

# Lynx in Washington

## Current Status and Potential Threats



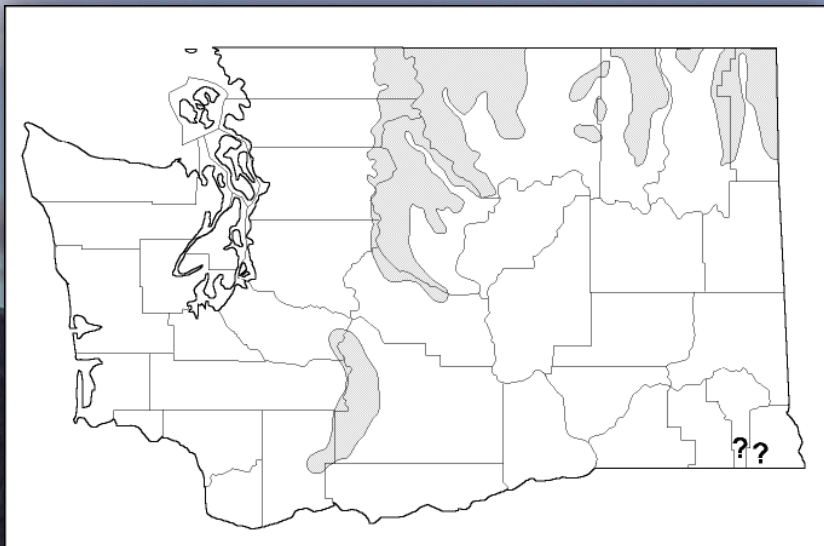
Benjamin Maletzke | Carnivore Biologist



Washington Department of  
**FISH and WILDLIFE**

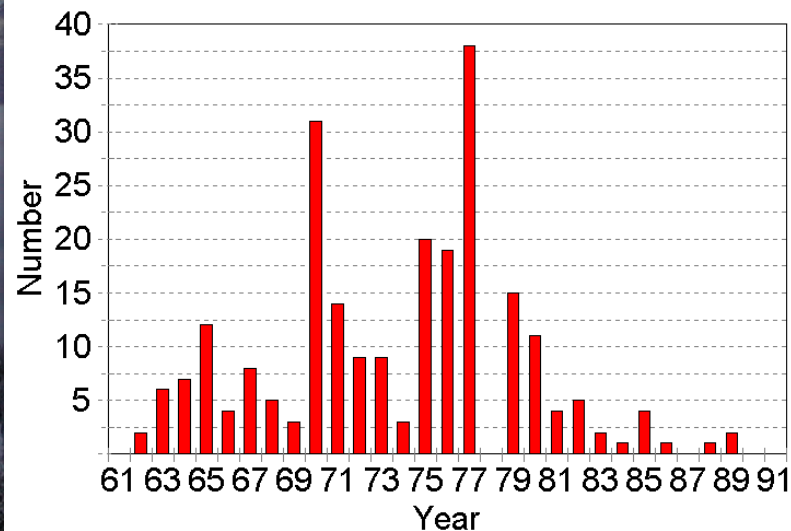


# Historical Records of Lynx in Washington



- State Listed as Threatened in 1993
- Recovery Plan 2001
- No take or harassment
- Management Plan

