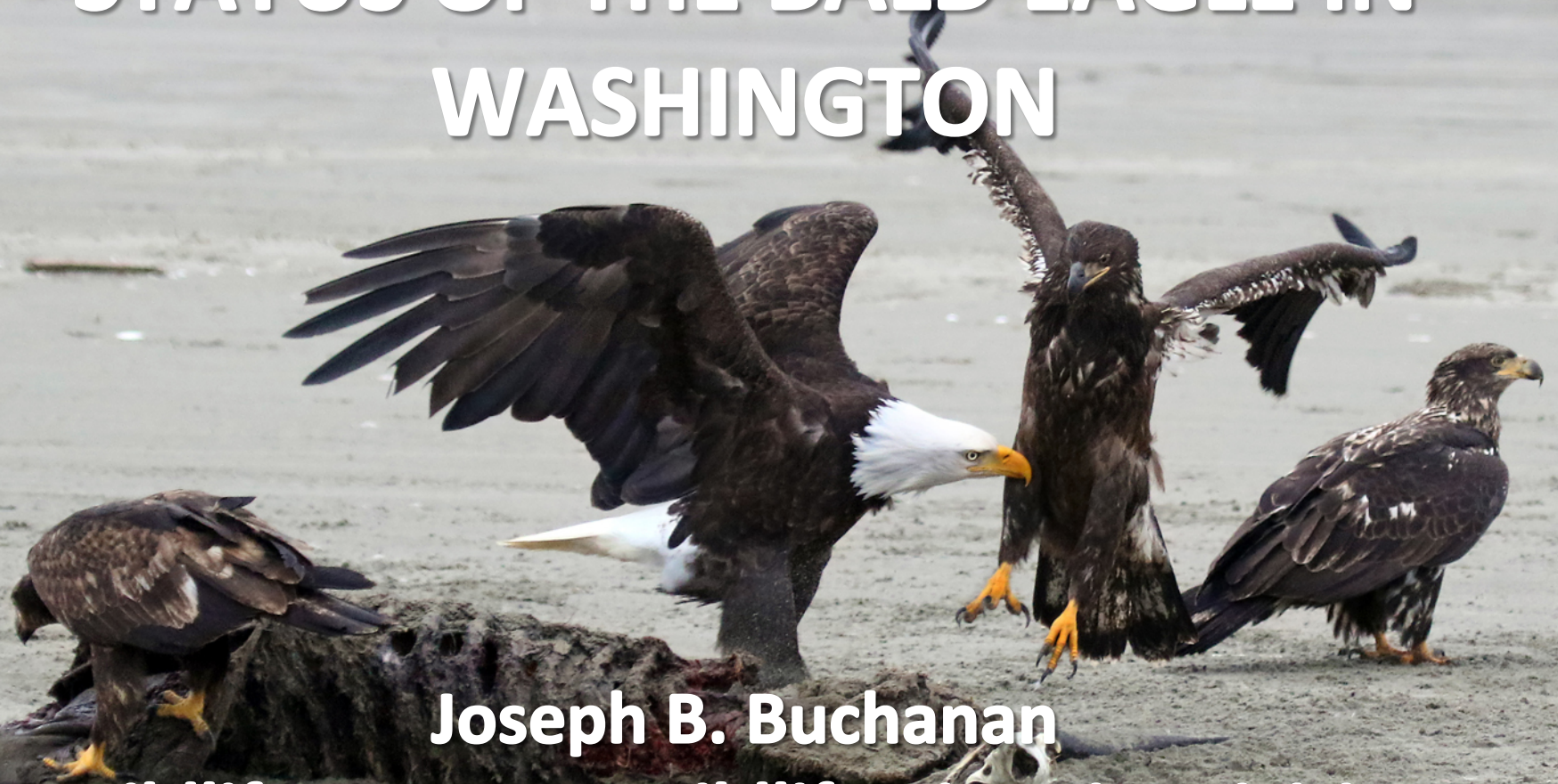


STATUS OF THE BALD EAGLE IN WASHINGTON



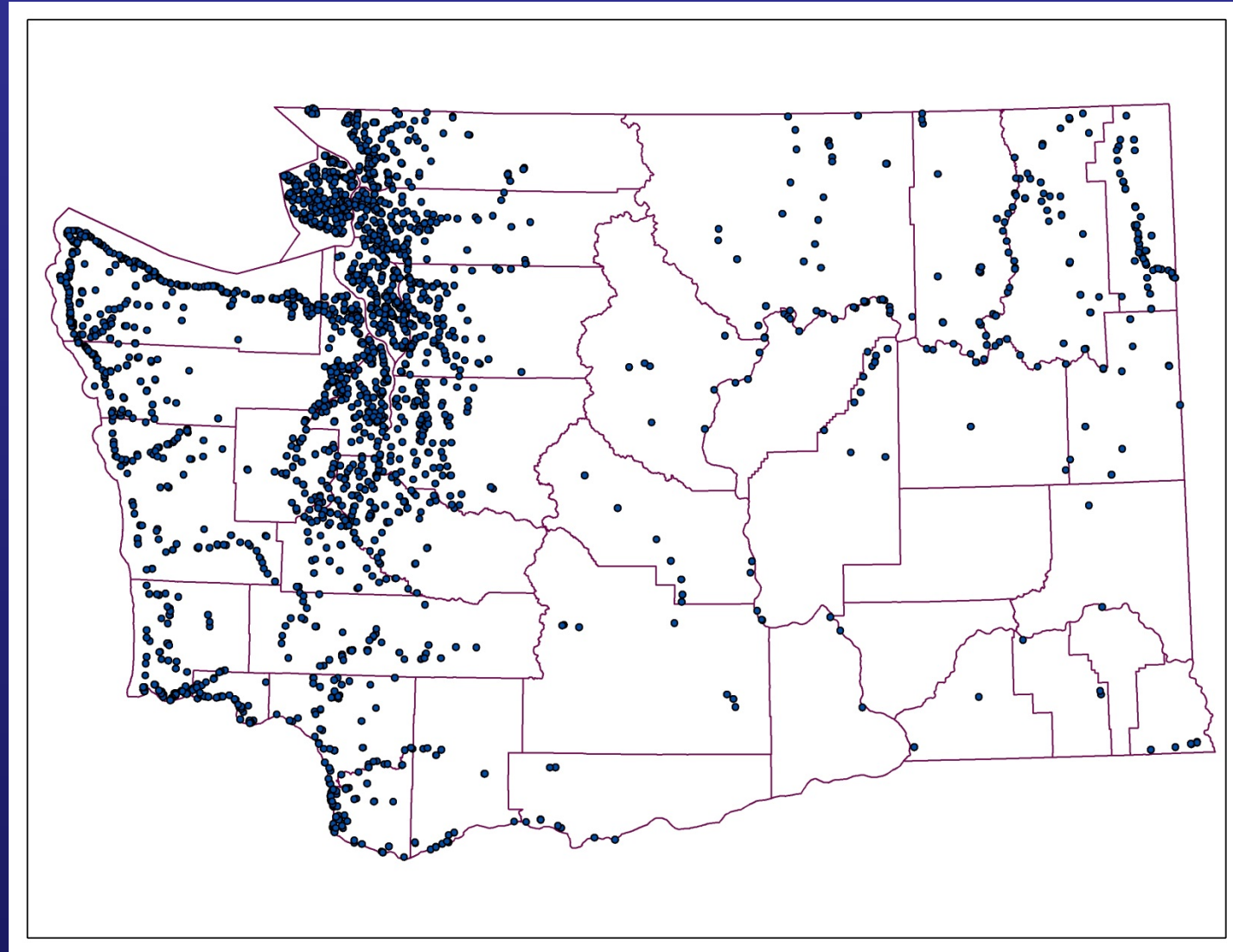
Joseph B. Buchanan
Wildlife Program, Wildlife Diversity Division
November 2016



Listing Status

- 1940: Bald Eagle Protection Act
- 1978: Listed as threatened under the ESA
- 1983: Listed as threatened in Washington by Fish & Wildlife Commission
- 2007: Delisted from ESA (& revisions to Bald & Golden Eagle Protection Act)
- 2008: Down-listed to sensitive status by Fish & Wildlife Commission

Distribution in Washington



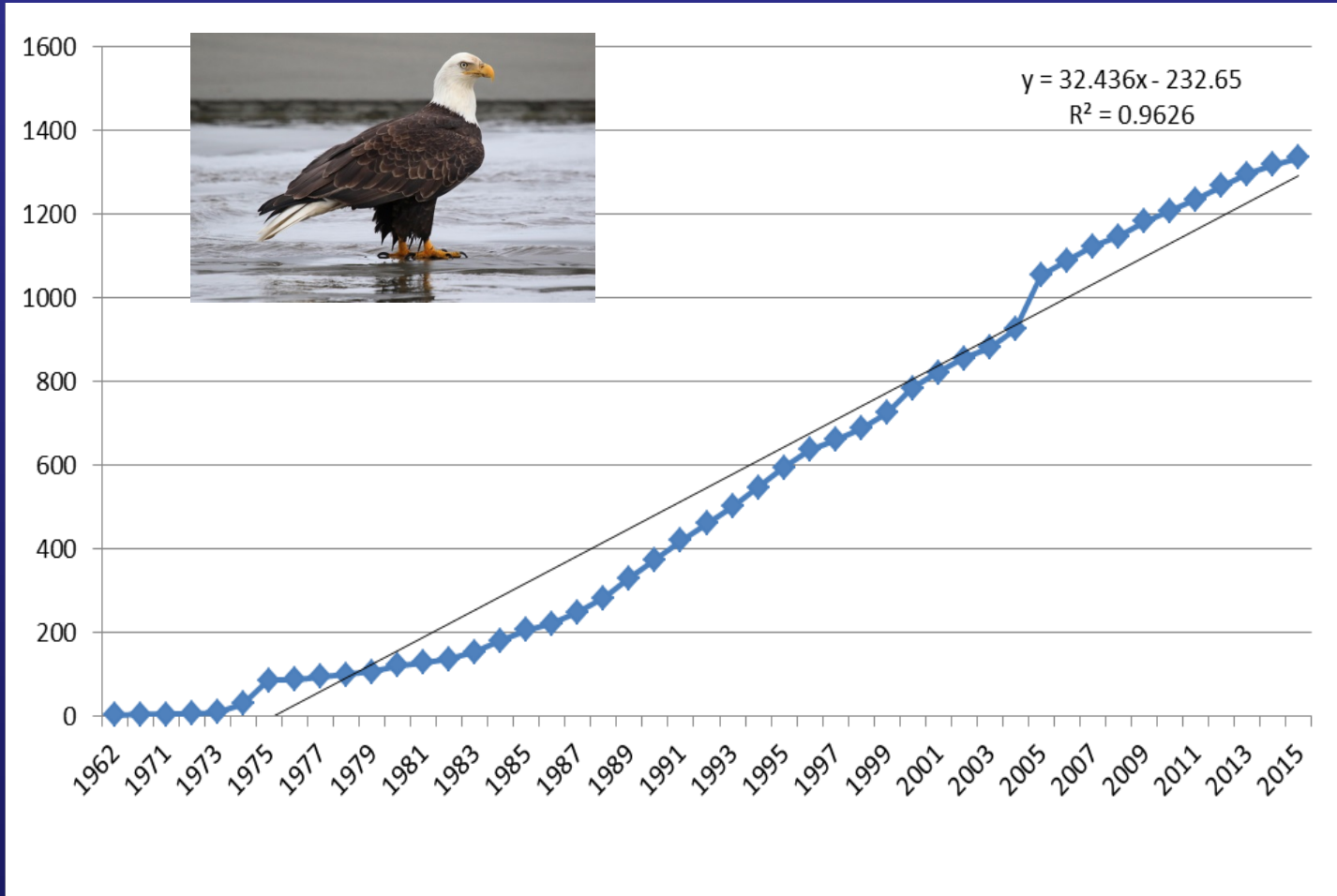
Natural History

- Marine and freshwater environments
- Use large trees to support large nests
- Food: fish, waterbirds & waterfowl; self-caught or stolen; carrion



Population Status

Cumulative number of territories



Population Status (continued)

Breeding Bird Survey data for the Bald Eagle - annual percent change (accessed 7 October 2016)

State, province or region	1966 - 2013	2003 - 2013
British Columbia	2.93	3.53
Washington	9.13	9.30
Oregon	5.95	6.80
California	11.63	13.88
Idaho	4.75	7.28
North Pacific Rainforest	2.71	3.53
Western North America	4.16	6.54
North America	5.37	9.79

Factors Affecting the Species

- Chemical contaminants
 - Use of DDT discontinued
 - Other contaminants present, but not currently known to impact the species
- Habitat loss/change
 - Some salmon populations increasing
 - Loss of nest trees or candidate nest trees (removal, blow-down)
- Human interactions
 - Disturbance near nests
 - Collisions with vehicles



Management Activities

- USFWS: implement Bald & Golden Eagle Protection Act
- Local governments: protect Bald Eagles in a manner consistent with Bald & Golden Eagle Protection Act
- Forest Practices Rules: enhancement of habitat for salmon results in recruitment of nest trees for eagles

WDFW's Role

- Customer service (e.g., direct citizens to USFWS website for permits, and inquiries about injured birds)
- Permit and support wildlife rehabilitation facilities that care for injured Bald Eagles
- Support needs of national feather repository
- Monitor status as needed and to inform next status review
- Law enforcement as needed



Recommendation: de-list and remove from the state Endangered Species list in Washington



Public Comments

- Eleven emails/letters
- Retain as sensitive (5), delist (4), change to endangered (1), misunderstanding of current status (1)
- One comment letter (delist) provided support for their opinion (citing reports and publications); the others did not

Questions?



