Development and Implementation of Salmon Escapement Goals in the State of Alaska

Senate Finance Budget Subcommittee
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ADF&G Escapement Goal Development Process

Regional Escapement Goal Review Team

- Review escapement goals
- Add or delete escapement goals
- Analyze assessment data
- Draft report with recommended changes

ADF&G staff

Regional Supervisors approve recommendations

Board of Fisheries

- Recommendations discussed
- Board may adopt other goals based on allocation or other factors

Formal adoption by Division Directors

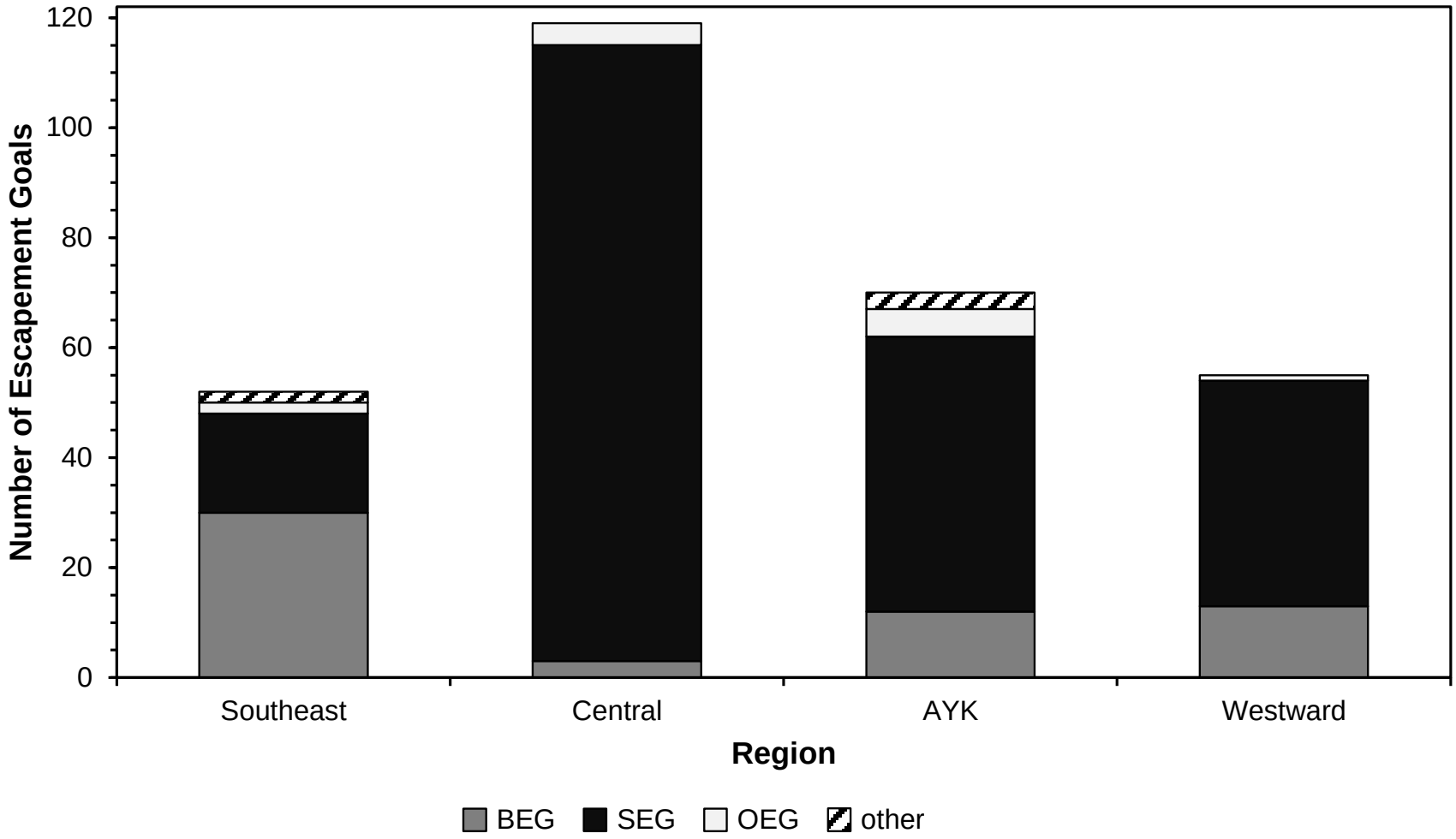
Major Tenets of the Sustainable Salmon Fisheries Policy

- Maintain salmon stocks and habitat
- Manage for escapements
- Establish and apply effective management
- Encourage public support and involvement
- Manage conservatively, acknowledge uncertainty

