

# AQUACULTURE IN ALASKA MANAGEMENT ISSUES

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# ALYESKA

The Great Land



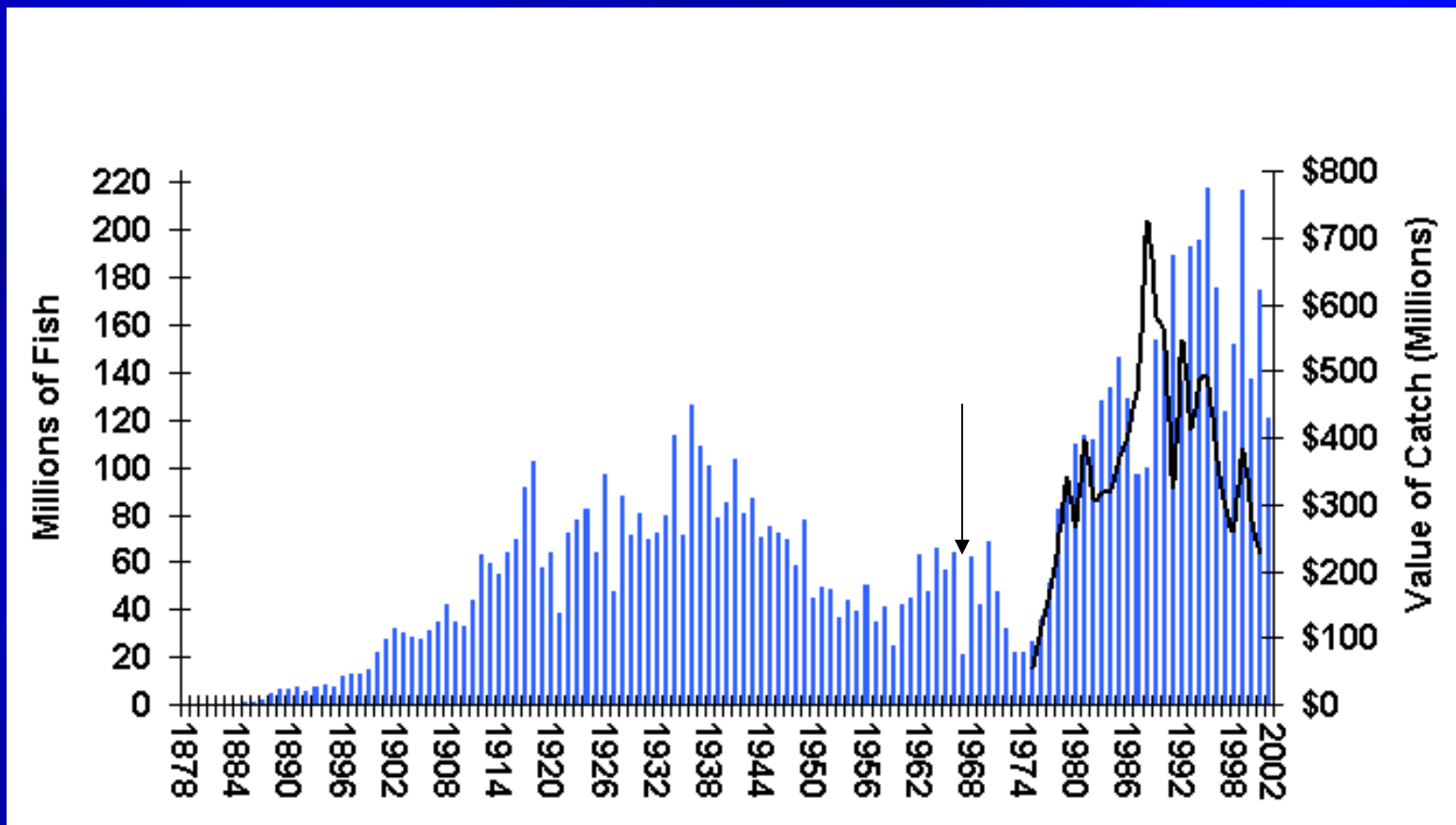


# PRE-STATEHOOD Fisheries issues

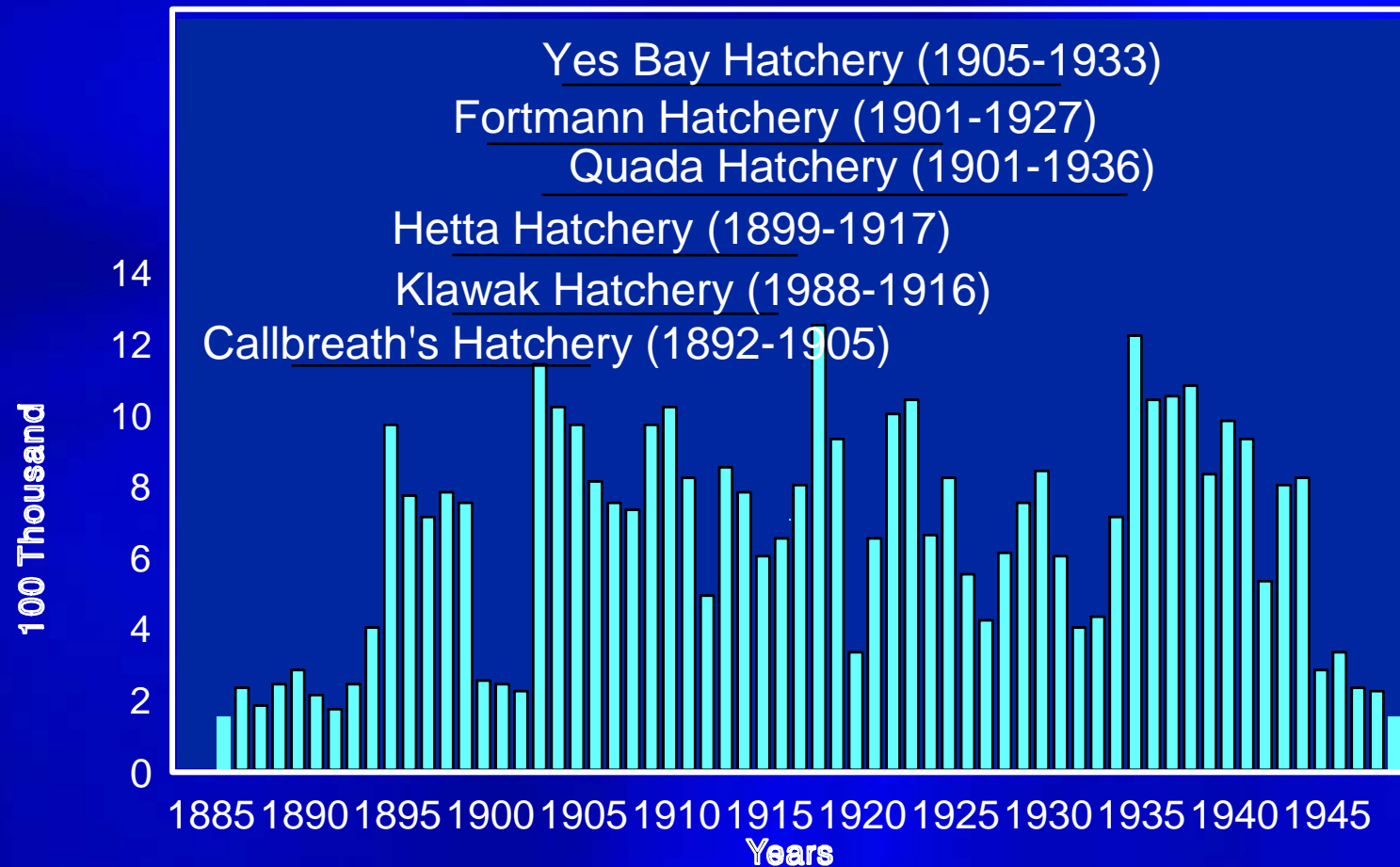
- Control by outside interests
- Unmanageable fish traps
- Fishery depletion
- Federal management
- Alaska Native village displacement



