
Kenai River King Salmon Assessment and Management

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Division of Sport Fish
Soldotna



RC 4, Tab 4

What are the issues before the BOF regarding Kenai River King salmon?

Issue	Proposal #
Bait/Multiple hooks	232, 238
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There are 2 runs of king salmon into the Kenai River, each with its own management plan

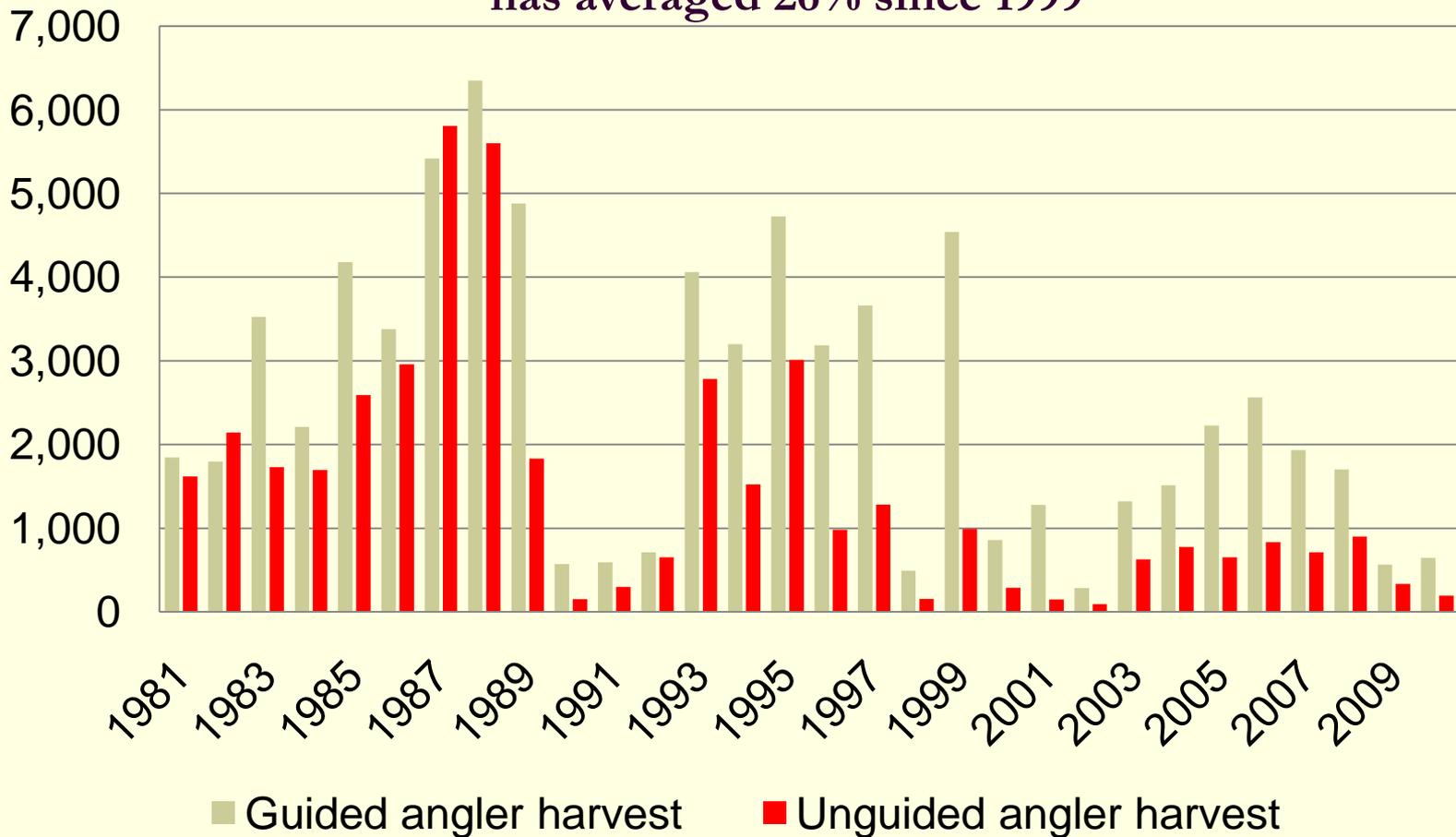
Early run (late April-June) 5 AAC 57.160

- * Likely small but unknown harvest in marine sport fishery
- * No commercial harvest in Upper Cook Inlet
- * Educational harvest <100
- * Inriver run (sonar) averages ~16,000 in recent years
- * Sport fishery recent average ~3,000, almost entirely above sonar
- * Inseason creel survey & SWHS to estimate sport harvest
- * Escapement = Sonar *minus* Sport harvest *minus* C&R mortality
- * Escapement Goal; OEG, set by the BOF (5,300-9,000)
SEG set by UCI EG Committee (4,000-9,000)
- * Spawn primarily in tributaries of the Kenai River

Early run harvest by guided and unguided anglers

Relevant issue: Guides/Guided anglers

Early run harvest by guided anglers below the Soldotna Bridge has averaged 26% since 1999



Days and times open to guided anglers for the early run

Relevant issue: Guides/Guided anglers

Years	Season start	Days open	Times open
1973-1974	5/30	All	24 hrs.
1975-1983	1/1	All	24 hrs.
1984-1985	1/1	All	24 hrs-May; 6am-6pm-June
1986-1999	1/1	T,W,R,F,S,SN	24 hrs-May; 6am-6pm-June
2000-2010	1/1	T,W,R,F,S	6am-6am in May-June

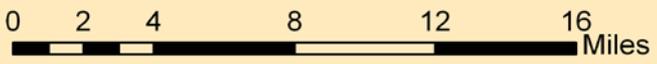
To protect staging king salmon:
Tributaries and the entire Upper Kenai are closed year round to king salmon fishing
And tributary confluences are closed seasonally
And the entire river is closed after July 31

Relevant issue: Closed times/areas



Red areas are closed areas

Funny River confluence closed 1/1 - 7/31
Slikok Creek confluence closed 1/1 - 7/31
Killey River confluence closed 1/1 - 7/31



Spawning destinations of radio-tagged king salmon in the early run for 3 different years

