

Salmon Fishery Enhancement in Alaska

Alaska Department of Fish and Game

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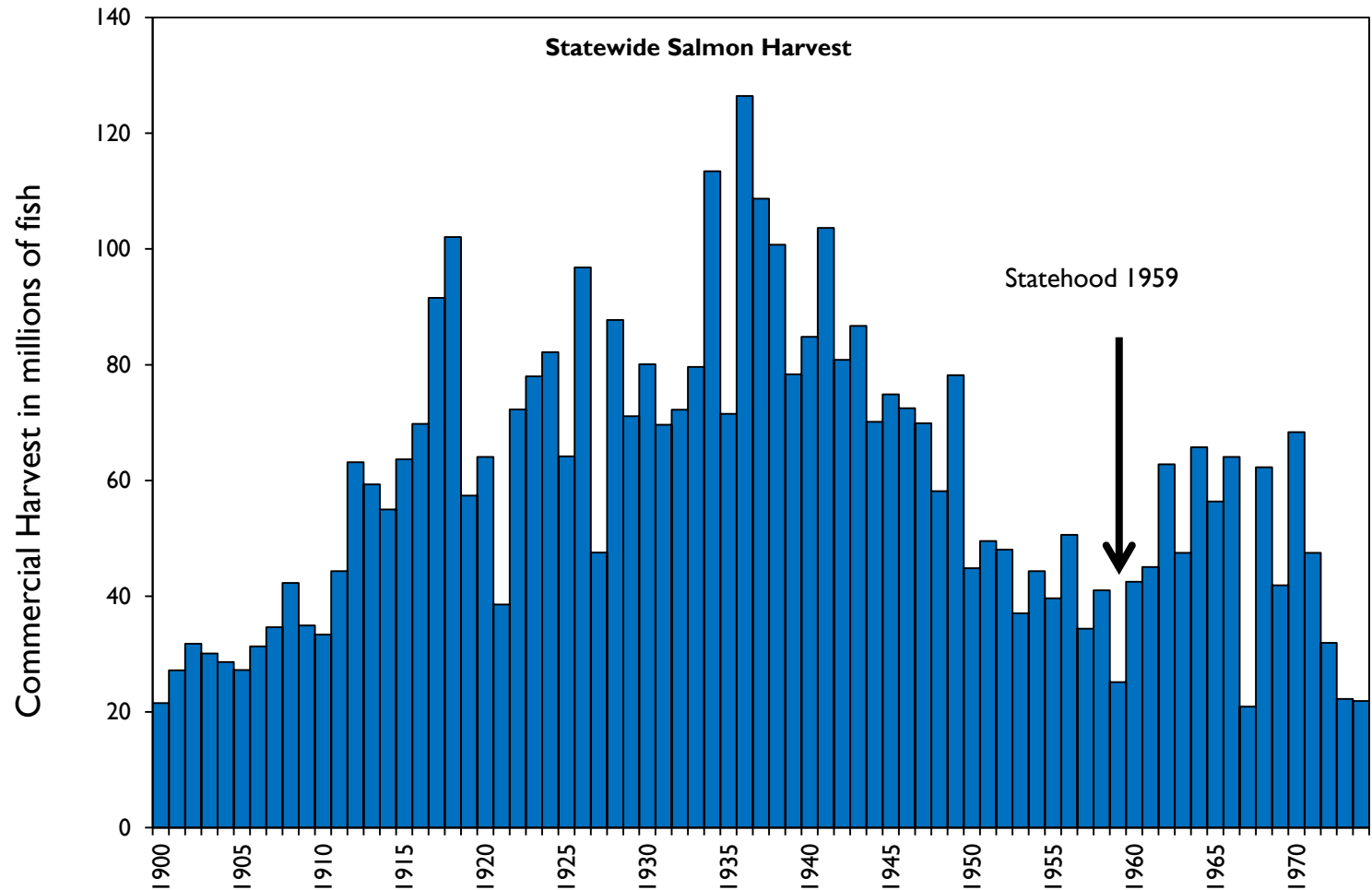




