

# Status of Woodland Caribou in Washington

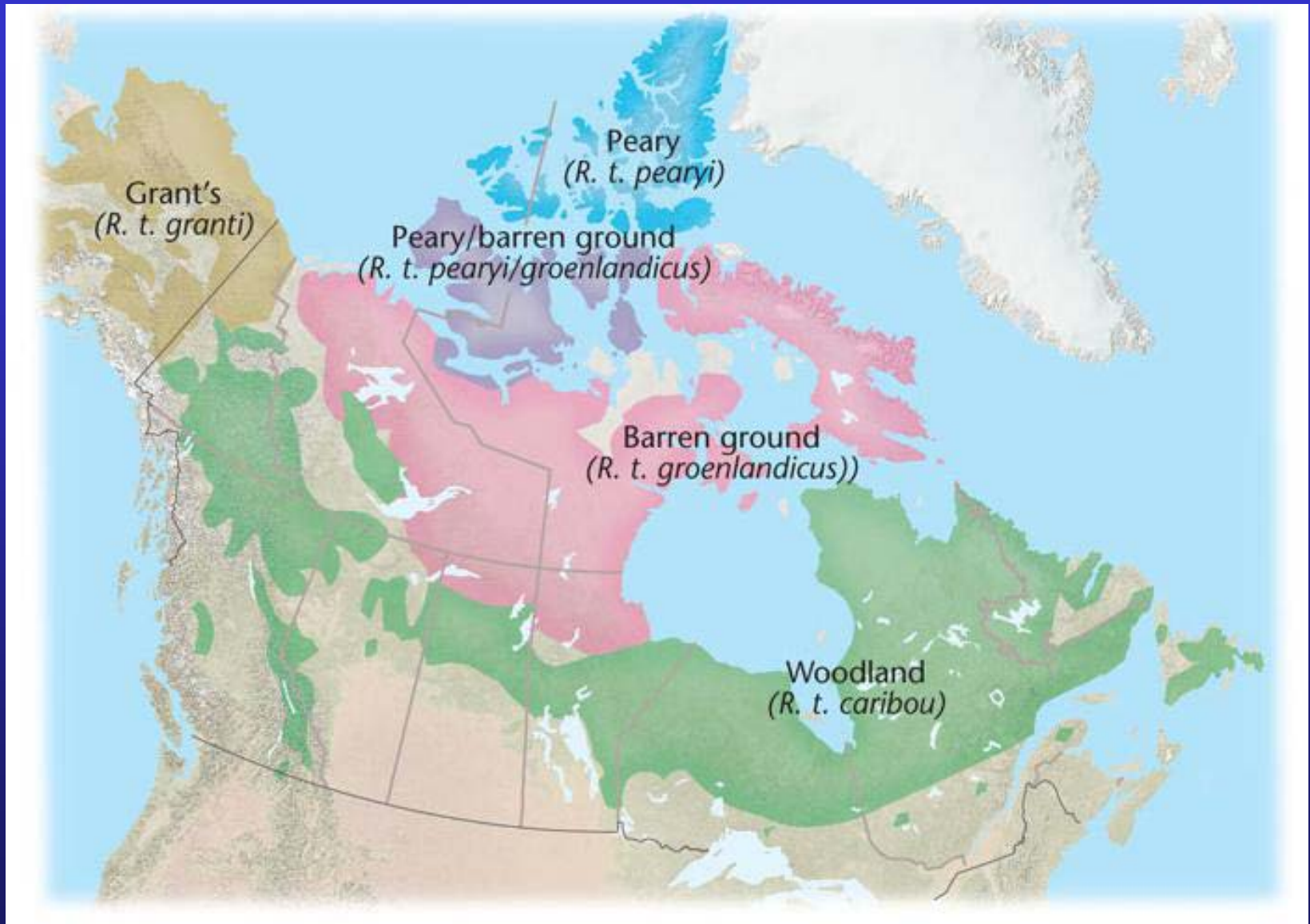


*Steve Forrest, Wikimedia Commons*



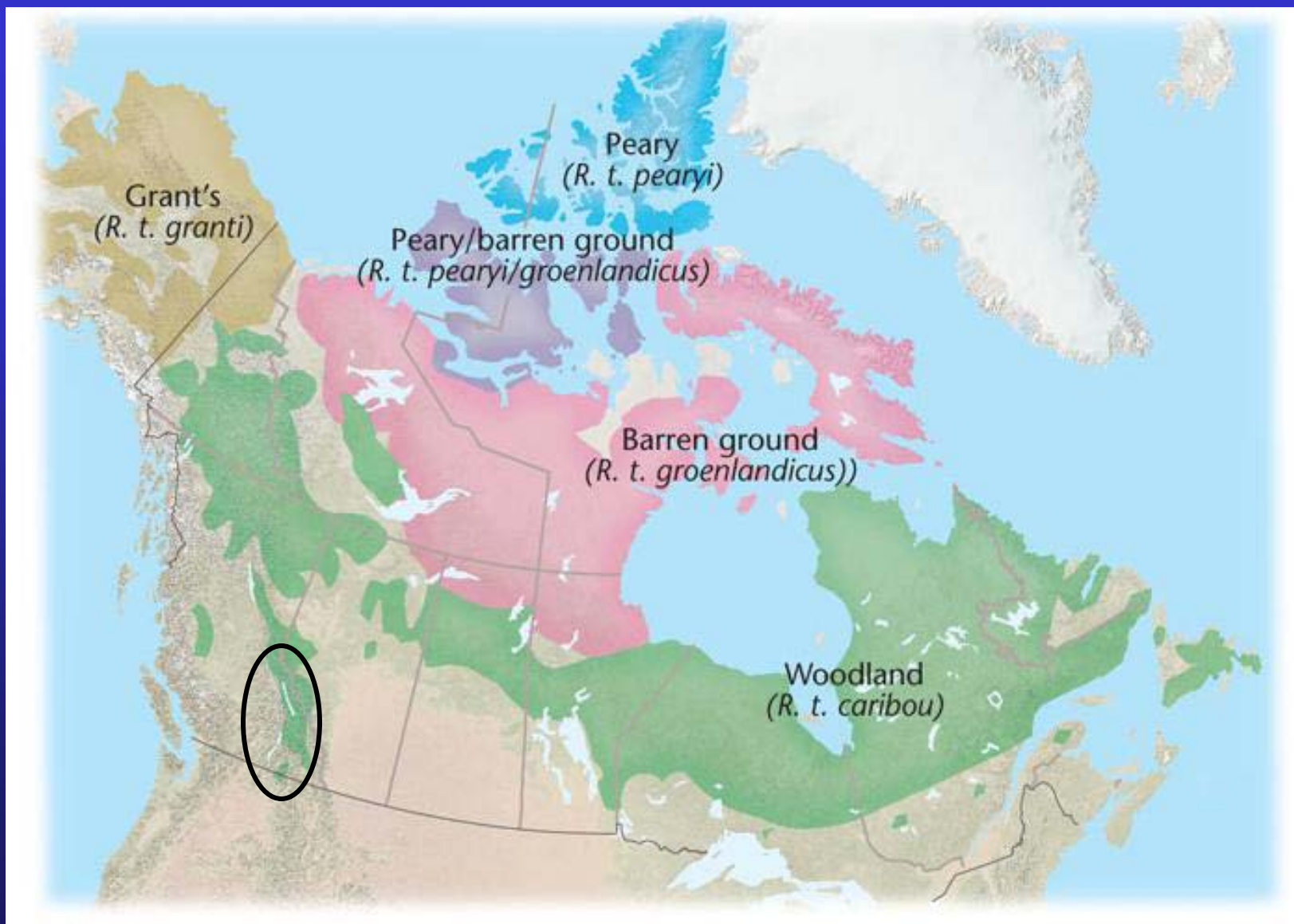
**Gary Wiles, Biologist**  
**Diversity Division, Wildlife Program**