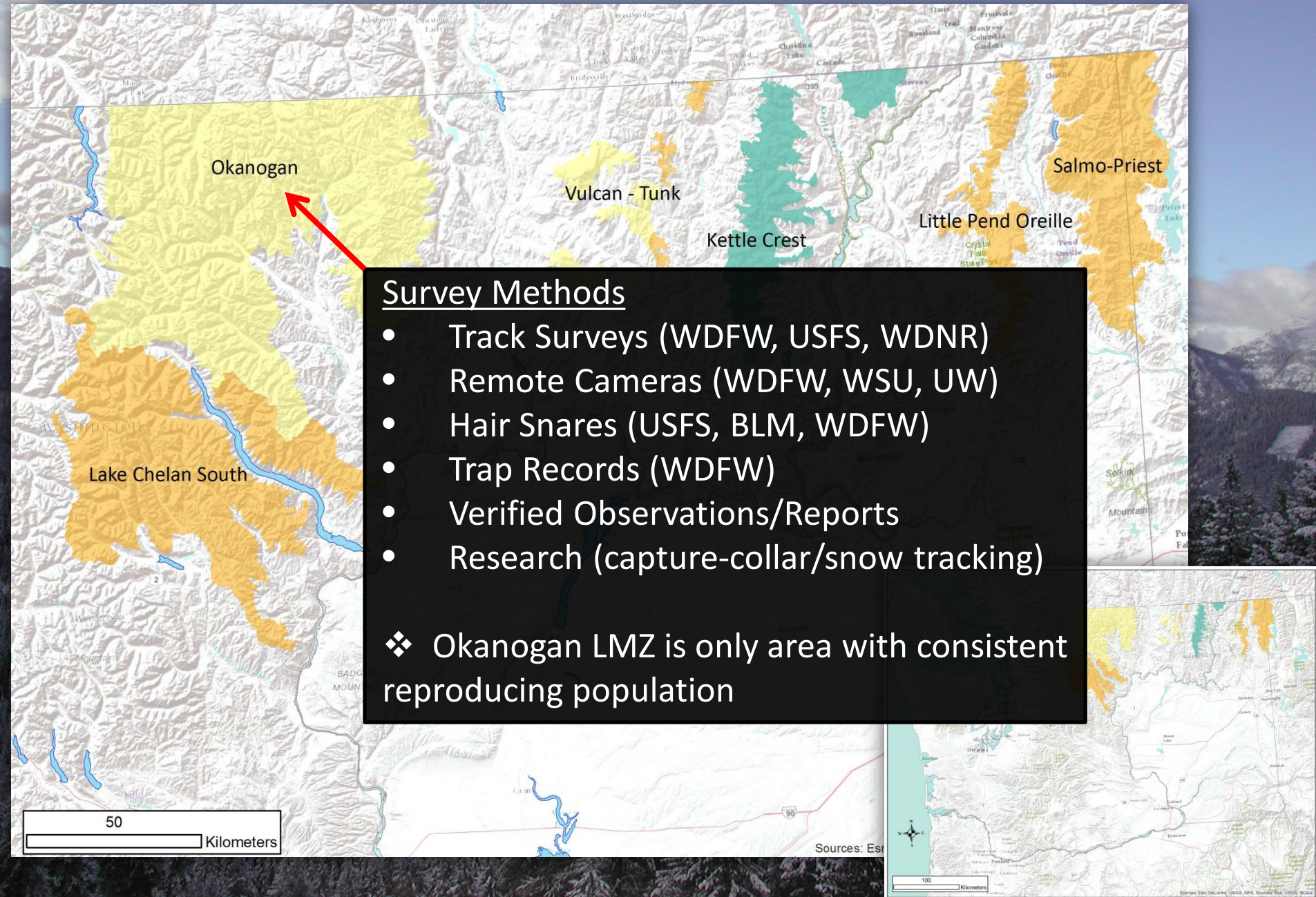
Washington Lynx Harvest: 1961-1991



Stinson, D. W. 2001. Washington state recovery plan for the lynx. Washington Department of Fish and Wildlife, Olympia, Washington.