# ALASKA SALMON HARVEST ALL SPECIES



# COMMERCIAL SOCKEYE SALMON CATCH FOR SOUTHERN SOUTHEASTERN ALASKA



# STATEHOOD ACTION

## Alaska State Constitution Article VIII Natural Resources

**SECTION 3. COMMON USE.** *Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use.*

# METHODS OF MANAGEMENT

- FISHERY HARVEST
- HABITAT IMPROVEMENT
- FISH ENHANCMENT

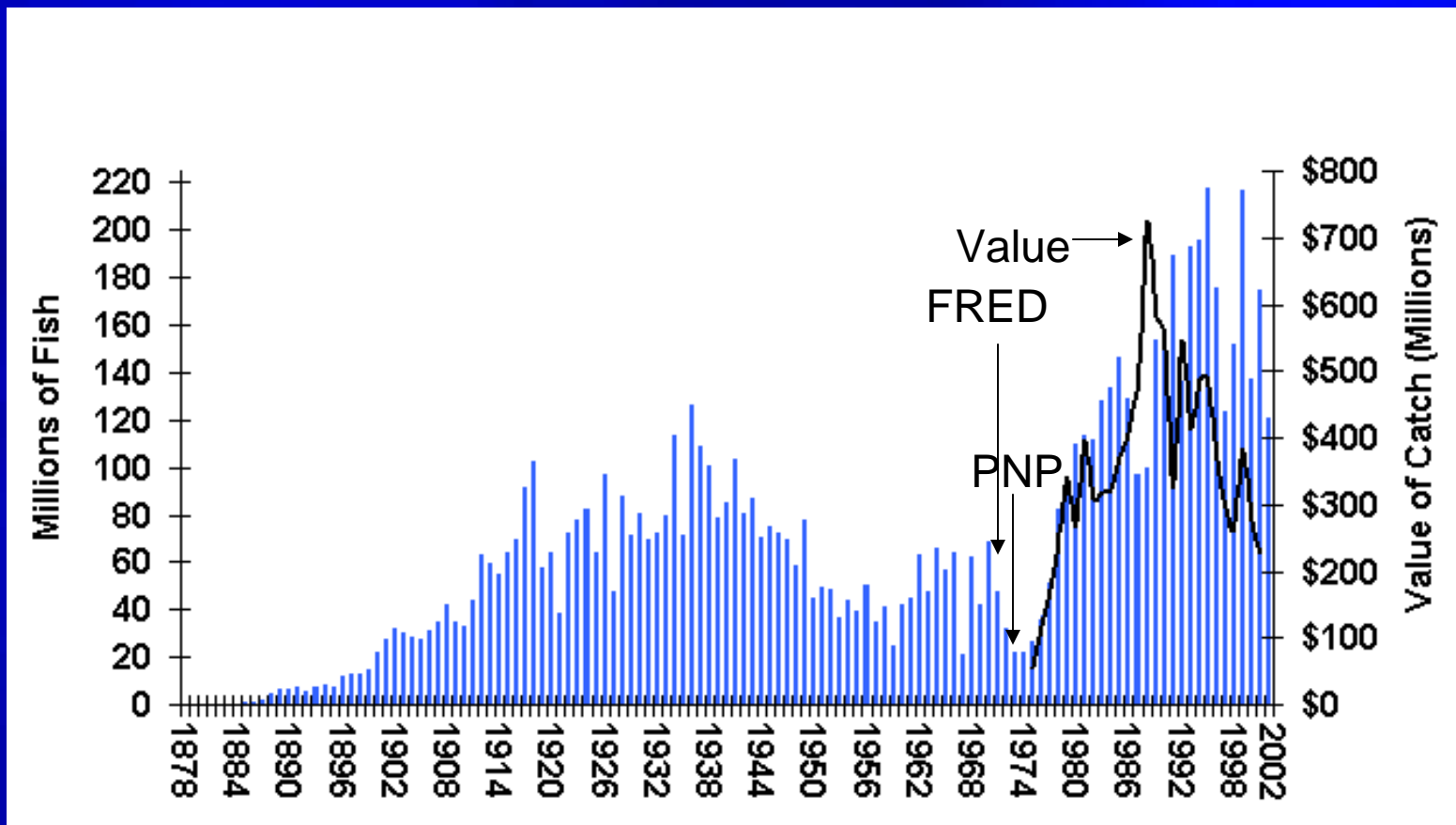




# POST STATEHOOD SIGNIFICANT EVENTS

- 1967 SALMON HARVEST CRASH
- 1971 FRED DIVISION FORMED
- 1974 PNP HATCHERIES ACT
- 1976 AQUACULTURE ASSOCIATIONS
- 1980's STATE HATCHERY TURNOVERS
- 1988 AQUATIC FARMING ACT
- 1990 FINFISH FARMING PROHIBITED