# Caribou subspecies in North America

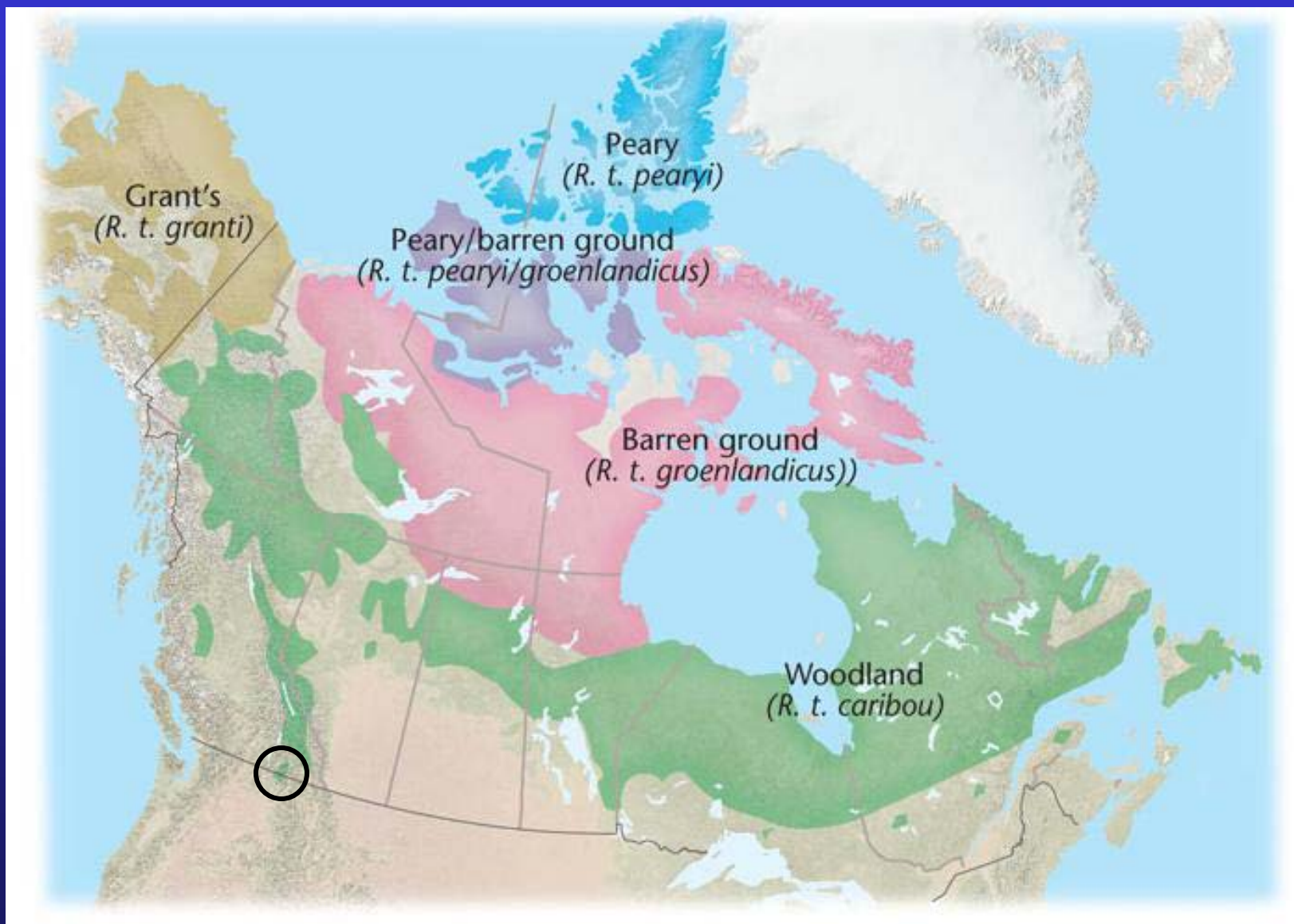


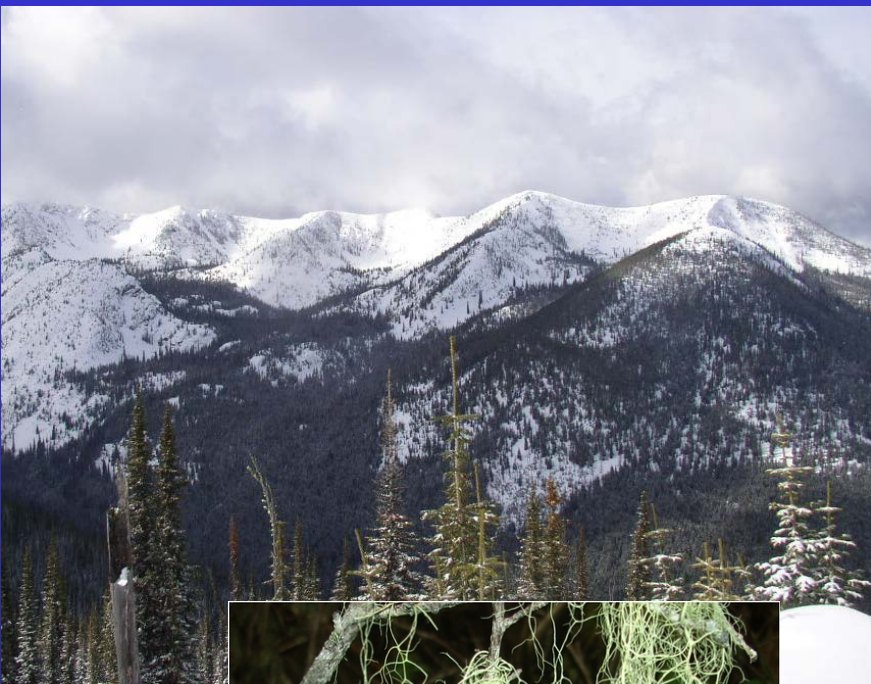
COSEWIC 2011

# Caribou subspecies in North America



# Caribou subspecies in North America





M. Borysewicz,  
US Forest Service



# Natural History

- Old-growth forests
- Seasonal migration between elevations
- Group size: 1-25 animals
- Diet: arboreal lichens, green vegetation
- Single calves, females usually breed at 2.5 yr

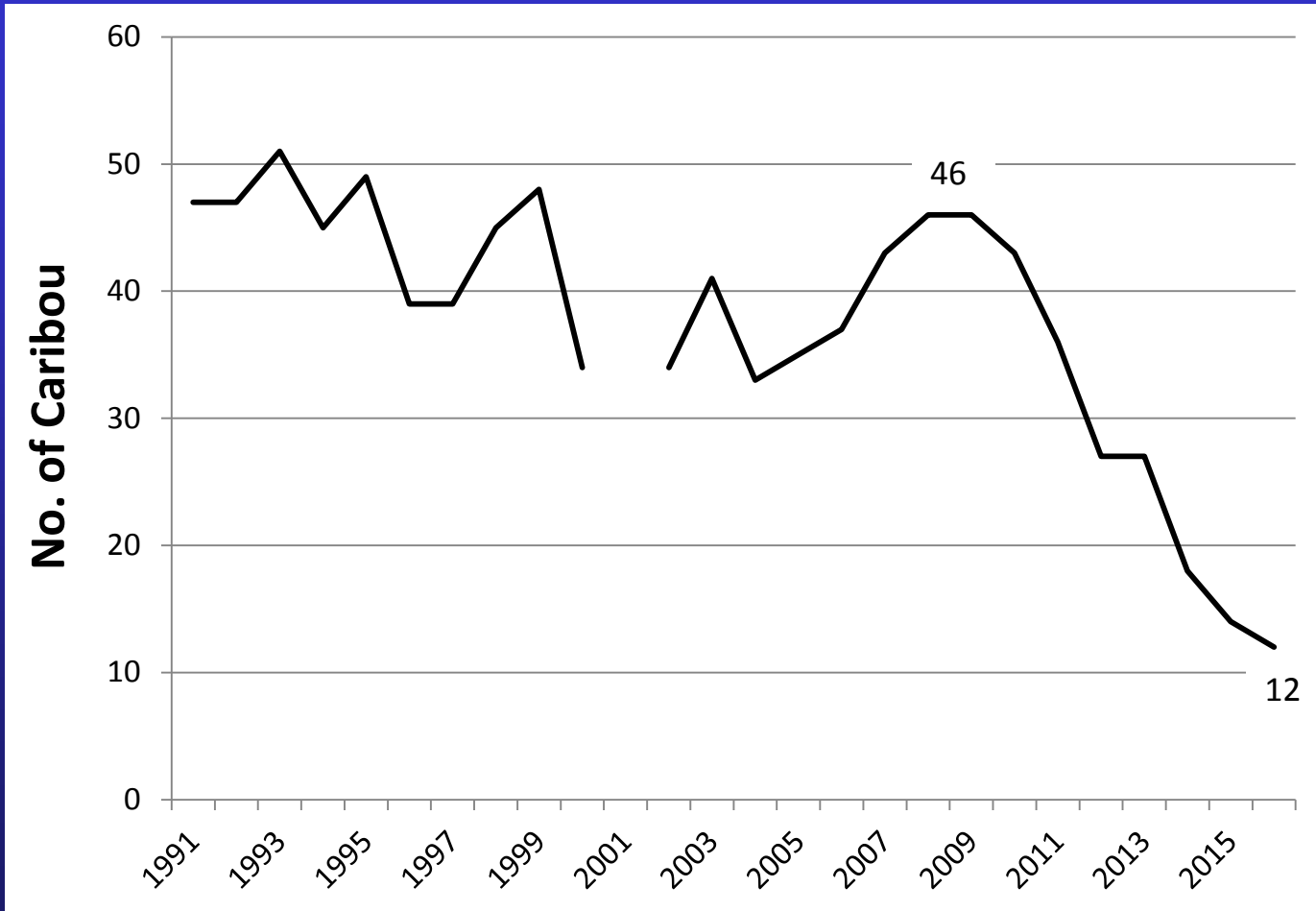
# Listing Status

- Idaho: endangered, 1977
- Washington: endangered, 1982
- U.S. federal: endangered, 1984
- Canada federal: endangered, 2014
- B.C.: red-listed



*Alamy*

# Status of the South Selkirk Herd







# Factors Affecting the Herd

- Habitat loss and alteration
- Predation
- Recreational disturbance
- Highway mortality
- Climate change



Art G, Flickr Creative Commons

# Recent Conservation Actions

- Habitat protections
- Predator management
- Recreation management
- Translocations
- Federal recovery planning
  - SCITWG
- Reducing highway mortality

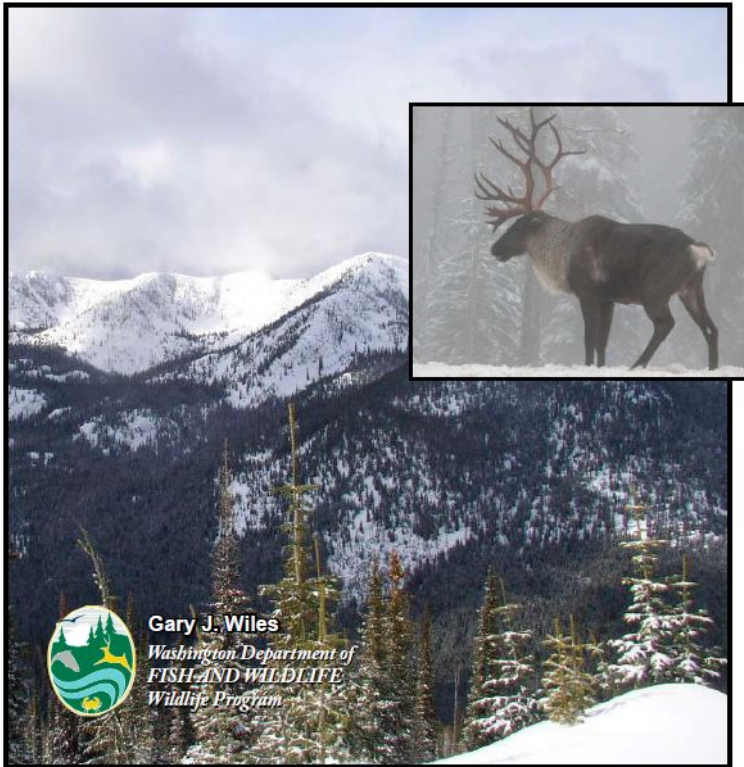


# Recommendation

STATE OF WASHINGTON

January 2017

## Periodic Status Review for the Woodland Caribou



Retain woodland  
caribou as a state  
endangered species

# Public Comments/Concerns

- Support for continued endangered listing or recovery (12)
- Opposition (0)
- Support for predator management or reduction (8)
- Support for retaining old-growth habitat (1)