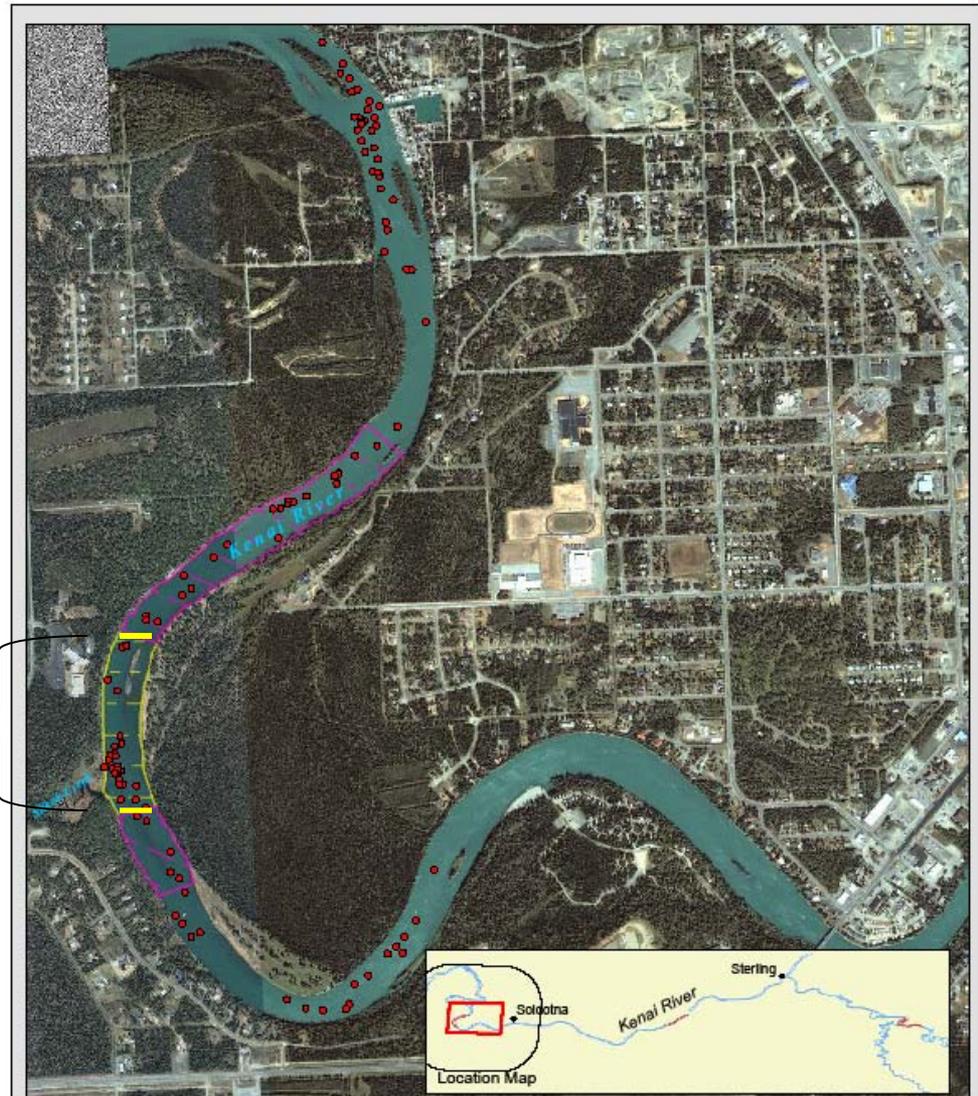
Relevant issue: Closed times/areas

	1990		1991		2010	
Destination	# of Tags	%	# of Tags	%	# of Tags	%
Slikok C.	1	1%	2	3%	0	0%
Funny R.	19	20%	16	21%	10	12%
Killey R.	43	45%	49	63%	50	58%
Russian R.	0	0%	0	0%	1	1%
Juneau C.	1	1%	1	1%	1	1%
Quartz C.	1	1%	2	3%	0	0%
Crescent C.	0	0%	0	0%	1	1%
Daves C.	0	0%	0	0%	1	1%
Grant C.	1	1%	0	0%	1	1%
Mainstem	28	30%	7	9%	21	24%