# ALASKA SALMON HARVEST ALL SPECIES



# ALASKA'S PRIVATE NON-PROFIT SALMON RANCHING PROGRAM

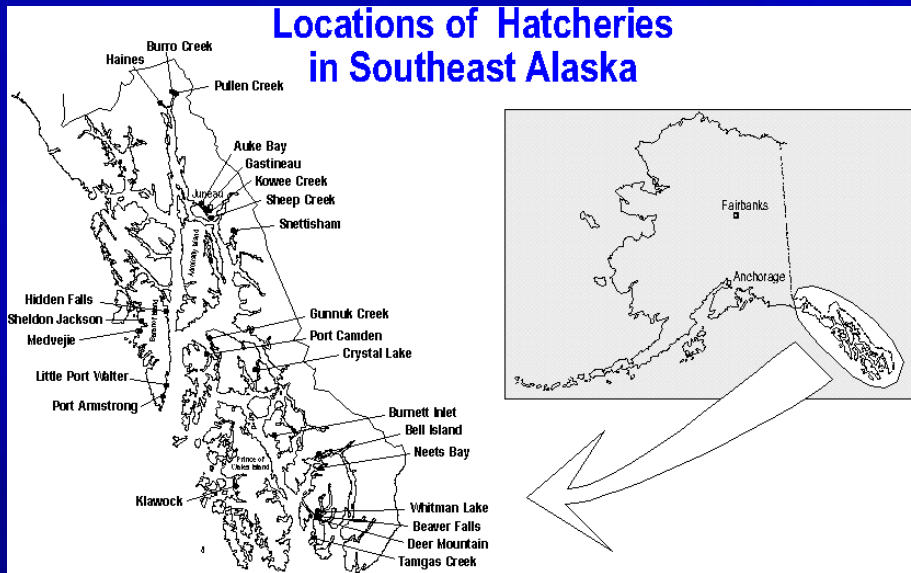
A commercial salmon fishery program to sustain and add value to Alaska's salmon

# PRIVATE NON-PROFIT HATCHERIES ACT

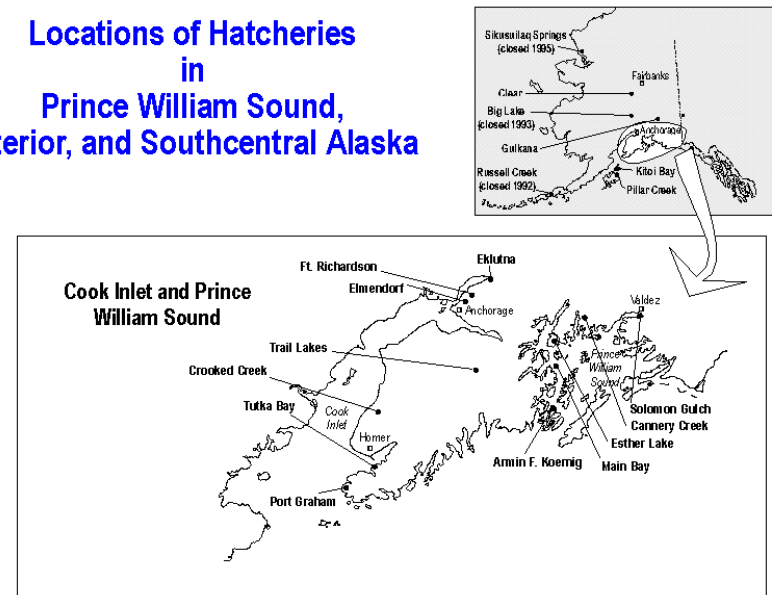
“It is the intent of this act to authorize the private ownership of salmon hatchery by qualified non-profit corporation for the purpose of contributing by artificial means, the rehabilitation of the state’s depleted and depressed salmon fishery. The program shall be operated without adversely affecting natural stocks of fish in the state and under a policy of management which allows reasonable segregation of returning hatchery-reared salmon from naturally occurring stocks.”

