

**NOAA**  
**FISHERIES**  
West Coast Region

# Petition to List NC Summer-Run Steelhead

Structure and Process  
Extinction Risk  
DPS Policy

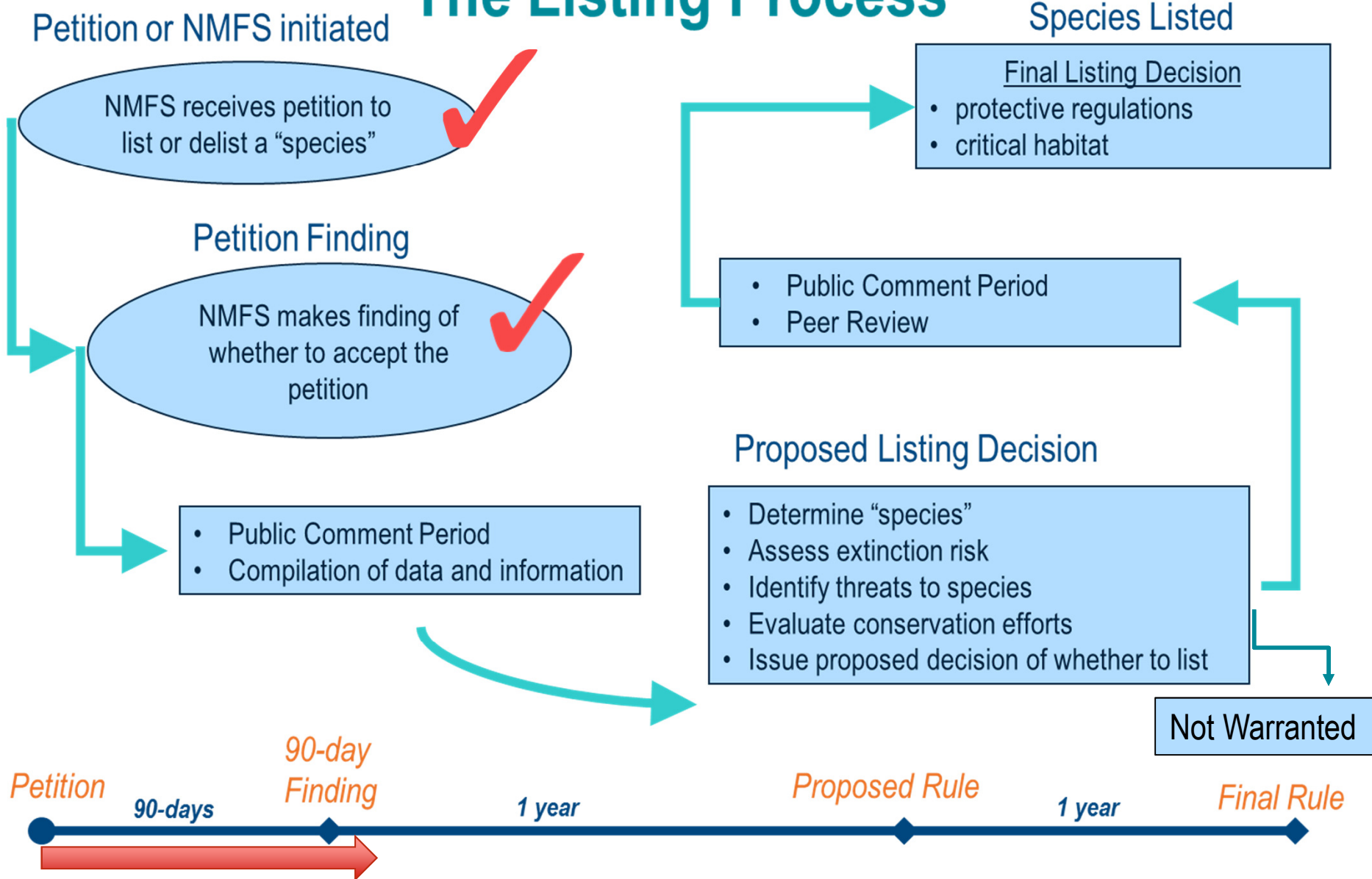
May 8, 2019  
Matt Goldsworthy  
Fisheries Biologist

