

# Review of Biology, Management, and Status, of Coastal Cutthroat Trout in Alaska



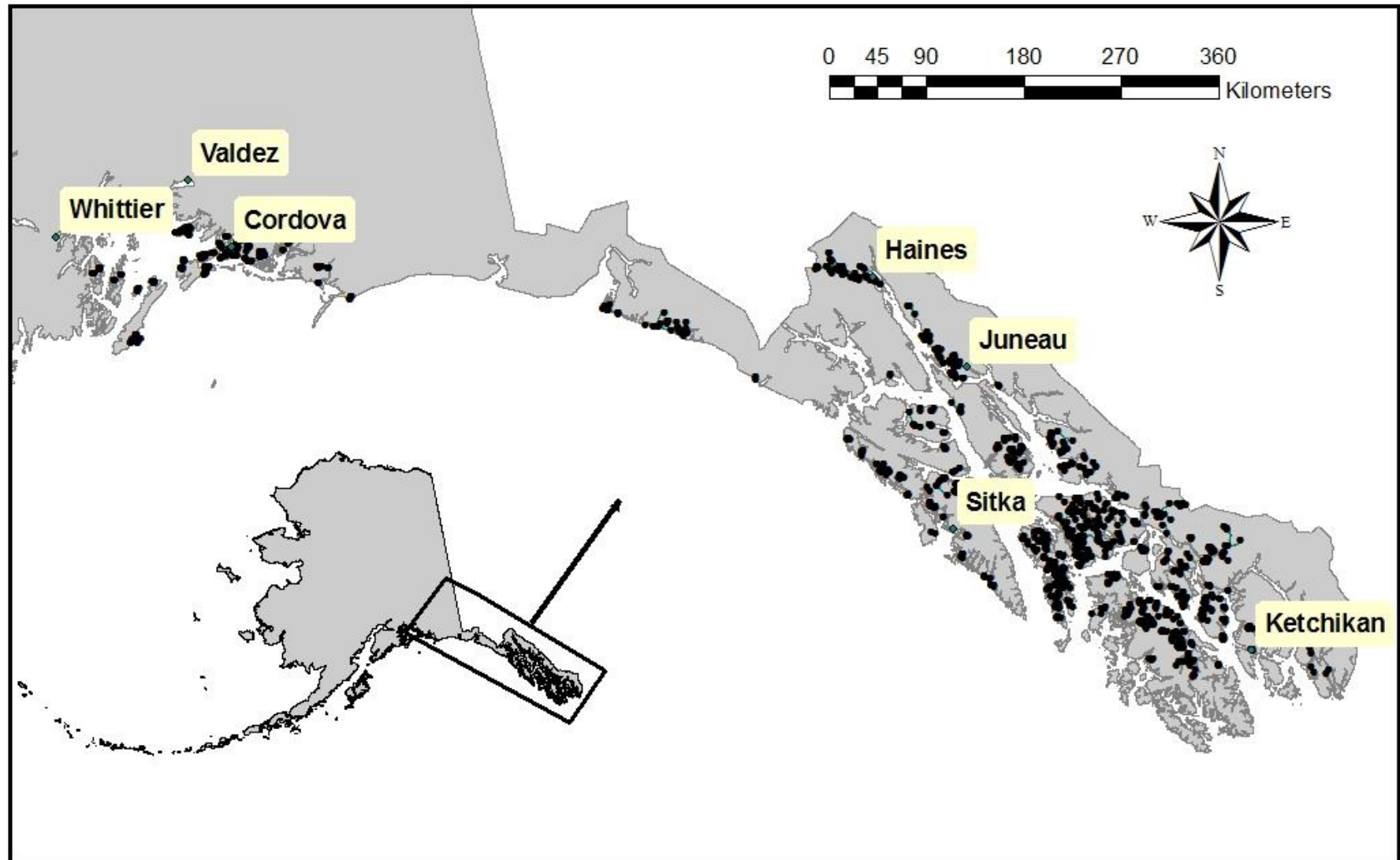
Roger Harding, Alaska Dept. of Fish & Game (DISCLAIMER: I AM RETIRED  
and am not representing any agency)