# Questions?



*Alamy*

# Status of the Western Pond Turtle in Washington



Lisa Hallock, Herpetologist  
Wildlife Diversity Division



**Washington Department of Fish and Wildlife**



# Introduction



## Western Pond Turtle (*Actinemys marmorata* )

- Semi-aquatic
- One of only two turtles native to Washington

# Western Pond Turtle (*Actinemys marmorata*)



Photo by WP Leonard



Photo by Ryan Hawk, Woodland Park Zoo



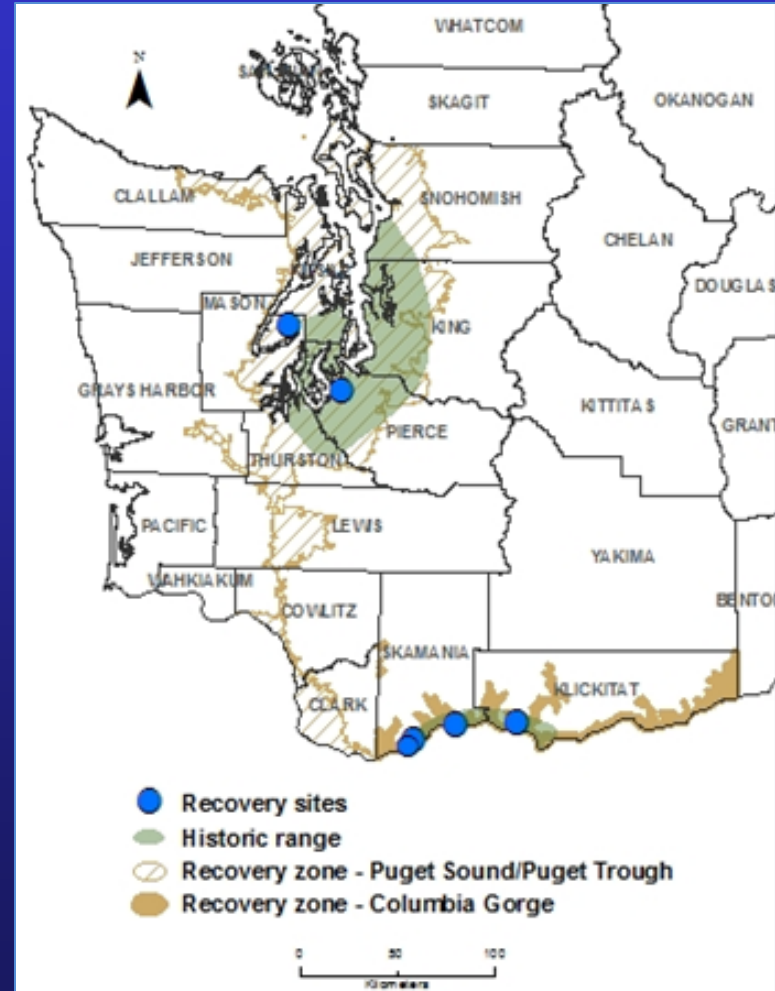
Photo by Eric Holman, WDFW







# Distribution

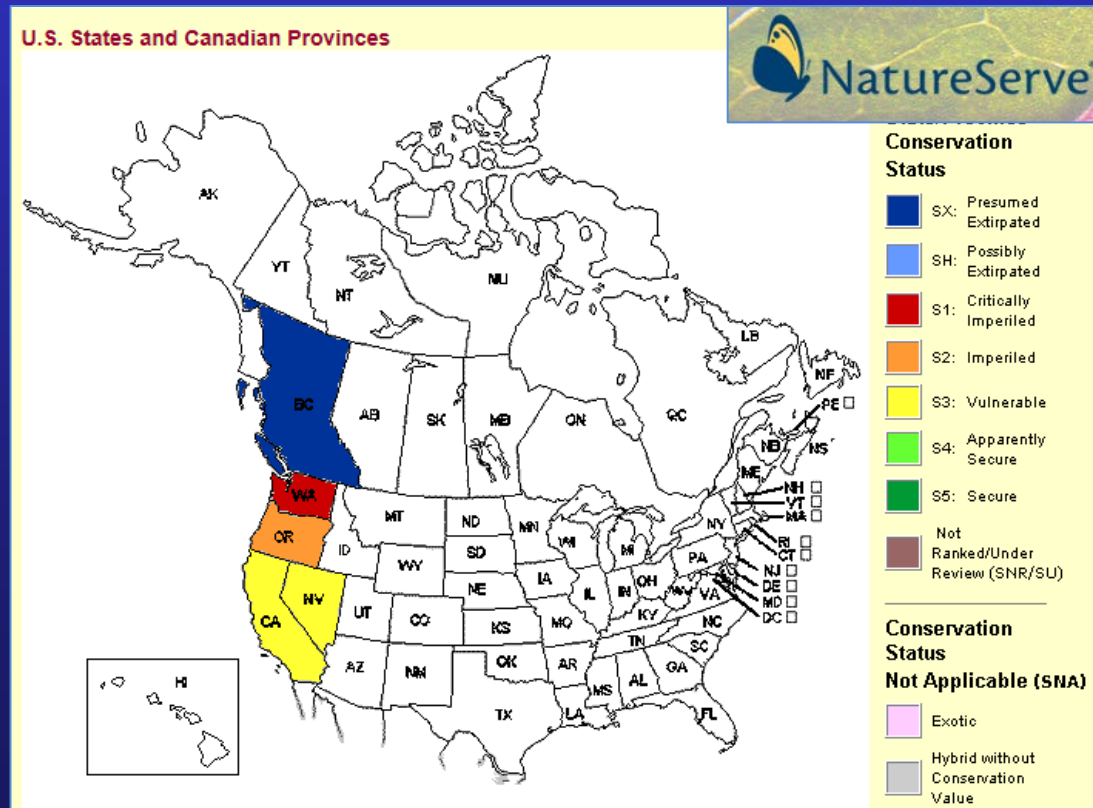




# Range-wide Status



Declining and of concern throughout their range



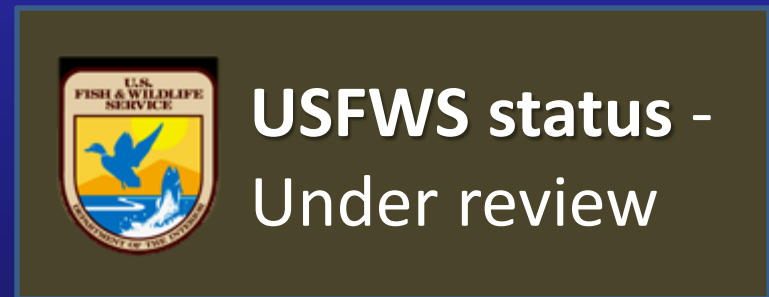
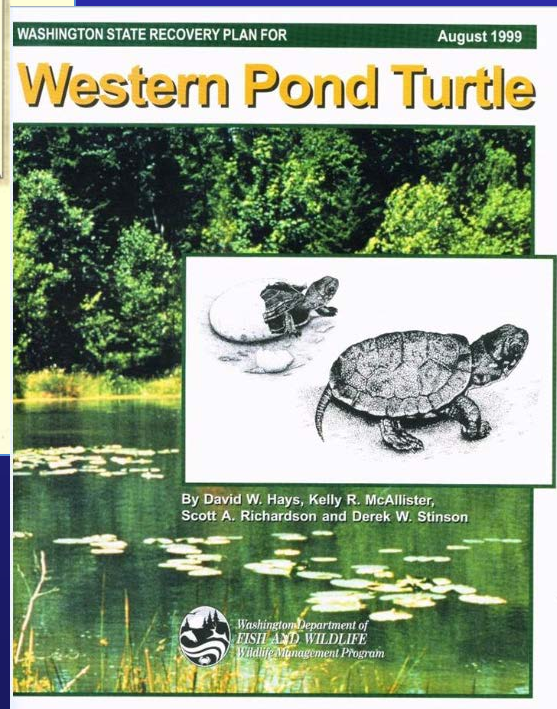
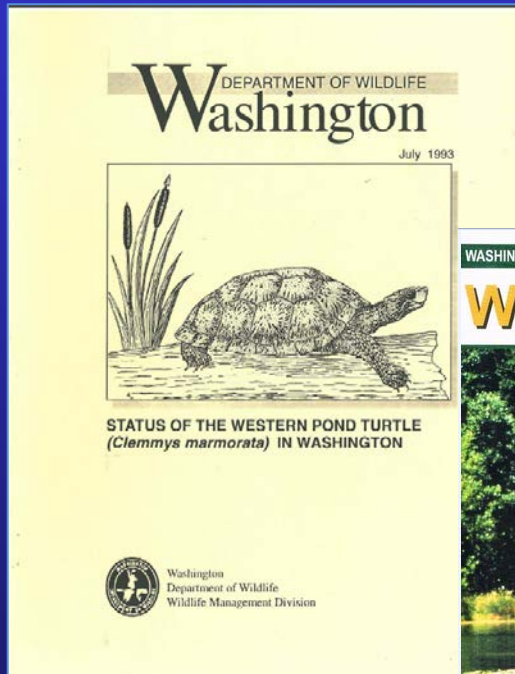