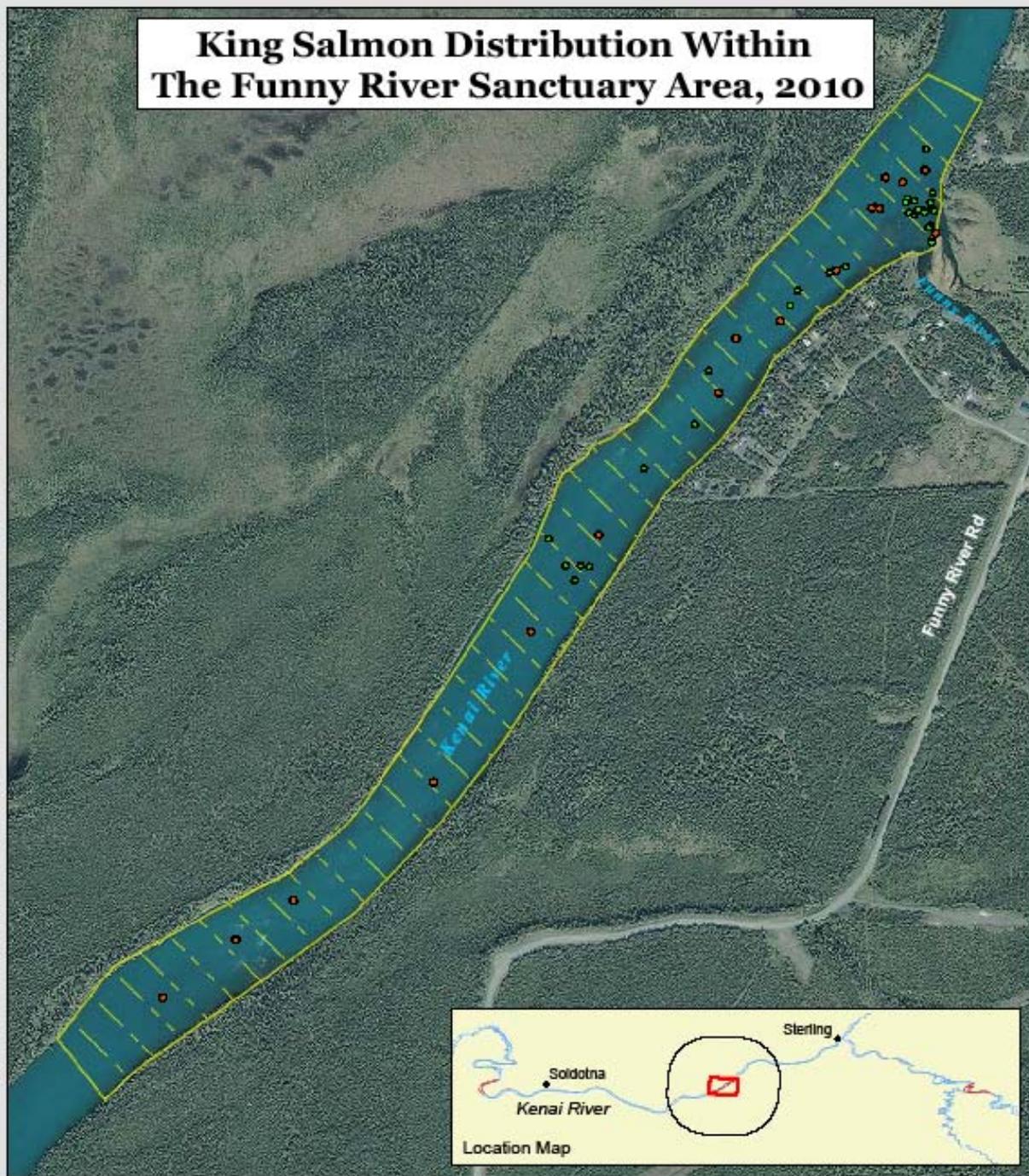
Slikok Creek Closed area

Relevant issue: Closed times/areas

proposed closed area
existing closed area



King Salmon Distribution Within The Funny River Sanctuary Area, 2010

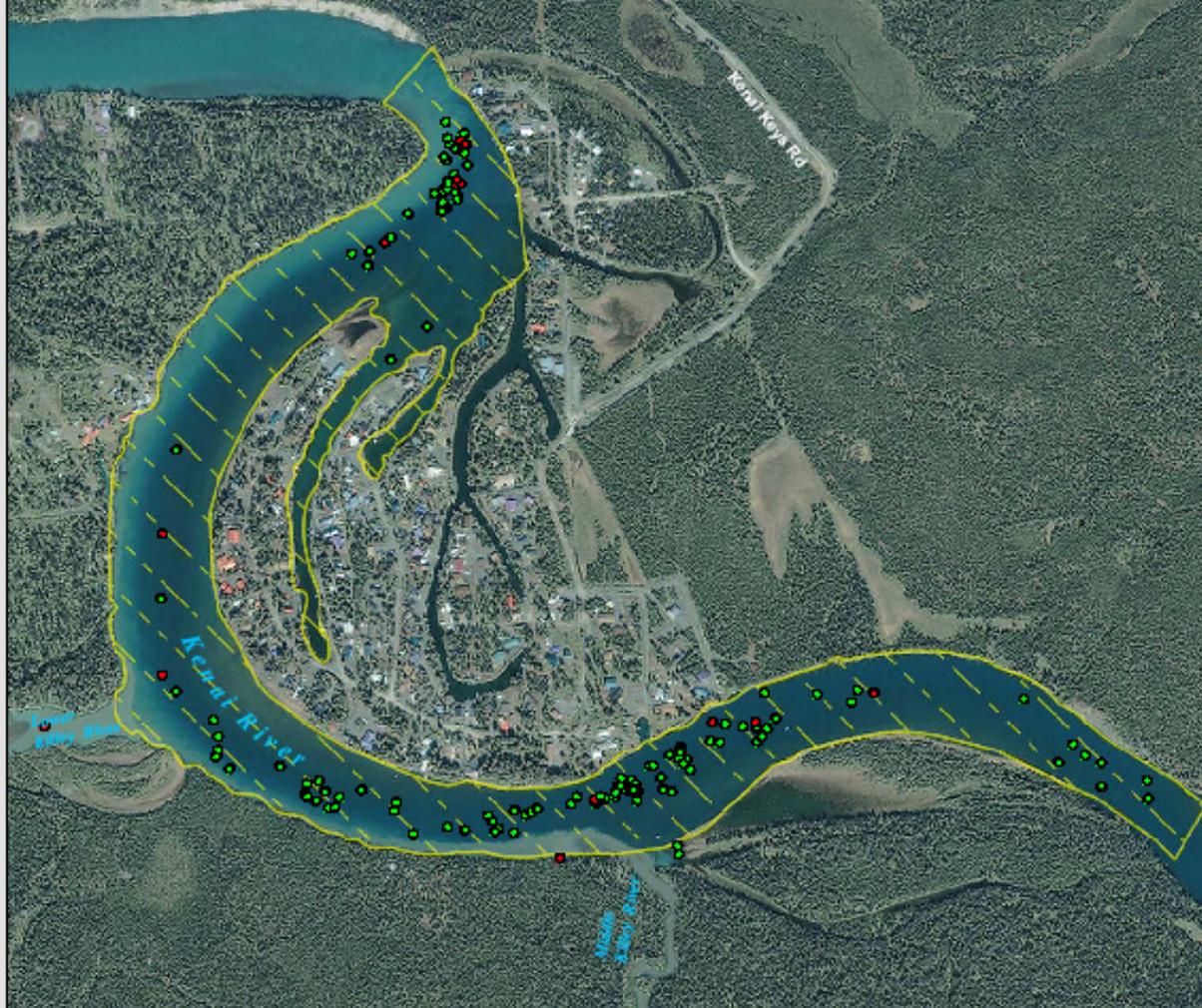


Relevant issue:
Closed times/areas

Light circles - Funny River fish
Dark circles - destined elsewhere

King Salmon Distribution Within The Killey River Sanctuary Area, 2010

*Relevant issue:
Closed times/areas*



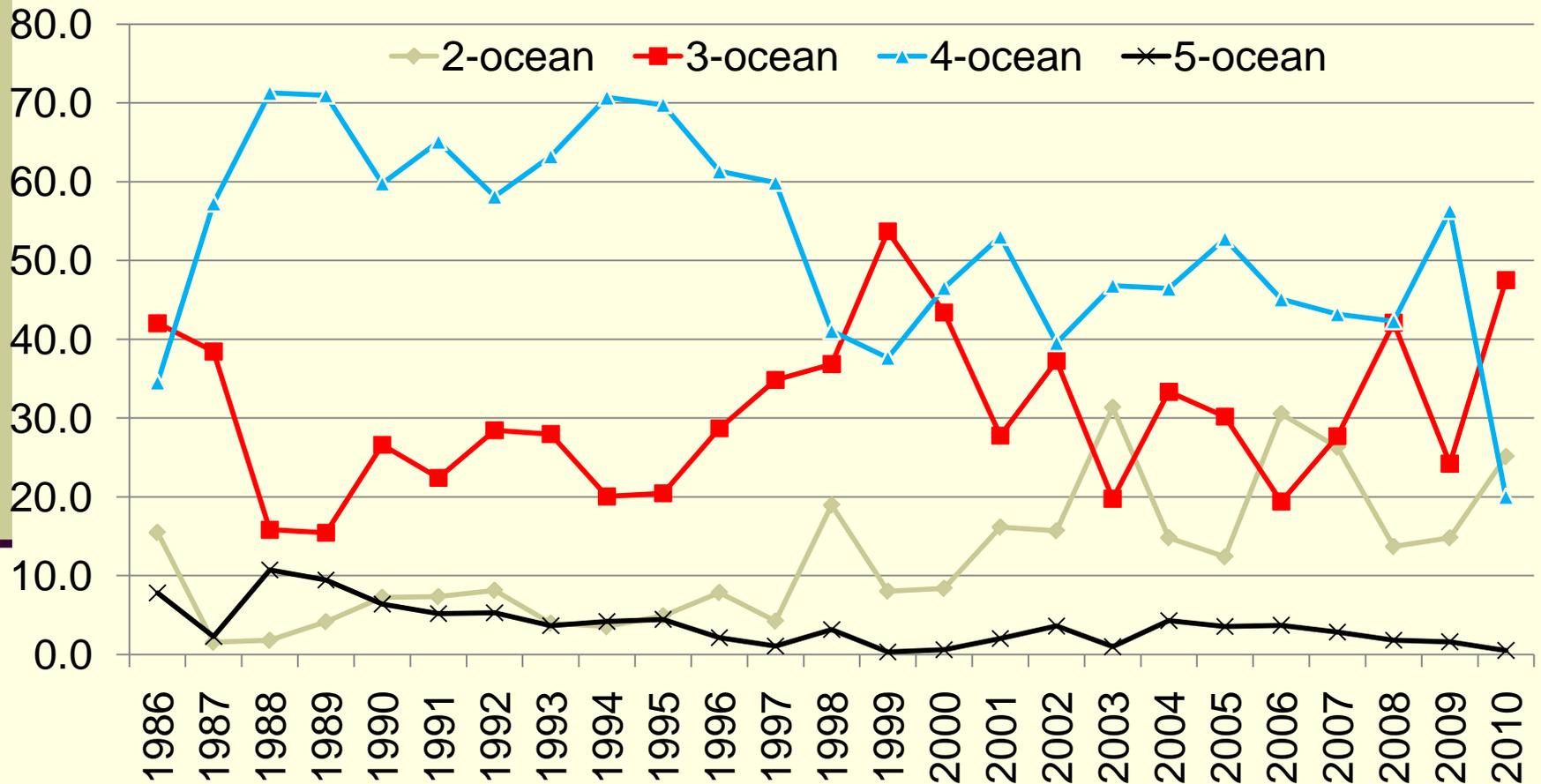
Light circles - Killey River fish
Dark circles - destined elsewhere



There have been declines in older fish and increases in younger fish that began in the late 1990's