# SALMON RANCHING

Locations of Hatcheries in Southeast Alaska



Locations of Hatcheries in Prince William Sound, Interior, and Southcentral Alaska



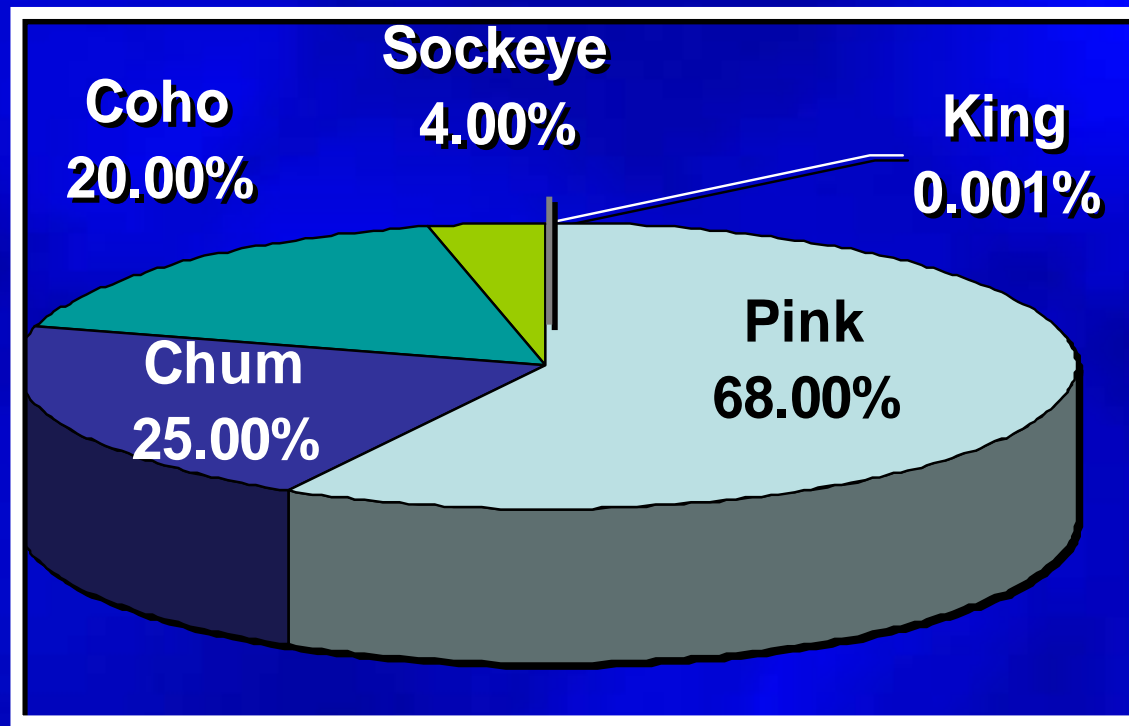
- **Non-Profit**
  - Funded by fishermen assessment and cost recovery harvest
- **Private companies**
- **Aquaculture corporations**
  - Regional
    - (Kodiak Island, Cook Inlet, PWSAC, NSRAA, SSRAA)
  - Fishermen administered

# PRIVATE NON-PROFIT HATCHERIES (PNP)

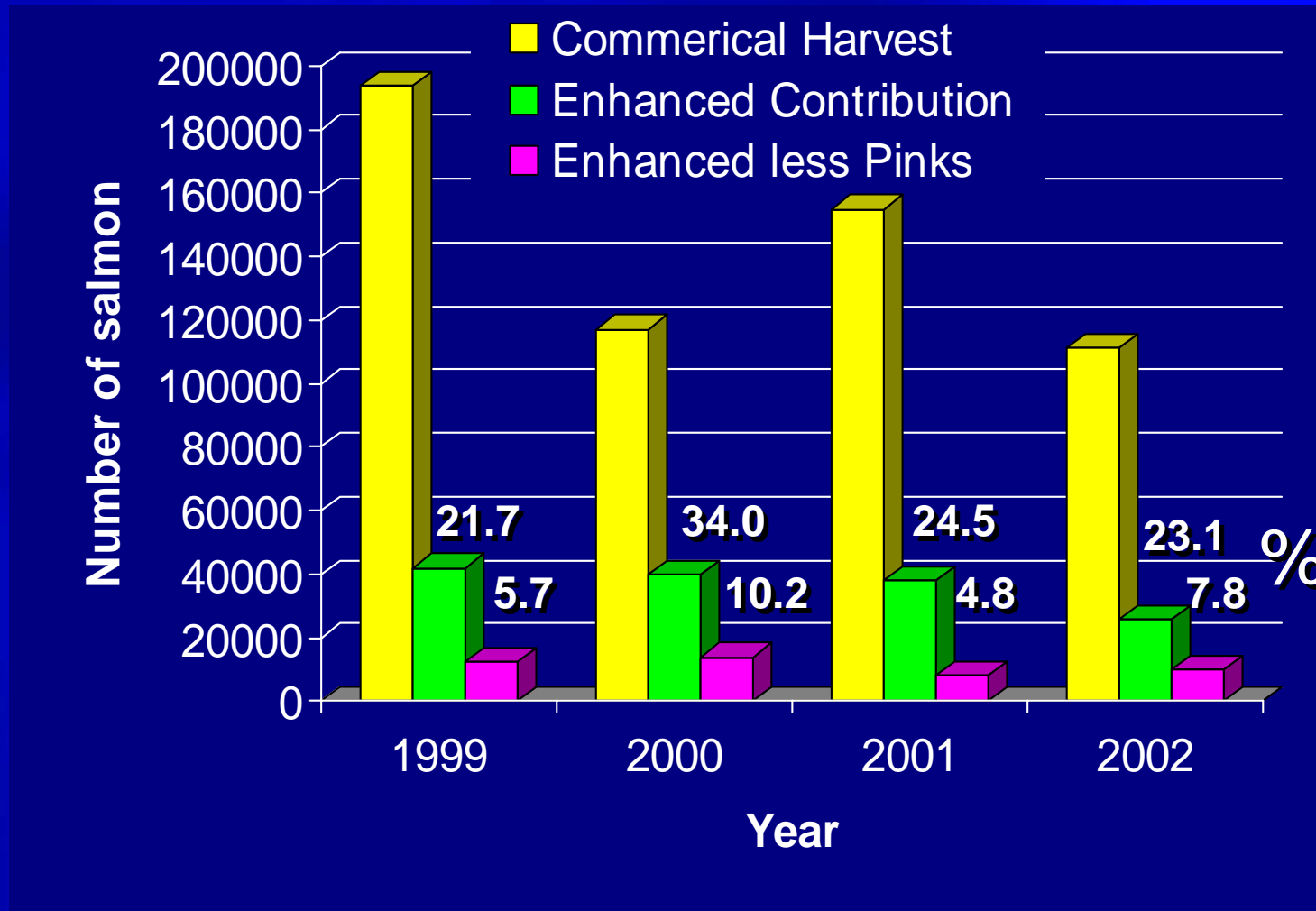
- Salmon hatcheries
  - 2 State
  - 26 Private non profit
- Release 1.5 billion smolt annually