# Legal Status



## Washington

- Listed as endangered in 1993
- Recovery Plan completed in 1999





# Natural History



Require both suitable upland and aquatic habitat



- Average home range of 0.7 -2.5 ac.
- Typical movements for nesting and overwintering are 100-150 m



# Natural History



## Aquatic habitat

Foraging, mating, thermoregulation and overwintering



# Natural History



Spend a great deal of time basking



Sensitive to human intrusion



# Natural History



## Uplands



Nesting, aestivating, dispersal and overwintering



# Natural History



## Annual survival



Hatchlings  
10-15%\*



Head-started juveniles  
77-90%



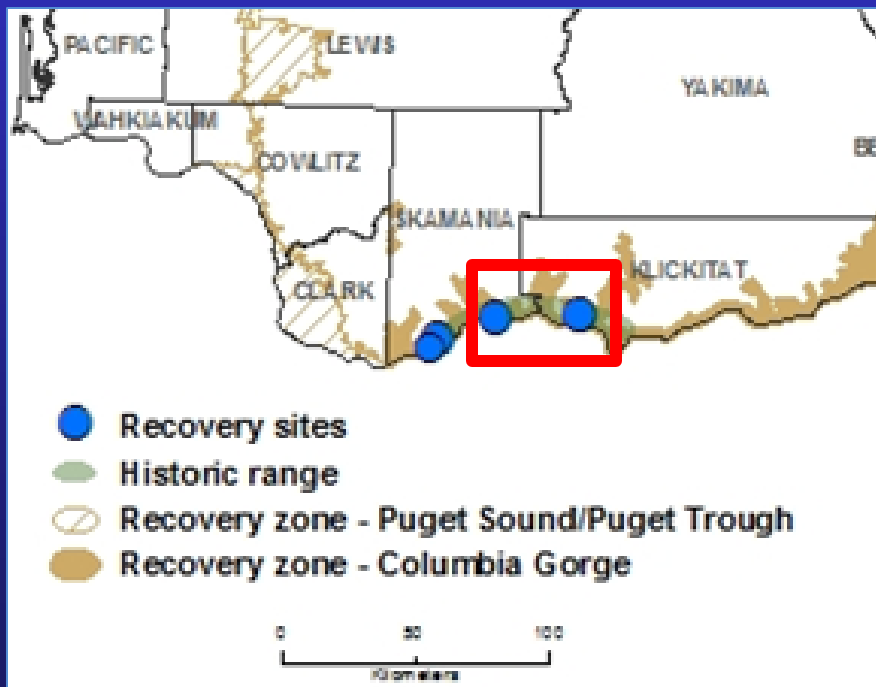
Adults  
95-97%





# Washington

## Population and Habitat Status - Past



### Columbia River Gorge

- Only two populations by mid-1980s
- 154 turtles in 1994



# Washington

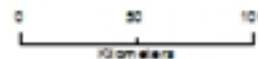
## Population and Habitat Status - Past



### South Puget Sound (SPS)

- Extirpated by the 1980s
- 12 turtles found opportunistically
- Captive breeding program started in the 1990s

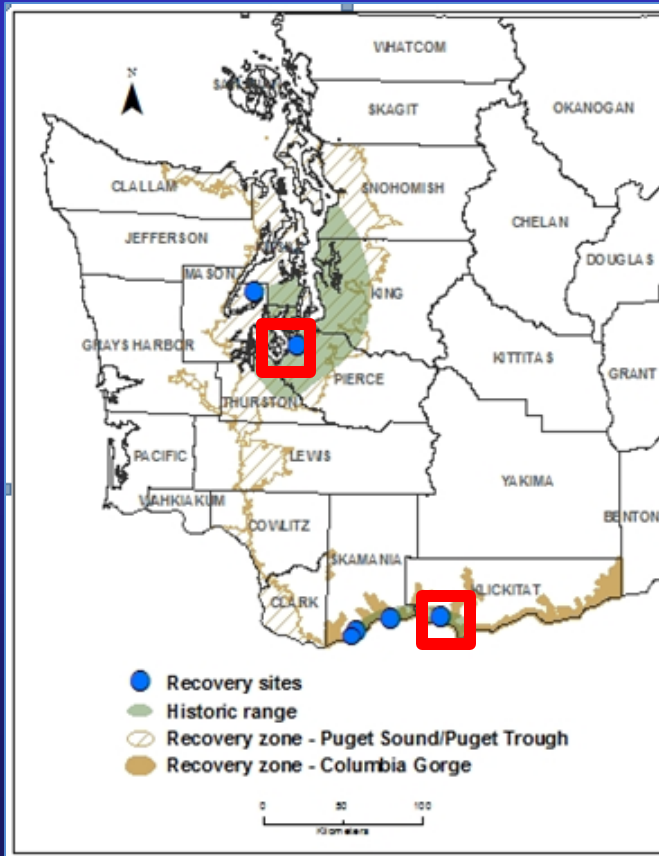
- Recovery sites
- Historic range
- ▨ Recovery zone - Puget Sound/Puget Trough
- ▨ Recovery zone - Columbia Gorge





# Washington

## Population and Habitat Status - Present



Statewide population of 800-1,000

Recovery objectives achieved

- Recovery sites established - 6 of 7
- Population of  $\geq 200$  turtles - 2 sites



# Factors Affecting

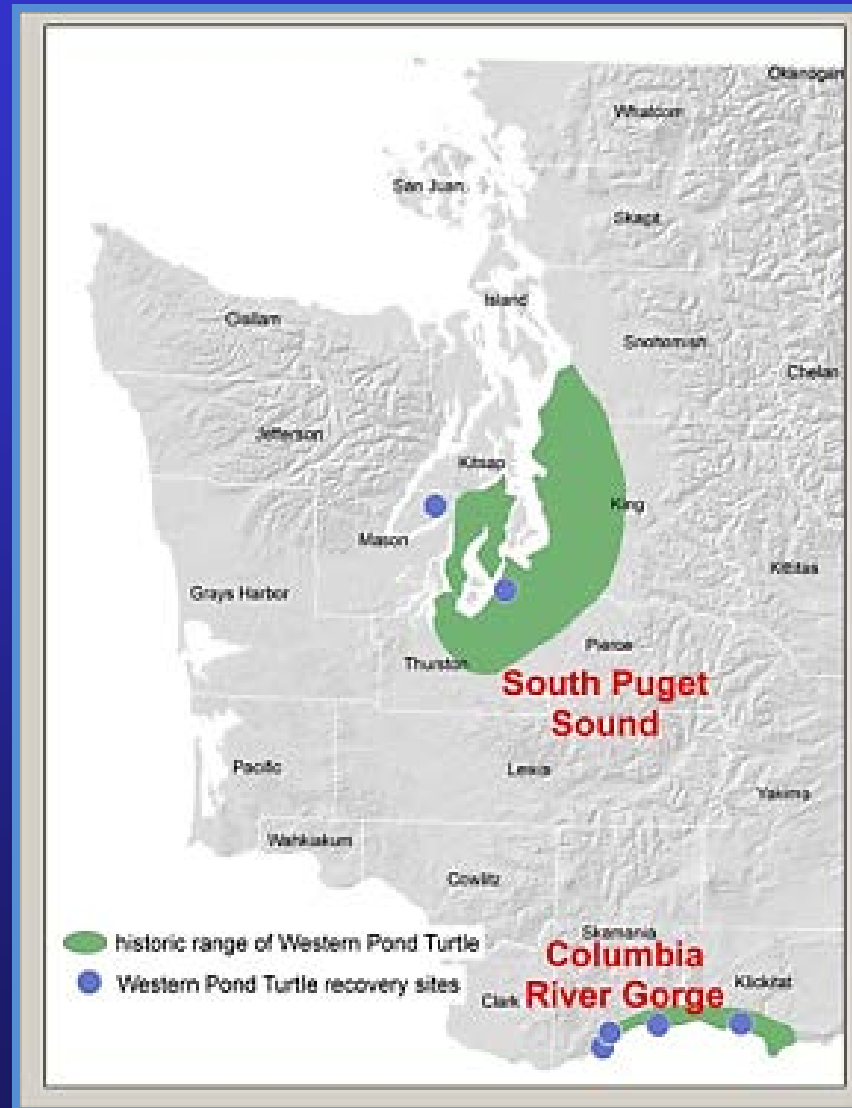


# Continued Existence

## Natural factors

- Slow growth rate
- Delayed sexual maturity
- Low fecundity
- High mortality of eggs and hatchlings
- Limited ability to disperse
- Complex habitat requirements
- Northern extreme of the range

# Landscape level – Lack of available habitat in recovery zones



# Non-native invasive flora and succession



- Himalayan blackberry
- Scotch broom
- Conifers
- Native shrubs
- Tall dense grasses



# Mortality



**Predators on hatchlings**

**Predators on nesting females and nests**



ODFW





# Factors Affecting



# Continued Existence

## Shell disease

- Unique disease
- All six sites
- 29-49% of turtles examined had disease
- Mild to severe
- CT scans suggests an even higher prevalence and more extensive disease
- Cause unknown





A.



C.



E.