# What I Will Present

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- Distribution and life history
- Management and regulations
- Stock status
- Threats and concerns
- Comments and observations

# Known Distribution in Alaska



# Various Combination of Life History Forms

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- Sea-run
  - » Rivers and lakes
- Resident
  - » Rivers and lakes
    - Defined as above migration barriers
- Combination of sea-run and resident
  - » Example: fish in anadromous waters that never emigrate to saltwater
  - » Resident fish above barriers become sea-run

# Wide Range of Behavior Expressed By Sea-Run Forms

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- Example: Auke Lake near Juneau
  - » Extended residency in freshwater
    - Range of size and ages of first emigration
    - May not emigrate every year
  - Exhibit strong fidelity to over-wintering lakes but not each year
  - May remain in saltwater >1 year
  - Migrating fish do not cross large bodies of water preferring to travel in estuaries and close to shore

# Other “Forms” of Cutthroat Trout in Alaska

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- “Trophy” populations in resident lakes
  - » 13 lakes in Southeast Alaska (SEAK)
  - » Trout attain larger size (>20” and 3-7 pounds)
  - » Long-lived fish
  - » Only found in lakes with abundant kokanee
  - » Minimum size limit is 25” and 1 fish/day

# Trophy Cutthroat Trout from Turner Lake



Trophy Cutthroat Trout from Turner Lake (24" and 18 years old)

# Also Have Naturally Occurring Cutthroat/Rainbow Hybrids



- Not much is known about range or occurrence



# Range of Cutthroat Trout Abundance in Alaska

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- Typically range from 100 and 5,000
  - » Emigrant counts throughout Alaska
    - 34 counts from 11 systems between 1962 and 2018
    - Counts taken during spring emigration from systems with overwintering lakes
    - Primary objective of these studies was to count steelhead smolt

# Range of Cutthroat Trout Abundance in Alaska

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- Cutthroat trout density in lakes
  - » Ranges from 2 to 38 fish HA
    - Includes resident and anadromous systems
    - abundance estimates from 20 lakes over 35 years
    - Lowest density in fjord lakes; think bathtub
    - Highest density in lakes with abundant rearing habitat; think lily pads