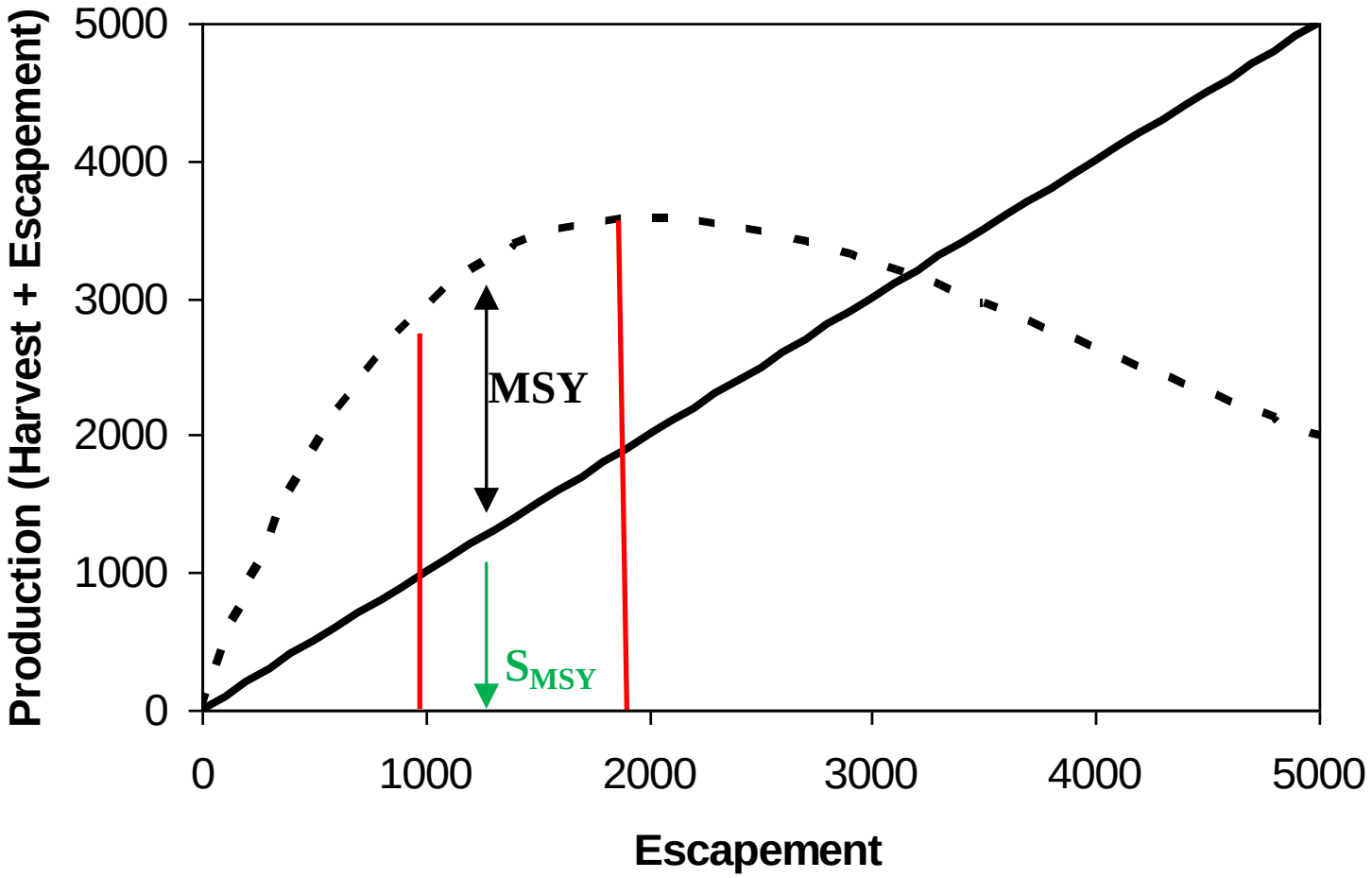
Goal Types

- Biological Escapement Goal (BEG)
- Sustainable Escapement Goal (SEG)
- Optimal Escapement Goal (OEG)

Escapement goal types by region (all species)