# NMFS Team Structure

- **Lead:** NMFS Protected Resources Division (Portland, OR)
- California Coastal Office (Arcata)
- Southwest Fisheries Science Center (Santa Cruz, CA)

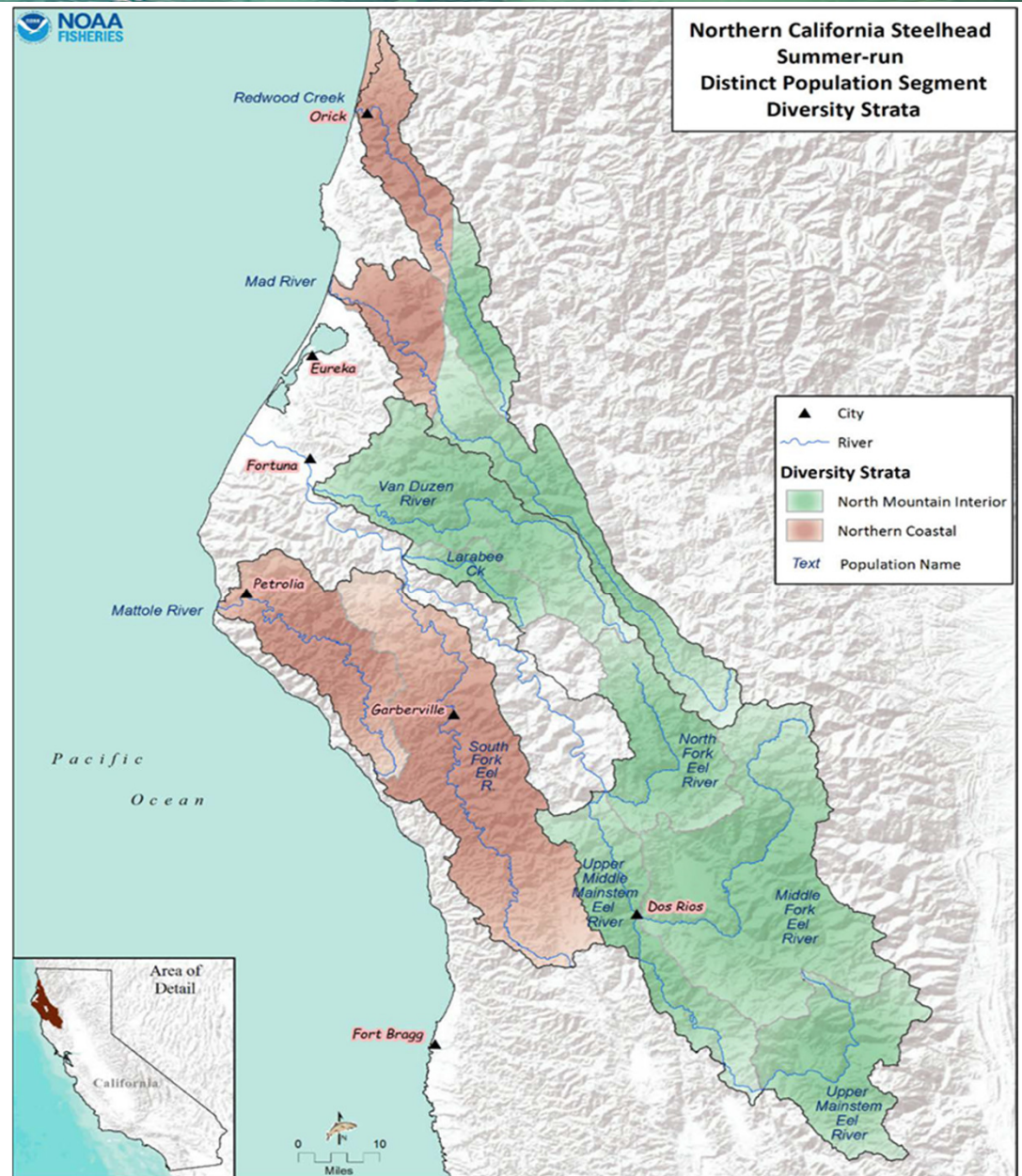


# The Listing Process



# Status Review

- Comprehensive review of the species' biology and ecology
  - Threats assessment
  - Demographic risks analysis
  - Analysis of overall extinction risk
    - Conduct SPR analysis, if applicable