Photographs:
Tom Rowley

Status of Peregrine Falcon in Washington



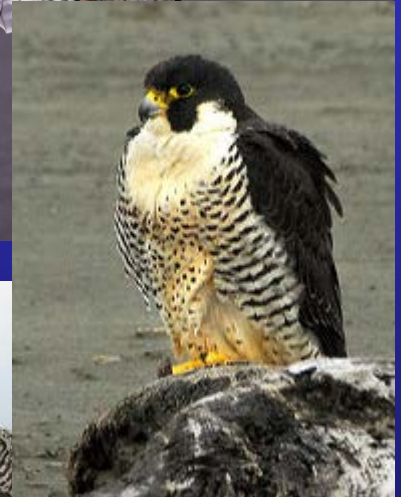
Gerry Hayes, Wildlife Biologist
Diversity Division, Wildlife Program

3 subspecies in Washington

Arctic
peregrine



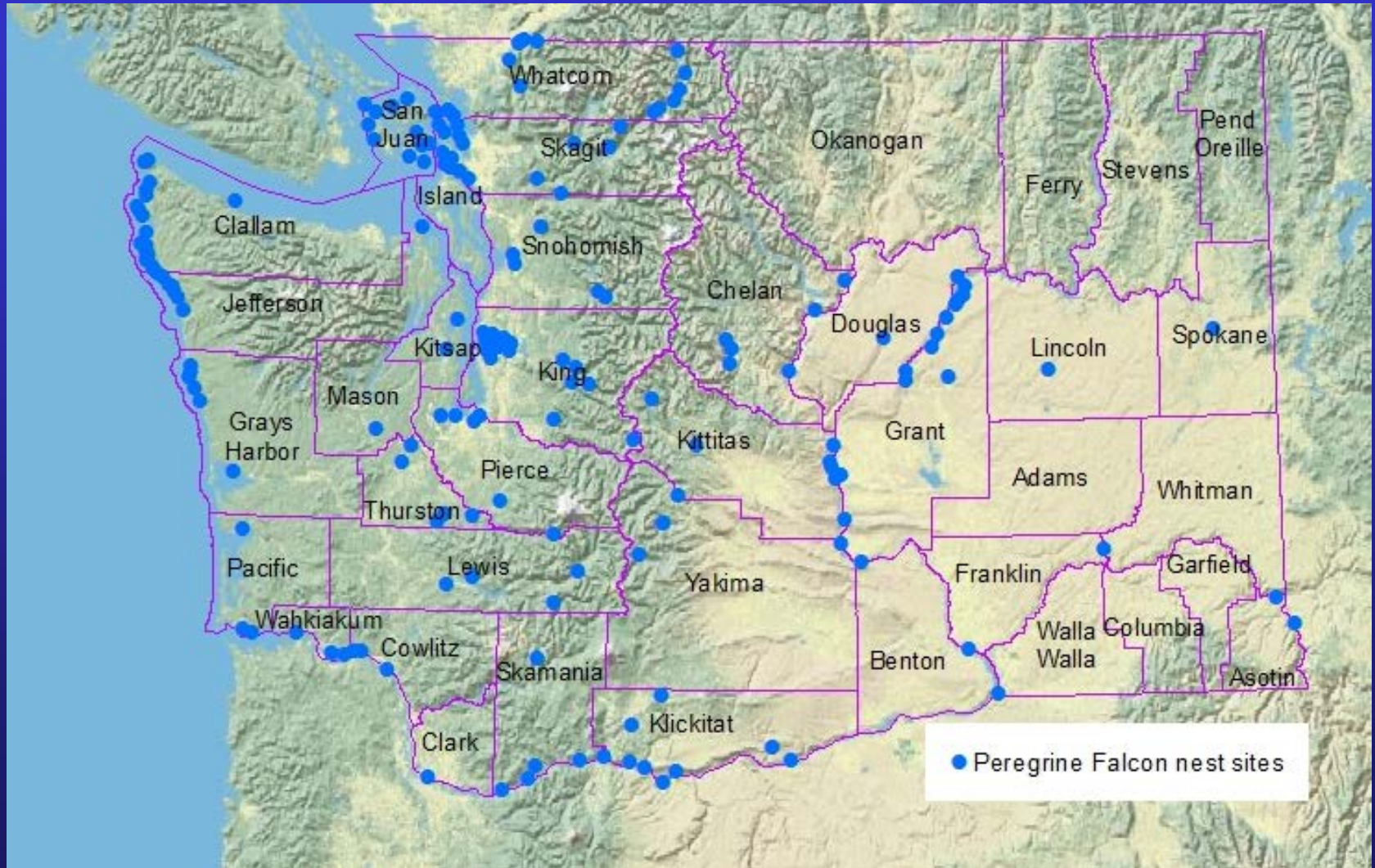
American
peregrine



Peale's
peregrine



Peregrine Falcon Distribution



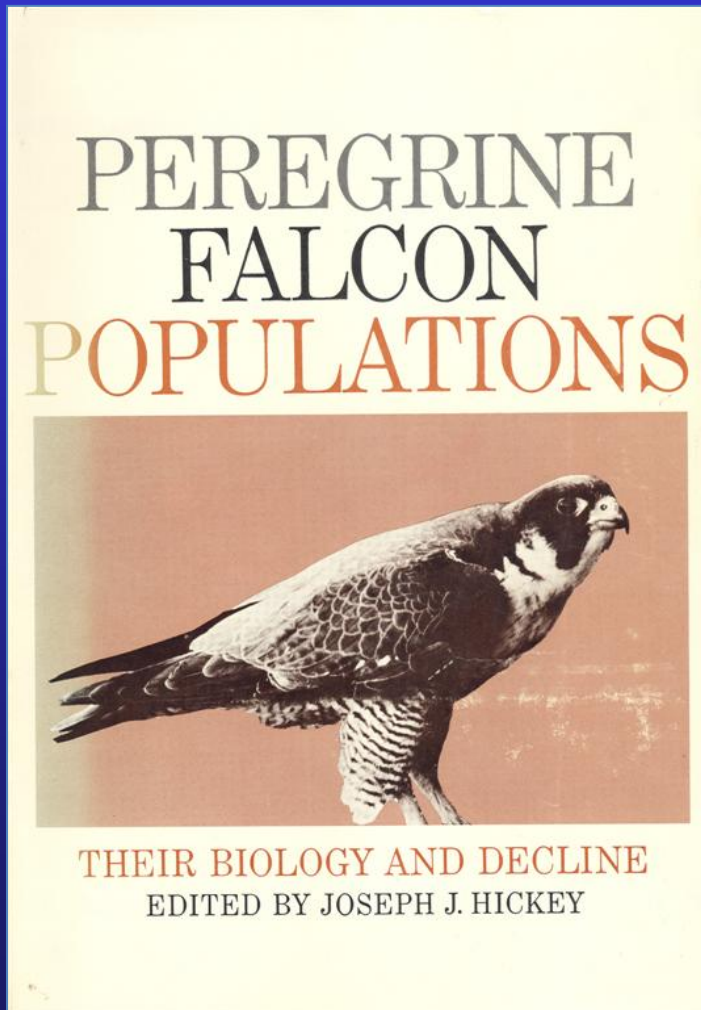
Natural History



- Nesting Habitat:
 - Cliffs, buildings, bridges
 - Ledges to lay eggs
 - Roost sites
 - Open landscape to hunt
 - Abundance of small-med size birds
- Wintering Habitat:
 - Abundance of flocking bird species
 - Perch/roost sites

Organochlorine Pesticides

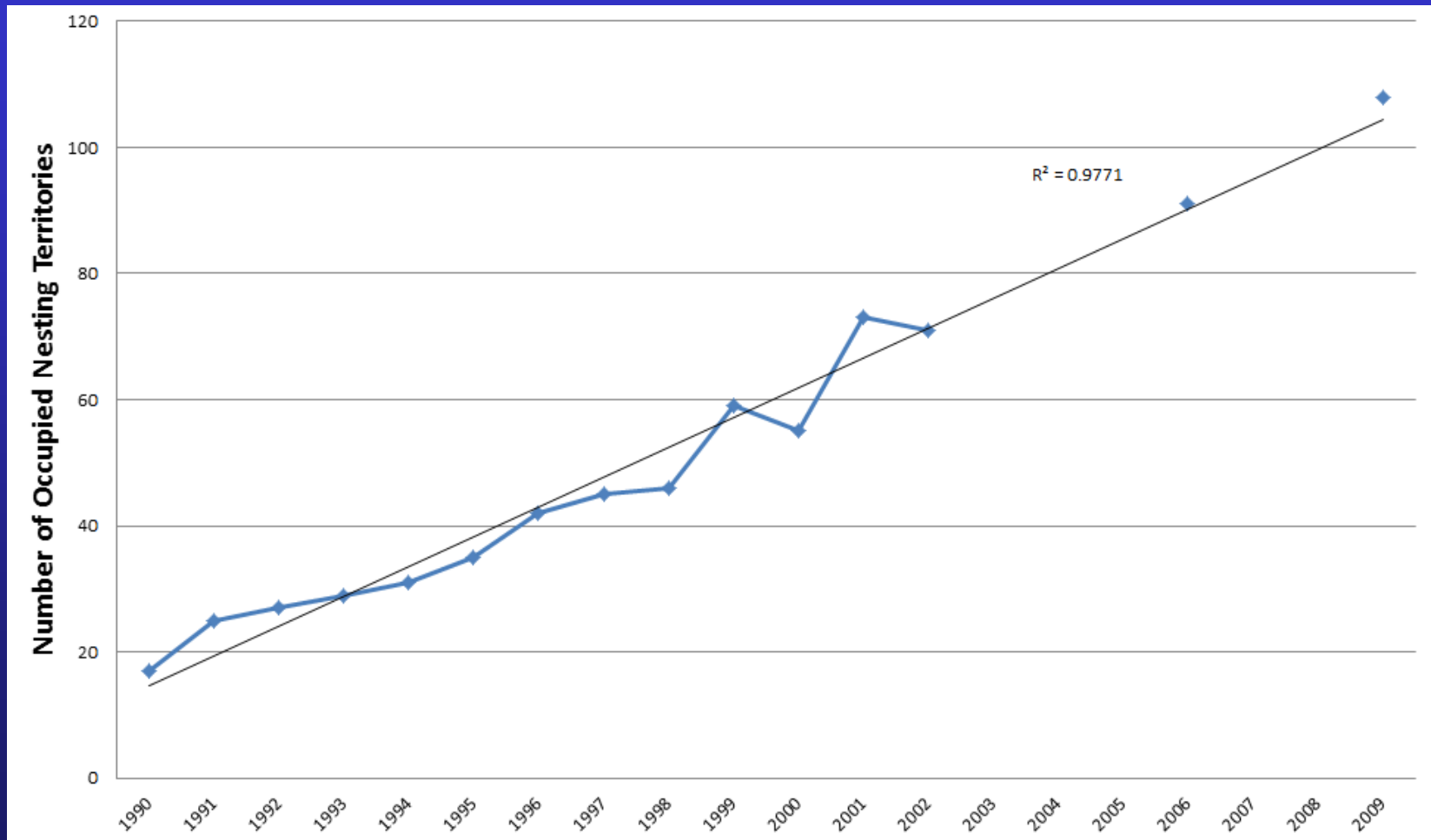
- DDT
- Cyclodiene compounds: dieldrin, aldrin



Listing Status

	American peregrine	Arctic peregrine	Peale's peregrine
Federal status	Endangered-1970 Delisted-1999	Endangered-1970 Threatened-1984 Delisted-1994	-
State status	Endangered-1980, Sensitive-2002		
MBTA protections	Yes	Yes	Yes

Peregrine Falcon Population Status



Factors Affecting the Species



- OC Pesticides
- PCBs
- Mercury
- Flame Retardants
- Oil spills
- Neonicotinoids
- Climate Change