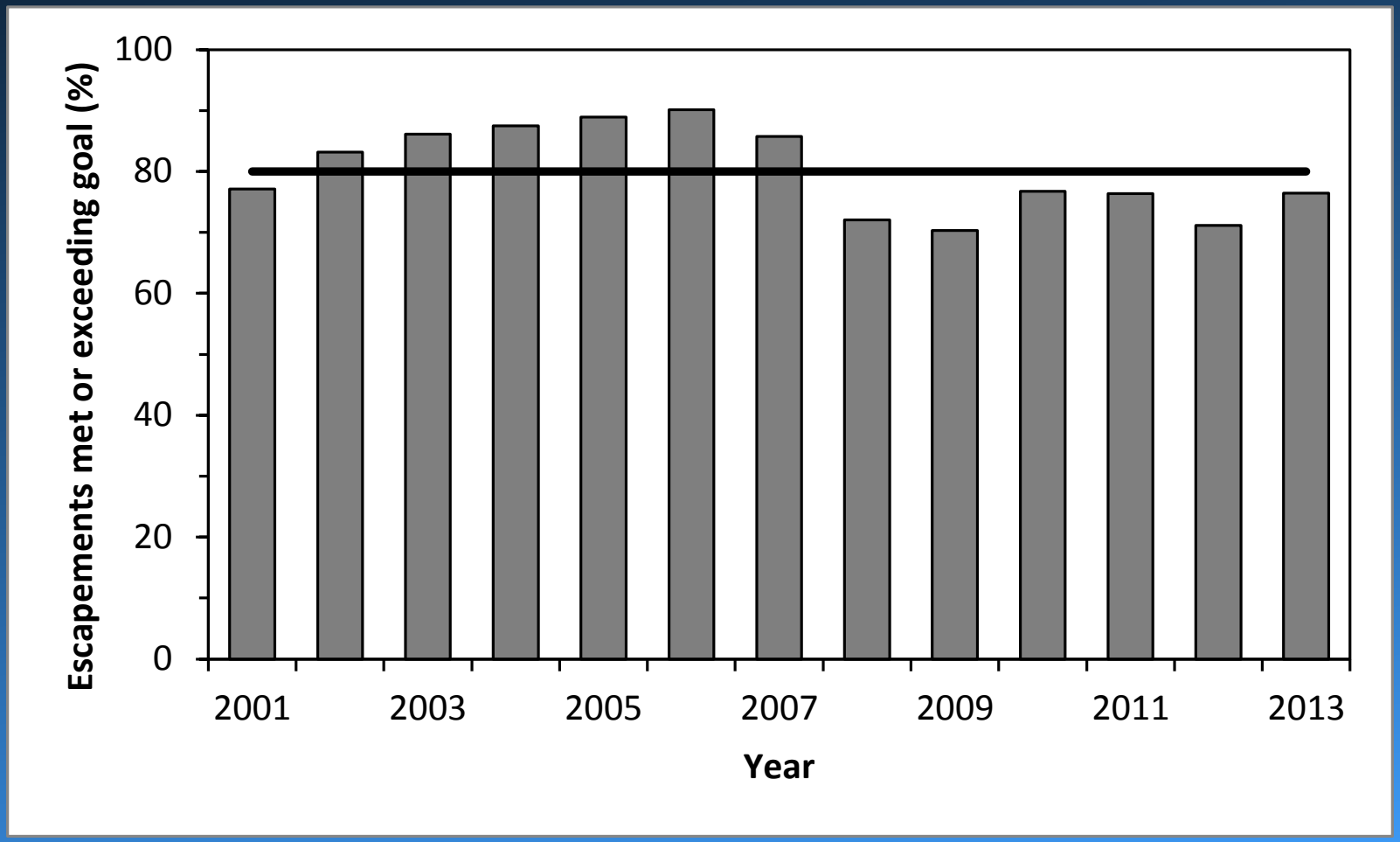
Escapement Range around MSY is theoretical Basis of Escapement Goal



Success Meeting Escapement Goals 2001 - 2013

Average since 2001

- below goal – 20%
- within goal – 48%
- above goal – 32%



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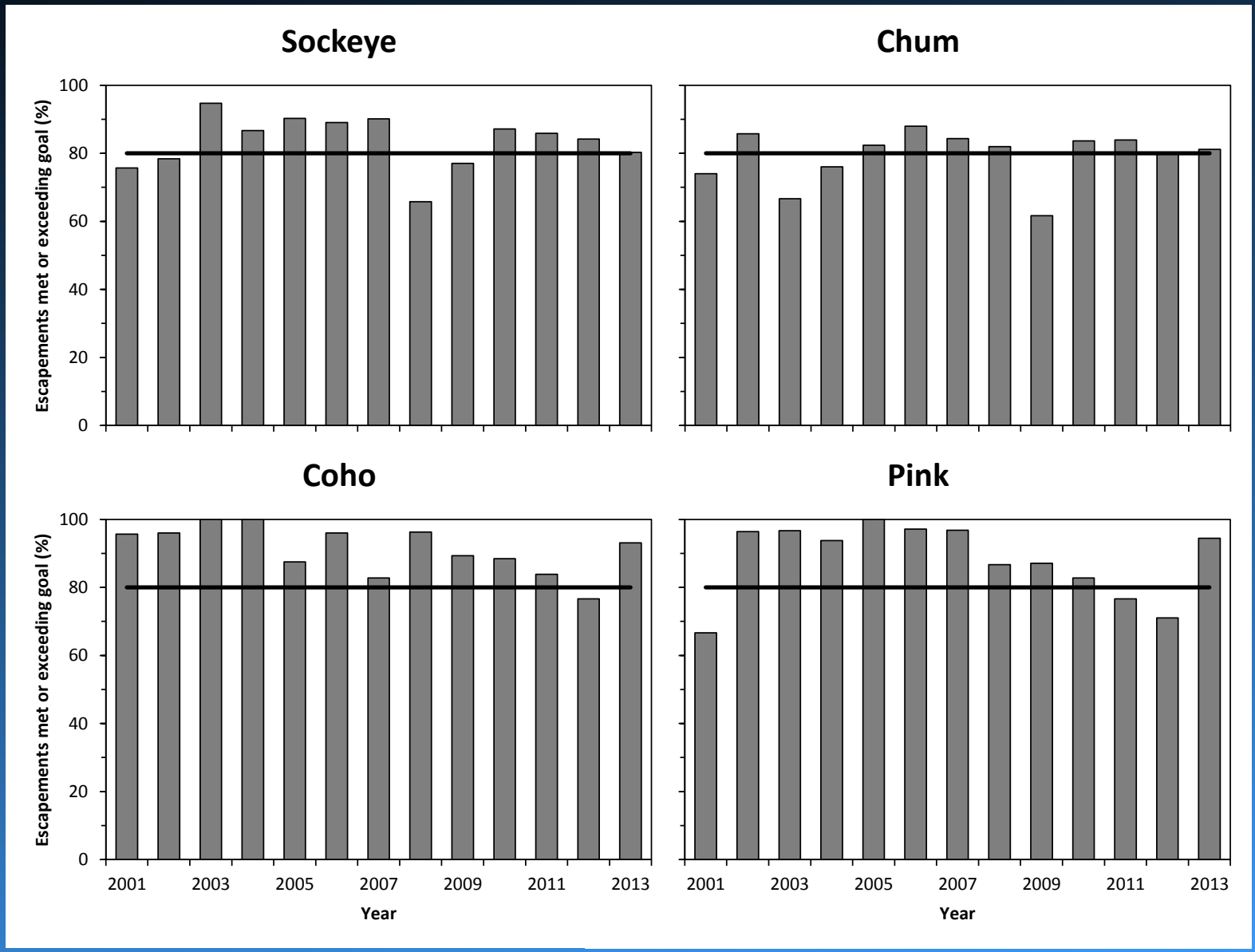