  - Evaluation of conservation efforts
- Status reviews support the listing determination but do not make T or E conclusions





# Threats Assessment [Section 4(a)(1) factors]

Present or threatened destruction, modification, or curtailment of its habitat or range

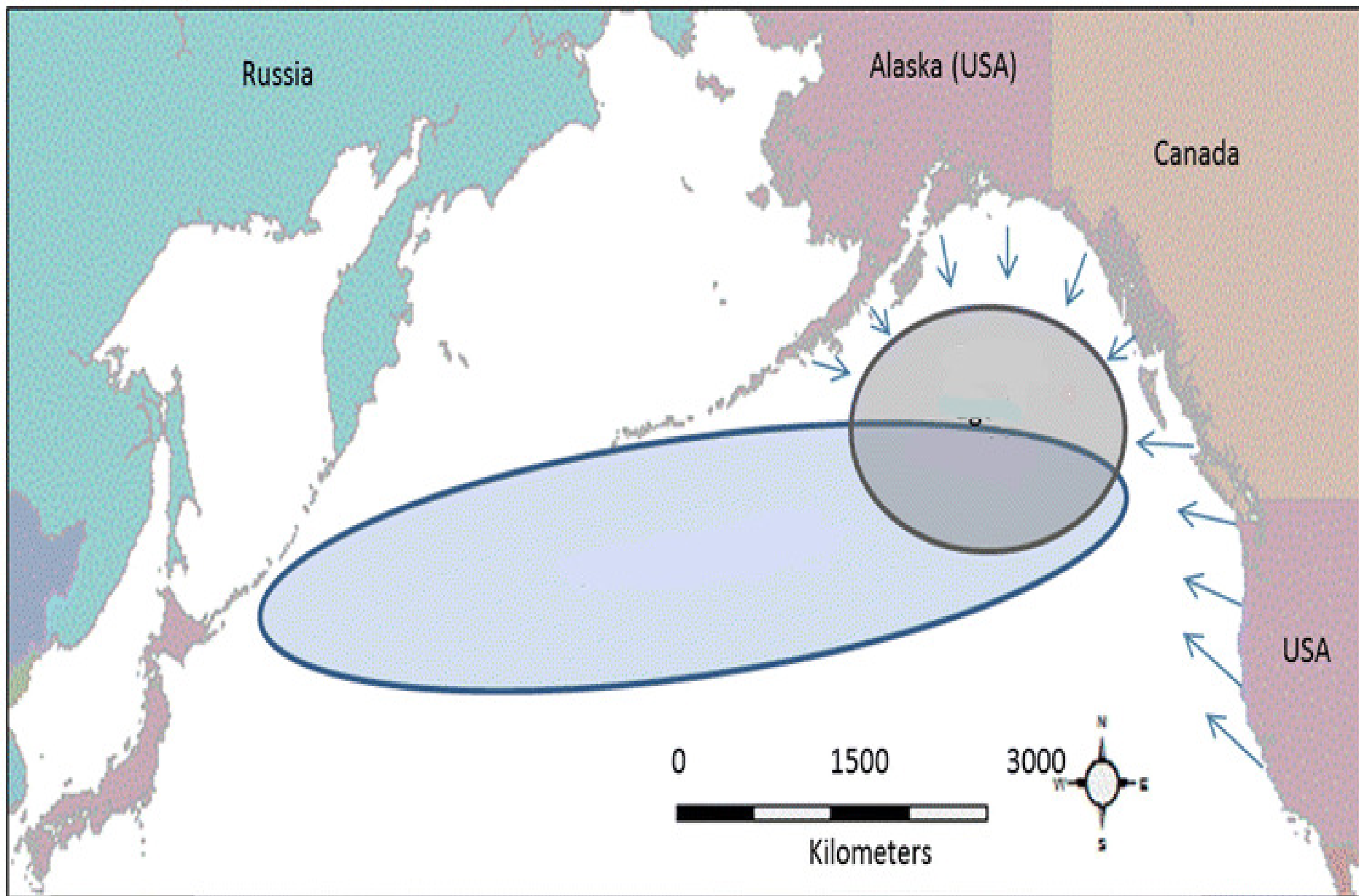
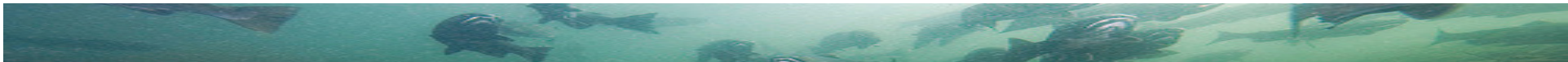
Over-utilization for commercial, recreational, scientific, or educational purposes