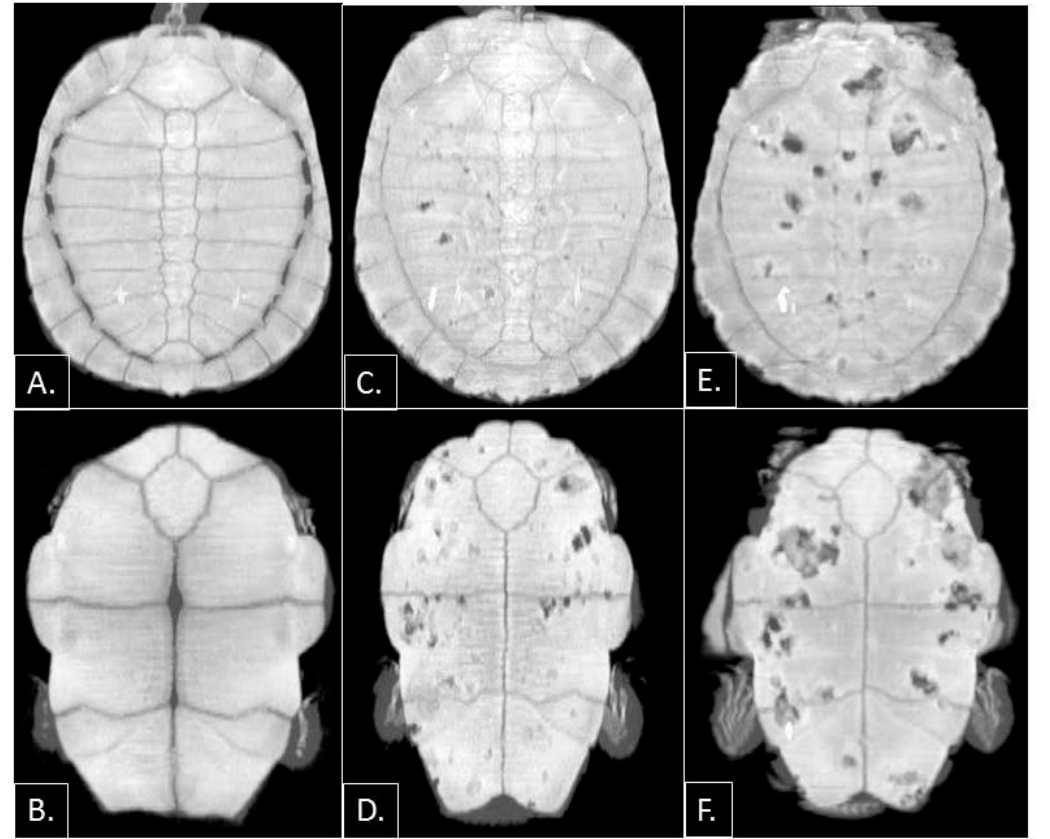
B.



D.



F.





# Management Activities



## Disease monitoring, research and treatment

- Diverse health team
- Determine cause, pathology, epidemiology and population impacts





# Management Activities



Habitat management



Predator control



Monitoring & Research Alan Mainwaring



Protect nests



Basking enhancement





# Head-start Program





# Recovery objectives for downlisting to State Threatened status



Recovery Zone	No. of Recovery sites	Secure from development & excessive human disturbance	Turtles per site $\geq 200$	Natural recruitment & demographics
Puget Sound	✓	✓	✗	✗
Columbia River Gorge	✓	✓	✗	✗



# Status Recommendation



**Western Pond Turtles have been rescued from the brink of extinction, however:**

- Downlisting recovery objectives not met
- Shell disease
- Likelihood is high that Western Pond Turtles will revert to near extinction without management


**For these reasons, it is recommended that Western Pond Turtles remain state listed as endangered in Washington**

# Summary of Public Comments

**DRAFT**

STATE OF WASHINGTON September 2016

**Periodic Status Review for the  
Western Pond Turtle in Washington**



Lisa A. Hallock, Anita McMillan and Gary J. Wiles  
*Washington Department of  
FISH AND WILDLIFE  
Wildlife Program*

- Five public comments on the Draft
- All supportive



# Acknowledgements



# QUESTIONS?



# SANDHILL CRANES IN WASHINGTON



**Derek Stinson, Biologist  
Wildlife Diversity Division  
Washington Department of Fish and Wildlife**

## Legal status

- Sandhill Cranes: state-endangered in WA since 1981
- Migratory populations legally hunted in 14 states, 2 provinces



# Natural History



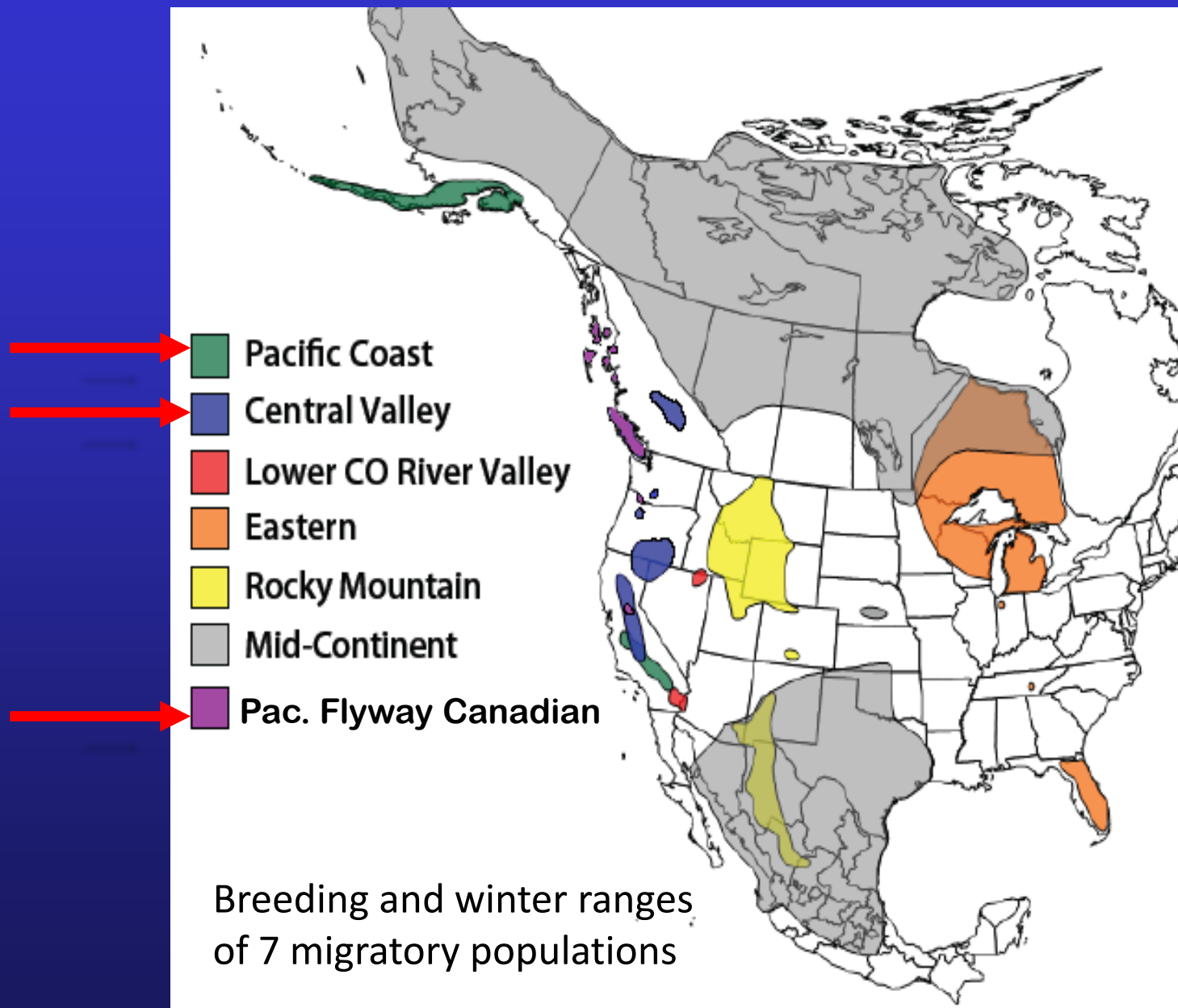
- **Diet:**
  - Spring/summer
  - Migration/winter
- High survival, long-lived, long-term pair bonds, very low reproductive rate
  - Colt survival high once they are strong fliers

# Natural History: habitat

- **Breeding season:** nest in meadows, bogs, marshes, generally isolated from human activity
- **Migration/wintering:** forage in grain fields, night roosts in shallow open water

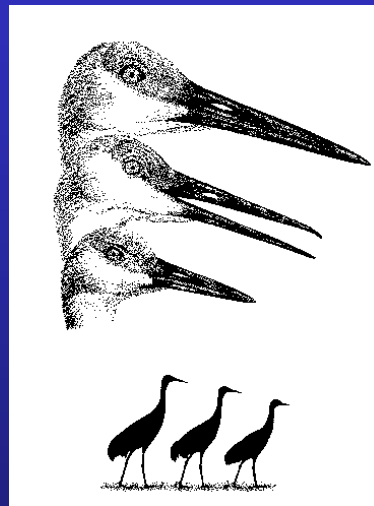
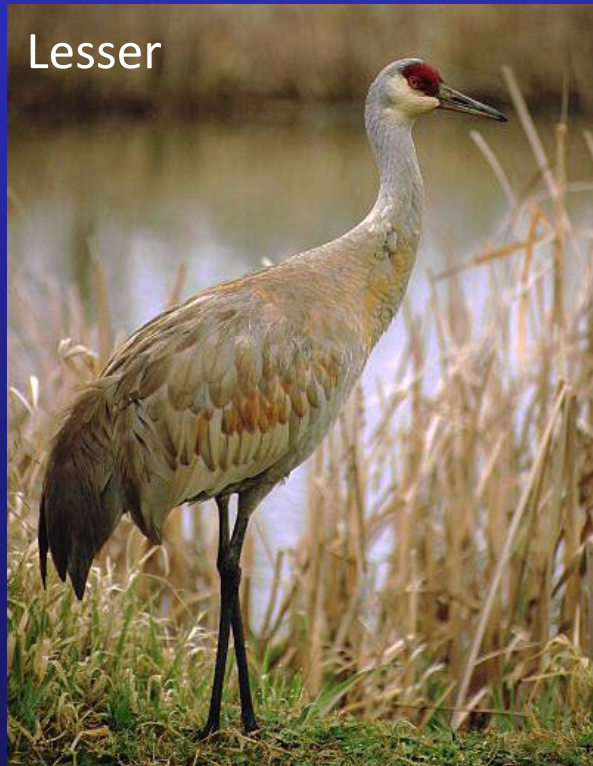


