation?
 - May be above 'normal'

State of Washington

November 2008

Identifying Streaked Horned Lark (*Eremophila alpestris strigata*) Nest Predators

Scott F. Pearson and Mark Hopey



Other Factors Affecting Streaked Horned Larks?

- Rodenticide (**zinc phosphide**) on airports and farms?
- Pesticides on farms in Willamette Valley?
 - **Seed treated with neonicotinoids can kill small birds**

Declines in insectivorous birds are associated with high neonicotinoid concentrations

Caspar A. Hallmann^{1,2}, Ruud P. B. Foppen^{2,3}, Chris A. M. van Turnhout², Hans de Kroon¹ & Eelke Jongejans¹



Pesticide Acute Toxicity Is a Better Correlate of U.S. Grassland Bird Declines than Agricultural Intensification

Pierre Mineau^{1*}, Mélanie Whiteside^{1,2}



The Impact of the Nation's Most Widely Used Insecticides on Birds

Conservation Actions

- Surveys/monitoring
- Habitat restoration
 - JBLM, Willapa NWR



Scatter Creek South burn. (P.Dunwiddie)

Survey Protocols and Strategies for Assessing Streaked Horned Lark Site Occupancy Status, Population Abundance, and Trends



Scott F. Pearson¹, Mary Linders¹, Ilai Keren¹,

Hannah Anderson², Randy Moore³,

Gary Slater², and Ann Kreager⁴

A collaboration by

¹Washington Department of Fish and Wildlife, Wildlife Science Division, Olympia

²Center for Natural Lands Management

³Department of Fisheries and Wildlife, Oregon State University, Corvallis

⁴Oregon Department of Fish and Wildlife, Corvallis



Conservation Actions: Airports and JBLM

- Efforts to reduce disturbance of nests on JBLM and airports have reduced human-related nest failure



WA and OR AIRPORT AND FEDERAL LANDS STREAKED HORNED LARK WORKING GROUP MEETING

March 3, 2016 9:30–3:30
Portland International Airport
St. Helens A&B Conference Room



Streaked Horned Lark and Pacific Northwest Airports *A Collaborative Workshop*

9 March 2011
Water Resources Education Center
Vancouver, WA



Center for Natural
Lands
Management



Habitat and Species Cooperative Restoration Program
Joint Base Lewis-McChord
Center for Natural Lands Management

JBLM Larks 2014 Nest Monitoring Final Report
W911S8-13-2-0006

Conservation Actions:

- **Army Corps of Engineers** Columbia River maintenance dredging program will >double available habitat, 2014-2018
 - Minimize nesting season disturbance

BIOLOGICAL ASSESSMENT FOR THE CONTINUED OPERATIONS AND MAINTENANCE DREDGING PROGRAM FOR THE COLUMBIA RIVER FEDERAL NAVIGATION CHANNEL



Upland placement of dredged materials on Rice Island, September 2013



Photos courtesy of USFWS: western horned lark, bull trout, Columbian white-tailed deer, marbled murrelet

MARCH 2014



U.S. Army Corps of Engineers
Portland District

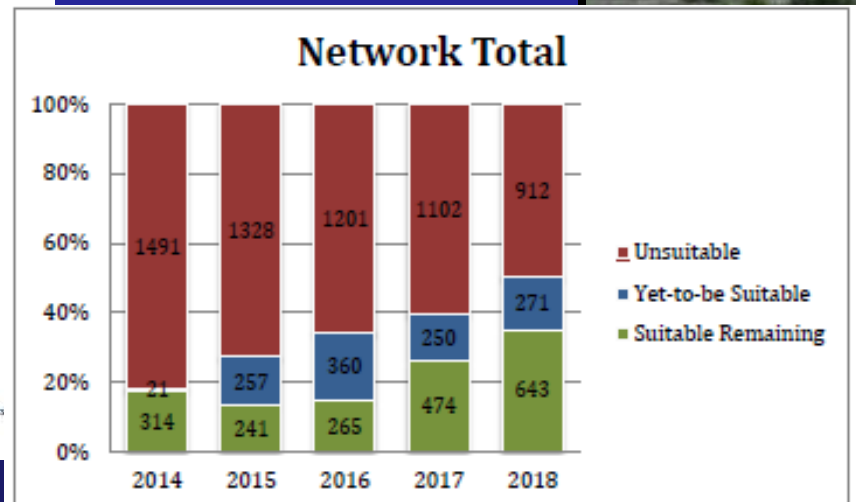


Figure 14: Transition of Suitable SHLA Nesting Habitat throughout Network, 2014-2018

Conservation Actions: Research...

- WDFW Science Div. and universities (OSU, UBC, Evergreen, UW)

Research Papers

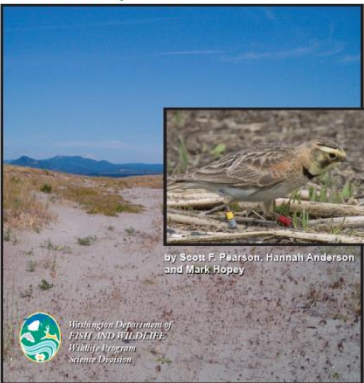
A Demographic Model to Evaluate Population Declines in the Endangered Streaked Horned Lark

Life history variation between high and low elevation subspecies of horned larks *Eremophila* spp.