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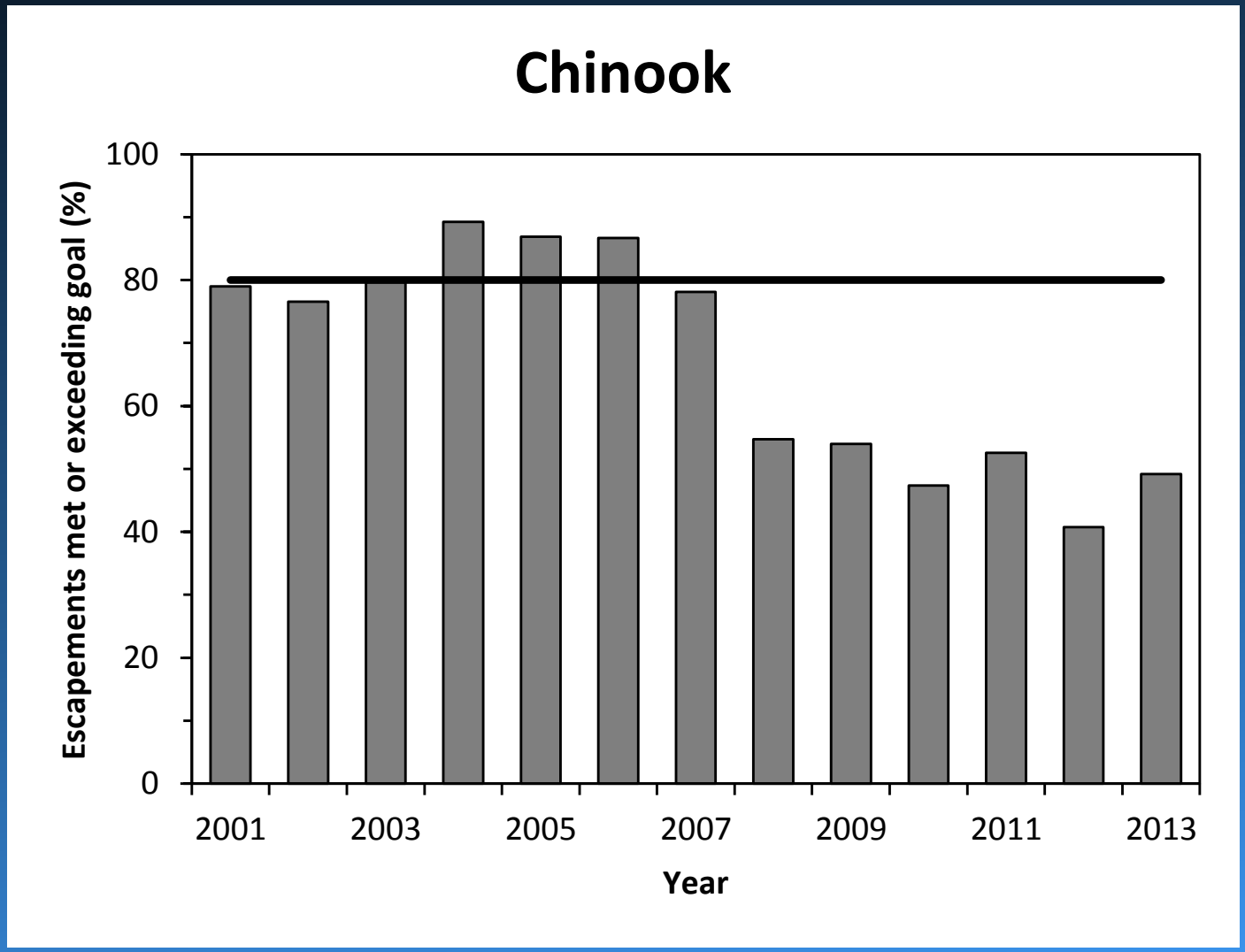


Revising Goals

2005 – 2013:

- ~300 goals statewide
- ~900 goals reviewed

- ~250 changes
  - 43 goal changes resulted in lower bound being lowered
  - 45 raised lower bound
  - 35 no change in lower bound

- No examples of the lower bound of a goal being lowered more than once during this period

Stocks of Concern Process

Regional/Area management and research staff

- Review recent escapements against goals
- Recommend SOC's according to 5 AAC 39.222

Approval of recommendations
by Regional Supervisor and Director

Development of Action Plan by ADF&G

Approval and adoption of recommendations
by Board of Fisheries

Yield Concern

Chronic inability to maintain expected yields above a stock's escapement needs

Management Concern

Chronic inability to maintain escapements for a stock within the bounds of the SEG, BEG, or OEG, or other specified management objective

Current Stocks of Concern

- AYK

Yukon River	2001	Chinook	Yield
Norton Sound Sub-District 1	2007	chum	Yield
Norton Sound Sub-Districts 2,3	2001	chum	Yield
Norton Sound Sub-Districts 5,6	2004	Chinook	Yield

- Westward

Karluk River	2011	Chinook	Mgmt.
Swanson Lagoon	2013	sockeye	Mgmt.