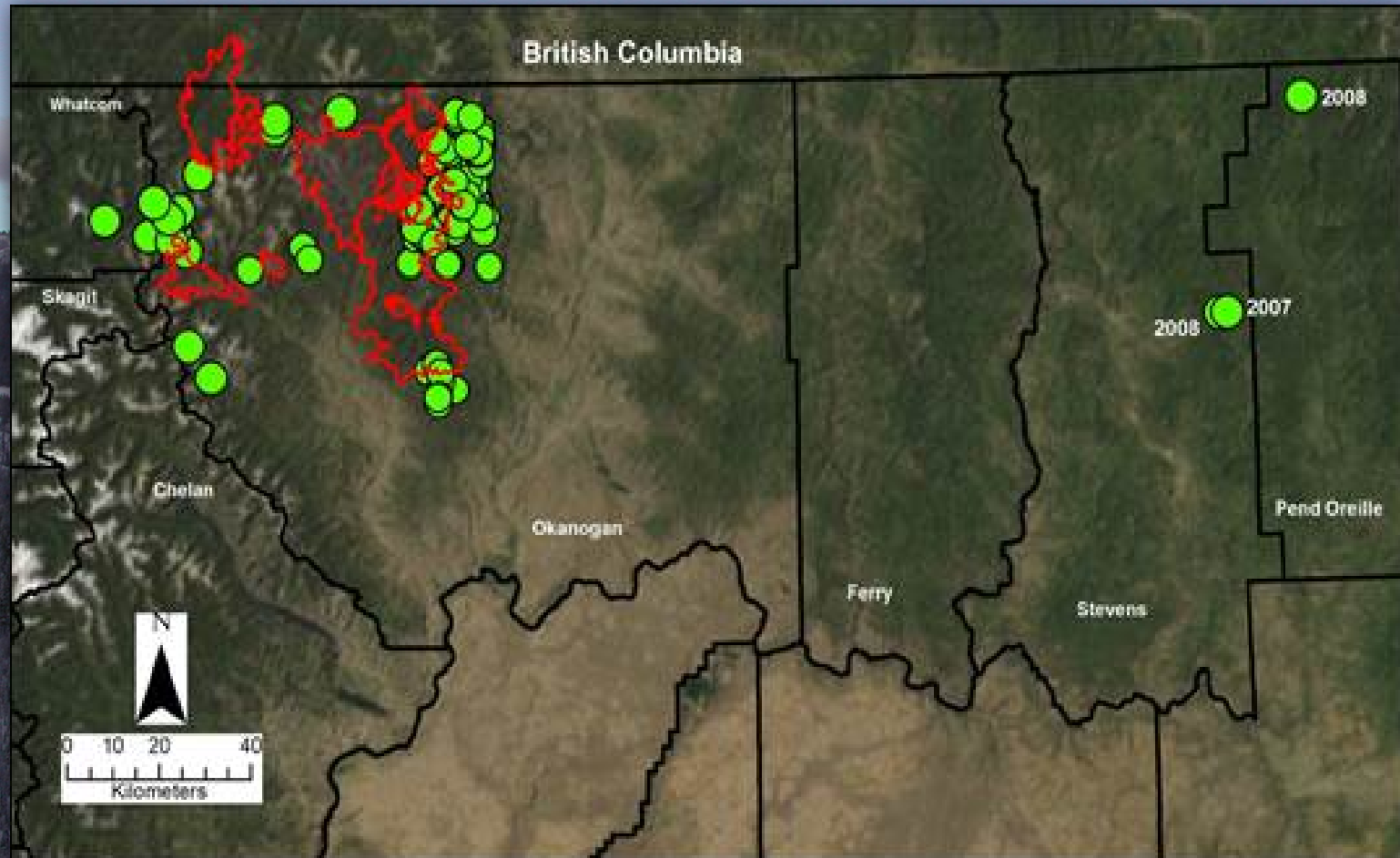


# Lynx Surveys and Detections





# Lynx Detections from 2005 – 2015





# Research



## Lynx:

- Habitat, Home range, Density (Koehler and Brittell 1990)
- Fine Scale Habitat Selection (Von Kienast 2003)
- Statewide Habitat Model (Maletzke 2004)
- Track surveys: 1987-present (USFS, WDFW, WDNR)
- Habitat Connectivity (Vanbianchi and Hodges 2015)
- Range and Density (Scully and Thornton ongoing)

## Snowshoe hares:

- Habitat and Density (Koehler 1990)
- Habitat Matrix and Density (Lewis et al 2005, 2011)