Alaine F. Camfield, Scott F. Pearson and Kathy Martin

STATE OF WASHINGTON October 2005

Streaked Horned Lark Monitoring, Habitat Manipulations and a Conspecific Attraction Experiment



by Scott F. Pearson, Hannah Anderson and Mark Hoppey



Managing Agricultural Land to Benefit Streaked Horned Larks: A Guide for Landowners and Land Managers



Streaked Horned Lark males in Multnomah, Clatsop, OR. Photo Credit: Randy Moore

Edited by:
Randy Moore
Dept. of Fisheries and Wildlife
Oregon State University
201 NW Oak Creek Drive
Corvallis, OR 97331
rmoore@oregonstate.edu

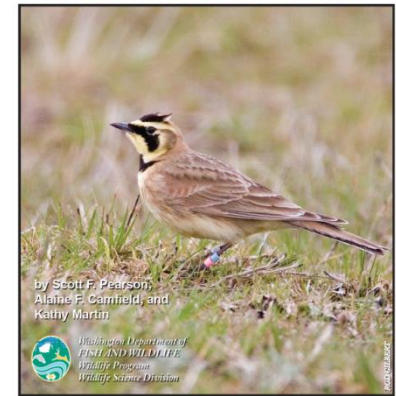


Edited by:
Center for Natural Lands Management
3 East Union Ave. #215
Bellingham WA 98201
Contact: Hannah Anderson



STATE OF WASHINGTON January 2008

Streaked Horned Lark (*Eremophila alpestris strigata*) Fecundity, Survival, Population Growth and Site Fidelity



by Scott F. Pearson, Alaine F. Camfield, and Kathy Martin



Journal of Field Ornithology



J. Field Ornithol. 83(3):315-322, 2012

DOI: 10.1111/j.1557-9263.2012.00381.x

Nest enclosures do not improve Streaked Horned Lark nest success

Scott F. Pearson^{1,3}, Randall Moore², and Shannon M. Knapp¹

¹ Washington Department of Fish and Wildlife, Wildlife Research Division, 1111 Washington Street SE,

Conservation Actions: Research Cont'd

CNLM, Amer. Bird Conservancy

- Habitat management
- Genetic augmentation,
- Site attraction experiments, etc.



Bob Altman¹, American Bird Conservancy, 311 NE Mistletoe, Corvallis, Oregon 97330

Historical and Current Distribution and Populations of Bird Species in Prairie-Oak Habitats in the Pacific Northwest

Streaked Horned Lark Conspecific Attraction Feasibility Study



Final Report
December 2013

Submitted to:
US Fish and Wildlife Service
Port of Portland
Joint Base Lewis-McChord
The Nature Conservancy
Metro

Prepared by:
Hannah E. Anderson, Adrian Wolf & R. Adam Martin
Center for Natural Lands Management

South Puget Sound Streaked Horned Lark (*Eremophila alpestris strigata*) Genetic Rescue Study

Report for Year 4

Spring/Summer 2014



Columbia River Streaked Horned Lark Restoration Trial

Final Report to the US Fish and Wildlife Service
USFWS Cooperative Agreement #13410-9-G007



Center for Natural
Lands
Management



Conservation Actions: Planning, etc.

- Streaked Horned Lark Working Group
 - Action plan to identify and prioritize conservation actions updated annually



Review and Recommendation

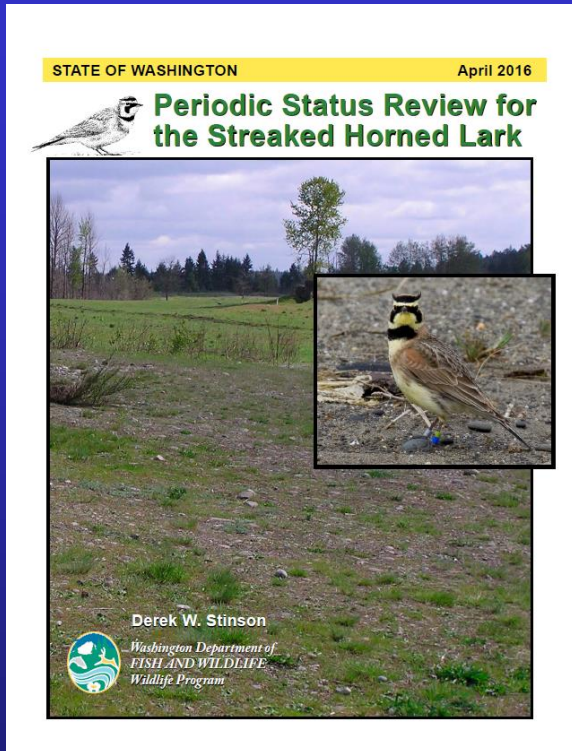


- Stable or increasing trend, but possible decline in females
- JBLM, ACOE, and airports have reduced conflicts and improved prospects for local populations
- <150 pairs nested at ~15 sites in Washington in 2015

Recommendation:

The Streaked Horned Lark should remain state-listed as Endangered

Summary of Public Comments



- Of 8 public comments, 6 support keeping the Streaked Horned Lark as endangered
 - 1 suggested recovery include reintroductions to Island County prairies
- 1 opposed public spending on listing and recovery in general

Acknowledgements

**Photos by many known and unknown,
but including:**

- Mark Williams
- Rod Gilbert
- Scott Pearson
- Derek Stinson



Questions?