Matt Vander Haegen, WDFW

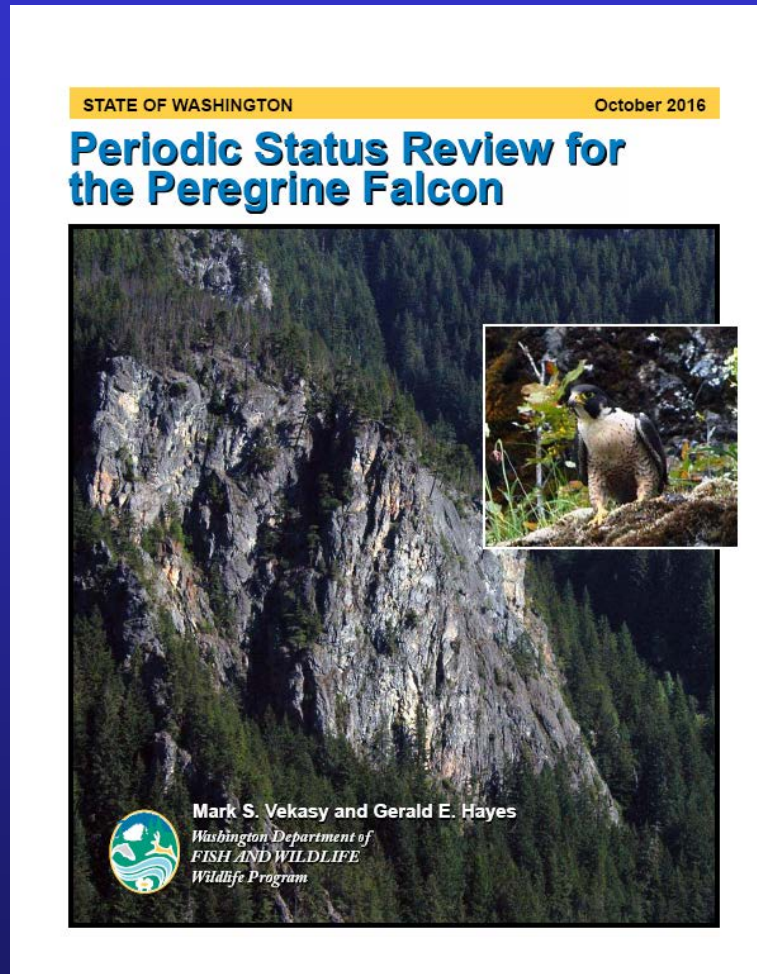
Management Activities



- PHS Mgmt. Recommendations
- Nest Surveys
- Falconry

Recommendation

Delist and remove
the Peregrine
Falcon from the list
of Endangered
Species in
Washington



Public Comments/Concerns

(12 comments)

- Support for up-listing to endangered status (2)
- Support for up-listing to threatened status (1)
- Support for continued sensitive listing (6)
 - No survey since removal of critical habitat protections under WA Forest Practices Rule
 - Population is still recovering, delisting is premature
 - Population numbers not high enough considering on-going human threats to habitat
- Support for delisting (3)
 - Continued monitoring to assess future stressors from climate change or new pesticides

Questions?



Status of the American White Pelican in Washington



Derek Stinson, Biologist
Wildlife Diversity Division

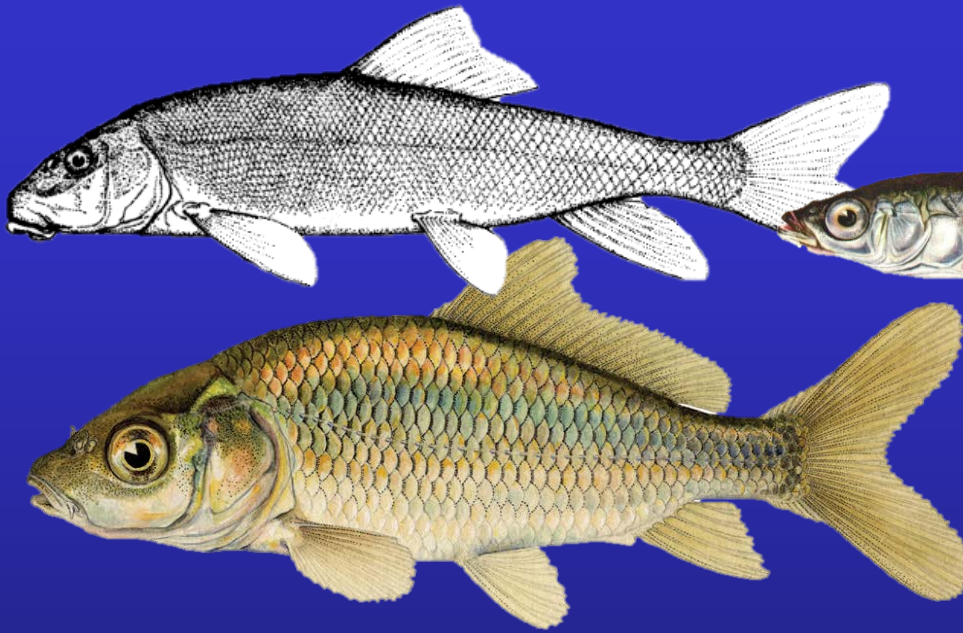
Washington Department of Fish and Wildlife

Natural History

- Large, long-lived, colonial nesting
- Breeds on islands in freshwater lakes and rivers
- Do not dive, forage by 'bill dipping'; sometimes in coordinated groups that encircle fish



Natural History, cont.



- Eat mostly nongame or "rough" fish:
- carp, suckers, sticklebacks, chub, bullheads, and minnows
 - tiger salamanders, and crayfish

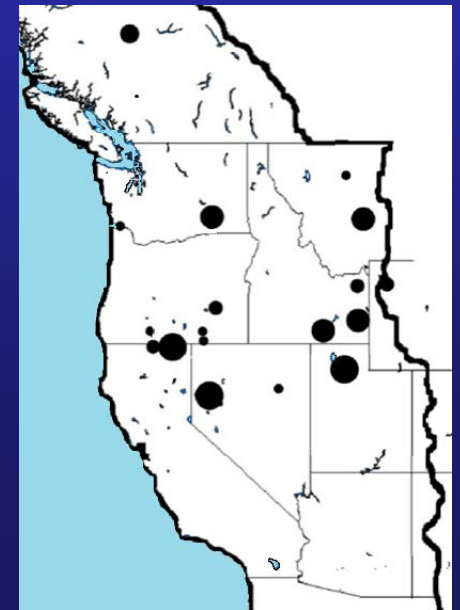
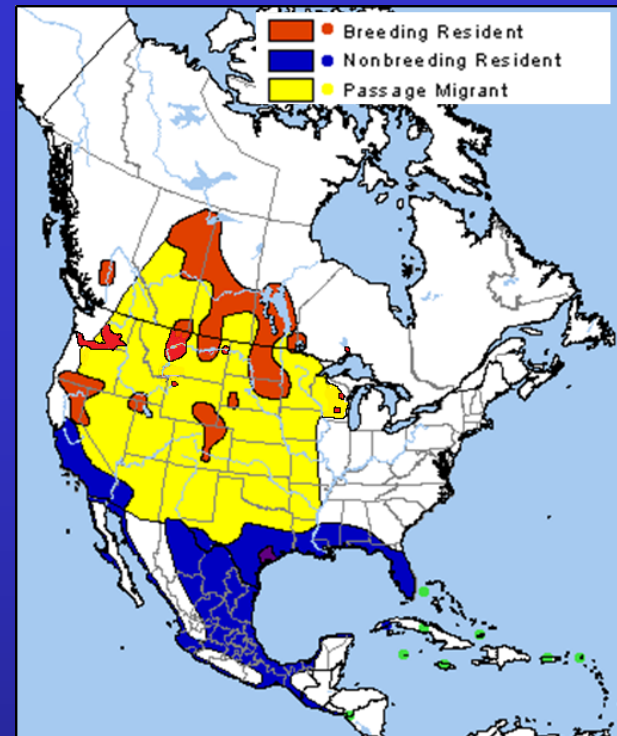
Natural History, cont.



- Habit of flying in flocks, and formations
- Often forage within 30 miles of colony, but long distances when necessary
- Round trips >200 mi are routine for some colonies

Rangewide Distribution

- Occurs in west and southeast
- < 50 colonies, most have <500 nests
- >1/2 birds at 4 large colonies in the northern Great Plains
- West: <15 active colonies
- Most western birds winter in California



Rangewide Population Status

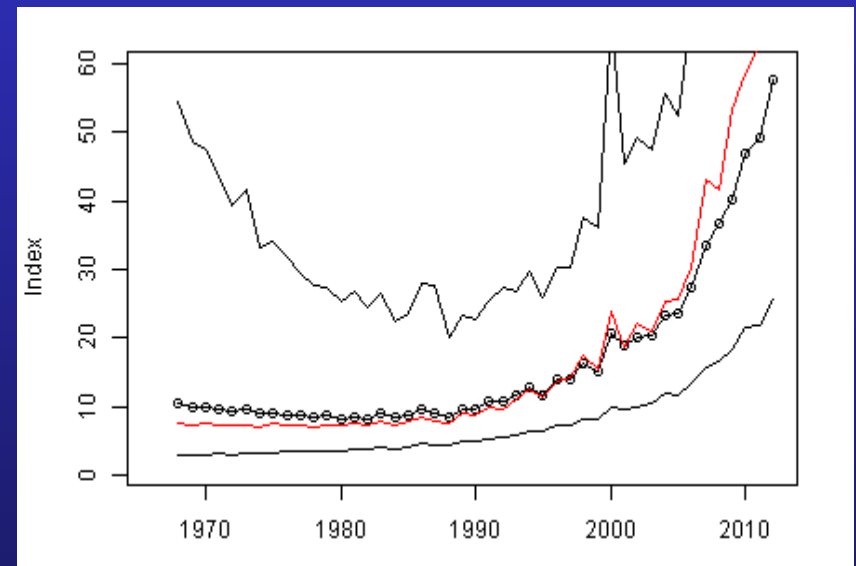
Declined in the 20th century due to:

- **Water projects** (e.g.: CA had 11 colonies in the 19th century, 1 in 1932)
- **Persecution**: shot for sport or to alleviate suspected impacts on fish
- **Feather trade** (plumes worth weight in gold)
- **DDT**



Population Status

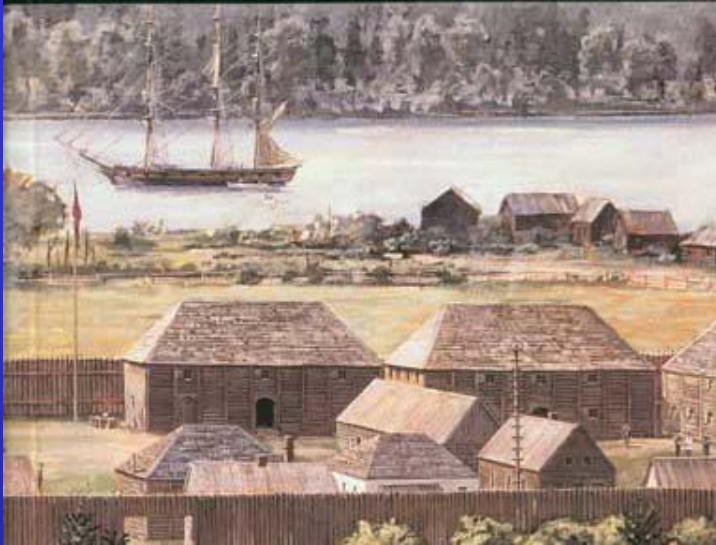
- 1964: estimated at ~45,000
- 1972: National Audubon Society **Blue List**
- 1981: Listed as Endangered in WA
- Populations have recovered from pre-1970 declines



Western BBS Region

- 2014: ~43,000 birds in western states

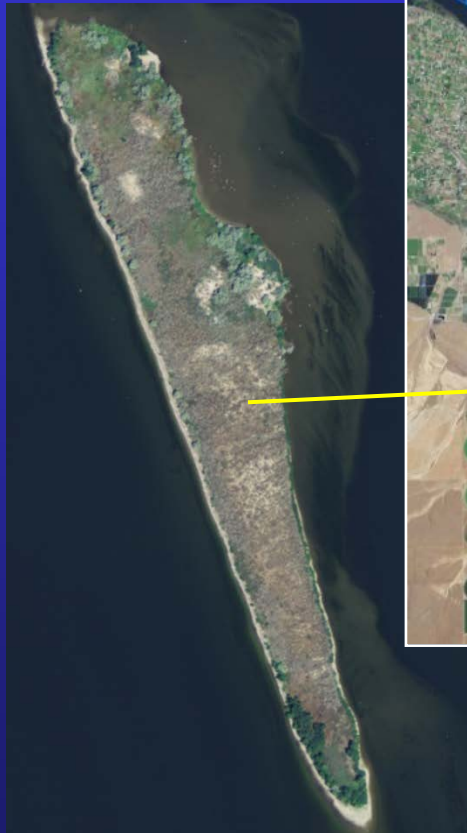
Population Status: Washington Historically