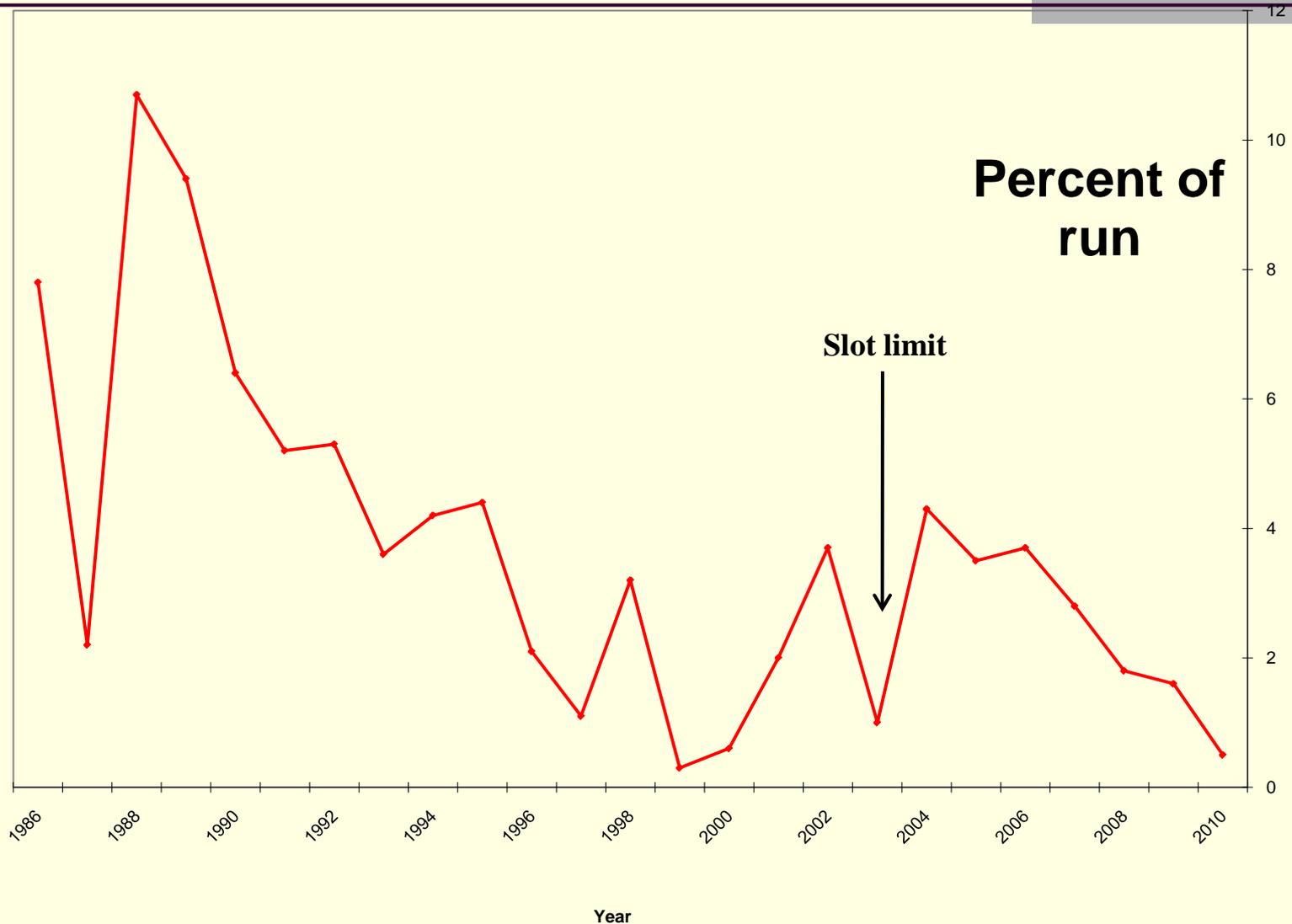
Relevant issue: Size regulations

Percent of early run by age and year



In order to conserve the declining number of 5-ocean fish in the early run, a slot limit has been in regulation since 2003

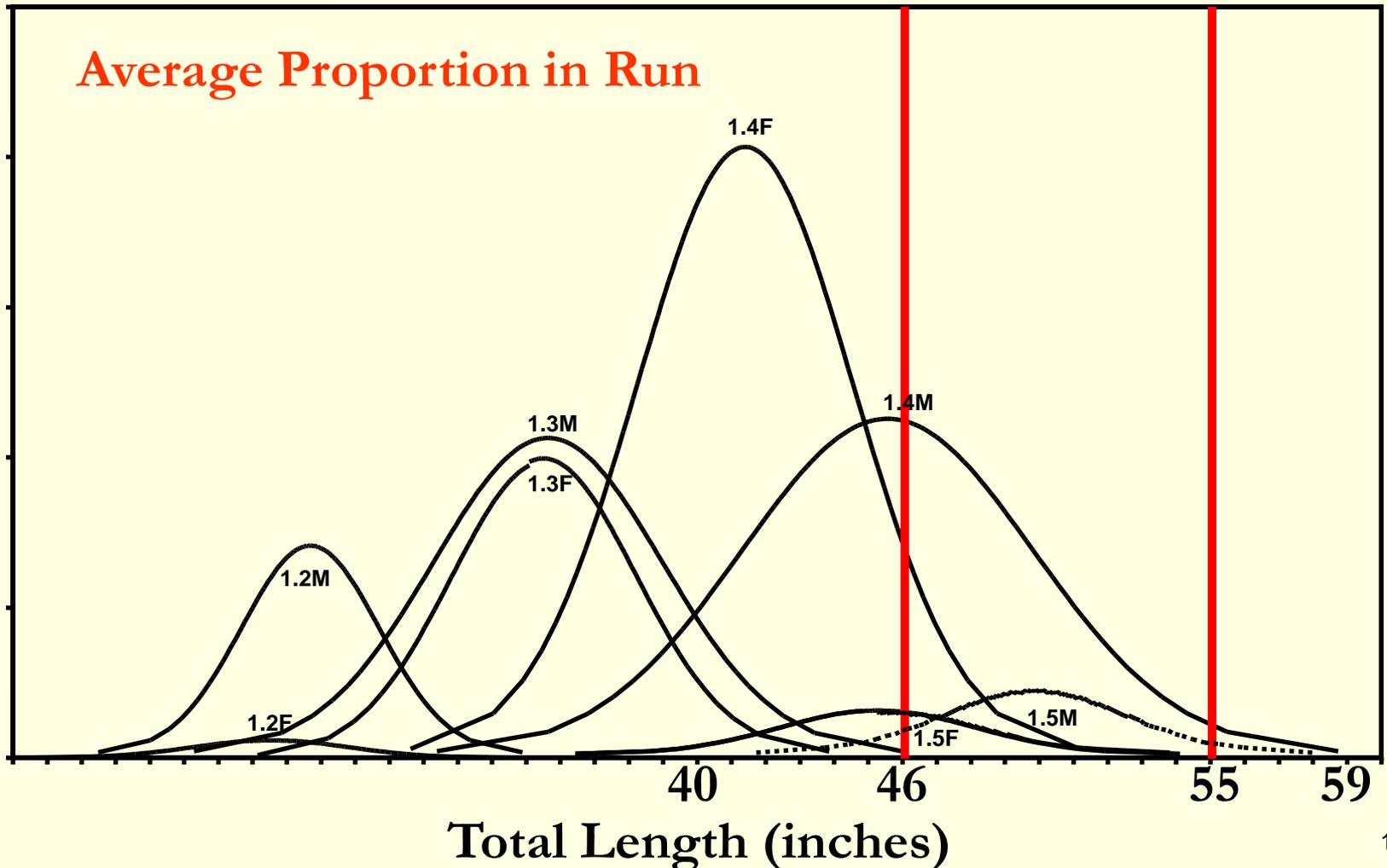
Relevant issue: Size regulations



The slot limit:

a length range that protects a majority of 5-ocean fish w/out severely impacting harvest opportunity for other age classes