# Distribution: 4 flyways/7 migratory populations



# Sandhill Crane: 3 subspecies/forms in Washington:

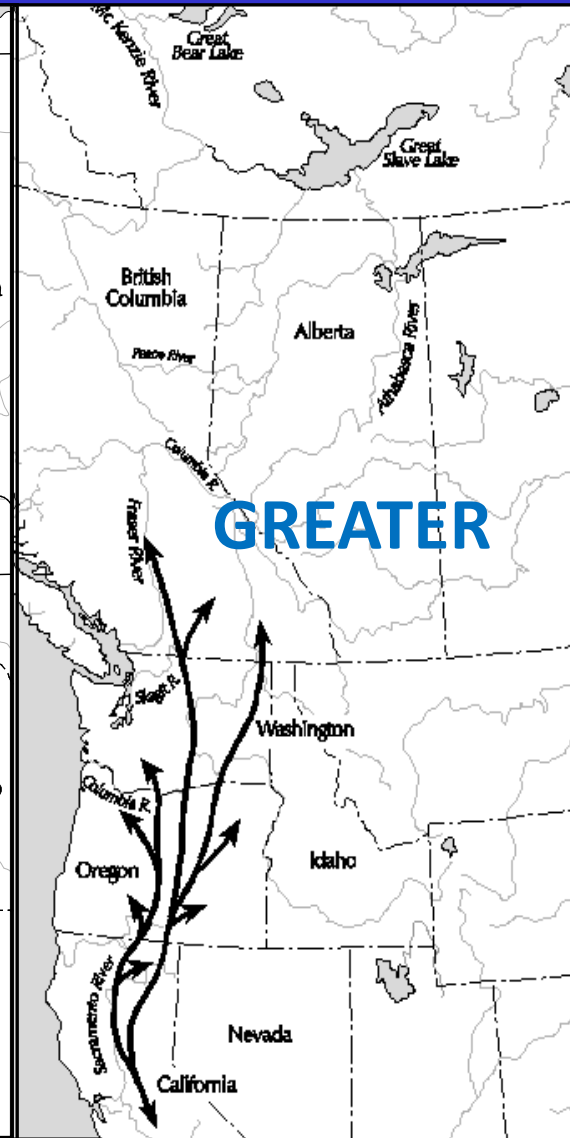
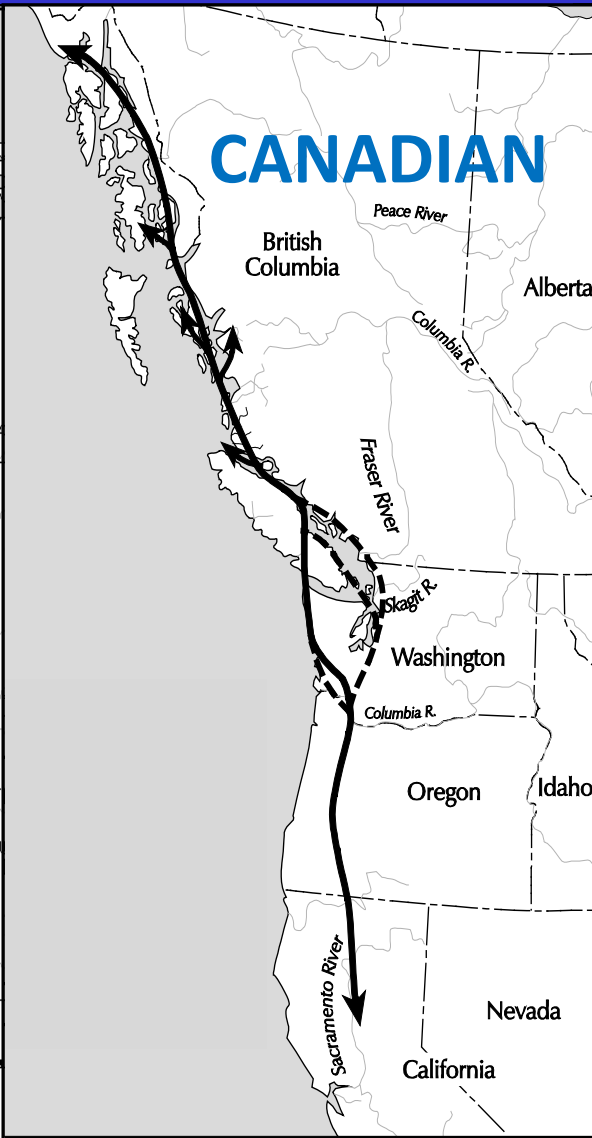
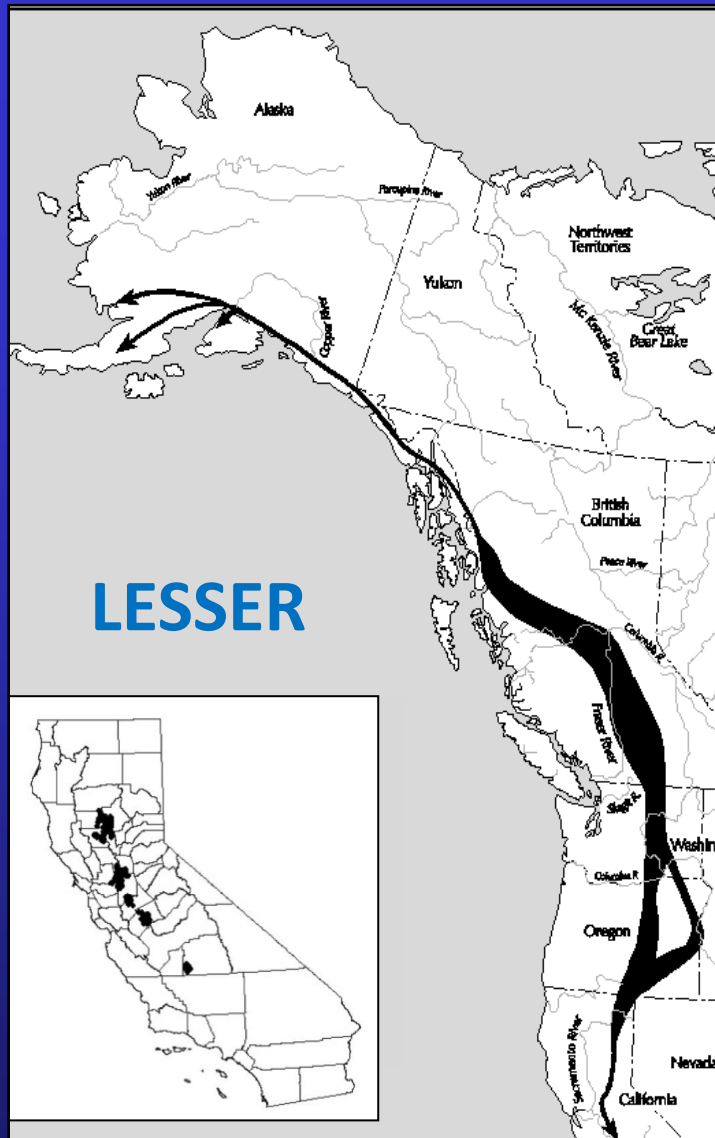
Greater (*Antigone canadensis tabida*) breeds in WA/OR  
Canadian (*A. c. rowani*) migrant and winter  
Lesser (*A. c. canadensis*) migrant



© Simon Richards







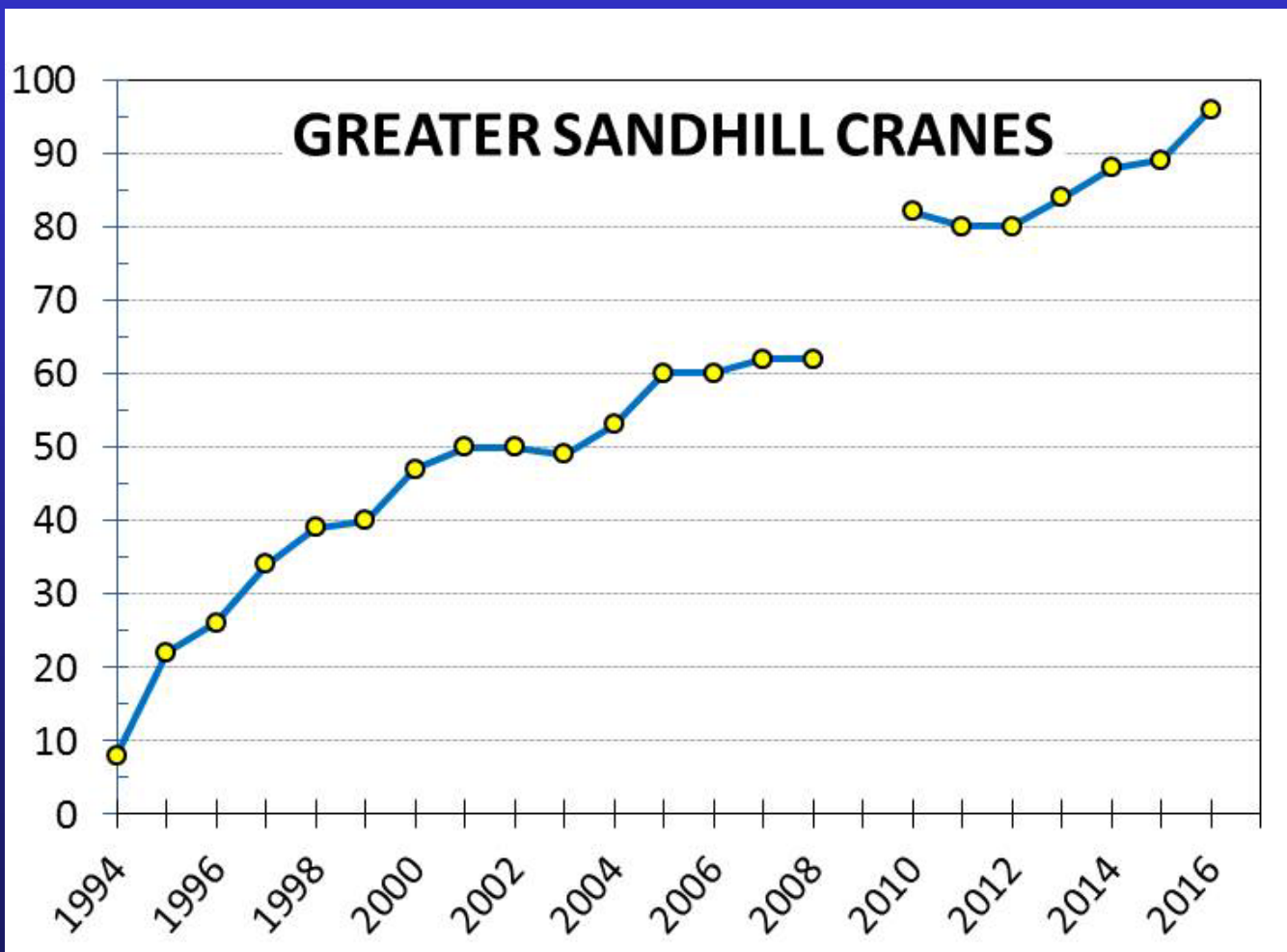
# Population Status in Washington-past

- Historically bred more widely including in western WA
- Declined with habitat loss, market hunting until 1916
- Extirpated as breeder after 1941
- Re-colonized in 1970s