# The USFWS's 5-factors for determining the need to list:

## Listing a Species Requirement for USFWS

- a. Present or threatened destruction of habitat or range
- b. Over-utilization
- c. Disease or predation
- d. Inadequacy of existing regulations
- e. Other natural or manmade factors affecting continued existence





# Inadequacy of existing regulations?



## Washington State Recovery Plan for the Lynx



Prepared by Derek W. Stinson

Washington Department of Fish and Wildlife  
Wildlife Management Program  
600 Capitol Way North  
Olympia, Washington 98501

June 2001



## Canada Lynx Conservation Assessment and Strategy

3rd Edition — August 2013



## Lynx Habitat Management Plan

For DNR-Managed Lands

April 2006



# Disease or Predation?

## Disease?

- No documented cases in WA

## Predation?

- 1 collared female killed by a cougar
- Warmer drier winters (Climate Change)
  - Decreased snow pack and persistence
  - Snow conditions (freeze/thaw events = crust)





# Present or threatened destruction of habitat or range



**Bark Beetle**



**Bud worm**

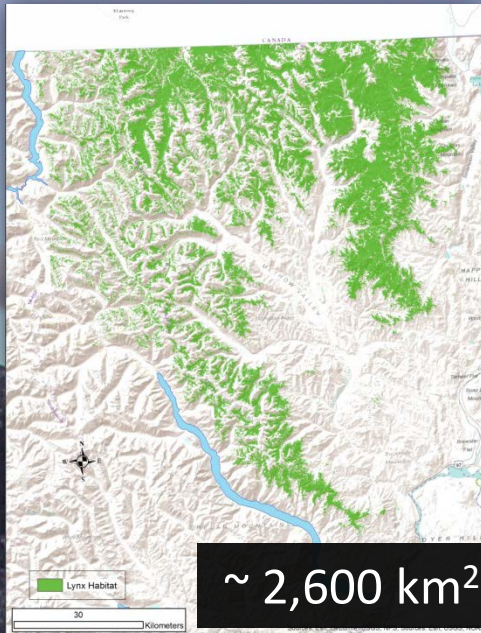


>1,000 km<sup>2</sup> burned  
1994-present

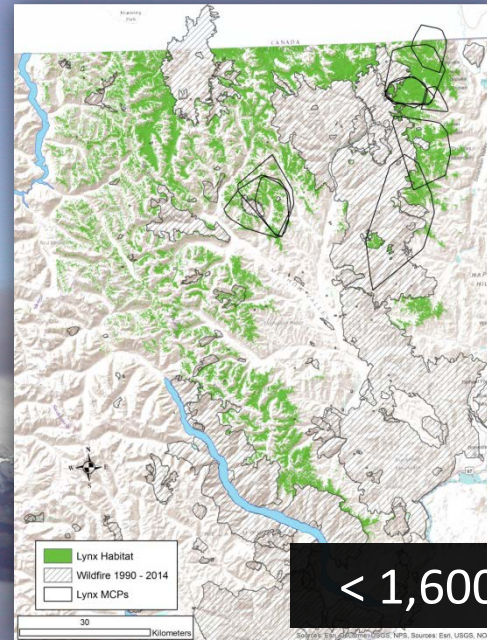
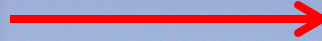