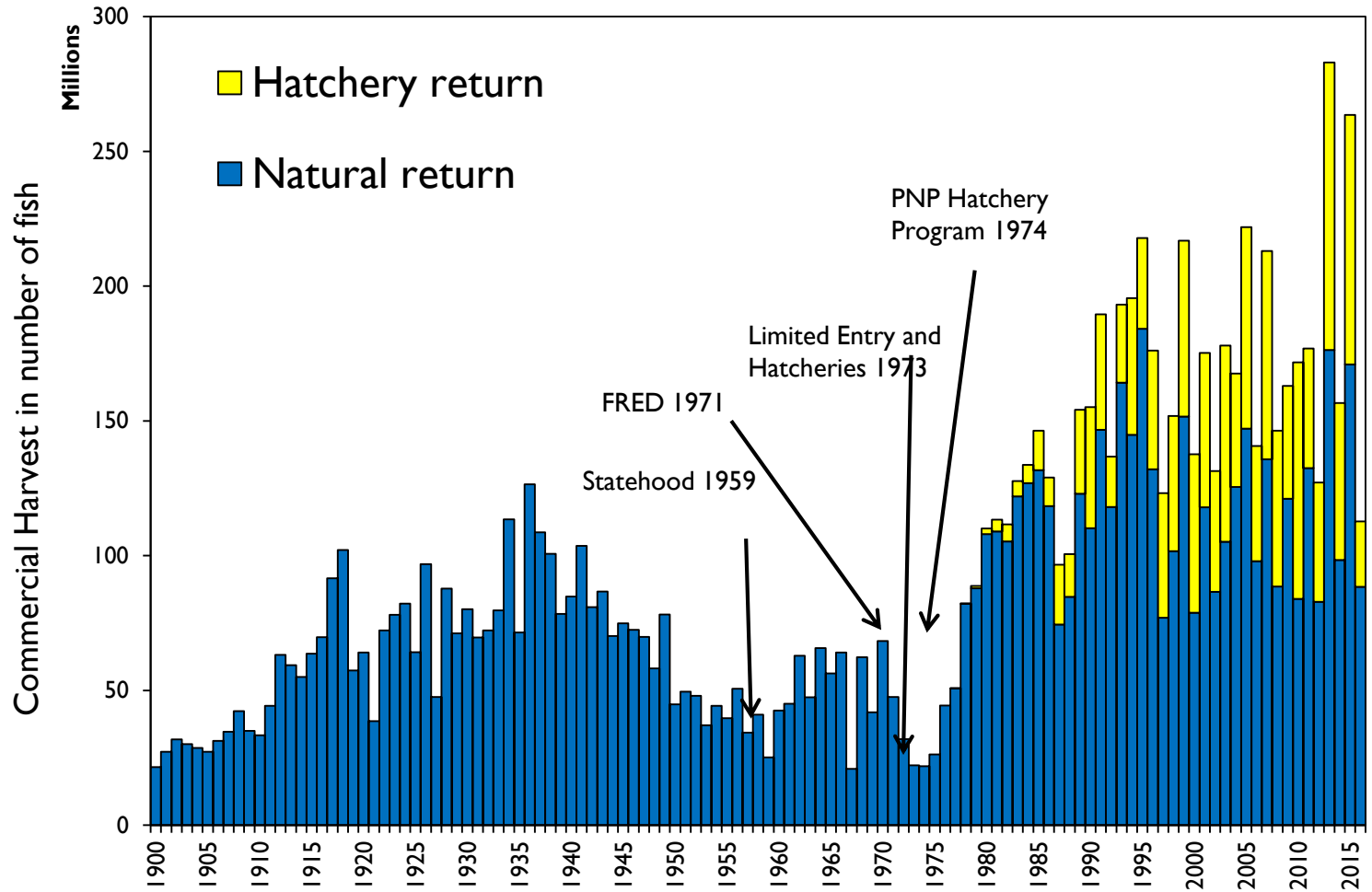
Today's Presentation

1. The state's role at Klawock River Hatchery
2. State hatchery permitting process
3. Options for sockeye fishery enhancement

Why did Alaska start its modern hatchery program?