# Sport Fishery Management and Regulations



*“Fishing at  
Turner Lake  
just isn’t  
what it used  
to be.”*

# Sport Fishing Regulations in Southeast Alaska

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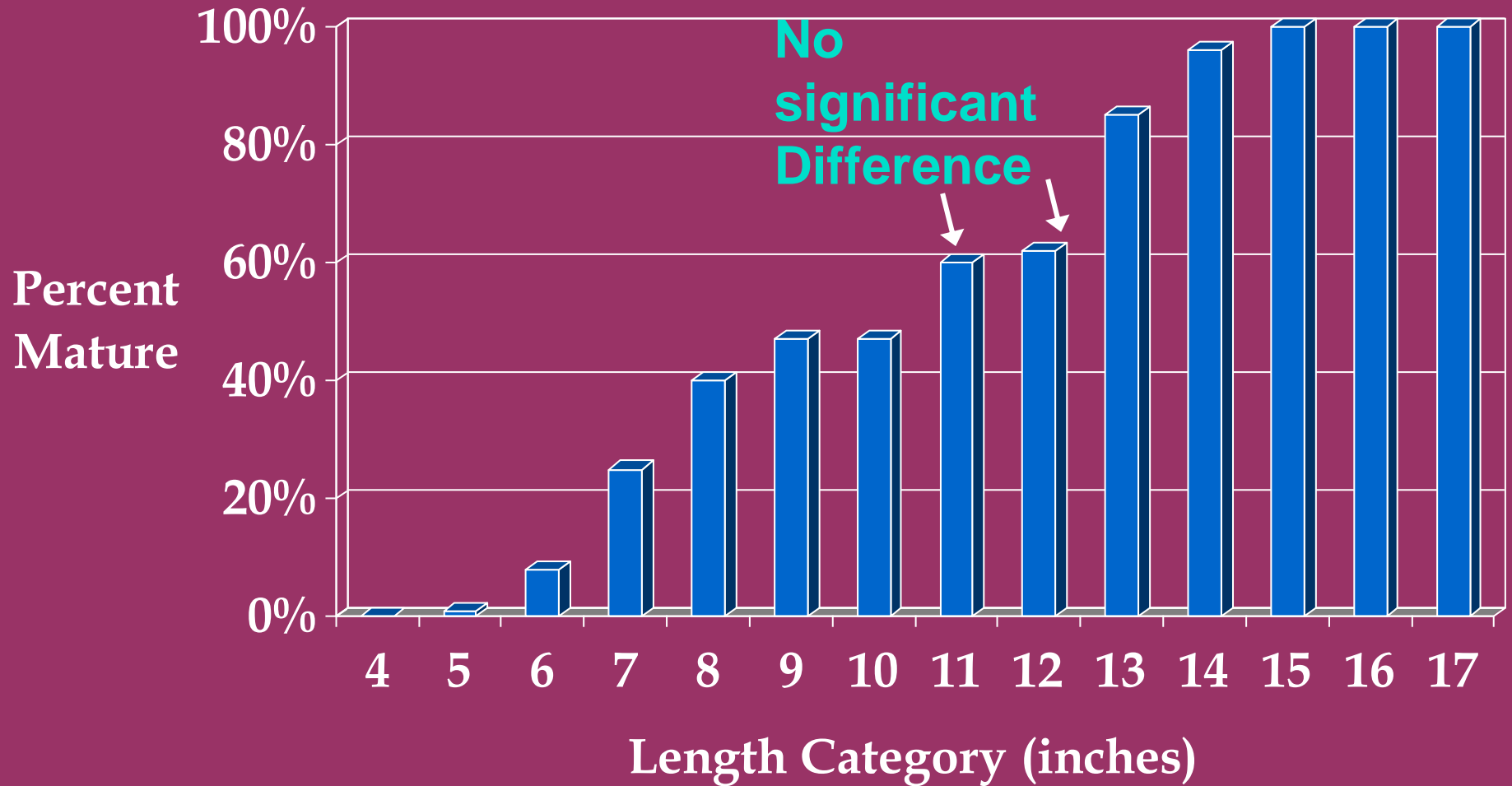
- Conservative regulations were adopted in 1994
  - » Very involved and lengthy public process
  - » Regulations are based on length at maturity studies conducted in Southeast Alaska

🕒 Descriptive papers and presentations are available

# Trout Regulations in Southeast Alaska

- Current regulations are combination of:
  - » Minimum size limits
    - 11” - allow 50% to spawn before reaching minimum size limit
    - 14” - allow 90% to spawn in higher use areas
  - » Bait prohibited in freshwater throughout Southeast AK
    - Increase survival of all C&R fish
  - » Daily bag limit of 2 fish per day
  - » Various Special management areas that:
    - allow for more harvest
    - Catch and release only

# Why Is The Minimum Size Limit 11" and 14" In "Hgh Use Areas"



# Alaska Has Federally Managed Subsistence Fishery

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- All waters in Southeast Alaska are open to subsistence trout harvest
- All waters in Prince William Sound, except Copper River, are open to subsistence trout harvest

# Differences between Sport and Subsistence Regulations

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- In Southeast Alaska
  - » Sport:
    - 2 daily bag limit and 11-inch min size limit
  - » Subsistence:
    - 6 daily bag limit and no size restrictions
- In Prince William Sound
  - » 5 trout per year (household limit of 30 trout) and no size restrictions