- Central

Susitna (Yentna) River	2008	sockeye	Yield
Chuitna River	2011	Chinook	Mgmt.
Theodore River	2011	Chinook	Mgmt.
Lewis River	2011	Chinook	Mgmt.
Alexander Creek	2011	Chinook	Mgmt.
Willow Creek	2011	Chinook	Yield
Goose Creek	2011	Chinook	Mgmt.
Sheep Creek	2014	Chinook	Mgmt.

Delisted Stocks of Concern

Stock	Species	Type	Year Initiated	No. Years SOC
Toklat River	fall chum	Mgmt.	2001	3
Fishing Branch	fall chum	Mgmt.	2001	3
Yukon River	summer chum	Mgmt.	2001	6
Anchor River	Chinook	Mgmt.	2001	3
Hugh Smith Lake	sockeye	Mgmt.	2003	3
Kvichak River	sockeye	Mgmt./Yield	2001	11
McDonald Lake	sockeye	Mgmt.	2009	3
Kuskokwim River	chum	Yield	2001	6
Kuskokwim River	Chinook	Yield	2001	6
Yukon River	fall chum	Yield	2001	6
Fish Creek	sockeye	Yield	2002	3

History of Stocks of Concern

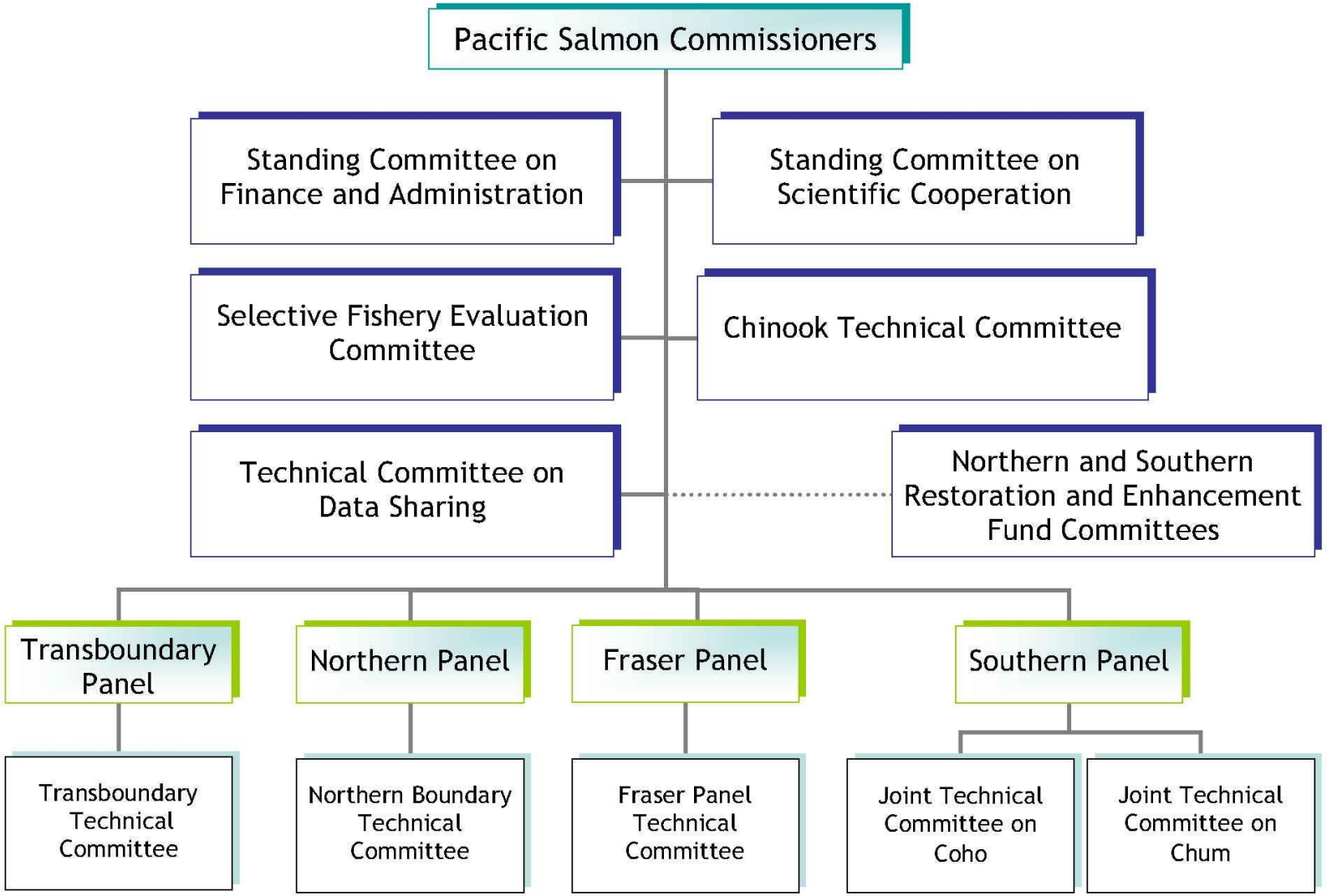
- Since SSFP implemented in 2001
  - 25 stocks of concern among all species
  - 6 removed after 3 years
  - 4 removed after 6 years
  - 1 removed after 11 years

- Currently 14 stocks of concern
  - 3 on-going since 2001
  - 9 designated since 2011 (8 are Chinook)

Questions so far?