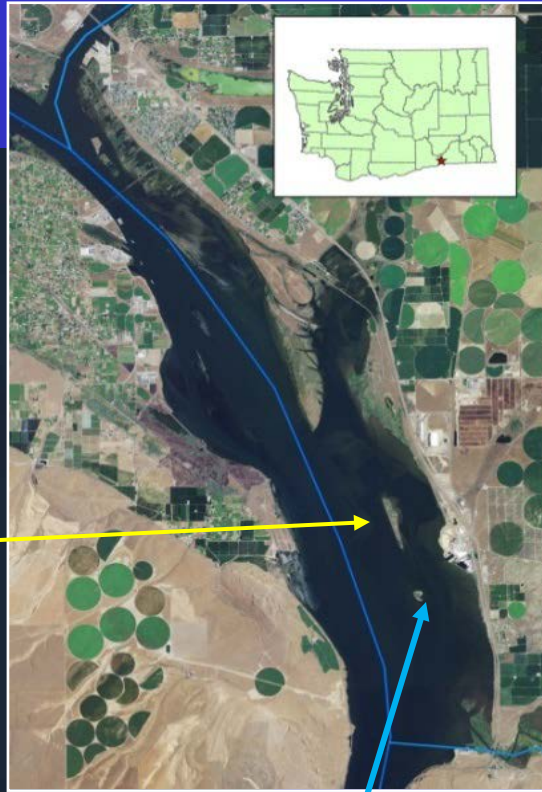
- Noted by Lewis & Clark in Columbia in 1805, and in 1830s
- Nested at Moses Lake in 1920s- maybe others
- Extirpated from 1940s - 1993

Population Status: Washington Today

- 1994: Crescent Island colony established
- 1997-8: Shifted to Badger Island



Badger Island

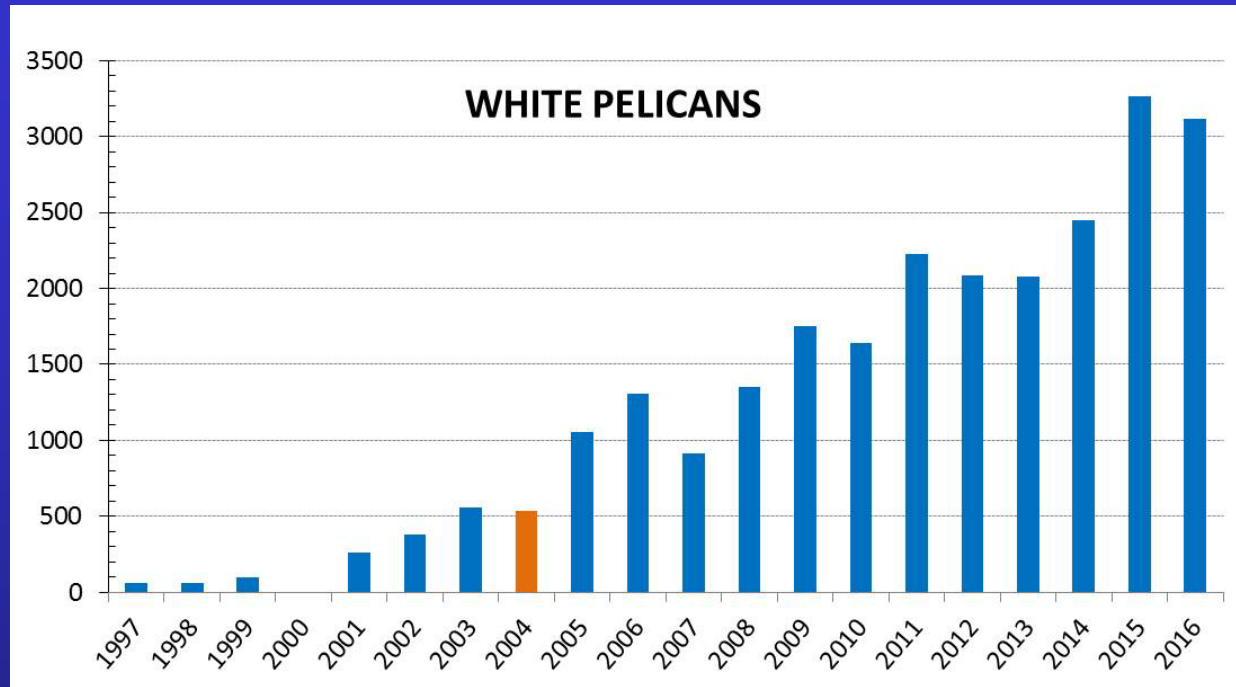


Crescent Island



Badger Island 2005

Population Status: Washington today



- Colony grown to over 3,100 birds in 2016
- Increasing numbers of non-breeders seen foraging below dams
- Summer, peak of 2,000 birds in the Potholes region
- Winter-- smaller numbers remain

Population Status: cont.



2010: began nesting in Columbia estuary on Miller Sands, Clatsop County OR

- **2014:** 109 nests; abandoned (human disturbance)
- **2015:** 144 nests
- **2016:** xxx nests; abandoned (mammal predator?)

Factors Affecting the Species



- Habitat loss, water level fluctuations, and water quality
- Competing demands for water may be the greatest long-term issue

Factors Affecting the Species

- Human disturbance of colonies
- Diseases
 - West Nile Virus (killed 9,000)
 - Botulism (killed 8,500 in 1996)
- Pesticides and contaminants
 - Water quality -- agricultural run-off, pollution, rising salinity and selenium levels
 - Contaminant residues in wetlands



65-85% of western popn
during migration

Factors Affecting the Species

Severe weather and climate change:

- Example: Chase Lake, North Dakota:
 - 1965 - 2008, spring arrival advanced 16 days
 - Cold/wet weather killed thousands of chicks 2005-2008

Pelican deaths puzzle biologists

About 8,000 chicks have died at a North Dakota wildlife refuge, leaving only 500.

Everett Herald (Associated Press)

BISMARCK, N.D. - The U.S. Fish and Wildlife Service is investigating the deaths of thousands of young white pelicans at a wildlife refuge in central North Dakota, a year after thousands of adult

Factors Affecting The Species



Fisheries conflicts: eat mostly carp, suckers, but...

- Effects to Columbia Basin ESA-listed salmon
 - Badger Island colony - impact on smolts much less than by terns, cormorants, gulls
 - Impact of increasing non-breeders often foraging below dams is not well understood

Conclusions and Recommendation

White Pelicans have increased in Washington

- Badger Island colony ~3,000 birds
- New small colony (Miller Sands, OR)
- Potential for fisheries conflicts

but...

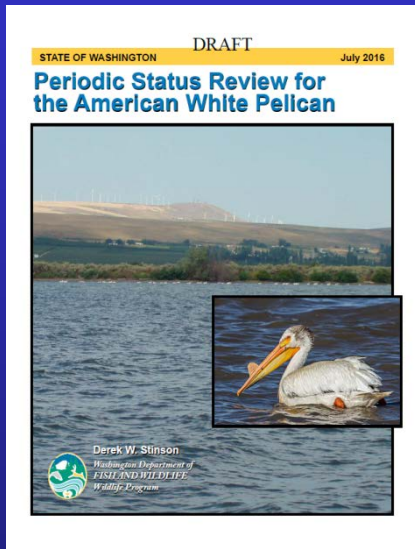
- Washington still hosts only one colony
- Sensitive to disturbance
- Diseases, toxins, drought, and extreme weather

Recommendation:

Down-list the White Pelican to Threatened

Summary of Public Comments:

9 public comments on the Draft



- 1 agreed with down-listing to threatened
- 6 suggested keeping as endangered
- 2 suggested delisting, citing numbers, lack of threats, impacts to salmon smolts, aircraft strike hazard, etc.

QUESTIONS?



Status of Marbled Murrelet in Washington



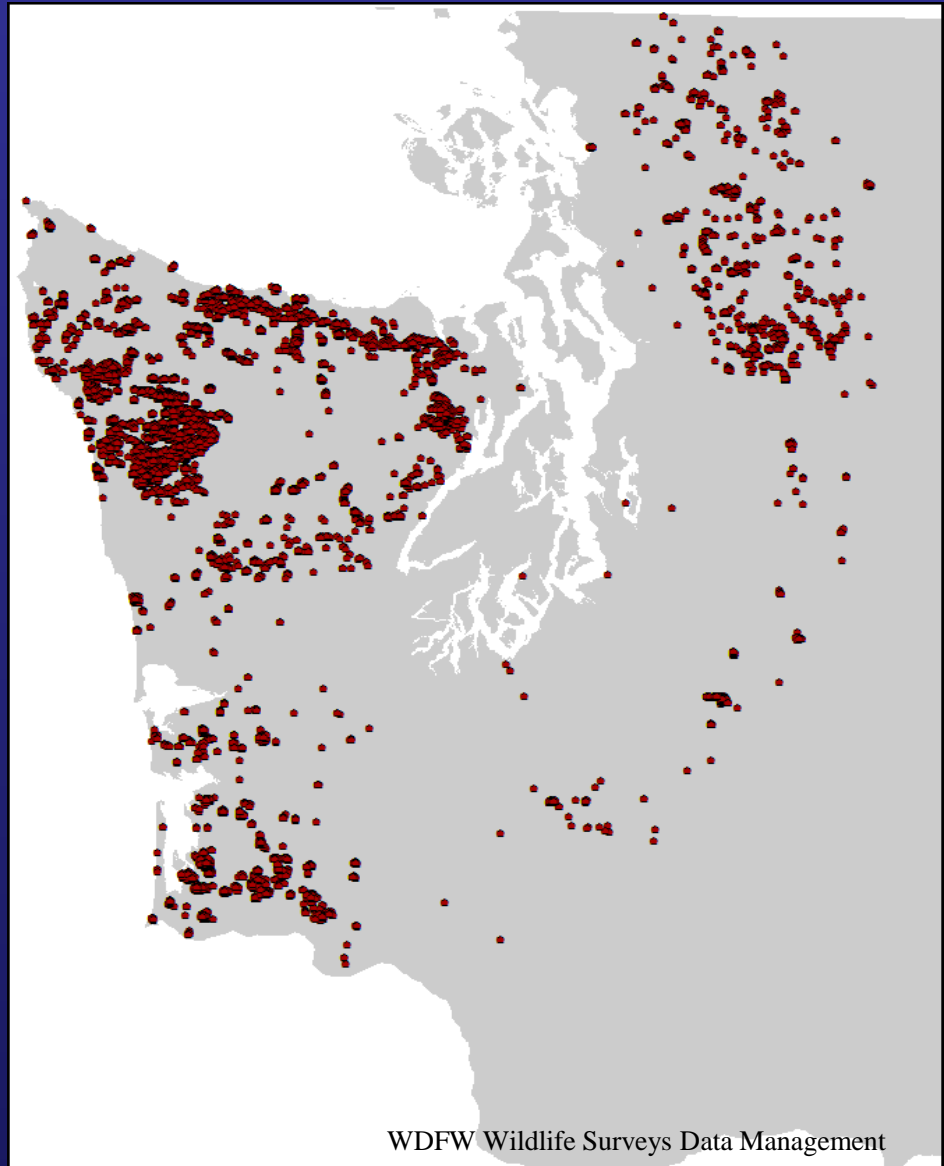
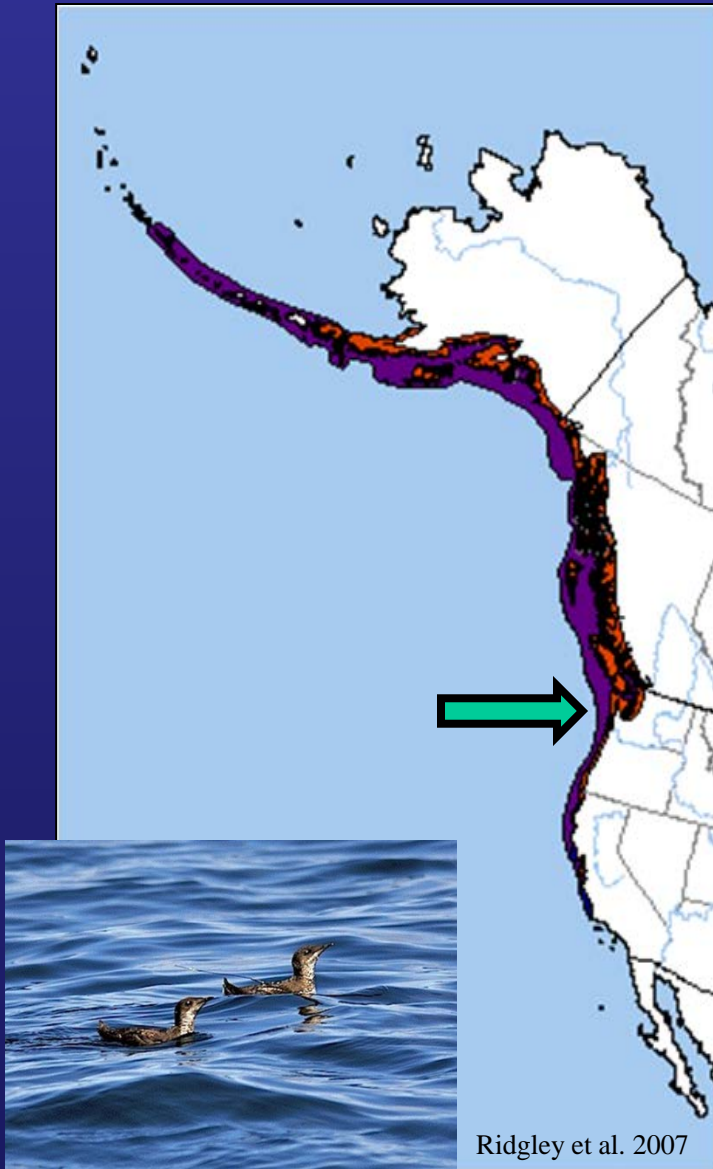
Steve Desimone, Wildlife Biologist
Diversity Division, Wildlife Program