# Scope of Federal Subsistence Cutthroat Harvest

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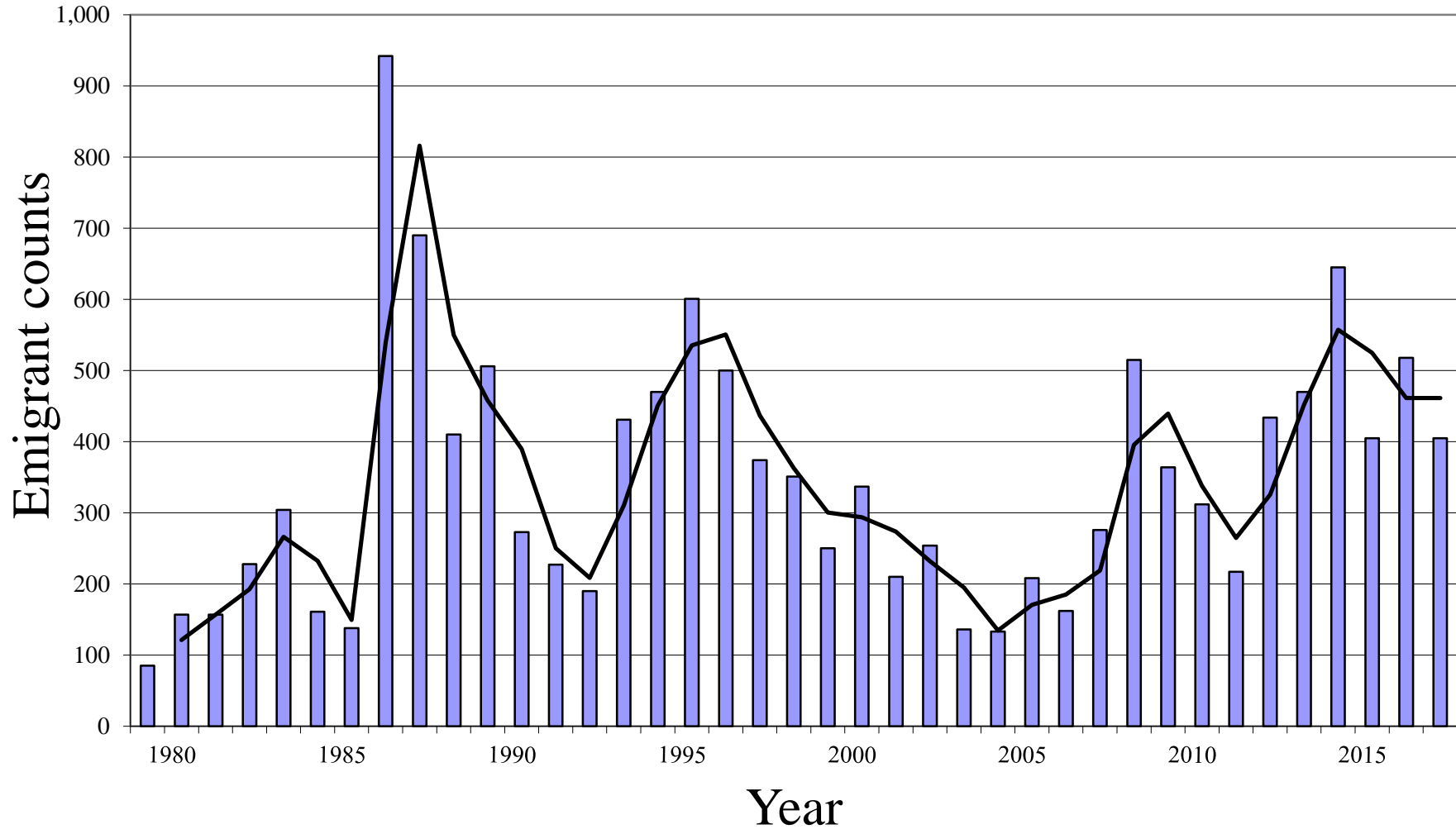
- Believed to be very low
  - » Reported to be <100 annually
  - » Mostly incidental to salmon harvest
  - » Tracked through permit reporting
    - Uncertainty in reporting
    - Alaska Sport Fish license not required
      - Harvest does not show up on state surveys