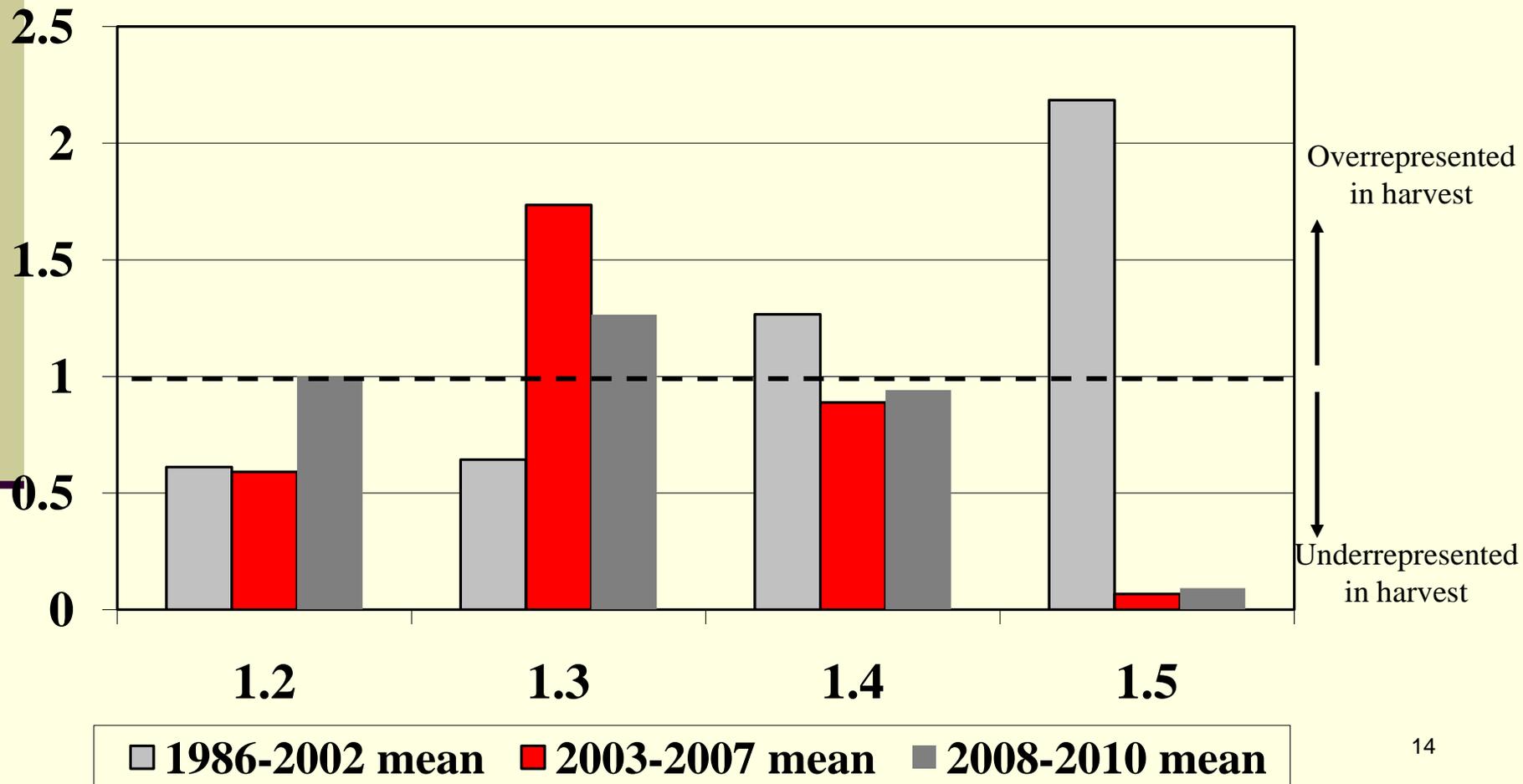
Relevant issue: Size regulations



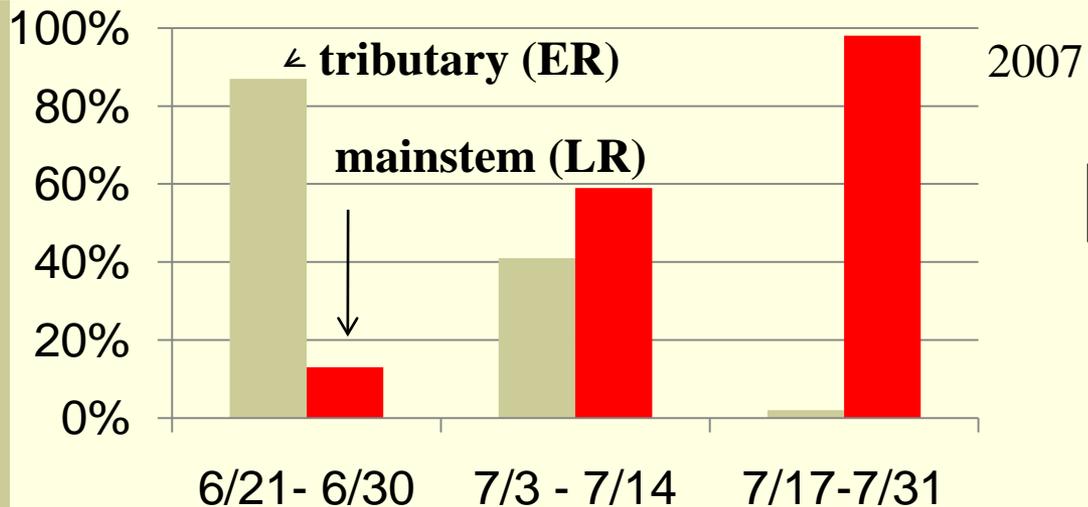
Relative harvest selectivity by age
for early run Kenai River king salmon
has improved with the slot limit

Relevant issue: Size regulations

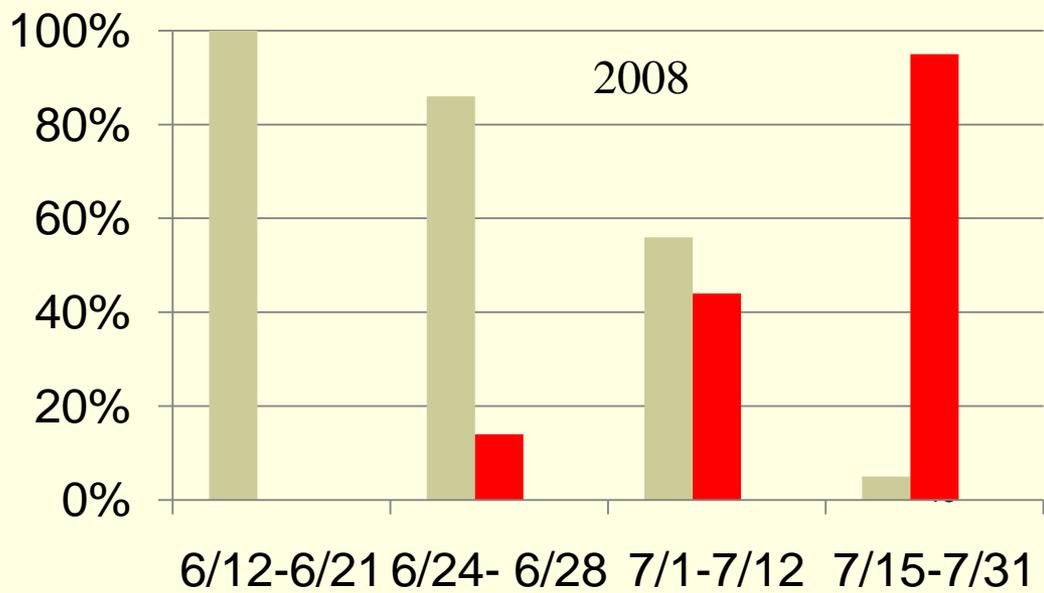
Proportion of fish at age in the harvest divided by the proportion of fish at age in the run