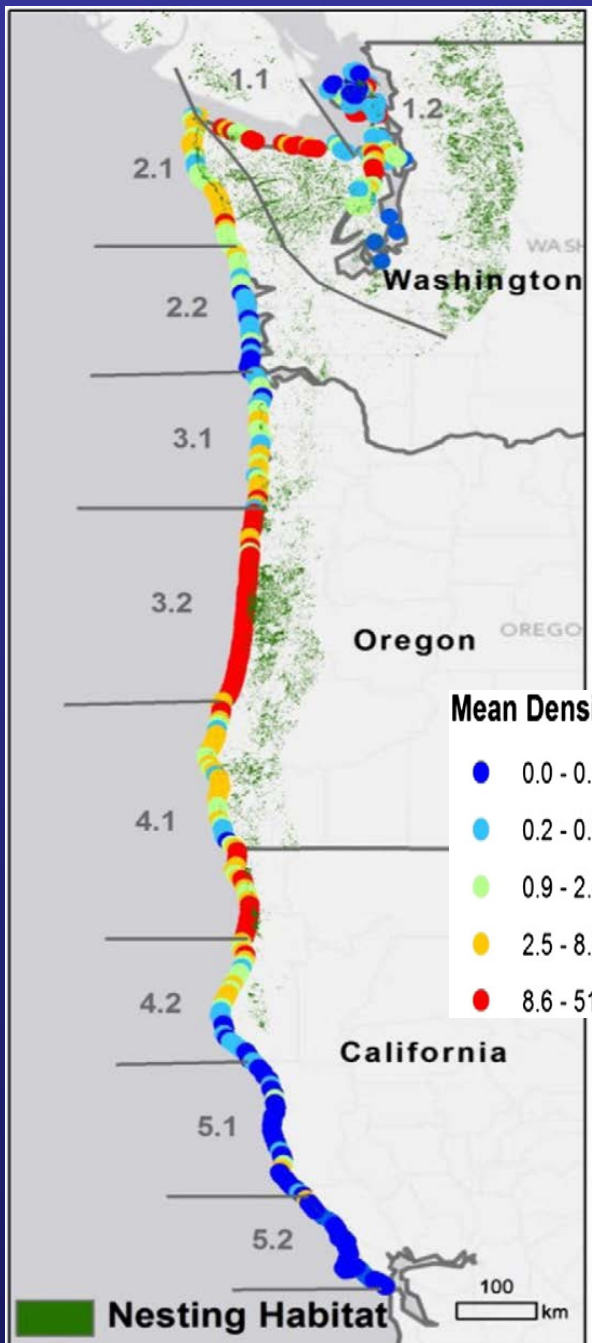
Description



- Robin-sized seabird (Alcidae)
- Lives in 2 habitats; majority at sea
 - Forages and roosts in marine waters
 - Nests inland on limbs of mature and old conifer trees

Distribution and range





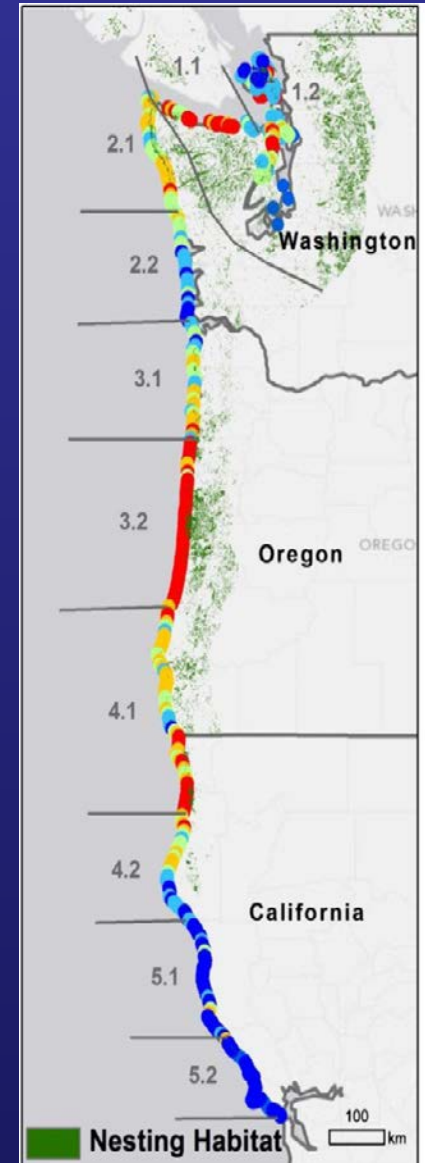
Highest murrelet densities offshore of large blocks of federal lands in NWFP area

- WA- Olympic NF and Park, N Cascades
- OR- National Forest

map: Raphael et al. 2015

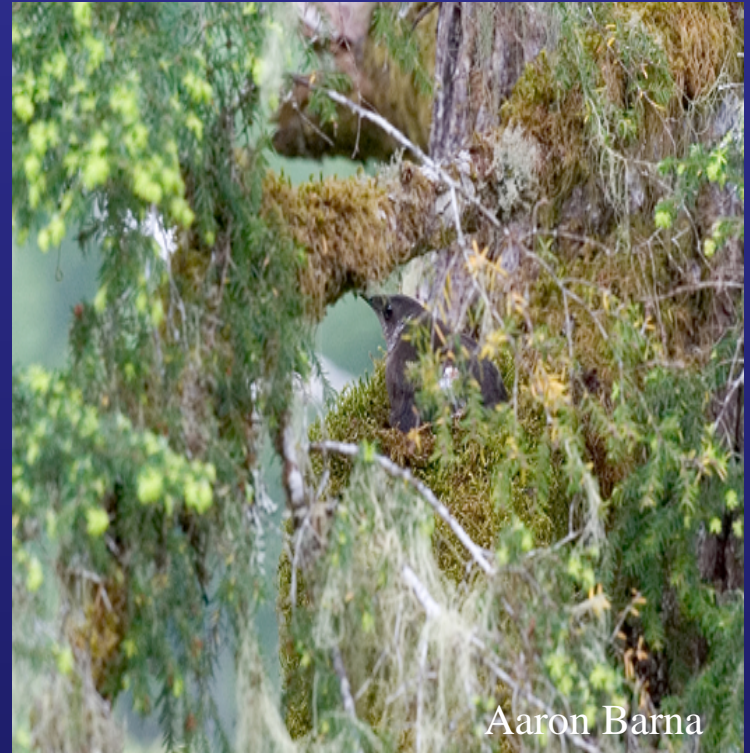
Legal Status & Listing

- Federally Threatened in WA, OR & CA since 1992
- Primary listing reason: loss and modification of nesting habitat
- Other: low juvenile recruitment, chemical pollution, fisheries net mortality
- WA State Threatened in 1993



Natural History

- Cryptically-colored and fast-flying
- Visits forest habitat before dawn and at dusk
- Feeds on small fish: herring, anchovy, smelt, etc.
- Near-shore out to ~5-8 km

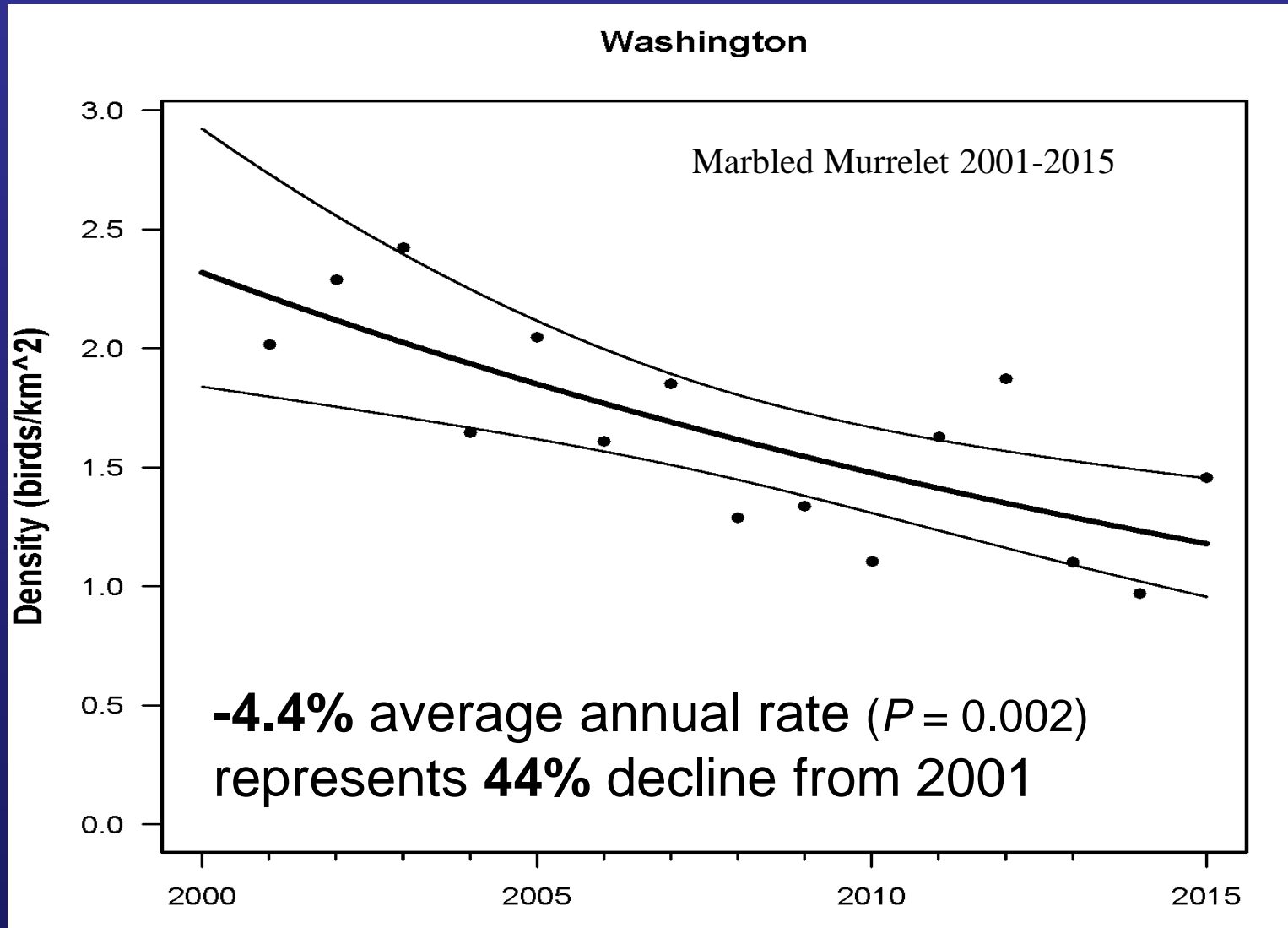


Reproduction and Survival

- 1 large egg per season; alternate years
- Low reproductive rate
- Low juvenile survival and recruitment
- Data lacking for WA



Washington Density Trend: Declining



(Lance and Pearson 2016)

Nesting Habitat Change in WA

NW Forest Plan (NWFP) model estimate

1993 baseline habitat to 2012: All Landowners

Habitat loss - 418,400 acres (-27%)

Habitat gains +212,700

Net habitat change -205,700 acres

-13.3% over 20 years

(Raphael et al. 2016a)

Terrestrial Habitat and Marine Abundance and Location

- NWFP synthesis of forest and population
- Marine forage and productivity considered



Distribution in marine strongly correlated with adjacent larger unfragmented areas of potential nesting habitat



(Raphael et al. 2002a, 2015, 2016b; Raphael 2006; Burger and Waterhouse 2009, Lorenz et al. 2016)