# Stock Status:

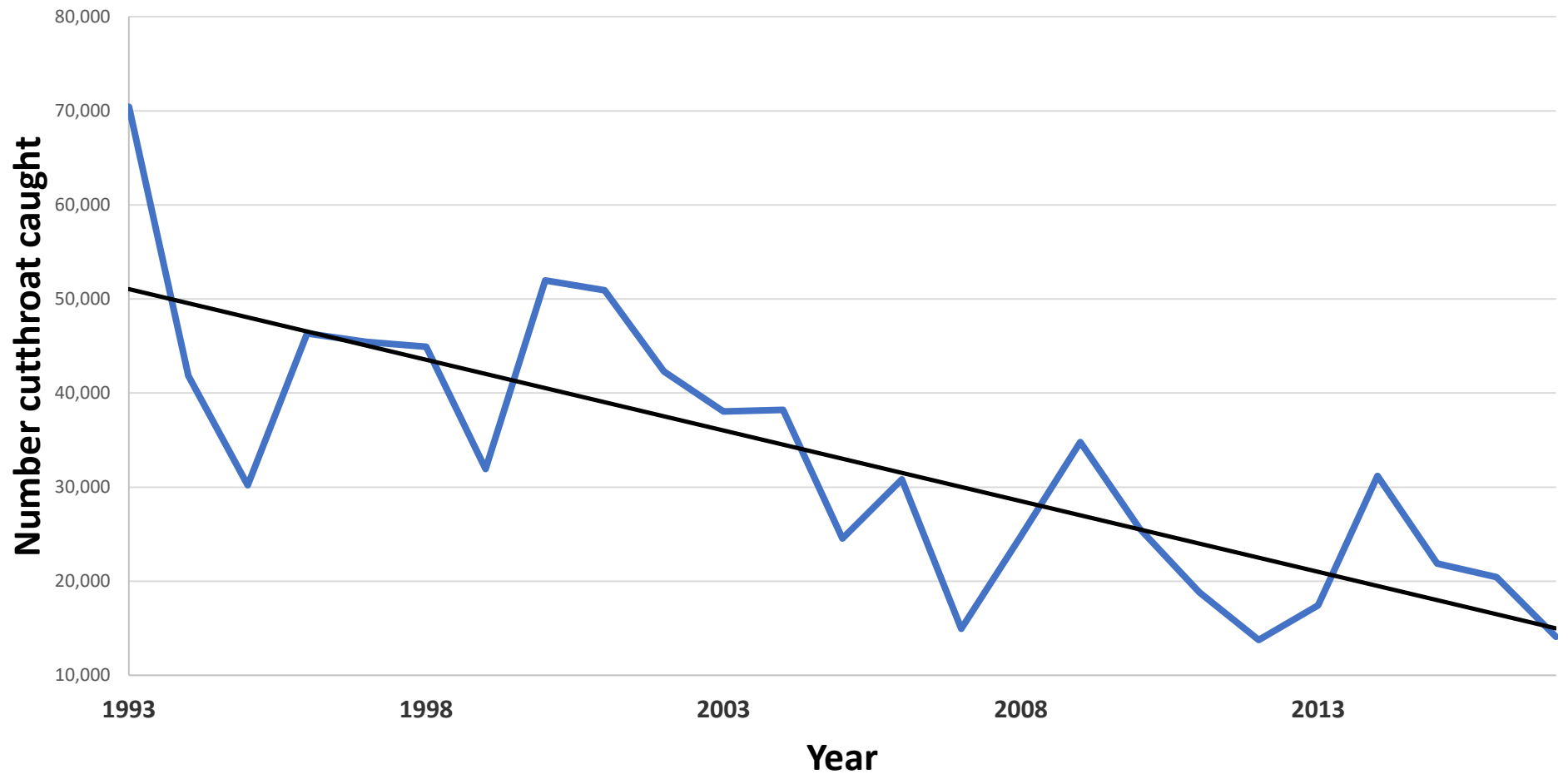
## Auke Creek Only Consistent Monitoring Site