# SALMON HATCHERY PRODUCTION

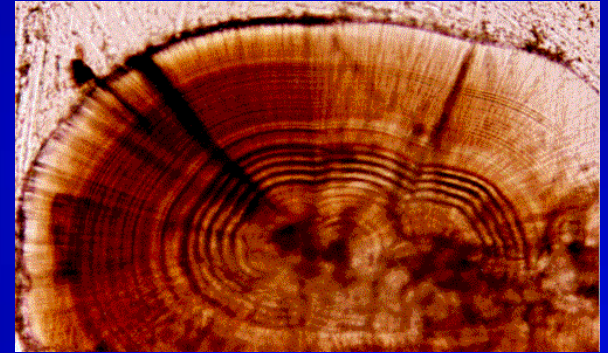


# ENHANCEMENT TO THE ALASKA SALMON FISHERY





# SEGREGATION FROM WILD SALMON



- Location of the hatchery
  - “...will allow for a segregated harvest of hatchery stocks without adversely affecting natural stocks is an important factor.”
- Required research of stock segregation
  - Sheldon Jackson hatchery study
- Remote release sites
  - Ex. Deep Inlet in Sitka Sound remote release where there are no wild stocks in the vicinity
- Lake stocking - Deer Lake Coho stocking
- Otolith marking
  - Dipac Hatchery – In season otolith retrieval program to target harvest on hatchery fish

# COMPLIANCE WITH PNP ACT

- Siting requirements to enable harvest and segregate from wild stocks
- Required to follow regional enhancement plan
- Hatchery inspections
- Disease prevention and control
- Fish transport permits
- Genetics policy
- Annual reporting of hatchery operations, production, and future activities
- Financial accountability for non profit status
- Harvest management plan
- Authorization to release fish into Alaska waters

# MCDOWELL REPORT

## SOUTHEASTERN ALASKA 1990-2000

- Contributed 582 million pounds of salmon to the common property fishery
- Estimate worth of \$737 million in first wholesale value to processors
- Contributed 330,000 coho and 78,000 chinook salmon to sport fishery
- In 2000 estimated \$32 million to exvessel value to fishermen
- In 2000 economic activity generated \$171 million, 1,500 jobs and a payroll of \$44 million

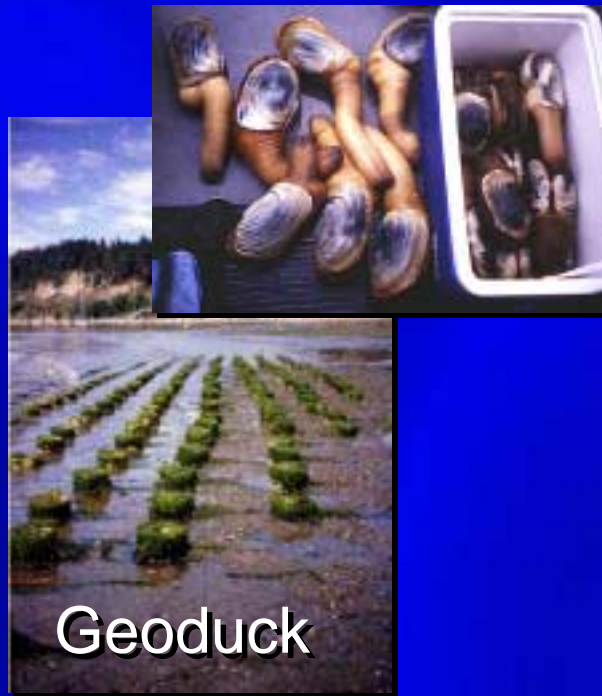
# THE AQUATIC FARM ACT OF 1988

“It is the policy of the state to encourage the establishment and responsible growth of an aquatic farming industry in the state; and that allocation of aquatic farming sited be made with full consideration of established and ongoing activities in an area.”