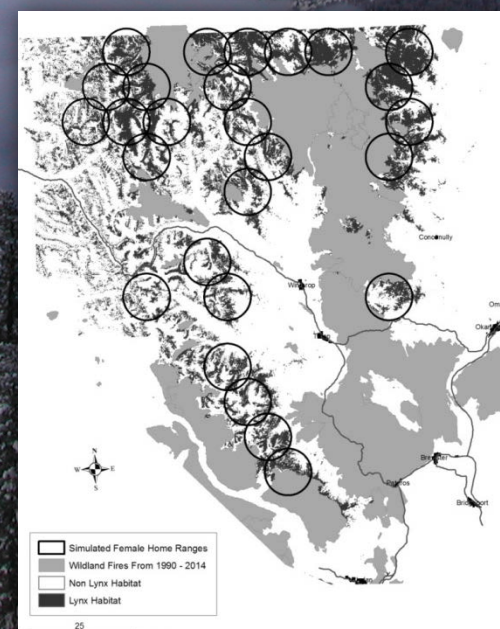
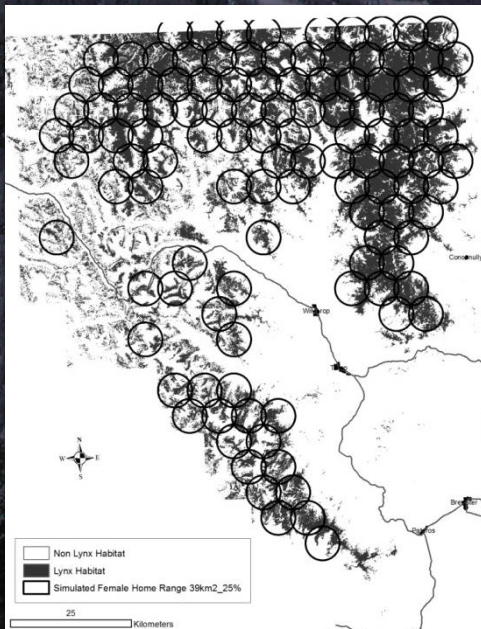
# Present or threatened destruction of habitat or range