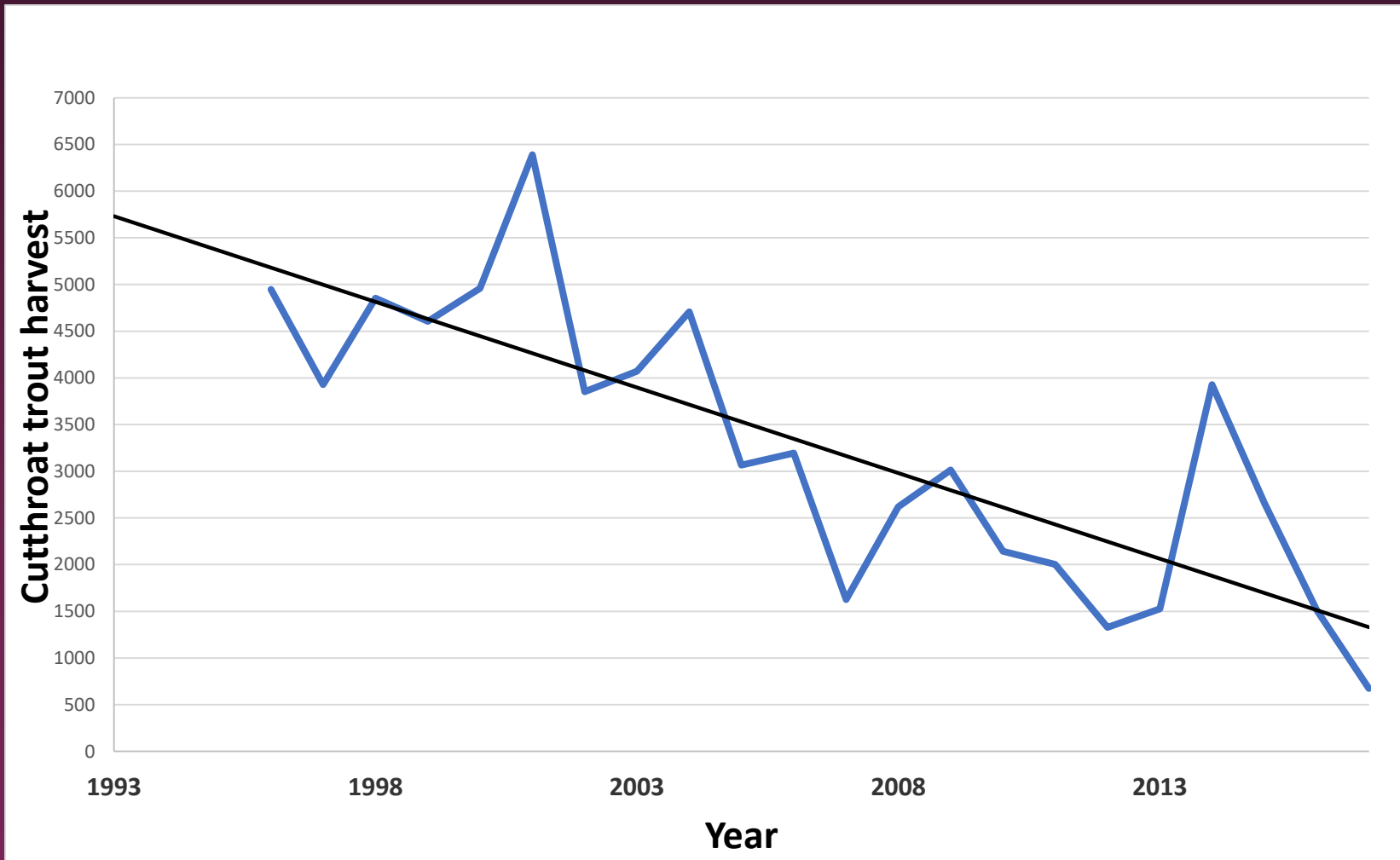
# Auke Creek Emigrant Counts Generally Stable