King salmon harvested above the Soldotna Bridge in the last 2 weeks in July are mostly late run fish



Relevant issue: Size regulations



Segue



Much larger run, the Late run

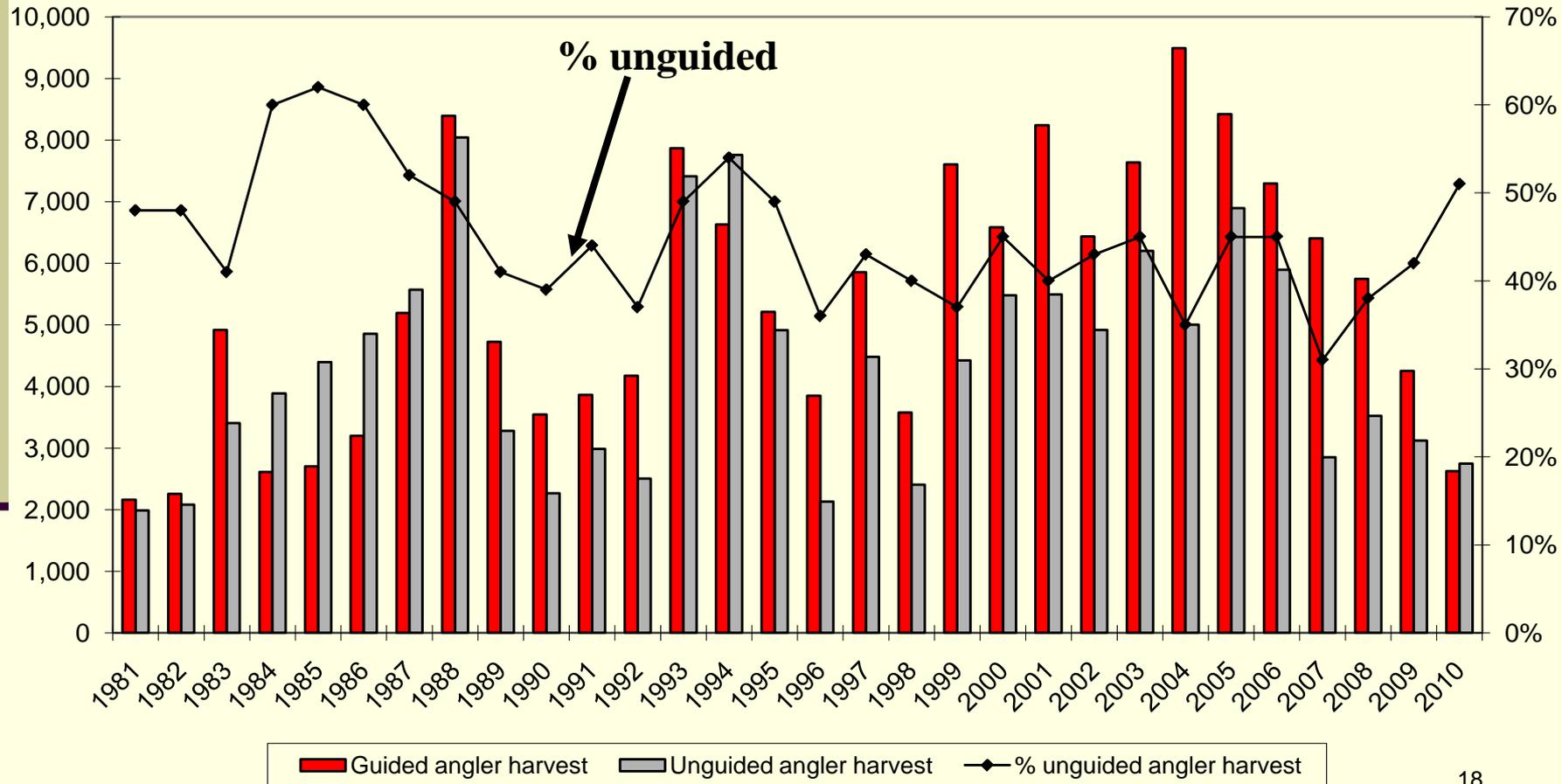
Late run (late June-August) 5 AAC 21.359

- * Harvest in marine sport fishery averages <1,000 in recent years
- * Commercial harvest ranges from 6,500–23,000 & averages ~12,000, with most (~92%) in the ESSN fishery
- * Personal Use dip net harvest ranges from 800-1,500 in recent years
- * Inriver run (sonar) ranges from 30,000-60,000 & averages ~40,000 in recent years
- * Inriver sport harvest ranges from 8,000-19,000 & averages ~13,000 in recent years
- * Inseason creel survey & SWHS used to estimate sport harvest
- * Escapement = Sonar *minus* Sport harvest above Sonar *minus* C&R mort.
- * Escapement Goal (SEG) 17,800-35,700
- * Spawn primarily in the Kenai River mainstem

Late run harvest by unguided anglers below the Soldotna Bridge has averaged ~ 41% since 1999

Relevant issue: Guides/Guided anglers

Late run harvest by guided and unguided anglers below the Soldotna Bridge



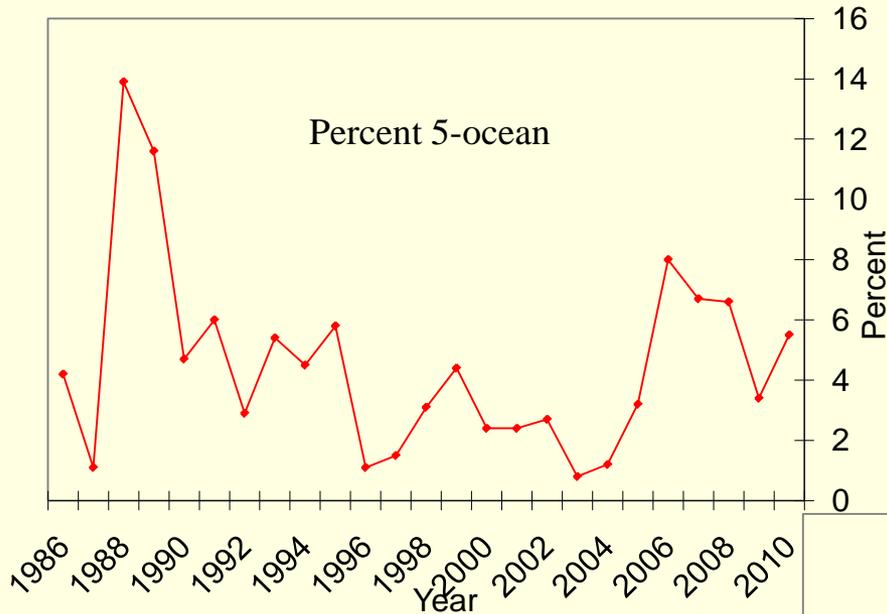
Days and times open to guided angler fishing for the late run