~ 2,600 km<sup>2</sup> in 1990 – 2002



< 1,600 km<sup>2</sup> in 2014





# Natural or manmade factors affecting continued existence

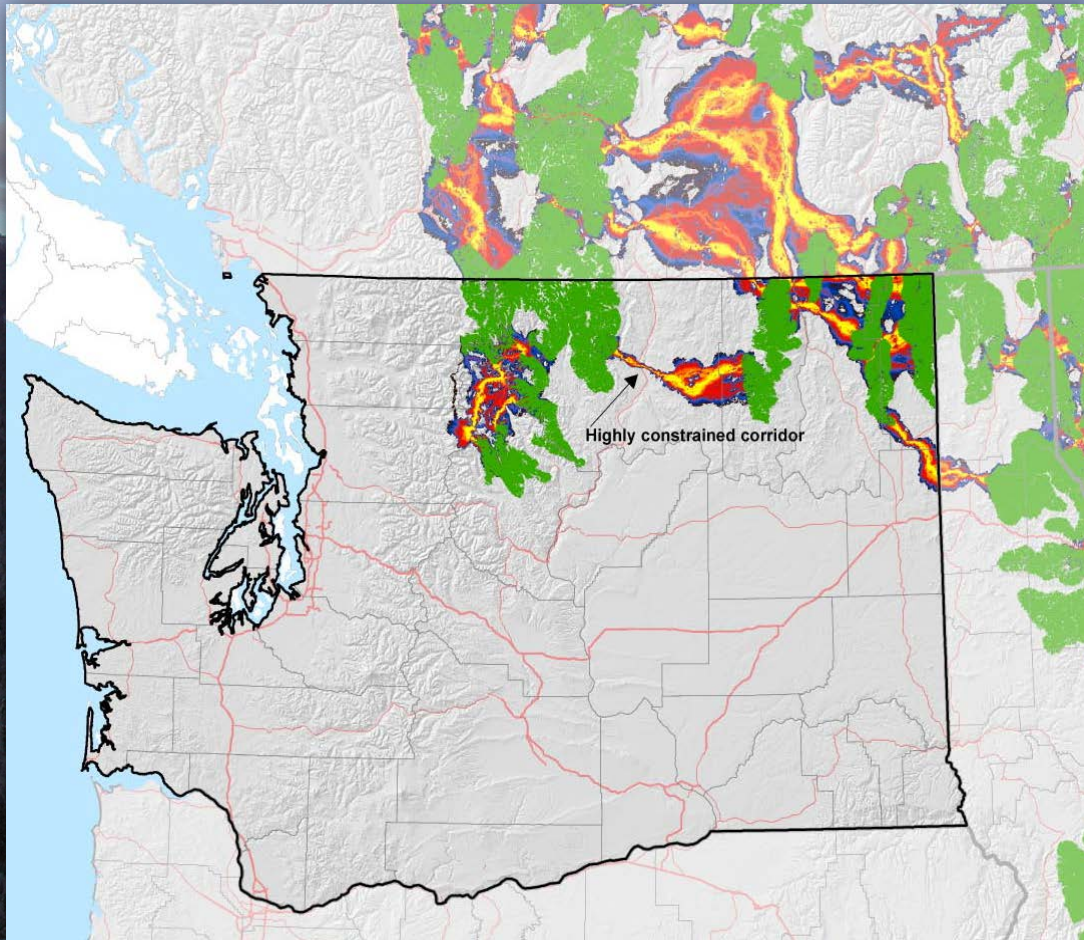
## Climate Change

- Snow persistence (Spatial and Temporal)
- Snow depth and condition
- Interspecific Competition
- Changes in Vegetation Cover
  - Temperature and precipitation driven
  - Fire Frequency, Intensity, and Size
- Prey Density
- Reduction and Isolation of suitable habitat





# Natural or manmade factors affecting continued existence



## Habitat Connectivity

Okanogan ~ currently okay

- Fire?
- Timber harvest?
- Trapping in BC?