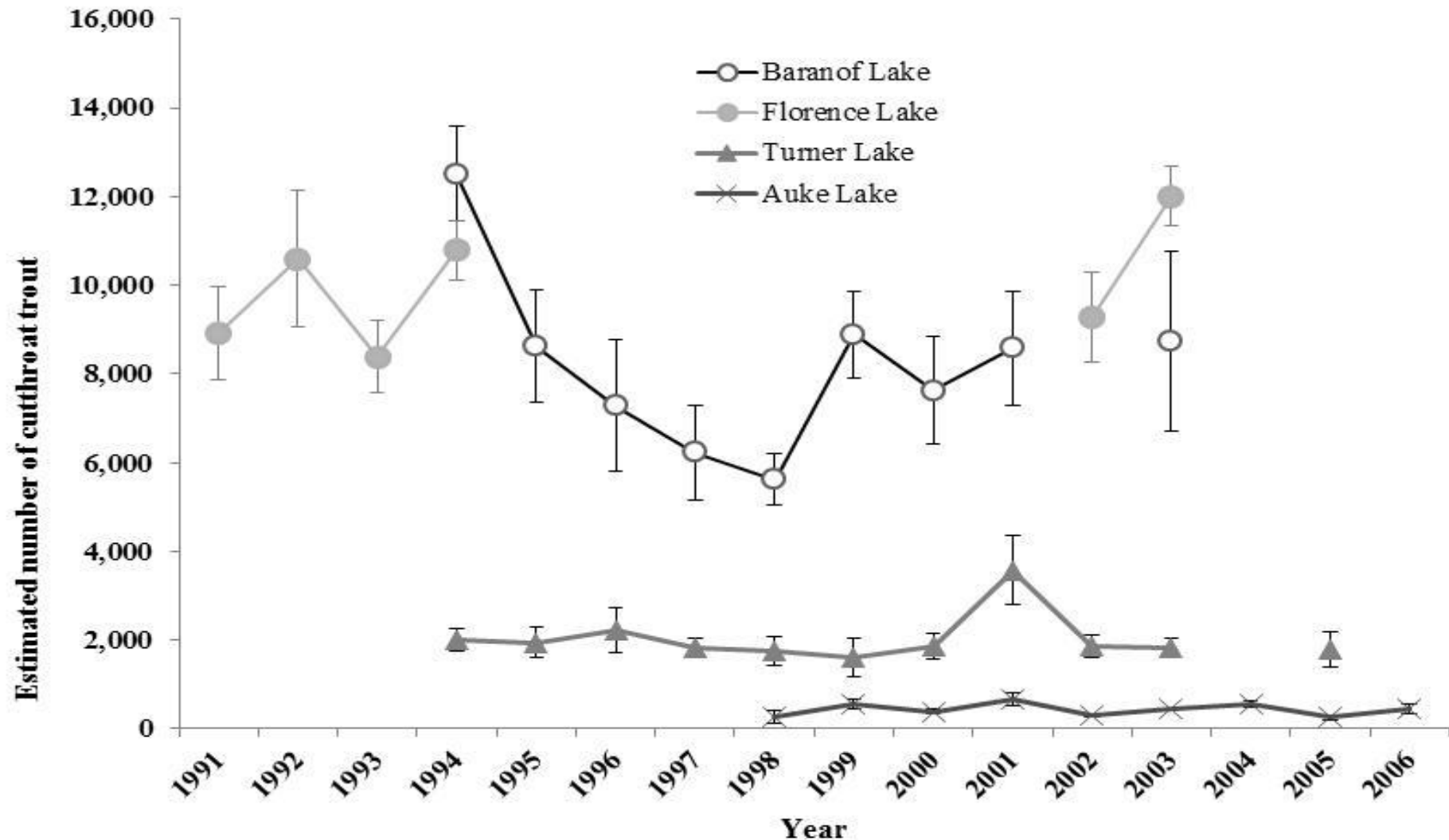
# Catch of Cutthroat Trout in SEAK Continues to Decline



# Harvest of Cutthroat in SEAK Continues to Decline



# Abundance in Lakes Have Have Annual Fluctuations But Generally Stable ?



# Status of Cutthroat Trout in Alaska Believed to be Stable Or At Least Not Declining



**“Relying on existing conservative regulations to protect majority of cutthroat populations”**

# Status of Cutthroat Trout Is Stable Provided:

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- Acknowledge management is relying on:
  - » 1 system to adequately represents 5,000 systems
  - » Have good compliance with conservative regulations
  - » Anglers will inform agencies of any conservation issues
  - » Climate and habitat changes do not adversely affect cutthroat populations



# Threats

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- Biggest threat to cutthroat populations is loss or degradation of habitat
  - » Road expansion
  - » Hydroelectric development
    - Including water extraction or diversions
  - » Urban development
  - » Large scale logging