Adequacy of Regulatory Mechanisms

- Federal lands: >99% of Critical Habitat
- Federal Recovery Objectives (1997) not yet realized
- Nonfederal lands: Forest Practices Rules (1997)
 - Occupied sites: ~52,000 acres
 - Habitat not defined by Rule and unoccupied can be managed

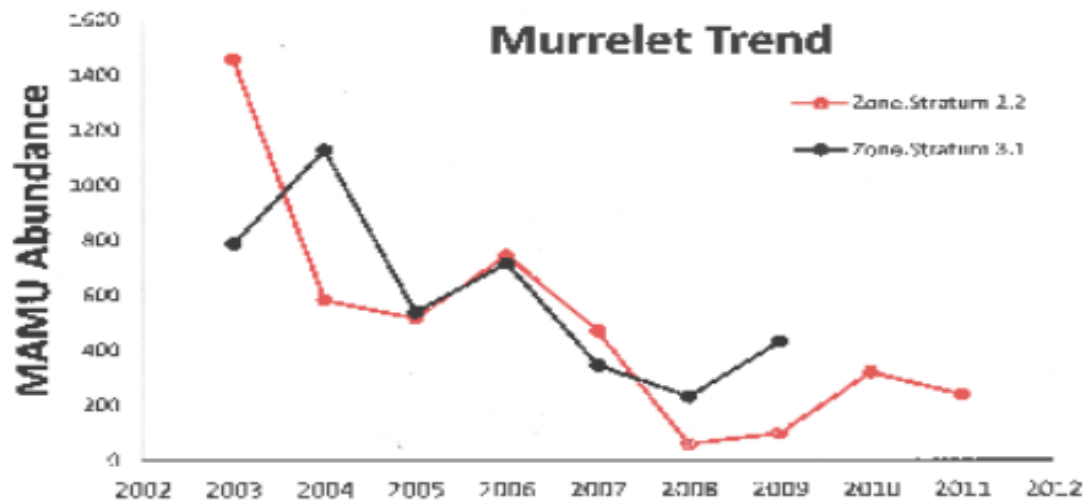
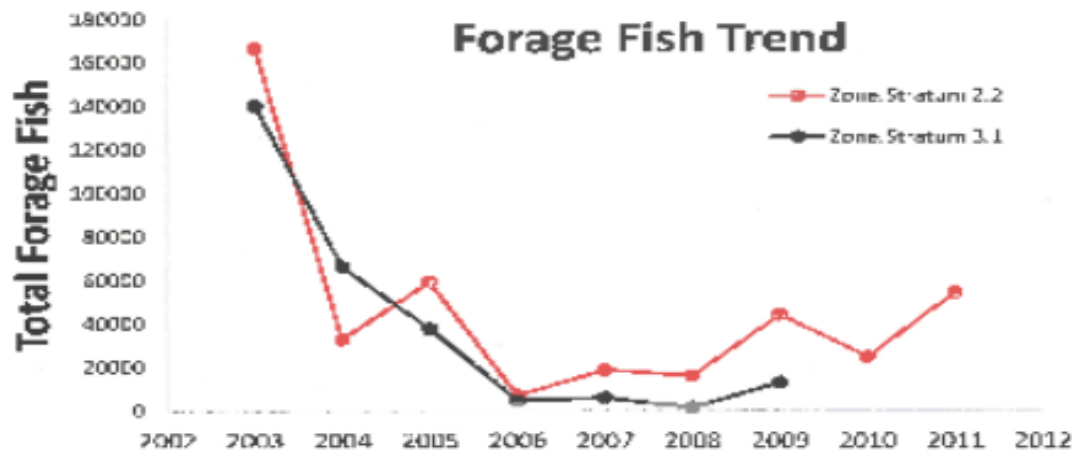


Factors for Continued Risks and Threats

- Marine prey availability
 - Changing marine conditions
- High energetic cost of food delivery
- Chemical pollution; disturbance



Forage Fish Near Willapa Bay and Columbia River

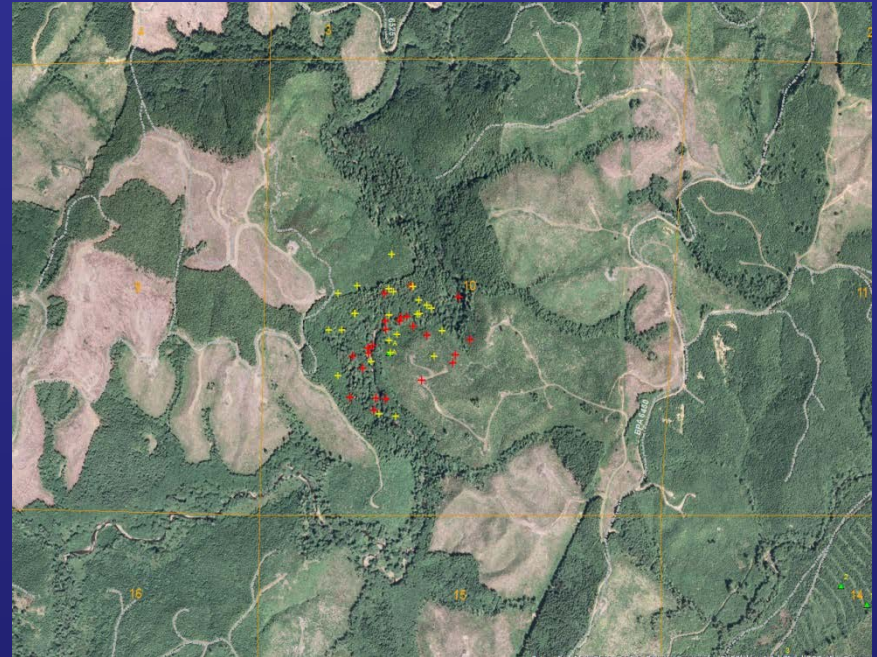


Raphael et al. 2016b

Continued Risks and Threats

Nest success influenced by:

- Adequate nutrition
- Nest habitat quality and position on landscape
- Fragmentation and human disturbance
- Predation risk by Corvids
(jays, crows, ravens)



Research and Management Activities

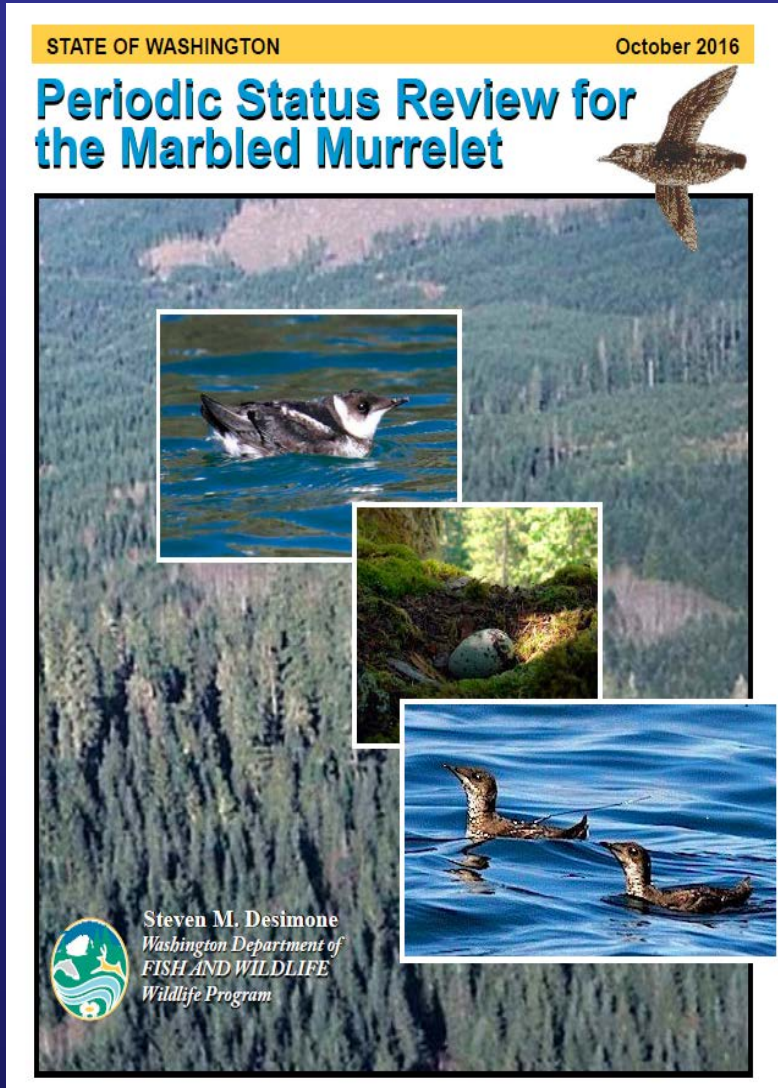
- New and Ongoing Projects:
 - Forage fish availability, murrelet habitat use
 - Improving “land-sea” models, population monitoring
- Protected federal higher suitability habitat expected to increase in <50 yrs
- Nonfederal lands: HCP, Safe Harbor, Forest Practices Rules

Conclusion and Recommendation

- Washington population declining at 4.4% per year
- Past and continued loss of nesting habitat
- Continued Low juvenile recruitment
- Despite past management, 44% decline in abundance

WDFW recommends revising status of Marbled Murrelet to state endangered

Public Comments



- >1,700 individual form letters /emails supporting recommendation
- 6 letters from NGOs
 - 4 supporting
 - 2 critical, but neutral



Questions?

Status of the Lynx in Washington



Jeff Lewis
Mesocarnivore Conservation Biologist
Diversity Division, Wildlife Program



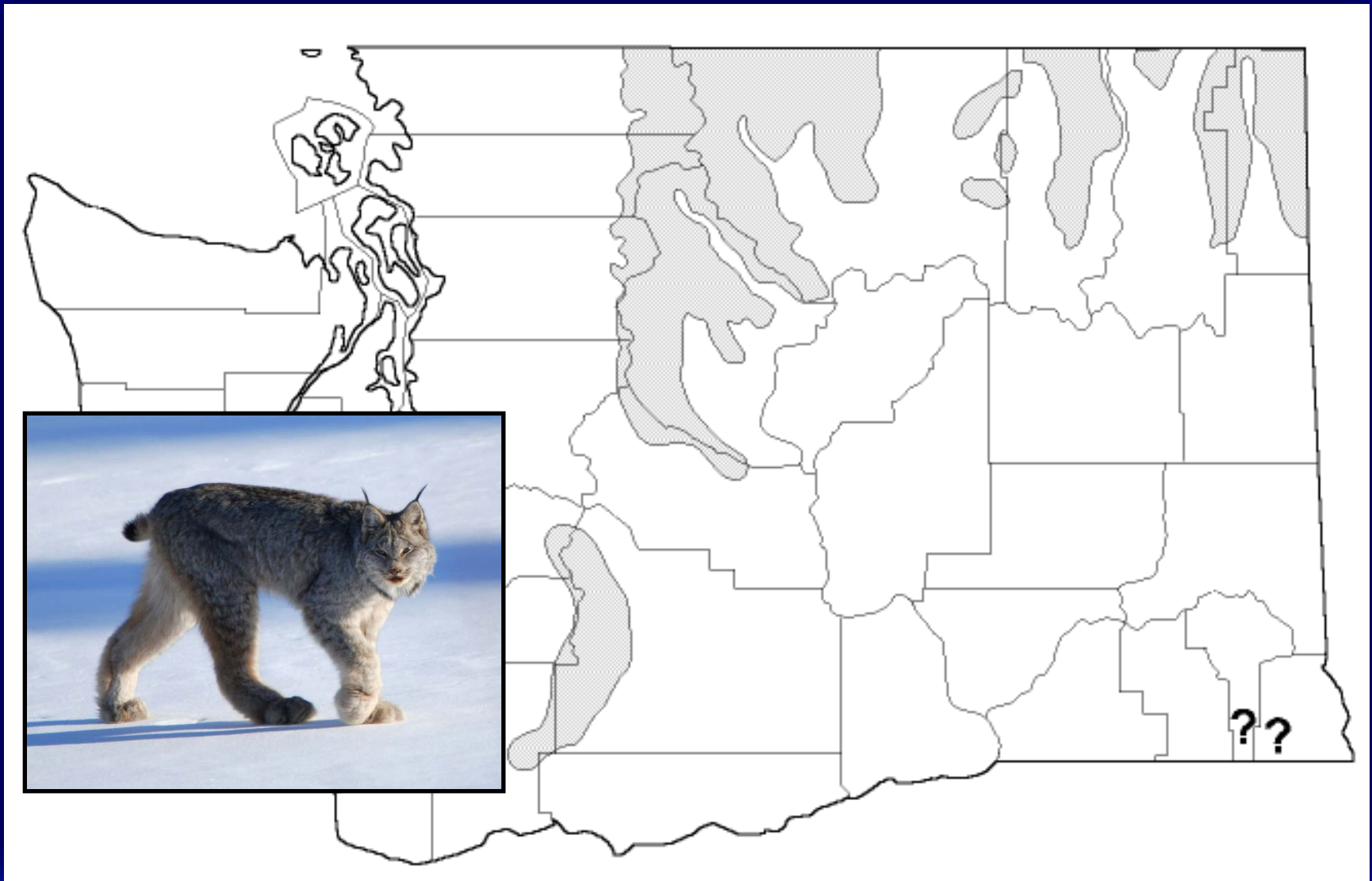
Washington Department of
FISH and WILDLIFE