Kettle Crest

- Shrub-steppe?
- Highway/Fence?
- Kettle River?
- Habitat in BC





# Natural or manmade factors affecting continued existence

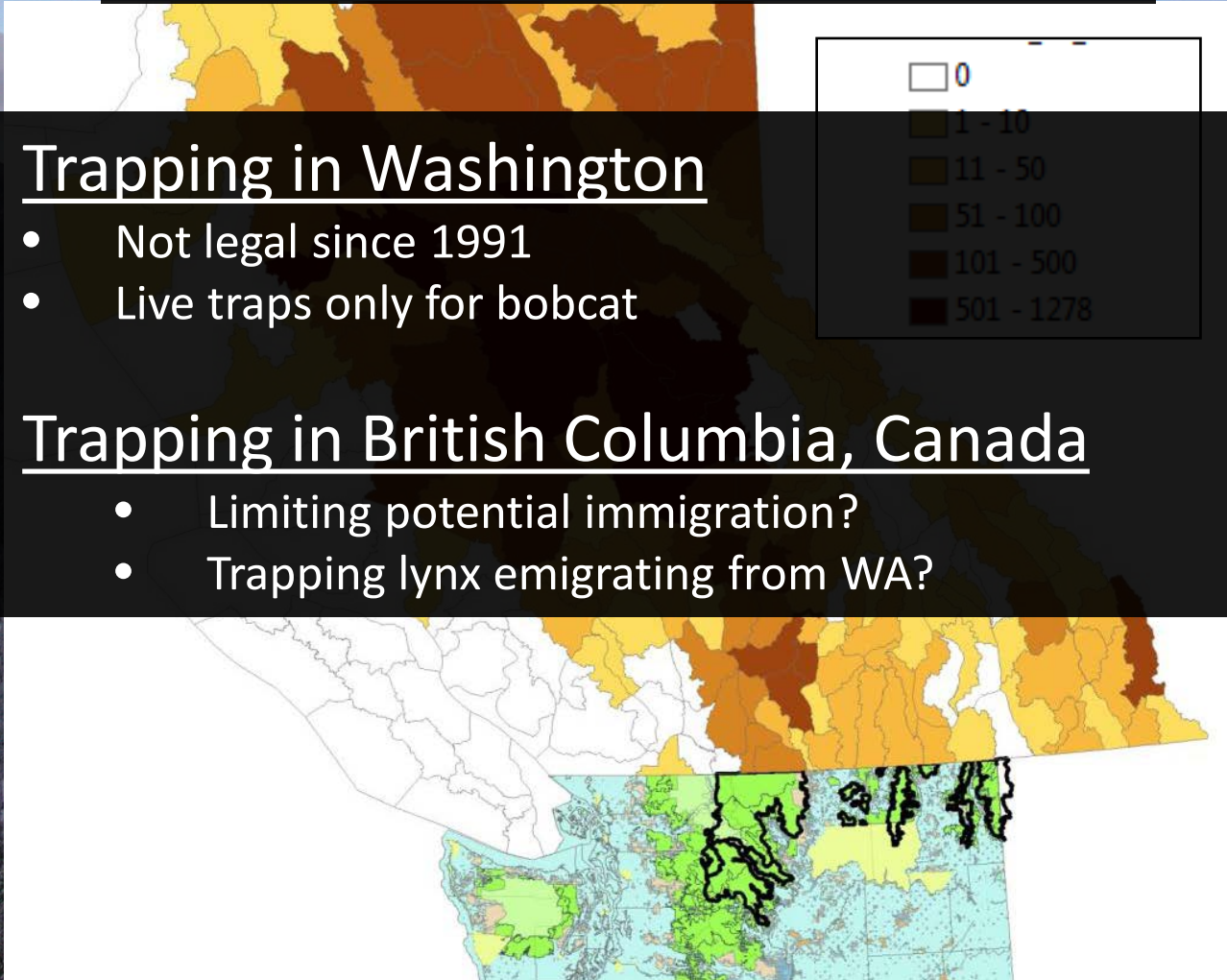
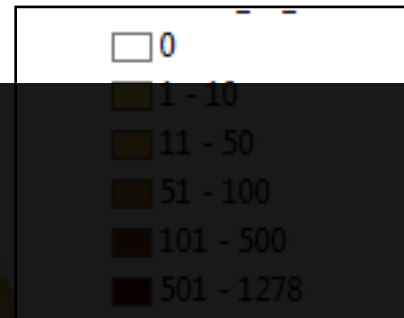
## BC lynx harvest by management unit, 1985-2011

### Trapping in Washington

- Not legal since 1991
- Live traps only for bobcat

### Trapping in British Columbia, Canada

- Limiting potential immigration?
- Trapping lynx emigrating from WA?