Disease or predation

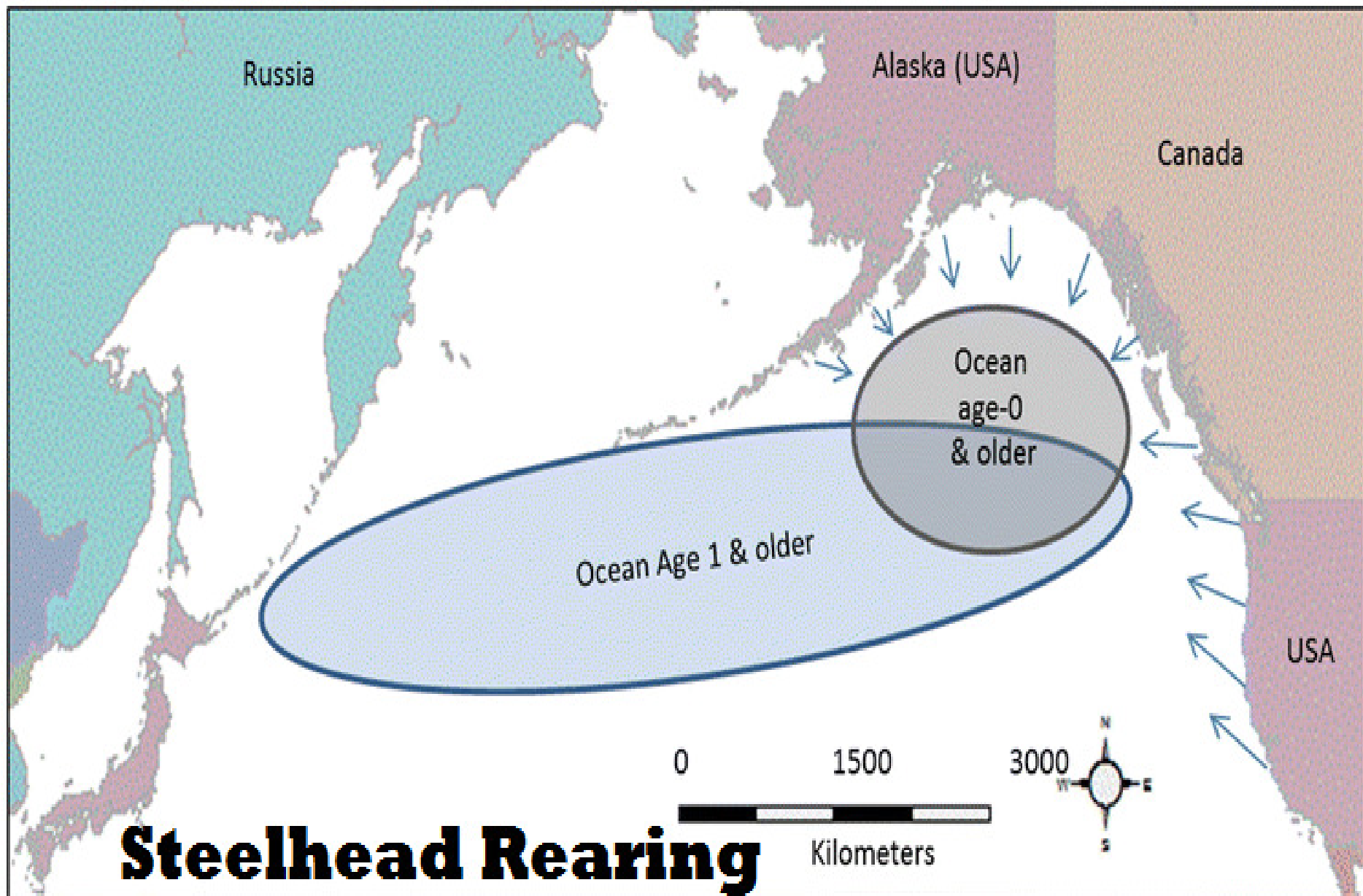
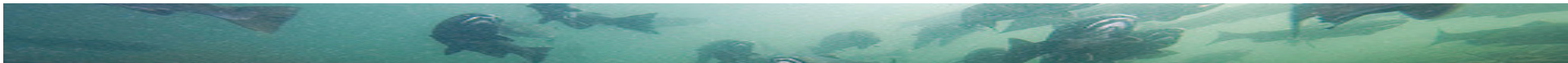
The inadequacy of existing regulatory mechanisms