# Concerns: Maintaining Participation In Freshwater Trout Angling?

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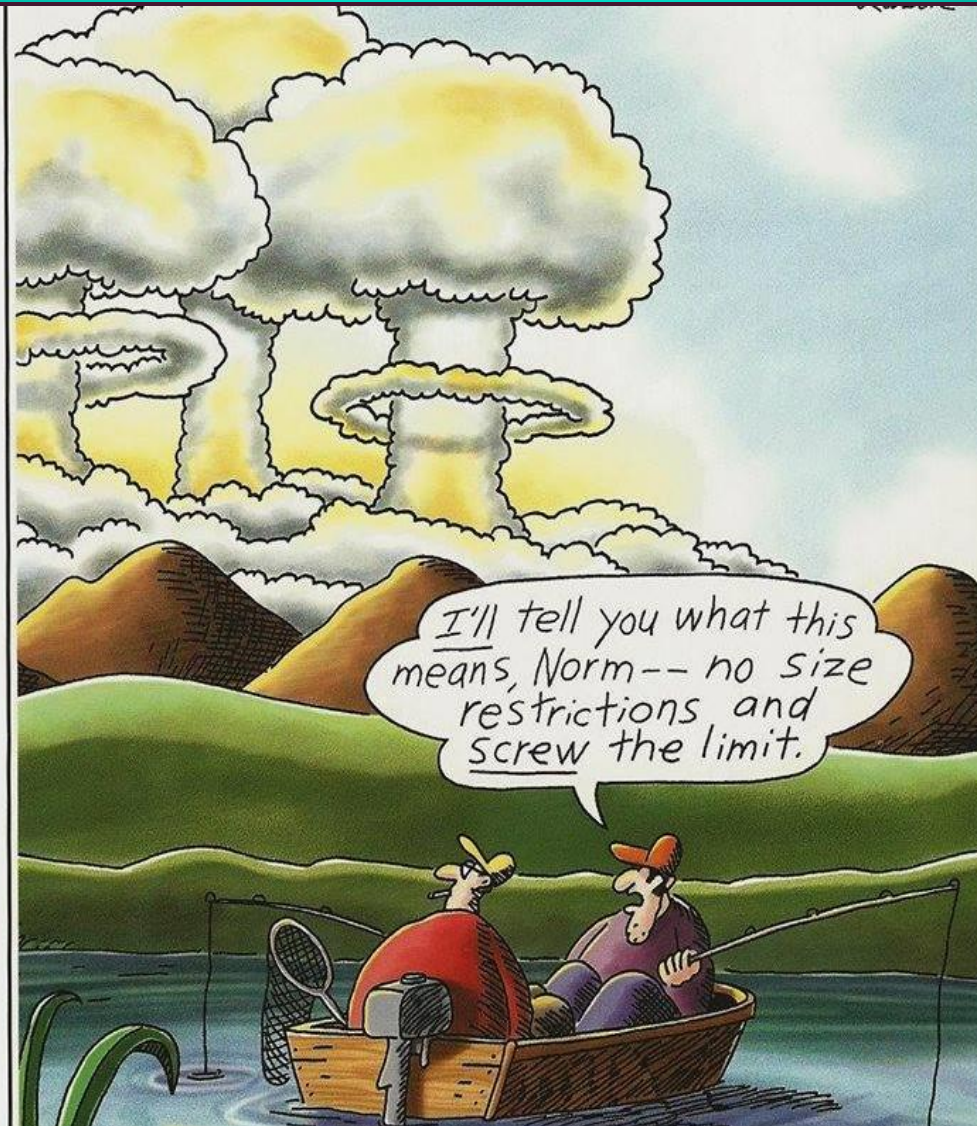
- Decreasing angler participation in trout fisheries leading to:
  - » Shifts in funding priorities
  - » Decrease support from and to agencies
  - » Decrease in agency funding for trout monitoring and research projects

# Comments and Observations

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- In Alaska, cutthroat trout are not the ‘hot-button’ issue it was 30 years ago
- Are the regulations now too conservative?
  - » Limited harvest opportunities?
  - » Did we lose a generation of anglers because kids couldn't use bait in freshwater?
  - » Expand and support youth angler programs

# Questions?



# Come Fish Alaska!