Relevant issue: Guides/Guided anglers

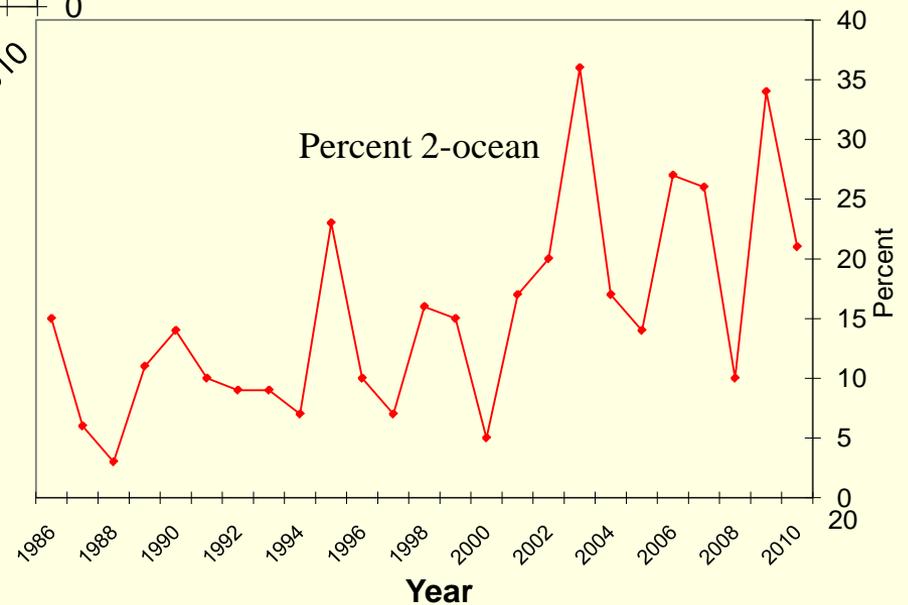
Years	Season start	Days open	Times open
1973 - 1974	5/30-7/31	All	24 hrs.
1975 - 1982	1/1-7/31	All	24 hrs.
1983	1/1-7/31	T,W,R,F,S	24 hrs.
1984 - 1985	1/1-7/31	T,W,R,F,S	6am - 6pm
1986 - 1988	1/1-7/31	T,W,R,F,S	7am - 7pm
1989 - 2010	1/1-7/31	T,W,R,F,S	6am - 6pm

Unlike the early run,
the number of 5-ocean Chinook salmon in the late run
are not a cause for concern

Relevant issue: Size regulations



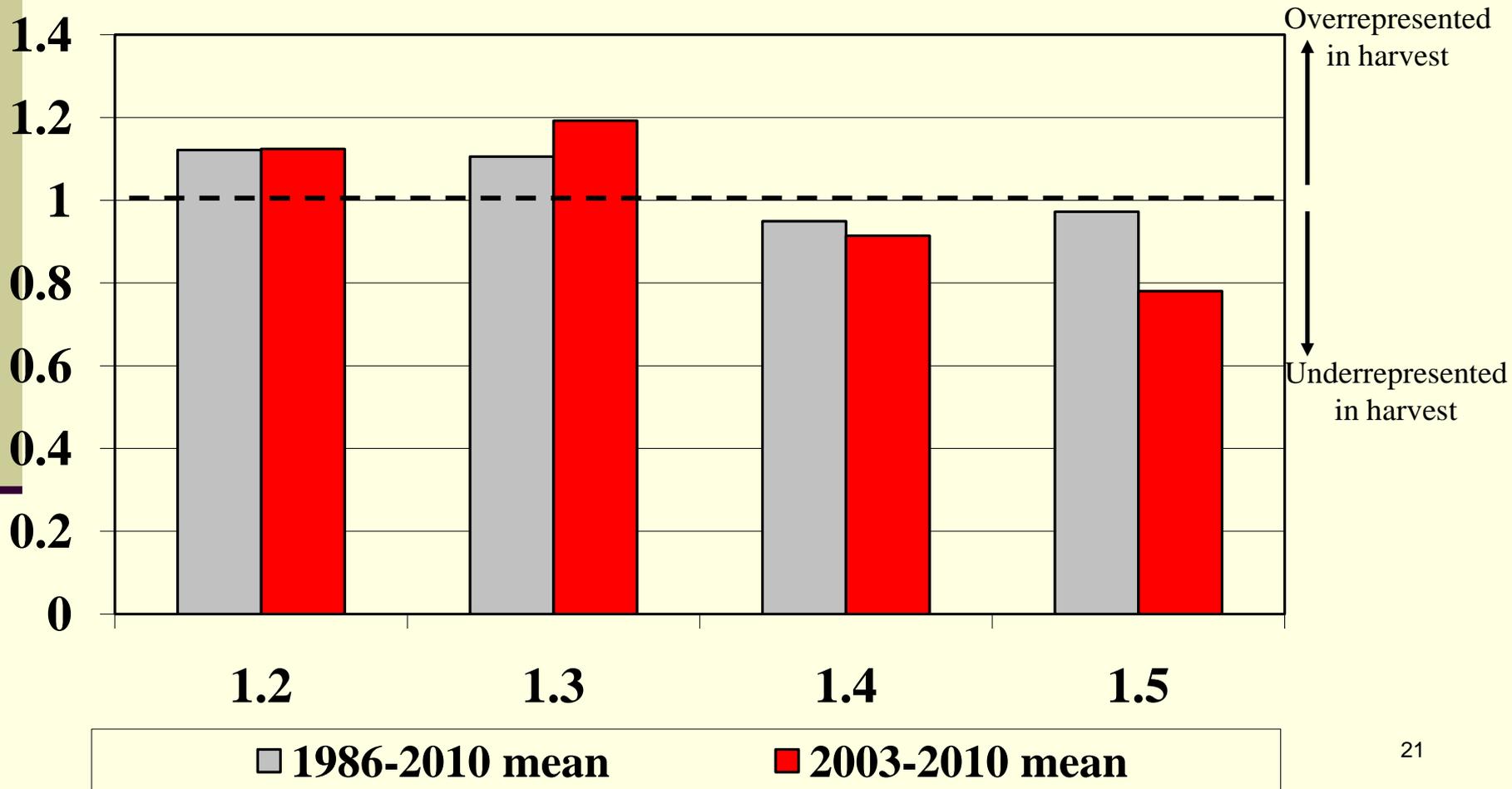
Similar to the early run,
there has been a large number
of 2-ocean fish in recent years



Relative harvest selectivity by age
for late run Kenai River king salmon
is minimal

Relevant issue: Size regulations

Proportion of fish at age in the harvest divided by the proportion of fish at age in the run