Natural History of the Lynx

- One of 3 native Washington cats
- Occupies high-elevation forests with deep snow
- Has large feet for mobility in/on the snow
- Relies on snowshoe hares



Historical Range of Lynx in Washington



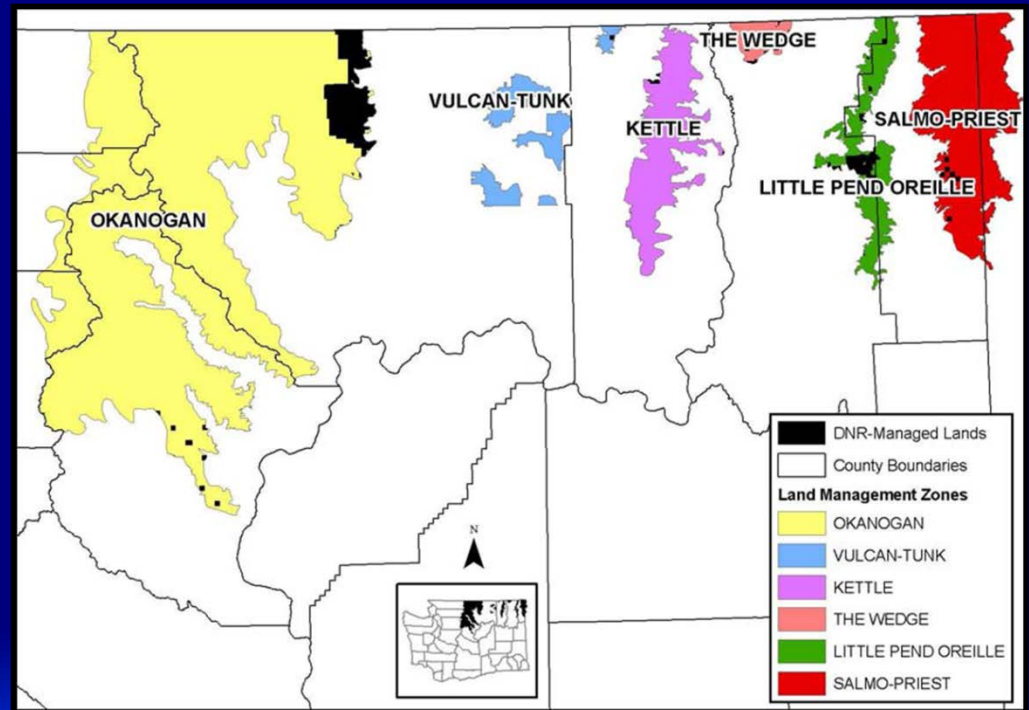
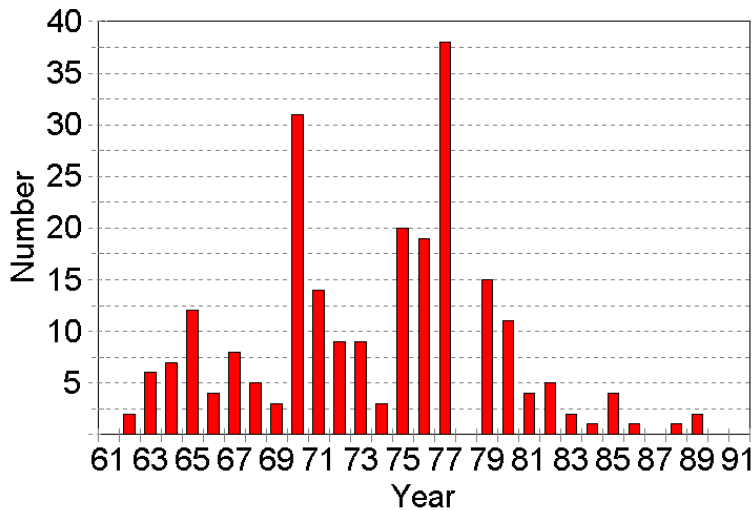
Stinson, D. W. 2001. Washington state recovery plan for the lynx. WDFW, Olympia.

Conservation Status of Lynx in Washington



- Harvested furbearer until 1991
- State Listed as Threatened in 1993
- Harvest, take or harassment prohibited
- Washington Recovery Plan 2001
- Federally Listed as Threatened in 2000

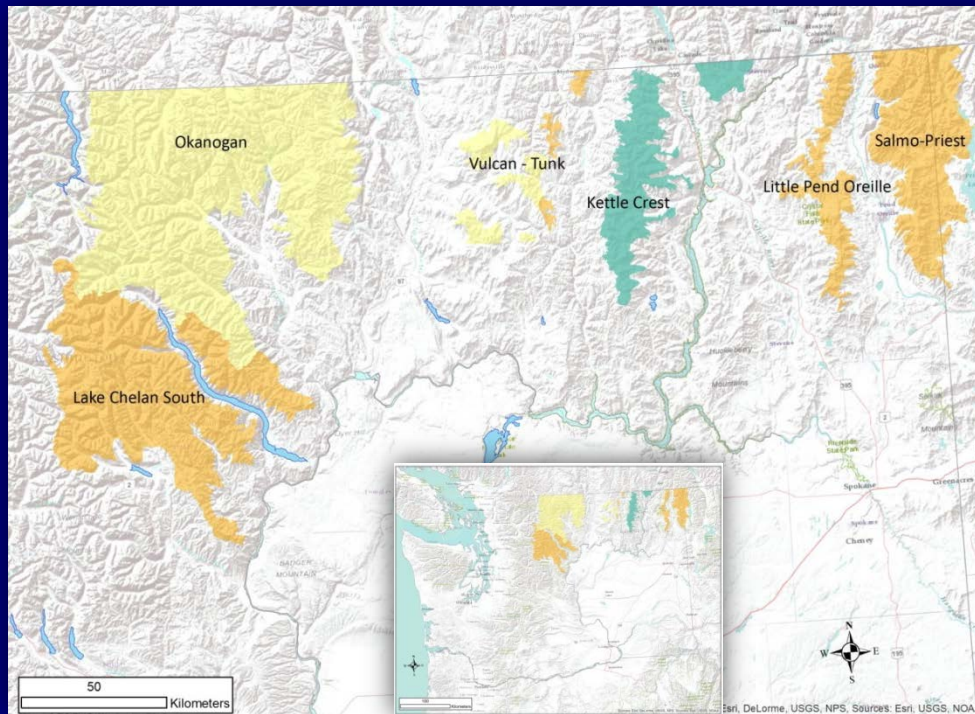
Washington Lynx Harvest: 1961-1991



Surveys and Detections in Lynx Management Zones

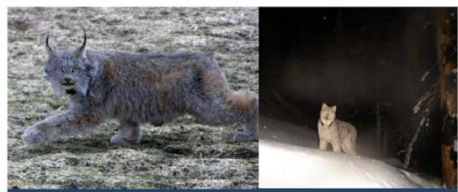
Survey Methods:

- Track Surveys
 - Remote Cameras
 - Hair Snares
 - Trapping records
 - Verifiable incidental observations
 - Research (capture, collar, snow-tracking)
- ❖ **Okanogan LMZ:** only LMZ with a resident, reproducing population.
 - ❖ **Current estimated population size ~54 lynx**



LMZ	Year(s)	Lynx detections	Survey technique ^a	Surveyors ^b
Kettle	2009-2011	0	Hair-snare stations (n=50)	USFS, WDFW & CNW
Kettle	2008	0	Track surveys (158.5 miles)	WDFW & USFS
Kettle	2007	0	Track surveys (150.5 miles)	WDFW & USFS
Salmo-Priest	2006	0	Track surveys	WDFW & USFS
Kettle	2005	0	Track surveys	WDFW
Salmo-Priest	2005	0	Track surveys	USFS

Lynx Habitat Management in Washington

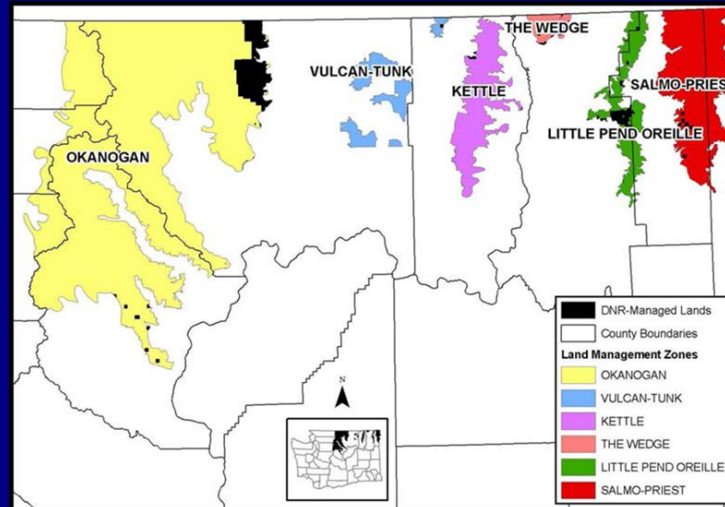


Canada Lynx Conservation Assessment and Strategy

3rd Edition — August 2013



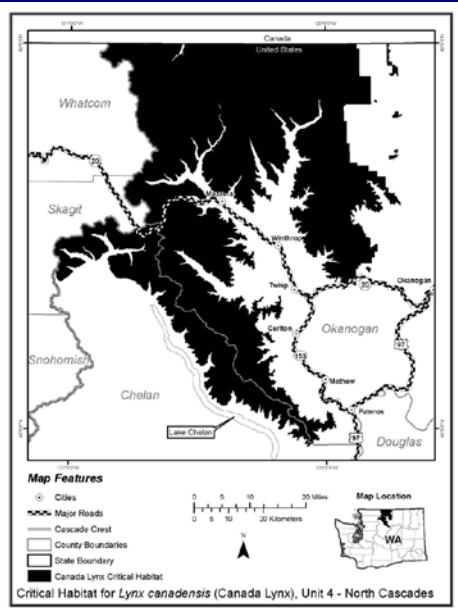
- Federal - USFS/BLM lands follows:
 - Federal lynx strategy (2013)
 - Critical Habitat Designation (2014; 1834 mi²)
 - Specific National Forest Plans
- State – WDNR’s Plan for the Loomis State Forest



Lynx Habitat Management Plan

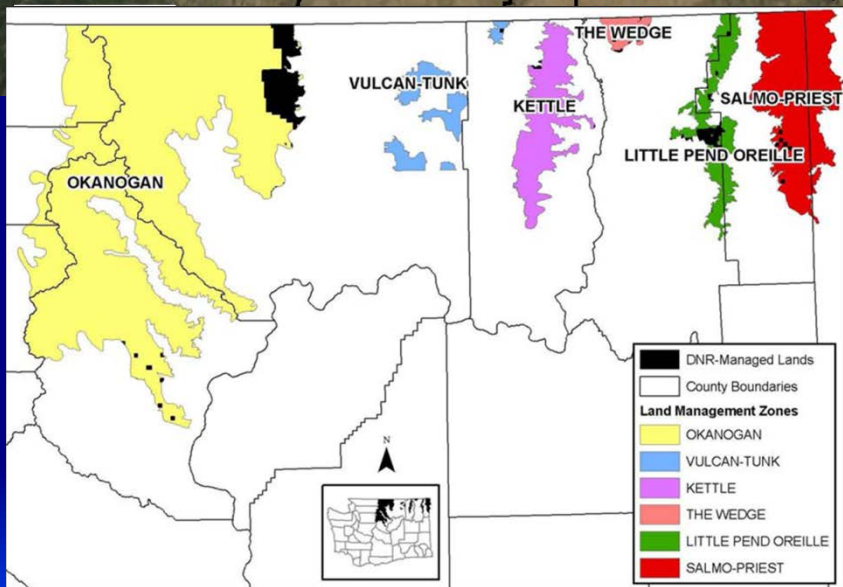
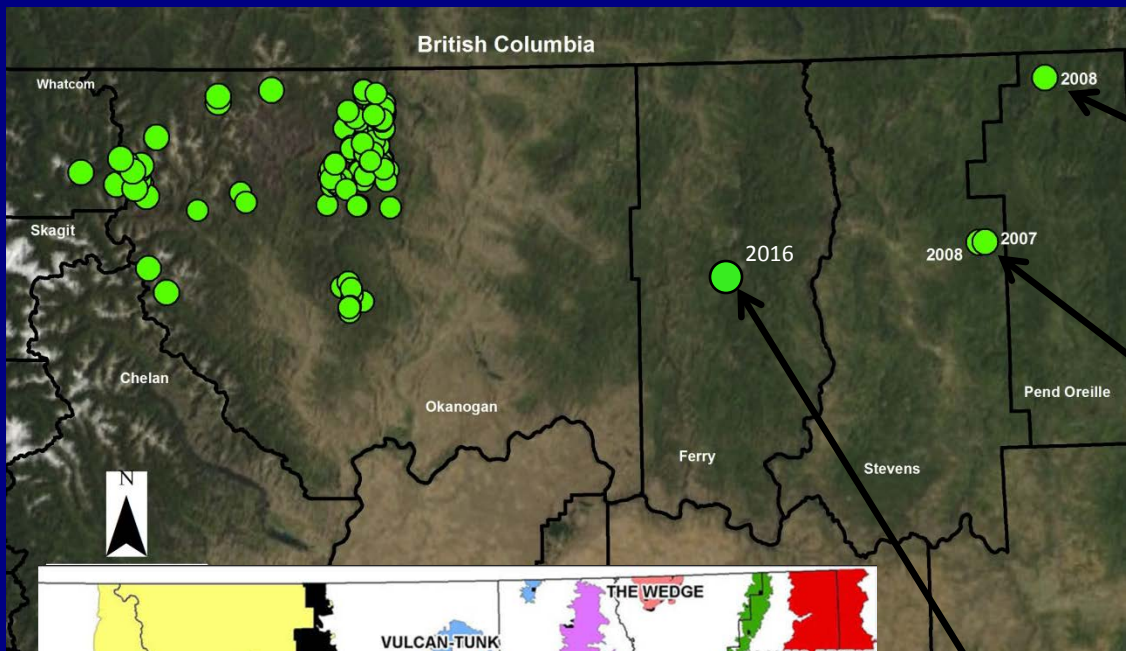
For DNR-Managed Lands