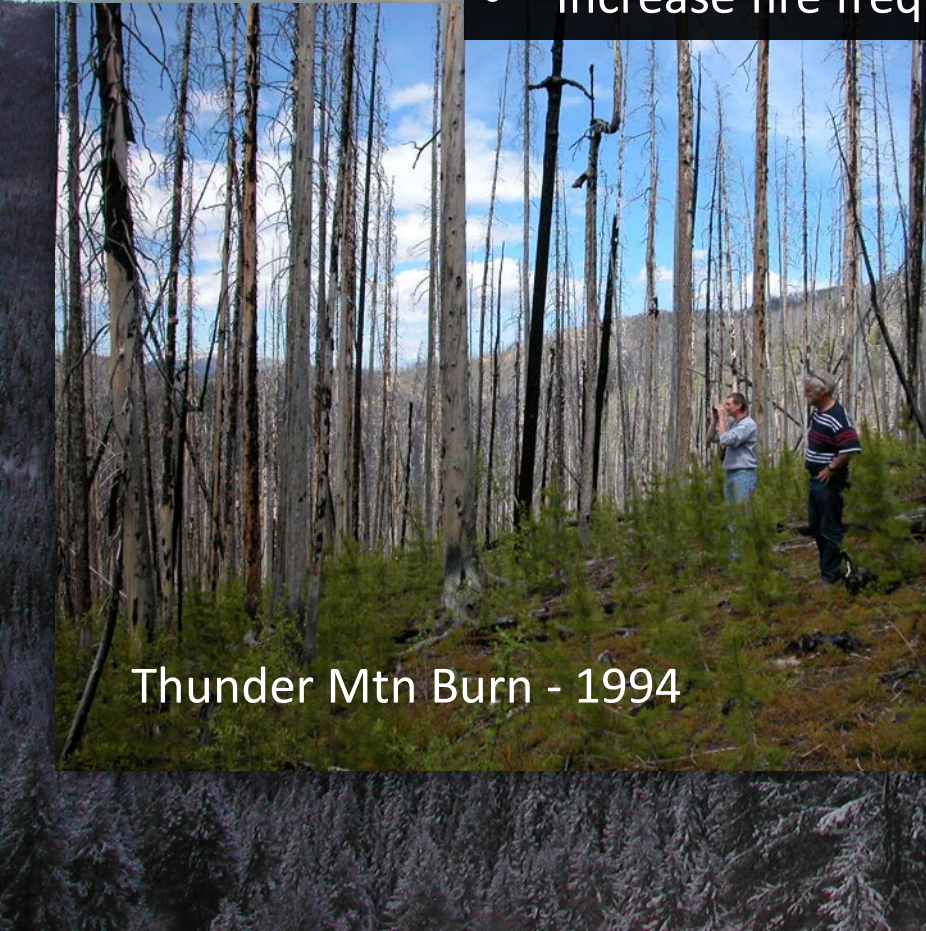




# Present or threatened destruction of habitat or range

## Regeneration after Wildfire

- 30% after 20 years
- > 35 – 40 years for lynx
- Vegetation shift (Climate change)?
- Increase fire frequency and severity?



Thunder Mtn Burn - 1994





# Potential Management and Recovery Actions:

1. Resume periodic surveys and monitoring with partners/collaborators
2. Revisit/review current management practices (WDNR, USFS, USFWS, Colville Tribe, others) to see if we can make them more friendly toward lynx
3. Probability of population persistence (Population Viability Analysis over 10, 25, and 50 years...)
4. Cooperation and collaboration with BC ~ (adapt to be sensitive to the concerns in Washington)
5. Evaluate the need and feasibility of augmenting female lynx in Okanogan LMZ?
6. Evaluate the need and feasibility of reintroducing lynx to the Kettle Crest?
7. Up listing lynx in WA to indicate the current status and severity of threats
8. Seeking partner collaboration and additional funding to support the actions listed above



Questions?





# Current Surveys and Distribution

Lynx Management Zone	Surveys Conducted	Detections
Salmo Priest	<ul style="list-style-type: none"> <li>Track Surveys</li> </ul>	Occas. single tracks
Little Pend Oreille	<ul style="list-style-type: none"> <li>20 remote cameras baited w/roadkill deer</li> </ul>	No Detections
	<ul style="list-style-type: none"> <li>Track Surveys</li> </ul>	Occas. single tracks
Kettle Crest	<ul style="list-style-type: none"> <li>60 remote cameras</li> </ul>	No Detections
	<ul style="list-style-type: none"> <li>Track Surveys</li> </ul>	Occas. single tracks
	<ul style="list-style-type: none"> <li>Hair Snag Grid</li> </ul>	No Detections
	<ul style="list-style-type: none"> <li>Trap Records</li> </ul>	Last records ~ 1970's
Vulcan – Tunk	<ul style="list-style-type: none"> <li>16 Remote cameras</li> </ul>	No Detections
	<ul style="list-style-type: none"> <li>Track Surveys</li> </ul>	No Detections
Lake Chelan South	<ul style="list-style-type: none"> <li>Track Surveys</li> </ul>	No Detections
Okanogan	<ul style="list-style-type: none"> <li>Capture/Collar Effort</li> <li>Track Surveys</li> <li>300+ Remote Cameras</li> <li>Trap Records</li> <li>Pasaytan Wilderness Camera</li> </ul>	Reproduction verified Reproduction verified Reproduction verified Records through 1991 15 – 25% detection rate