Salmon Production since 1975



Why Alaska's Hatchery Program Works

- Fisheries managed for wild stock escapement
- Most salmon habitat intact
- Local stocks for hatchery broodstock
- Selective breeding not used
- Large number of broodstock used
- Hatchery Siting

Wild Stock Protection Mechanisms

- Permit hatcheries at lower capacity
- Wild stocks priority in management
- Tagging/marking and sampling program
- Study wild/hatchery interactions

Alaska's salmon fishery enhancement program is stakeholder driven

- Stakeholders determine fishery enhancement in each region.
- The ADF&G determines what is appropriate within their mandate to protect natural production.
- **Regional Planning Team (RPT)** produce a Comprehensive Salmon Plan for their region.

State Role in Hatchery Production

- Oversight of salmon hatchery production
- Planning- Regional Planning Team
- Manage fisheries to protect wild stocks

I. State Role at Klawock Hatchery

- State retains ownership of hatchery
- Regulates hatchery production through the permitting process
- Manage wild stocks to meet escapement

Klawock Hatchery Site

- Klawock Hatchery was built in 1977 as state hatchery.
- The site was selected because of the large volume of water available, public road access to reduce operating costs, local labor source, potentially high biological productivity, and historic salmon decline to this system and others in the vicinity.

Klawock River Hatchery Permitting

- Built and operated by the state in 1978-1992
 - PNP Permits
 - City of Klawock 1993-1995
 - POWHA 1995-2016
 - Currently operated by SSRAA
 - Currently permitted for 5 million coho salmon and 1 million sockeye eggs.



II. Hatchery Permitting Process

Only 2 types of permits that authorize salmon propagation in Alaska

- Private Nonprofit (PNP) **Salmon Hatchery Permit**
- **Fish Resource Permit (FRP)**



Fish Resource Permits (FRP's)

□ Permit Classifications:

□ Collection

□ Holding

□ Propagation

Propagative Research Permit

No more than 500,000 eggs from non-smolt species or 100,000 eggs from smolt species.

Eggs are intended to produce fewer than 5,000 returning adults.

All adult returns are considered common property and are not the exclusive property of the project.

PNP Hatchery Permit

- Non-profit entity submits application to PNP coordinator
- ADFG staff review app and submit comments to ADFG PNP coordinator
- Management Feasibility Plan developed by ADFG
- RPT reviews application for compatibility with regional comprehensive plan and sends recommendation to ADFG Commissioner
- Hatchery operation plan (called Basic Management Plan) drafted by applicant and ADFG Staff
- Public Hearing held for comment on hatchery
- Hatchery App, BMP and Public Comment submitted to Commissioner for decision

Ongoing Hatchery Permitting

- **FTP- Fish Transport Permit**
 - Egg takes, transports, releases.
- **AMP- Annual Management Plan**
 - Plan for the year's egg takes, releases, harvest management

III. Sockeye Salmon Enhancement

- Current permitting status:
 - 1 million eggs are on SSRAAs Klawock River PNP hatchery permit

Sockeye Production Requirements

- IHN virus-free water
- Isolation in hatchery from other fish being reared

Types of Sockeye Programs

- Enhancement: Adding to natural production.
- Rehabilitation: Renewing natural production.

Sockeye Fishery Enhancement

- Adds to current natural production
- Returns are solely for harvest and broodstock

Sockeye Rehabilitation

- Must know what is limiting production before adding fish to a system
 - Limited Spawning Area?
 - Limited Escapement?
 - Limited Nutrients in the Lake?
 - Poor habitat?
 - Predators?
 - Competitors?

Sockeye Production in Alaska

- Prince William Sound
 - Main Bay Hatchery
 - Gulkana River
- Southeast
 - Snettisham Hatchery
- Kodiak
 - Pillar Creek
- Cook Inlet
 - Trail Lakes Hatchery