Other natural or man-made factors affecting its continued existence.





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# Demographic Risks Analysis + Threats = Extinction Risk

Apply “viable salmon population criteria” (McElhany et al. 2000)

- Abundance
- Productivity
- Spatial distribution
- Diversity – genetic and phenotypic



# NC Summer-Run: Coastal Multi Species Recovery Plan

Diversity Strata	NC summer-run steelhead populations	Extant?	Historical Population Status	Effective Population Size
Northern Coastal/ North Mountain Interior	Redwood Creek*	★	I	$N_e \geq 500$ <b>18</b> (2014)
Northern Coastal/ North Mountain Interior	Mad River*	★	I	$N_e \geq 500$ <b>179</b> (2016)
Northern Coastal	South Fork Eel River	?	I	$N_e \geq 500$
Northern Coastal	Mattole River	★	I	$N_e \geq 500$ <b>55</b> (2014)
North Mountain Interior	Van Duzen River	★	I	$N_e \geq 500$ <b>&lt;100</b> (1999)
North Mountain Interior	Larabee Creek	○	I	$N_e \geq 500$
North Mountain Interior	North Fork Eel River	?	I	$N_e \geq 500$
North Mountain Interior	Upper Middle Mainstem	○	I	$N_e \geq 500$
North Mountain Interior	Middle Fork Eel River	★	I	$N_e \geq 500$ <b>471</b> (1999)
North Mountain Interior	Upper Mainstem Eel River	?	I	$N_e \geq 500$