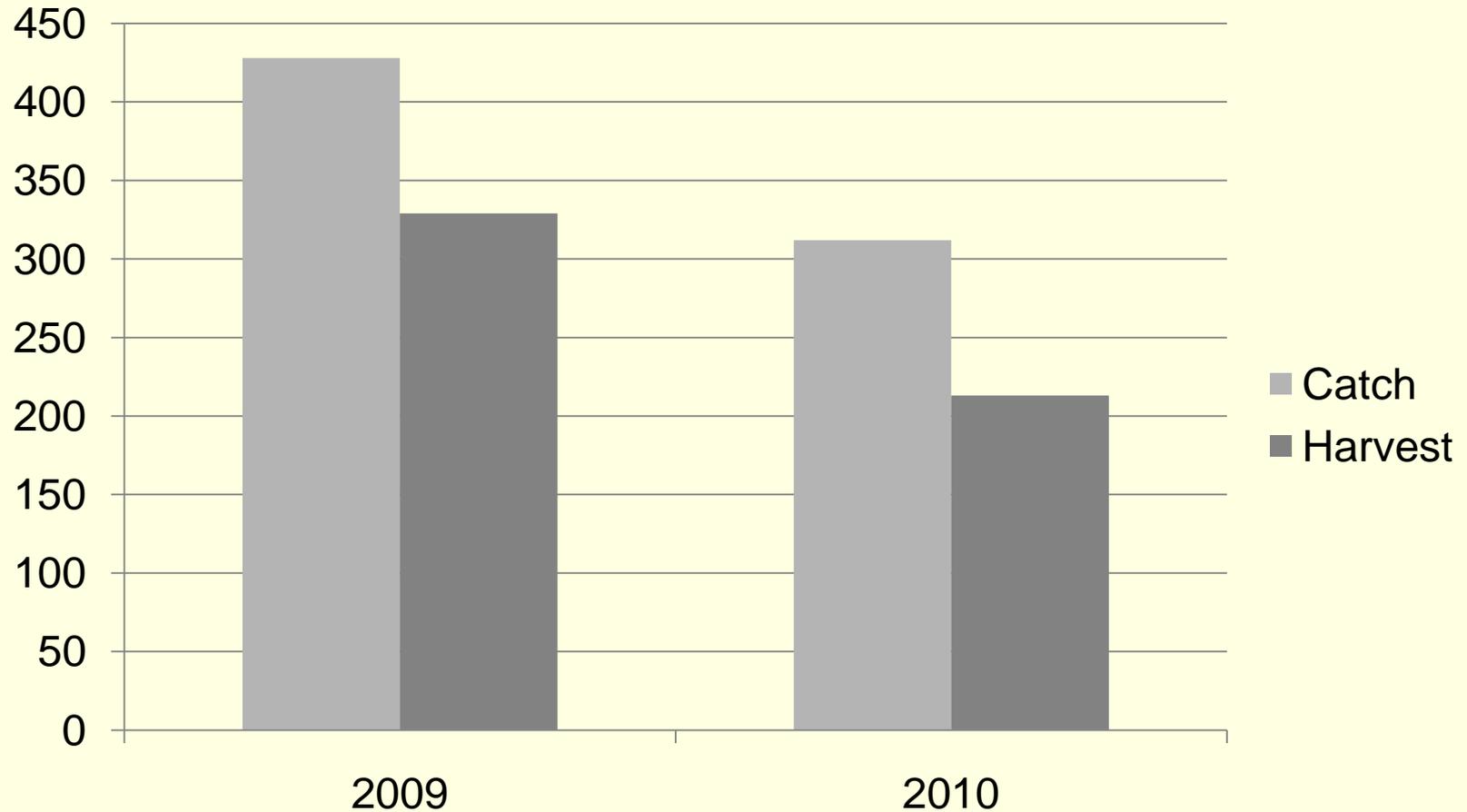
Fishing below Skilak Lake from boats on Mondays is allowed only for unguided anglers in non-motorized boats in May, & June (beginning 2002) and July (beginning 1999)

Relevant issue: Drift/power boats



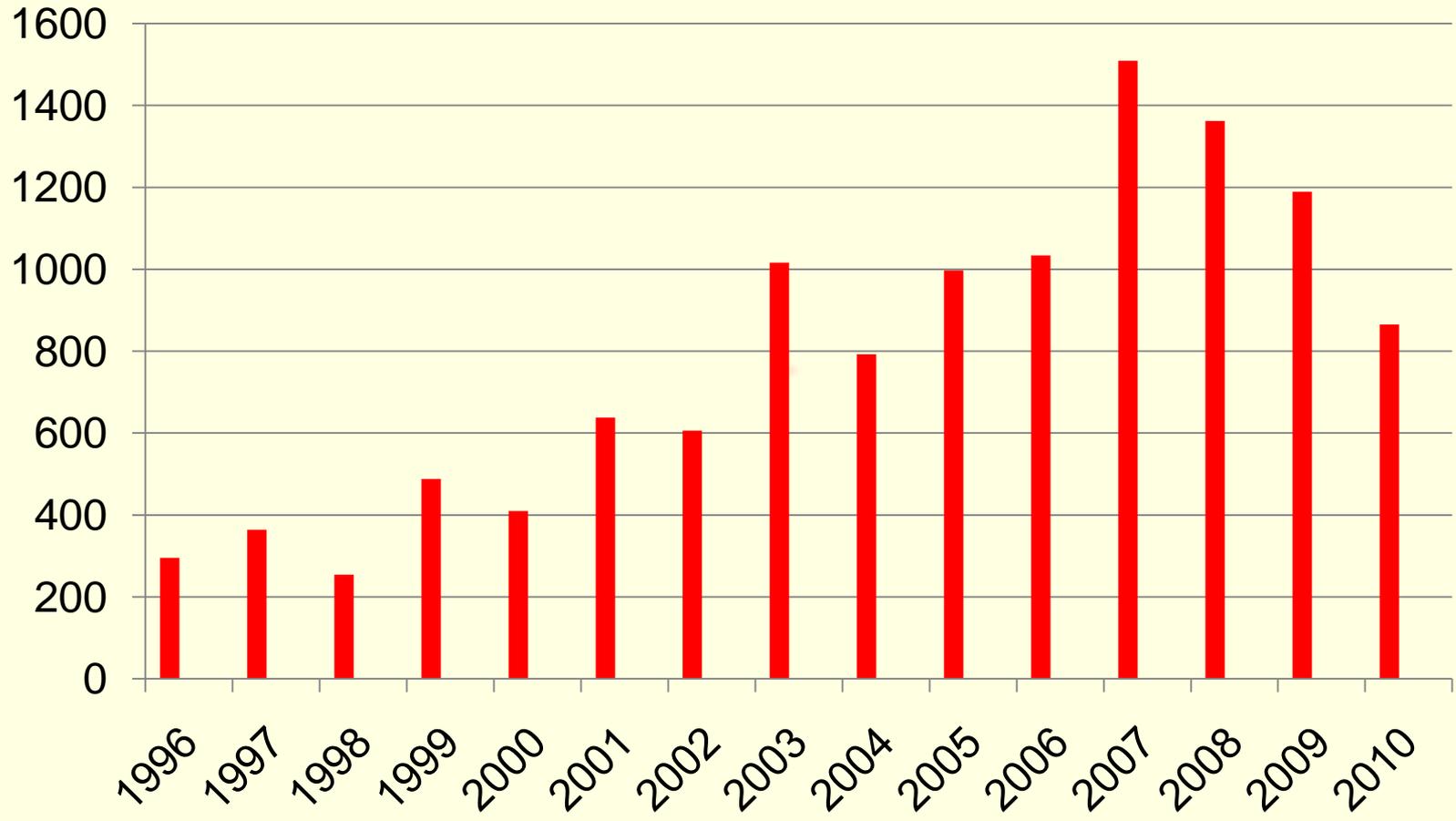
Catch & harvest on drift boat Mondays in July is only a few hundred fish annually

Relevant issue: Drift/power boats



PU dipnet harvest of Kenai River king salmon has ~ doubled in the last decade

Relevant issue: Personal use



Commercial harvest of Kenai River king salmon occurs mostly in the ESSN fishery, and is generally between 5,000 and 20,000 fish