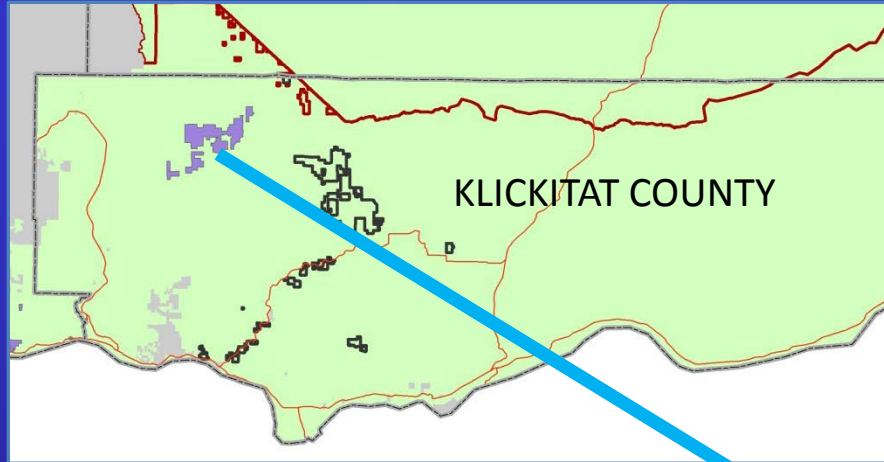


# Population Status in Washington: Greater Sandhill Cranes

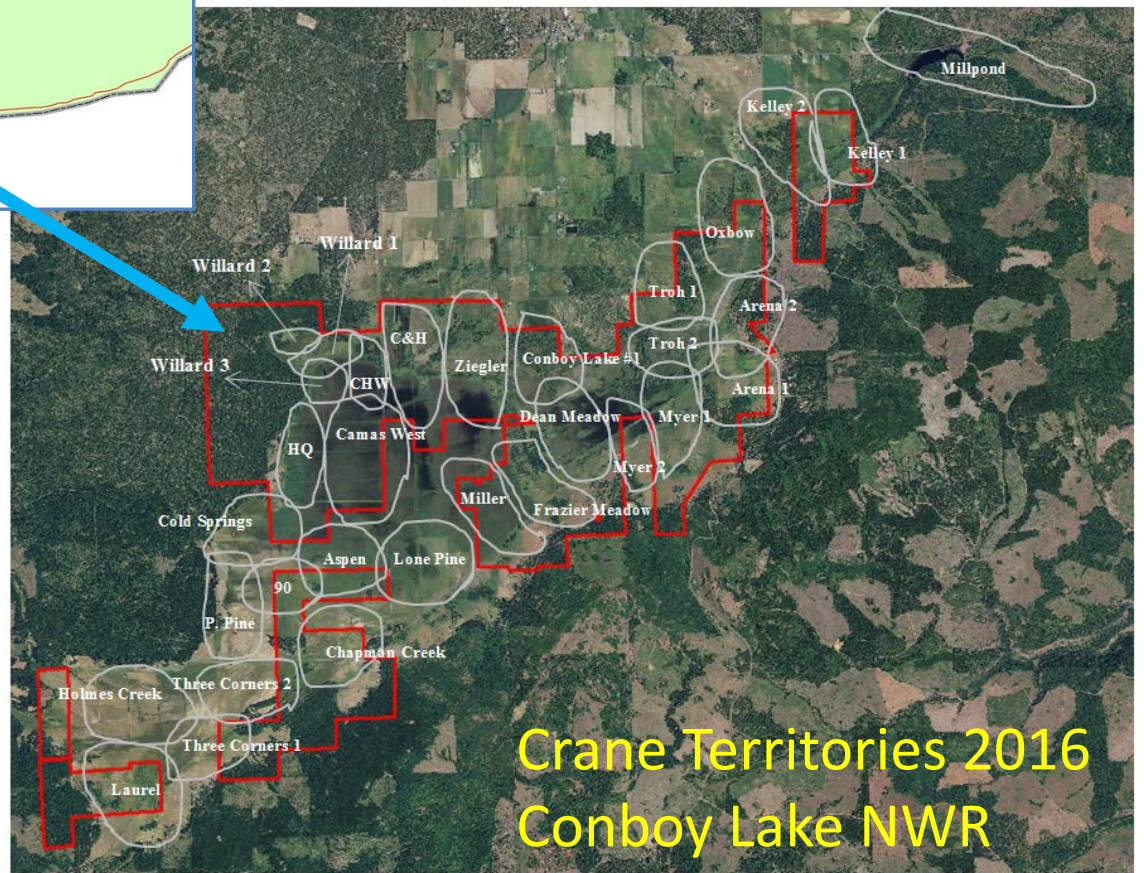
Steadily increased--~98 birds/37 pairs in 2016



# Washington Greater Sandhill Crane nesting territories:



- **Conboy Lake NWR**
- Trout Lake NAP
- Klickitat River NRCA
- Yakama Res.
- Private lands



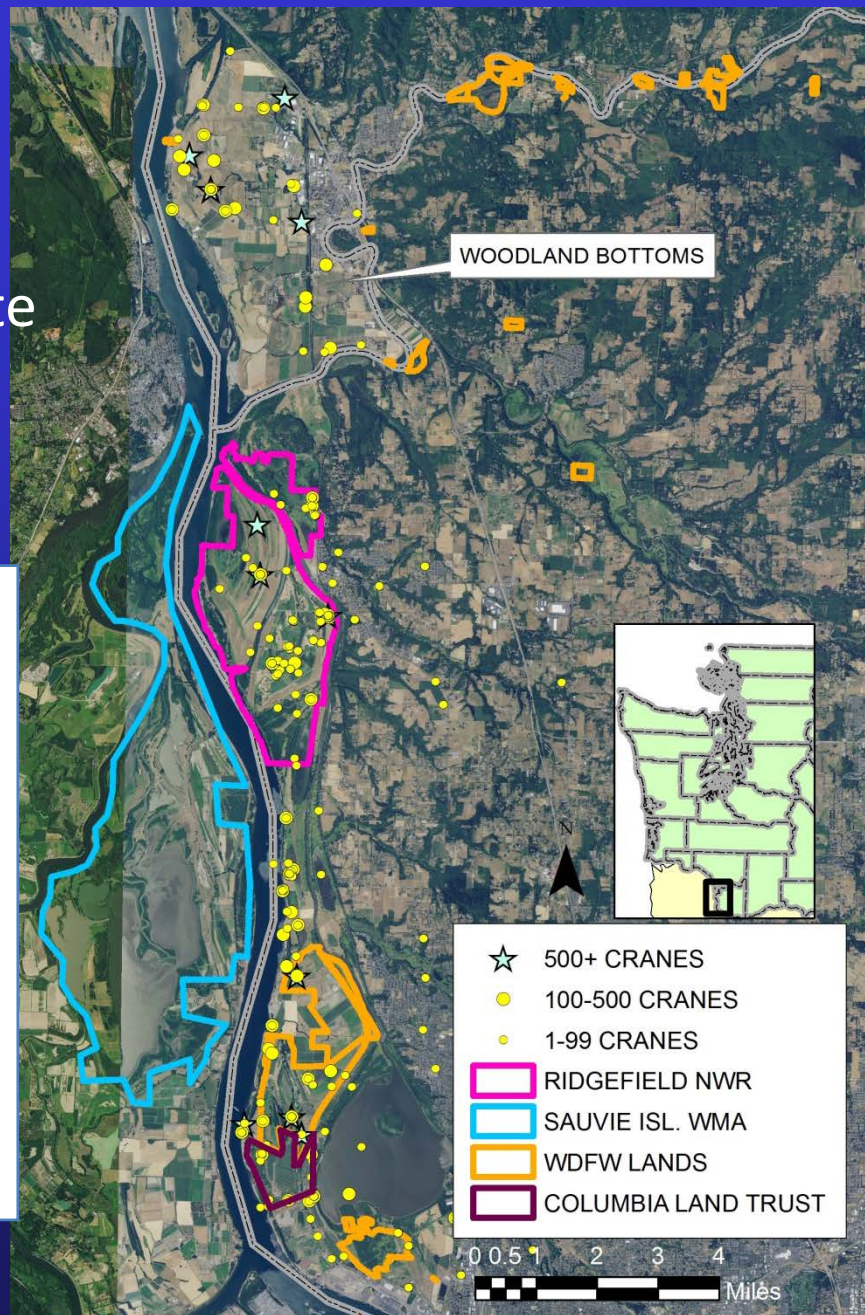
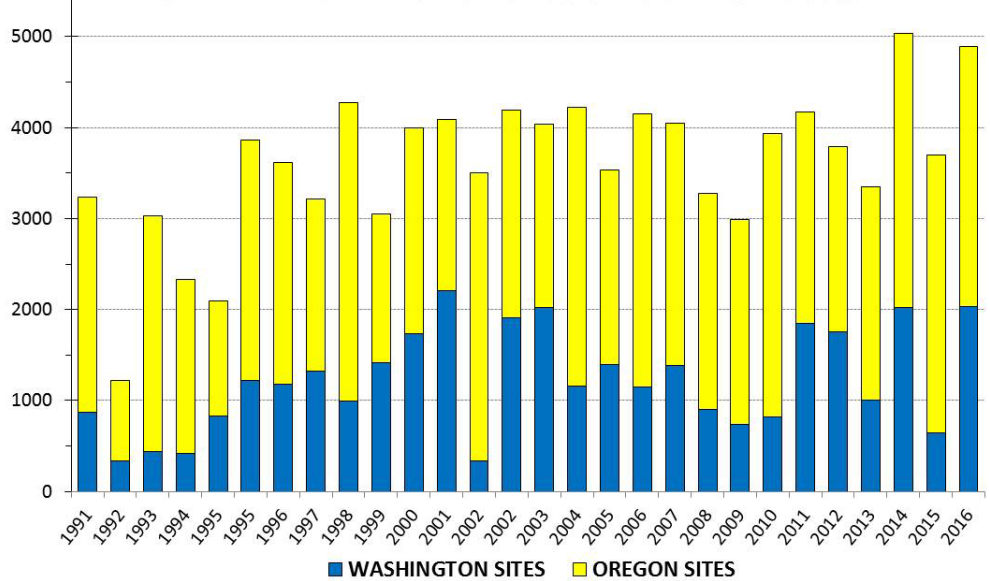
Crane Territories 2016  
Conboy Lake NWR