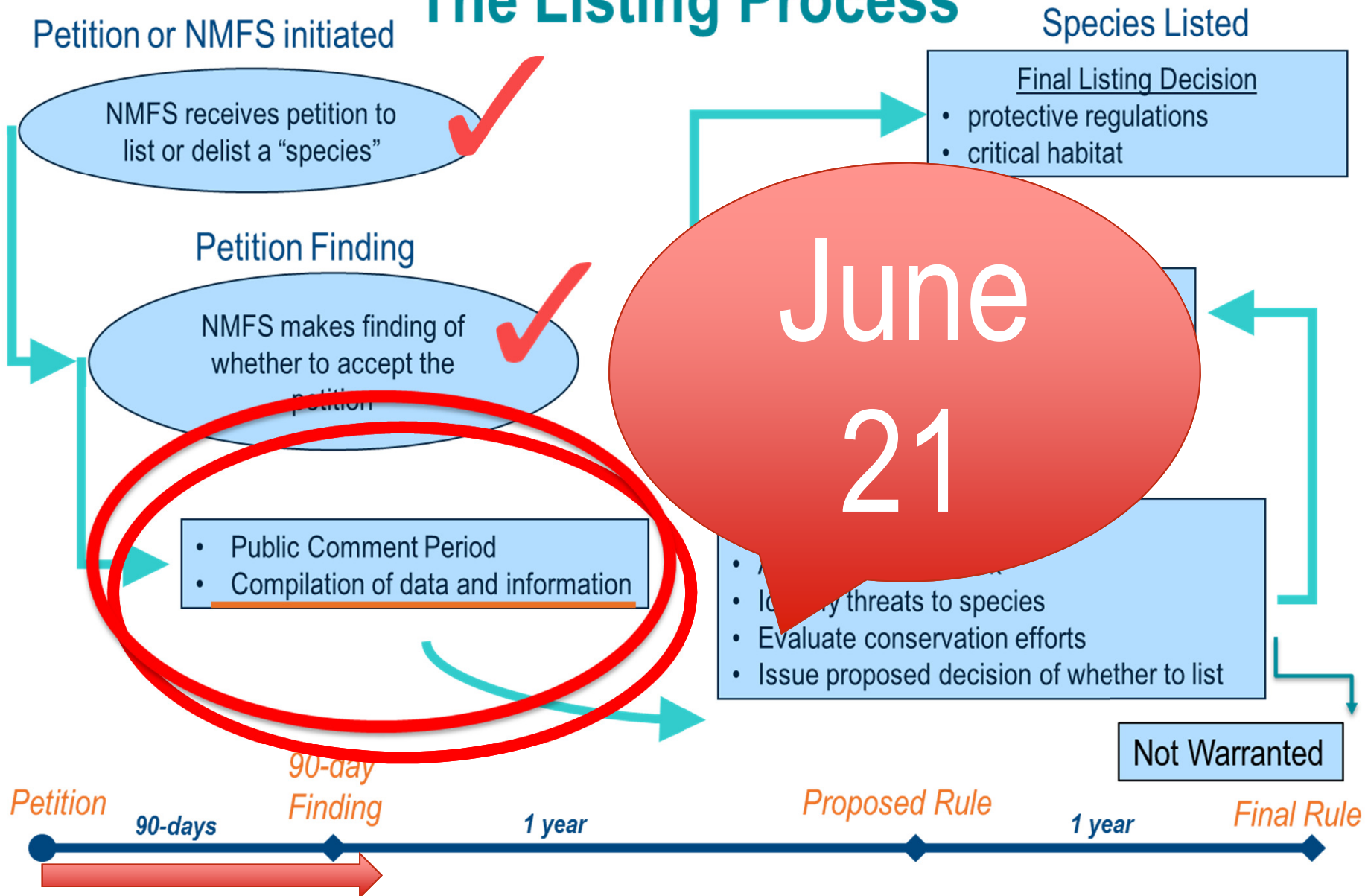
# DPS Policy: Distinct Population Segments

**Two criteria for determining whether a population segment qualifies as a DPS:**

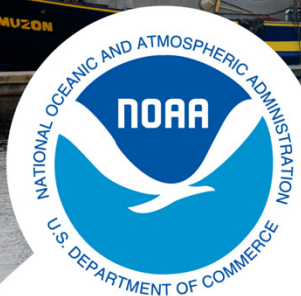
- 1) **Discreteness** of the population segment in relation to the remainder of the taxon to which it belongs
    - Markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors; or
    - Delimited by international governmental boundaries
  
  - 2) **Significance** of the population segment to the taxon to which it belongs
    - Persistence in an unusual or unique ecological setting;
    - Loss would result in a significant gap in the range of the taxon;
    - Represents only surviving natural occurrence of a taxon; or
    - Differs markedly from other populations of the species in its genetic characteristics
- ❖ **Congressional direction to exercise this authority “sparingly”**



# The Listing Process



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**Arcata, CA**

# Contact:

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