April 2006



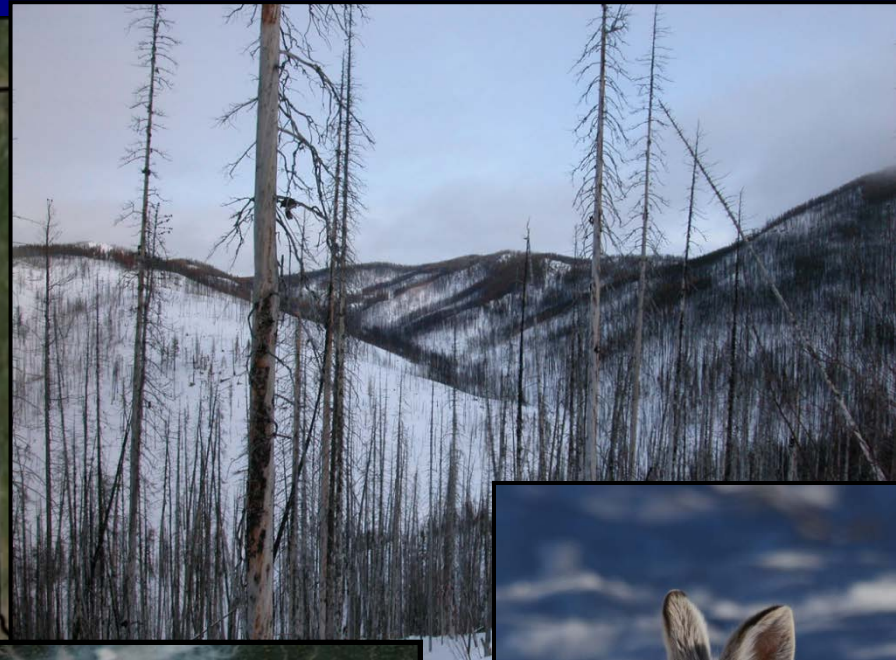
Factors Affecting Lynx

Range Contraction/Small Population Size (~54)



Factors Affecting Lynx

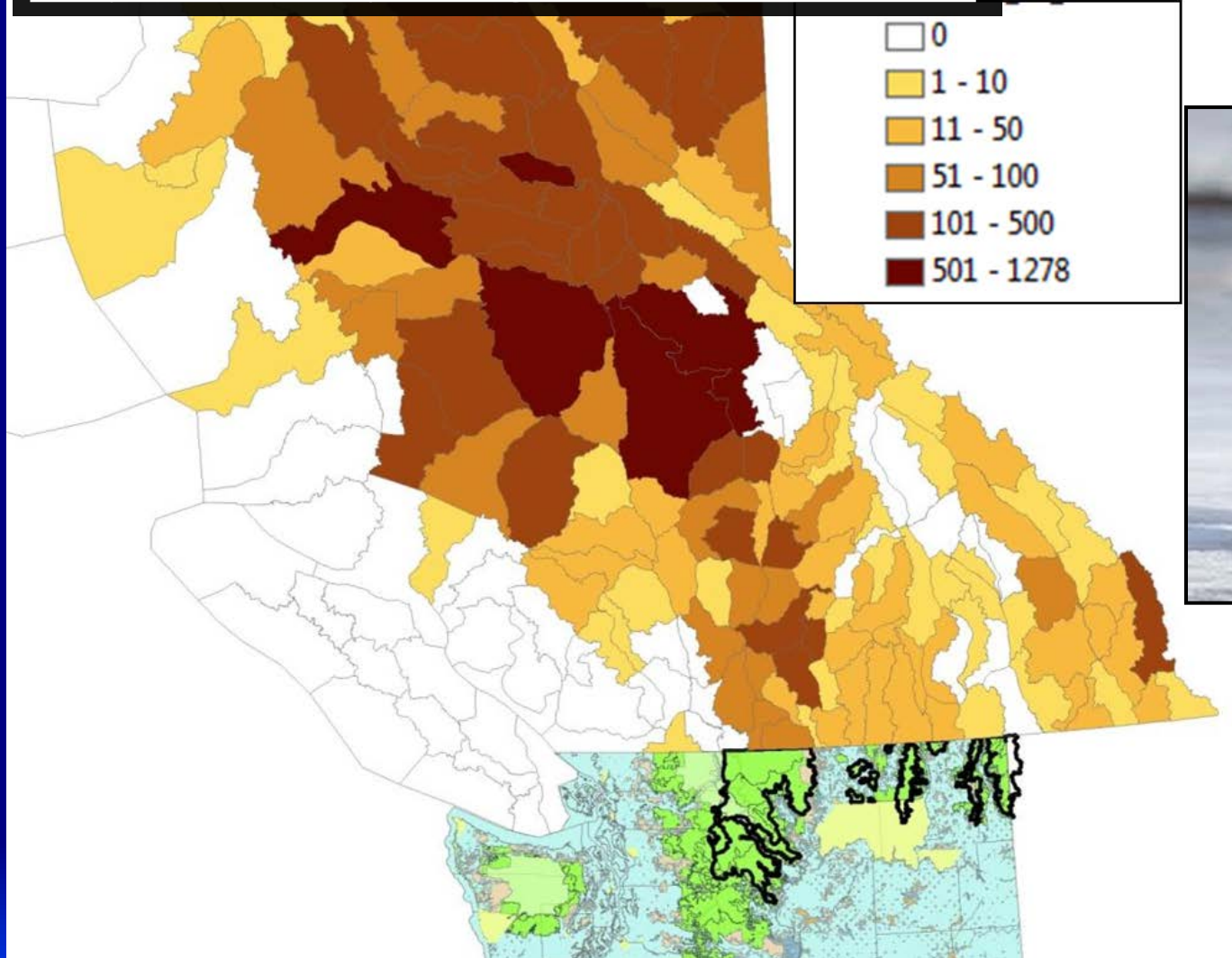
Loss of Forest Cover and Prey



Factors Affecting Lynx

Uncertainty about demographic support from BC lynx populations

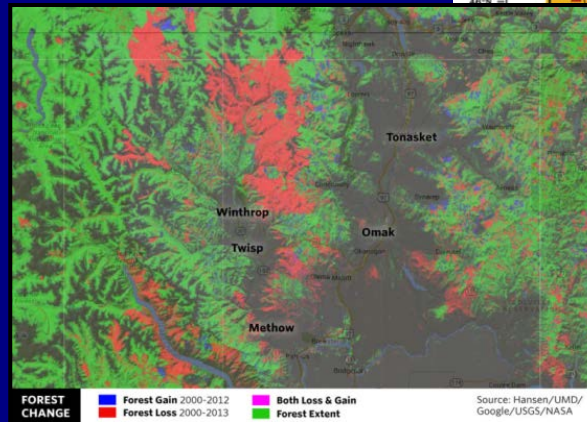
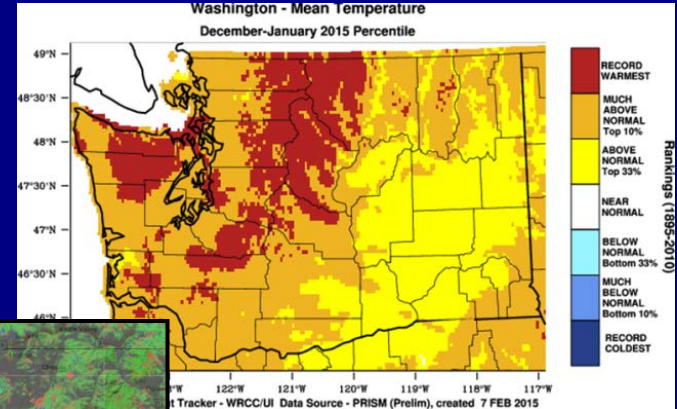
BC lynx harvest by management unit, 1985-2011



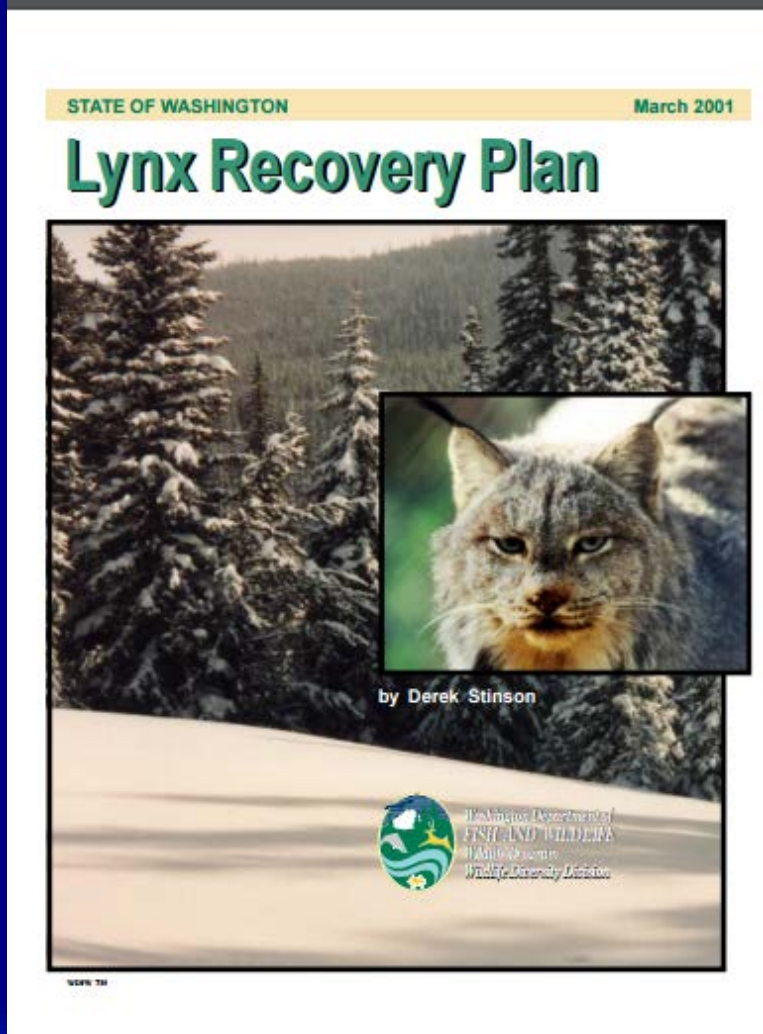
Factors Affecting Lynx

Uncertainty/concerns about climate change effects on

- Snow distribution, depth, condition, and persistence
- Fire frequency, severity, and size and its effect on cover
- Prey distribution and density



Recommendation



Because of the following threats to the WA lynx population from:

- 1) Significant range contraction
- 2) Small population size
- 3) Loss and fragmentation of habitat as a result of wildfires
- 4) Limited immigration from BC, and
- 5) Direct and indirect effects of climate change

We recommend up-listing the lynx from a state Threatened Species to a state **Endangered Species**

Public Comments

- 176 form letters from individuals: Supporting up-listing to Endangered
- 12 letters from individuals supporting up-listing
- Comments also from Industry and NGO's
 - One was against up-listing
 - One had no stated position on up-listing, but provided data
 - One was for up-listing



Questions?