## – Provision of the Aquatic Farm Act

- Allows only shellfish and seaweeds
- Extended the finfish farming moratorium
- Establish the finfish farming task force

# SHELLFISH AQUACULTURE



Cockle

# REGULATORY WAYS ADDRESS COMMON PROPERTY

## Example from the shellfish industry

- Hatchery broodstock requirements
  - Providing insignificant impact of fisheries resource
- Acquisition permits for common property geoduck clams
  - Complies with common property when wild standing stock density is not commercially viable for harvest
- Commercial harvest prior to farming for littleneck clam farming
  - Farmer pays for all permits and water quality testing for an open commercial fishery harvest

# FISHFISH FARMING IS ILLEGAL



# FINFISH FARMING TASK FORCE

1. Can finfish farming be conducted in a manner that protects the state's fisheries resources?
2. What criteria are necessary to minimize land use conflicts and environmental impacts?
3. What are the economic costs and benefits of finfish farming?
4. How much regulatory cost will be necessary to assure protection of the state's fisheries resources, public health and the environment?
5. What are the available resources for stocking farms?
6. What strategies should Alaska adopt to improve marketability of salmon?



# RECOMMENDATIONS FOR THE FINFISH FARMING TASK FORCE

- Health and protection of Alaska's fisheries Resources
  - Disease protection
    - “The finfish farming industry can be accommodated without significant threat of disease to wild and hatchery stocks
    - Providing that:
      1. Current disease inspection procedures required by PNP hatchery be employed to farming
      2. A ban on live importation of salmonid gametes should be placed into statute
      3. Increase private (certified) pathology services or the ADF&G pathology budget to accommodate finfish farming
      4. Treat water discharges from upland facilities

# RECOMMENDATIONS FOR THE FINFISH FARMING TASK FORCE

- Health and protection of Alaska's fisheries Resources
  - Genetics
    - “The existing State genetics policy is adequate to protect the genetic integrity of the state's fisheries and should be rigorously applied to fish farming.
    - Providing that:
      1. Maintain the ban on live importation of salmonid gametes should be placed into statute
      2. Prohibit siting of a finfish farm within 20 kilometer of a stream that has a significant population of the same species being farmed
      3. Establish wild stock sanctuaries

# RECOMMENDATIONS FOR THE FINFISH FARMING TASK FORCE

- Environmental impacts
  - Siting and User conflicts
    - “The State should use existing siting guidelines to develop a set of criteria specifically applicable to finfish net pen farming in Alaska.”
    - Providing that:
      1. Use studies presently available from ADF&G and the State of Washington. This includes the genetics and fish transport policies already in place for the PNP system
      2. Use the existing Alaska Coastal Consistency Review process for examination and evaluation of permit applications
      3. Use non-lethal predator control mechanisms
      4. Comply with Area Plans to address user conflict
      5. Farms must comply with zoning and designated uses of the uplands

# RECOMMENDATIONS FOR THE FINFISH FARMING TASK FORCE

- Costs/Benefits
  - Accrued to Alaskans
    - The State of Alaska should not subsidize finfish farming beyond the amount needed to regulate the industry
    - Concerns
      1. Effect of marketability of wild salmon (both in supply and the “wild” message used in the marketplace)
  - Economic viability
    - “The present poor world-wide economic climate for farmed fish will limit entry into the finfish farming industry...”
      - Findings: High risk, technical experience wanting, Insurance coverage, slower fish growth, ownership of the farm, capitalization required.
      - Appeared to a neutral stance

# RECOMMENDATIONS FOR THE FINFISH FARMING TASK FORCE

- Marketing and competition with farmed salmon
  - Marketing potential for Alaskan farmed finfish
    - Downward spiraling of prices
    - “Alaska is a price taker in a world dominated by pen-reared salmon”
    - “There is presently room for expansion of the market for high quality, fresh finfish especially in the Midwest .”
    - “A guaranteed year-around supply of fresh Alaska salmon (wild and farmed) could enable processors to attract and hold customers, who prefer certainty of supply from a single source.”
  - Competition between farmed and wild salmon
    - Documentation of affected markets (Europe, Japan, Eastern US)
    - “Competition in the world markets between farmed salmon and Alaska wild salmon will continue to occur whether or not Alaska permits finfish farming

# RECOMMENDATIONS FOR THE FINFISH FARMING TASK FORCE

- Broodstock and gametes for finfish farming
  - “The State should not permit private ownership of broodstock”
  - “All finfish gametes should remain in the ownership of the State by requiring that hatchery production of finfish farming be done under State permit and authority.”
  - New legislation required for the production and sale of fish eggs to finfish farms
  - Ban on export of indigenous finfish stocks.