# Canadian Sandhill Cranes

## Lower Columbia bottomland:

- Most important staging area
- Typically 3,000-4,000 counted (late Sept/mid-October)

**SANDHILL CRANES: lower Columbia River roosts**



# Canadian Sandhill Cranes: wintering



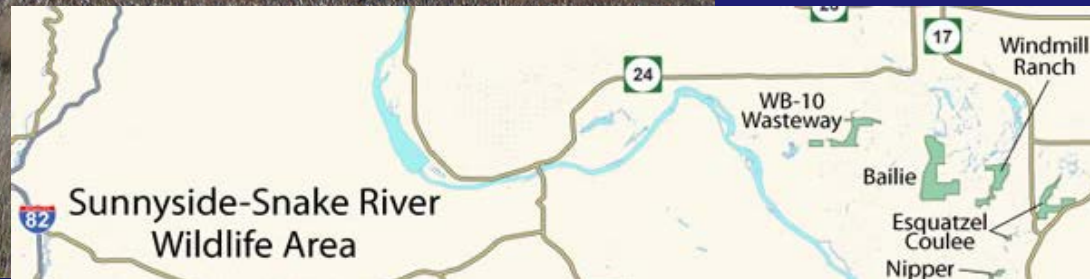
**Lower Columbia bottomlands** have also become a **wintering** area for Canadian Sandhills

- 1980s: ~100 began wintering
- 2016: up to 1,400 winter

# Pacific Flyway Lesser Sandhill Cranes:

- ~25,000 stop in Washington during migration
- Columbia Basin: most important staging area

- WLA and Columbia NWR
- Private ag lands
- Private hunting clubs



# Factors Affecting Sandhill Cranes in Washington:

- **Nesting habitat limitation**
- **Habitat degradation at nesting areas**
  - Hydrology (affects food and nest security)
- **Potential for habitat loss in staging areas**
  - Incompatible crops
  - Development
- Human disturbance
- Collision hazards (e.g. transmission lines)
- Salmon habitat projects?





# Management activities:

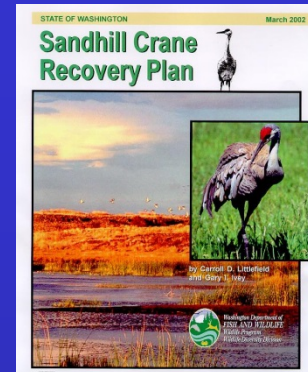
- Nesting surveys (FWS, WDFW, YN)
- Lower Columbia, fall count (volunteers)



## Management activities (cont'd):

- Color banding colts (FWS since 1996)
- Research (genetics, satellite telemetry by Int'l. Crane Fndtn, universities, and others)
- Working group





# Recovery Plan: objectives

To downlist from endangered to threatened:

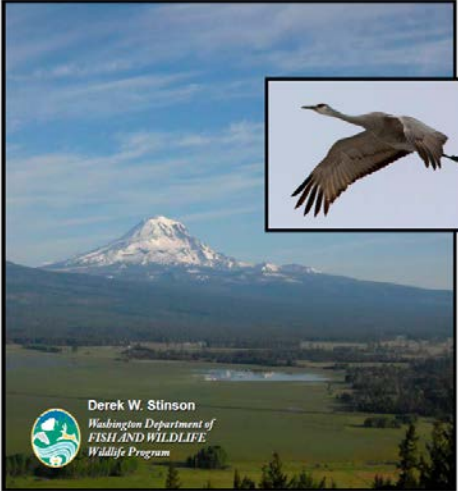
- **Greater Sandhill** breeding population of  $\geq 65$  pairs, ( $\geq 15$  outside Glenwood Valley)
  - Currently:  $\sim 37$  pairs, (perhaps 4-5 outside valley)
- Average annual recruitment of  $\geq 8\%$  for 5 years prior to de-listing
  - $\sim 11\%$  for the last 5 years
- “Water management control is improved to allow proper management” for breeding at Conboy
  - Much improved since 2002

## Summary:

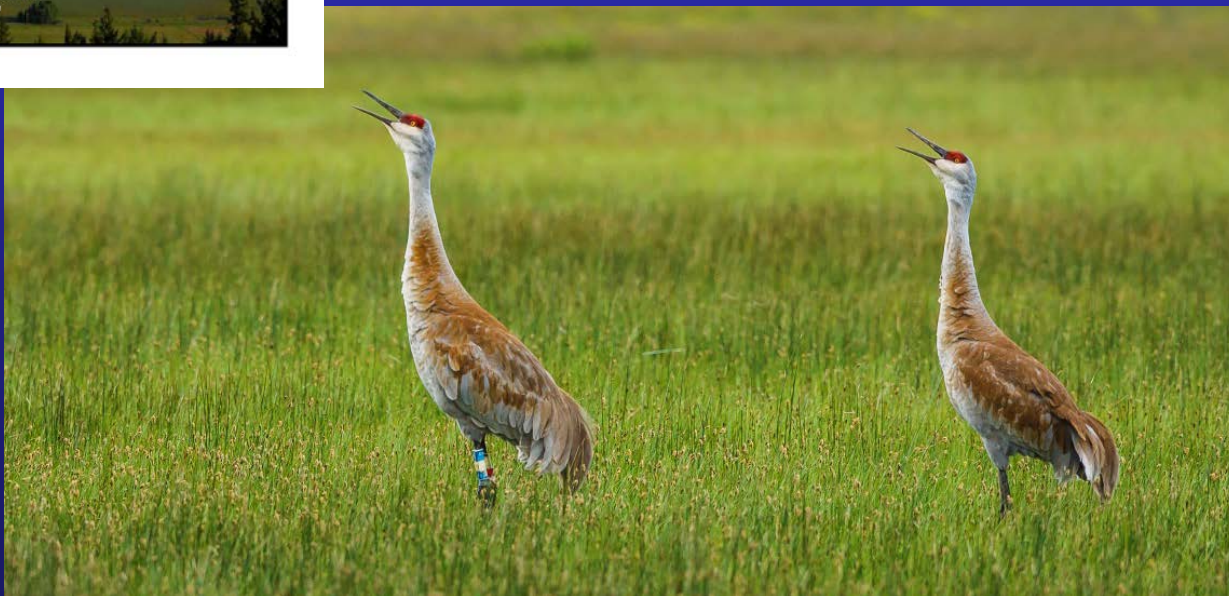
- 3 subspecies/forms in Washington
- **Greater:**
  - Nest in modest number (<40 pairs)
  - BC birds stopover in eastern WA
- **Lessers:**
  - Columbia Basin is most important staging area
- **Canadians**
  - Lower Columbia bottomlands a critical stopover
  - ~1,000 winter there
- **Staging/stopover/wintering habitat:**
  - affected by development and conversion to incompatible crops



## Periodic Status Review for the Sandhill Crane



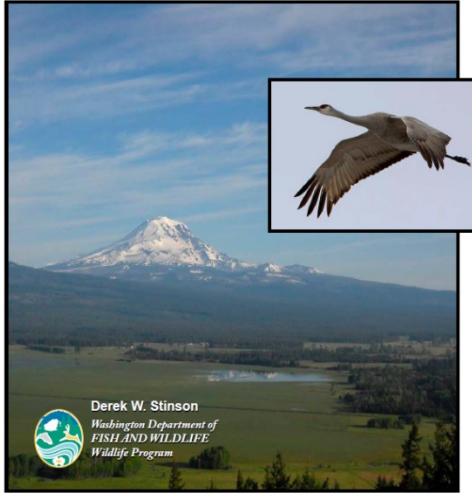
**Recommendation:**  
The Sandhill Crane should remain on the list of endangered species



# SUMMARY OF PUBLIC COMMENTS

STATE OF WASHINGTON DRAFT September 2016

## Periodic Status Review for the Sandhill Crane



## 3 public comments received:

- 2 supported keeping the Sandhill Crane as endangered
- 1 supported keeping as endangered if genetically distinct or isolated from abundant populations in other flyways

# QUESTIONS?