The Pacific Salmon Treaty

Pacific Salmon Commission Organization Chart



Background

The U.S. and Canada entered into the Pacific Salmon Treaty in 1985 to conserve and allocate salmon harvests of inter-jurisdictional fish.

The agreement took two decades of negotiations and was signed amid developing conservation problems, particularly for Chinook salmon stocks.

Scope of the Treaty

- Stocks and fisheries from Cape Falcon (Oregon) to Cape Suckling (Alaska) = 1,276 linear miles
- Treaty creates national obligations
- Unique because U.S. states and PNW treaty Indian tribes negotiate the fishery provisions
- The states and tribes are responsible for conducting programs that attempt to fulfill treaty/national obligations

Chinook Migratory Patterns

Aquatic Habitat

Fish Habitat Programs

- Protect and restore fish habitats.

- Programs
  - Aquatic Invasive Species
  - Stream Bank Restoration
  - Fish Passage
  - AWC and AFFI
  - Other Programs

Aquatic Invasive Species (AIS)

- Prevention
- Response
- Control/Eradication

“D. vex” (carpet tunicate)

Biology

Colonial tunicate

Rapid growth

Alter marine habitats

Response

Detected 2010 in Whiting Harbor

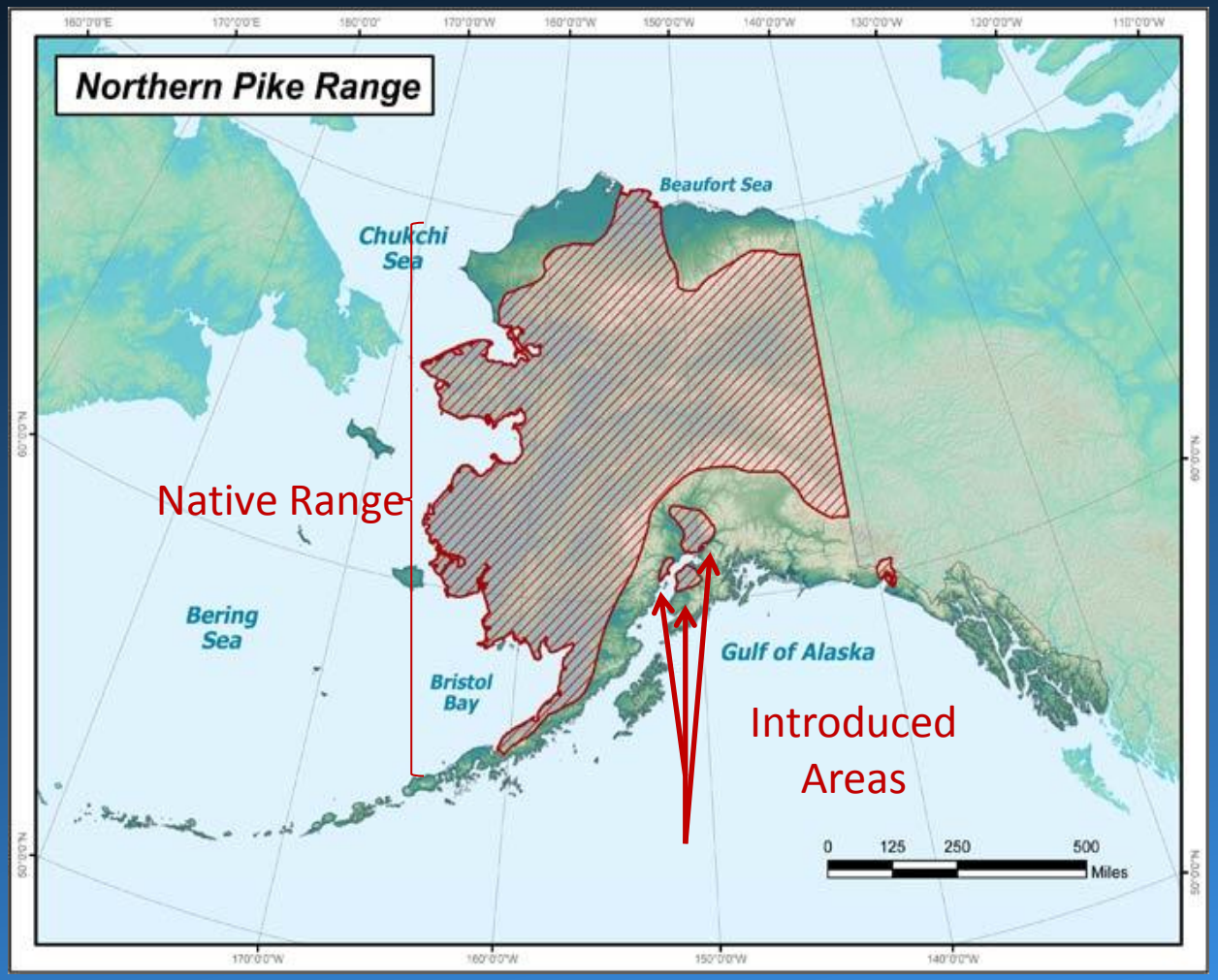
Rapid response

Containment

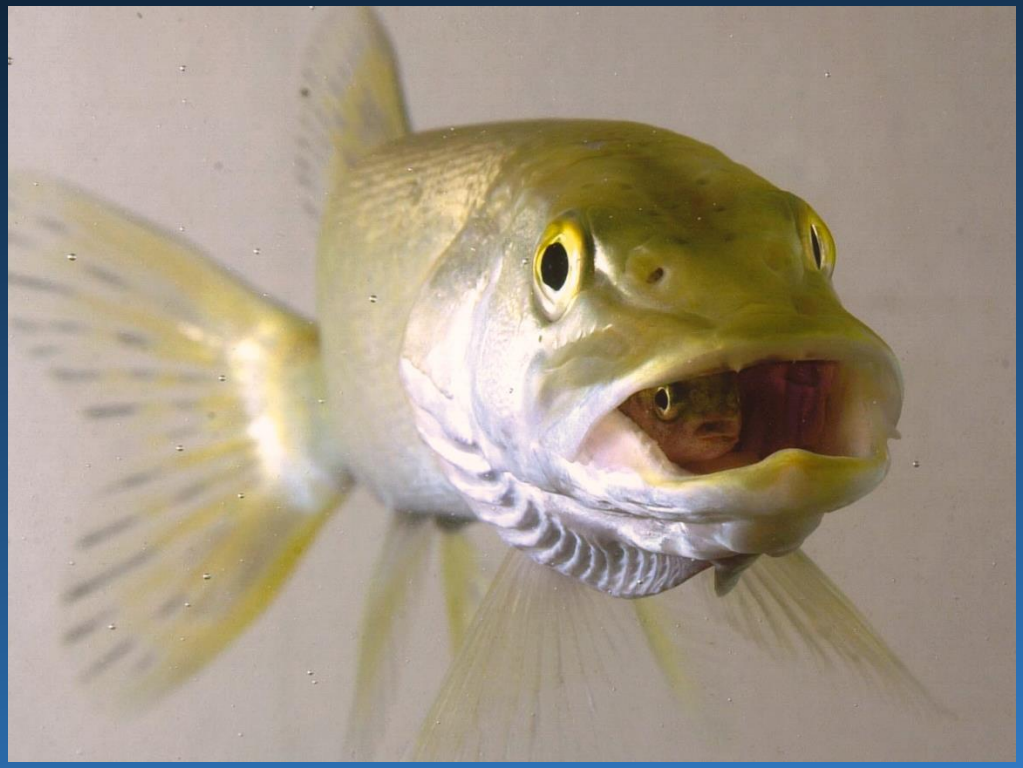
Control

Northern Pike

- Native north and west of the Alaska Mountain Range, but not in Southcentral
- Prefer shallow, slow-moving vegetated habitats
- Significant predators of juvenile salmonids and trout



Accomplishments



Pike Suppression:

Mat-Su: Alexander Creek (ongoing)

Eradication:

Anchorage:

Cheney Lake (2008)

Sand Lake (2009)

Otter Lake (2015)

Kenai Peninsula:

Arc Lake (2008)

Scout Lake (2009)

Stormy Lake (2012)

Soldotna Cr Phase 1 (2014)

Soldotna Cr Phase 2 (2016)

Alexander Creek Pike Suppression

Goal: Reduce pike abundance

Gillnet side-channel sloughs annually to remove pike

- Occurs during pike spawning and in the fall
- 15,800 pike removed since 2011

Evaluate juvenile salmonid abundance

- Minnow trap surveys
- Pike stomach content analysis

Kenai Peninsula Pike Eradication

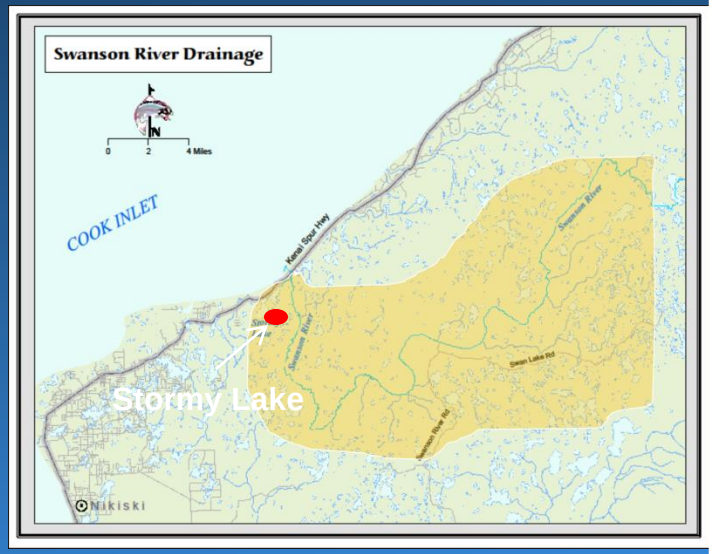
Goal: Eradicate pike from Kenai Peninsula