# FISHFISH FARMING IS ILLEGAL

## Report of the 1990 Finfish Farming Task Force

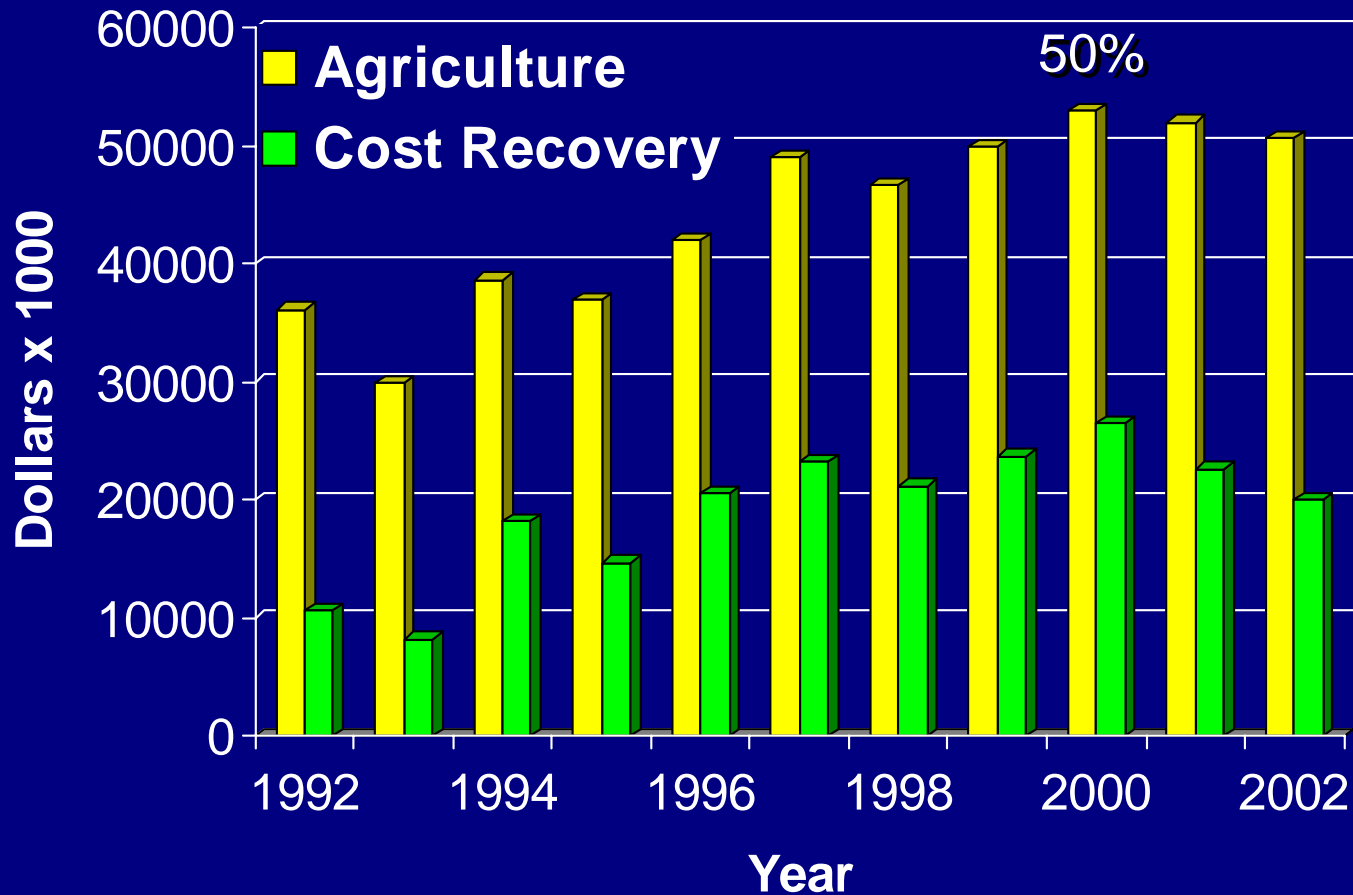
### Non-Issues

1. Genetics
2. Disease
3. Economics (Somewhat)
4. Environmental

### Issues

1. Common property rights
2. Investment already in the PNP system

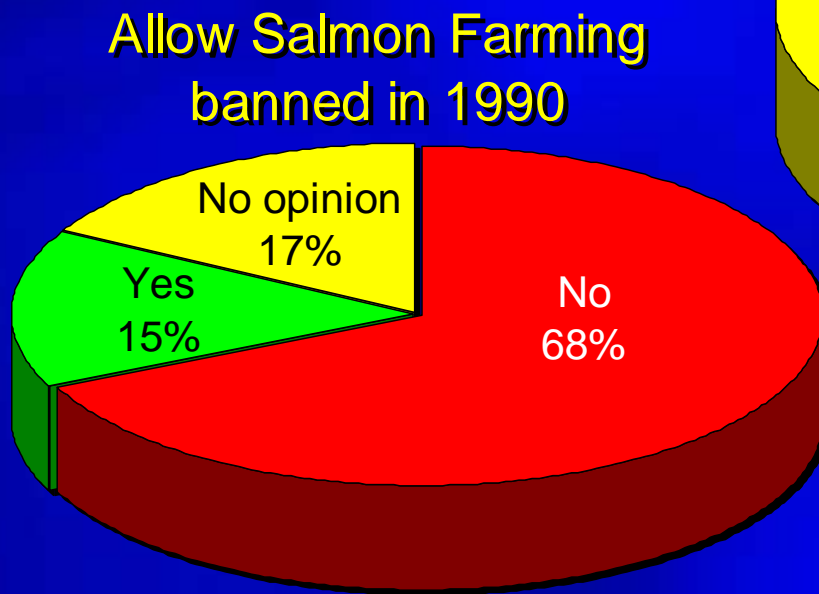
# ALASKA AGRICULTURE



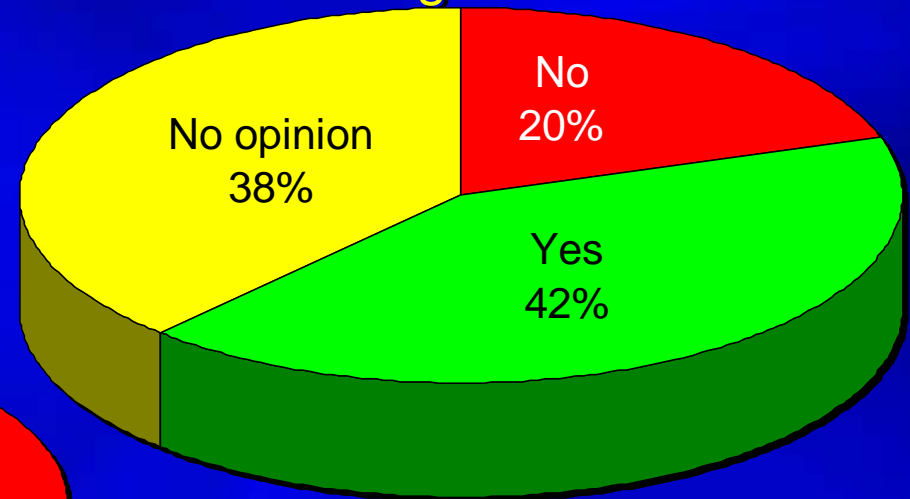


# COMMERCIAL FISHERMEN AND AQUATIC FARMING

1995 Sea Grant Survey



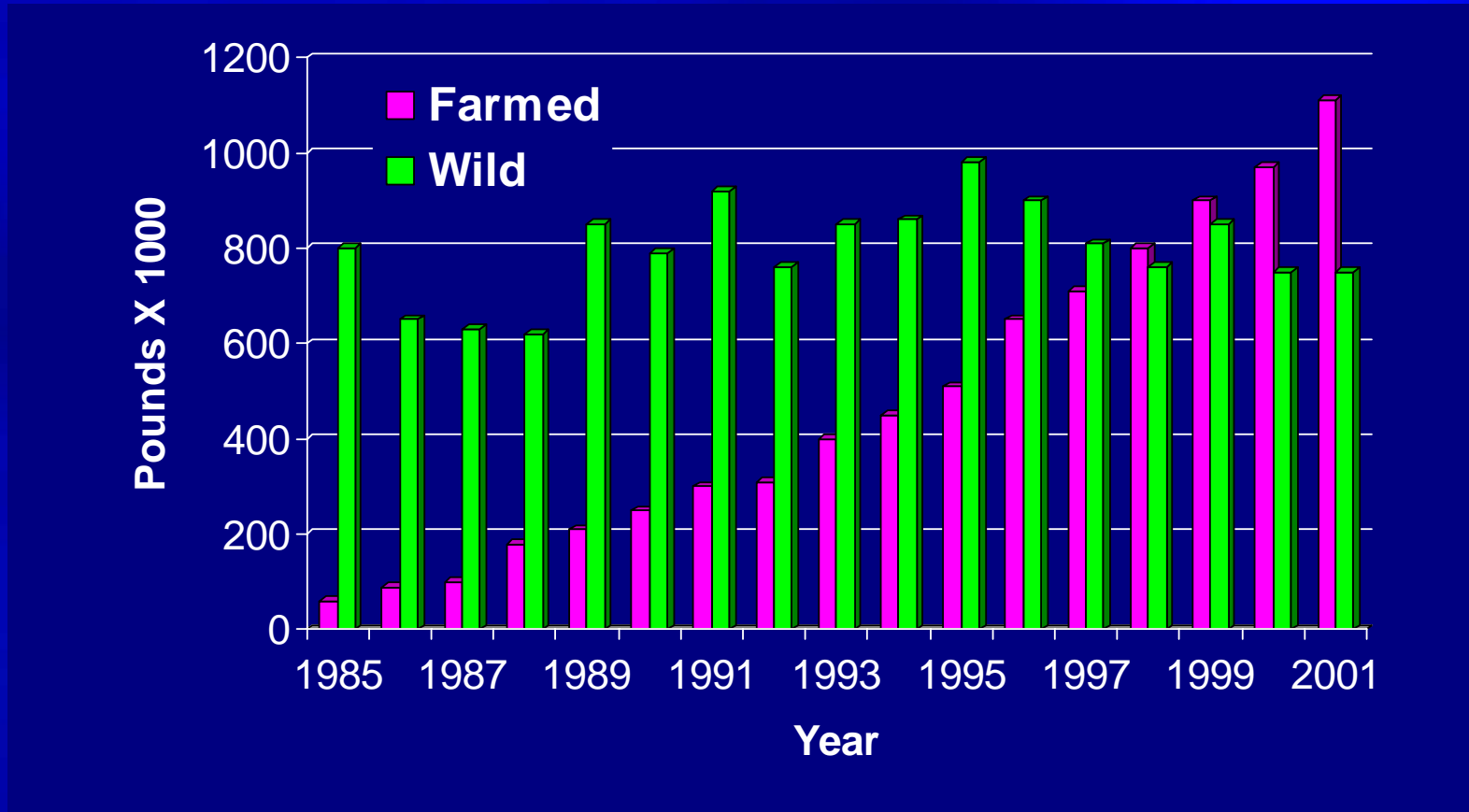
Expand Shellfish Farming  
made legal in 1988



# THE ISSUES NOW

- Concerns over escaping Atlantic Salmon
  - [http://www.state.ak.us/adfg/geninfo/special./AS/AS\\_home.htm](http://www.state.ak.us/adfg/geninfo/special./AS/AS_home.htm)
- Import ban is likely here to stay
- Senate Bill 18 – 2003 Legislature
  - Partial lifting of finfish farm ban for non salmonid species
- Alaska Fisheries Development Foundation Proposal
  - Hold salmon to extend the market opportunity

# FARMED VS. WILD



# THE REALITIES OF ALASKA

- **Environmental protection**- We are America's last frontier
- **Commercial fisheries** is the state's second most important income producer and Alaska will continue to assure its sustainability
- **Common property** governs use of state fisheries land and water.
  - Tidelands are state land, very little private land
  - Uplands are mostly federal, state, & Native corporation
  - Must acquire state leases for tidelands and uplands leases for land-based structures
- **Finfish farming** is illegal in Alaska
  - Only exemption is ornamental fish
  - Ban applies to private pond stocking, fee fishing, aquaculture fish used for human consumption
  - Finfish farming is open again for discussion

**KEEP PADDLING  
THIS IS NOT THE END**