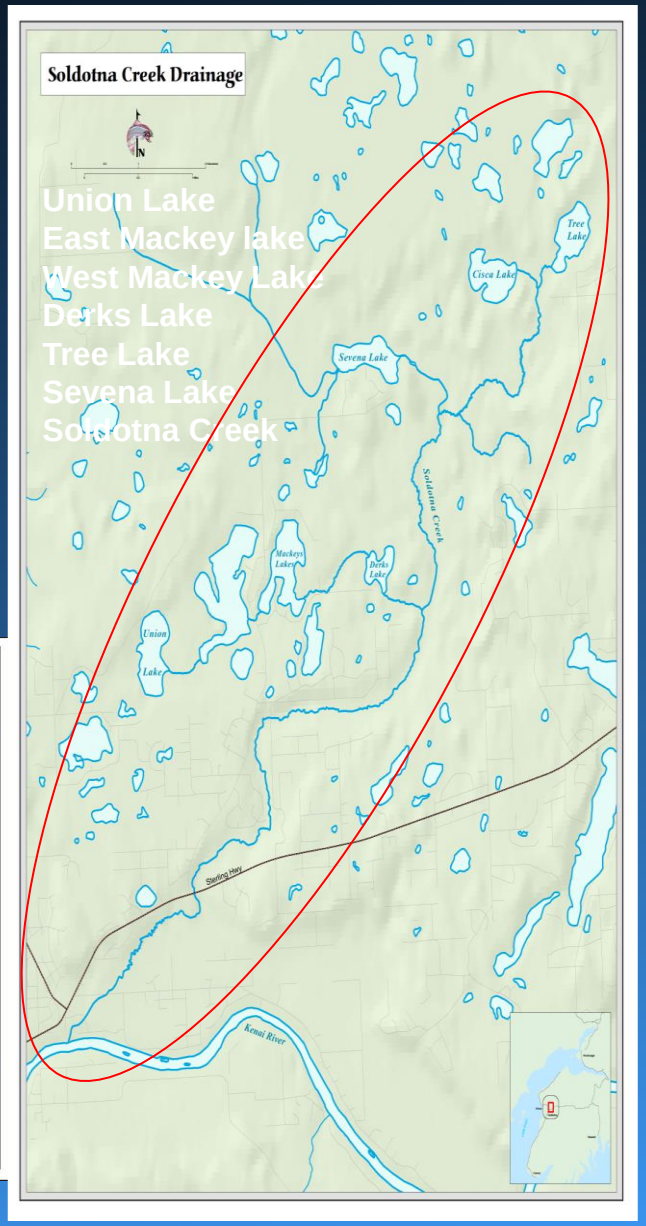
Stormy Lake (2012)

- Prevent pike entering Swanson River

Soldotna Creek (2014-2017)

- Two phases
- Prevent pike entering Kenai and Moose Rivers





Cost Share Program

- Restore stream bank riparian habitat
- Reduce erosion
- Improve water quality
- Program results

Fish Passage

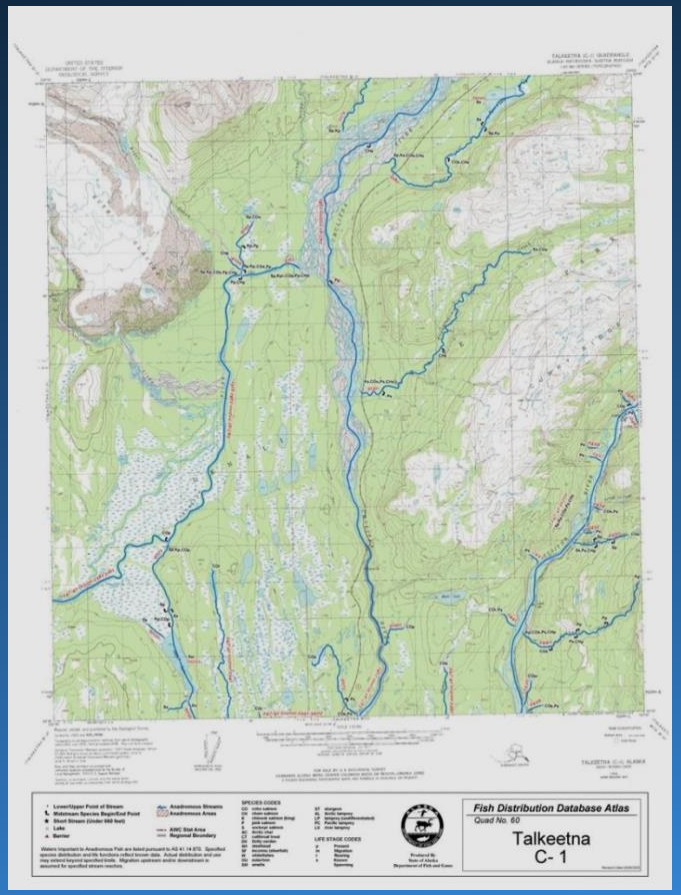
1. Assessment

2. Replacement

3. Research

Anadromous Waters Catalog (AWC)
contains 18,120 waterbodies, less than half of total estimated used by anadromous species

Alaska Freshwater Fish Inventory (AFFI)
1,283 new water bodies (4,952 miles) nominated for AWC since 2003




Questions?