

Management and Stock Status of Northern and Western Cook Inlet Sport Fisheries



A Report to the Legislative Salmon Task Force

Department of Fish & Game
Sport Fish Division,
By: *Dave Rutz*

The Northern & Western Cook Inlet Management Area

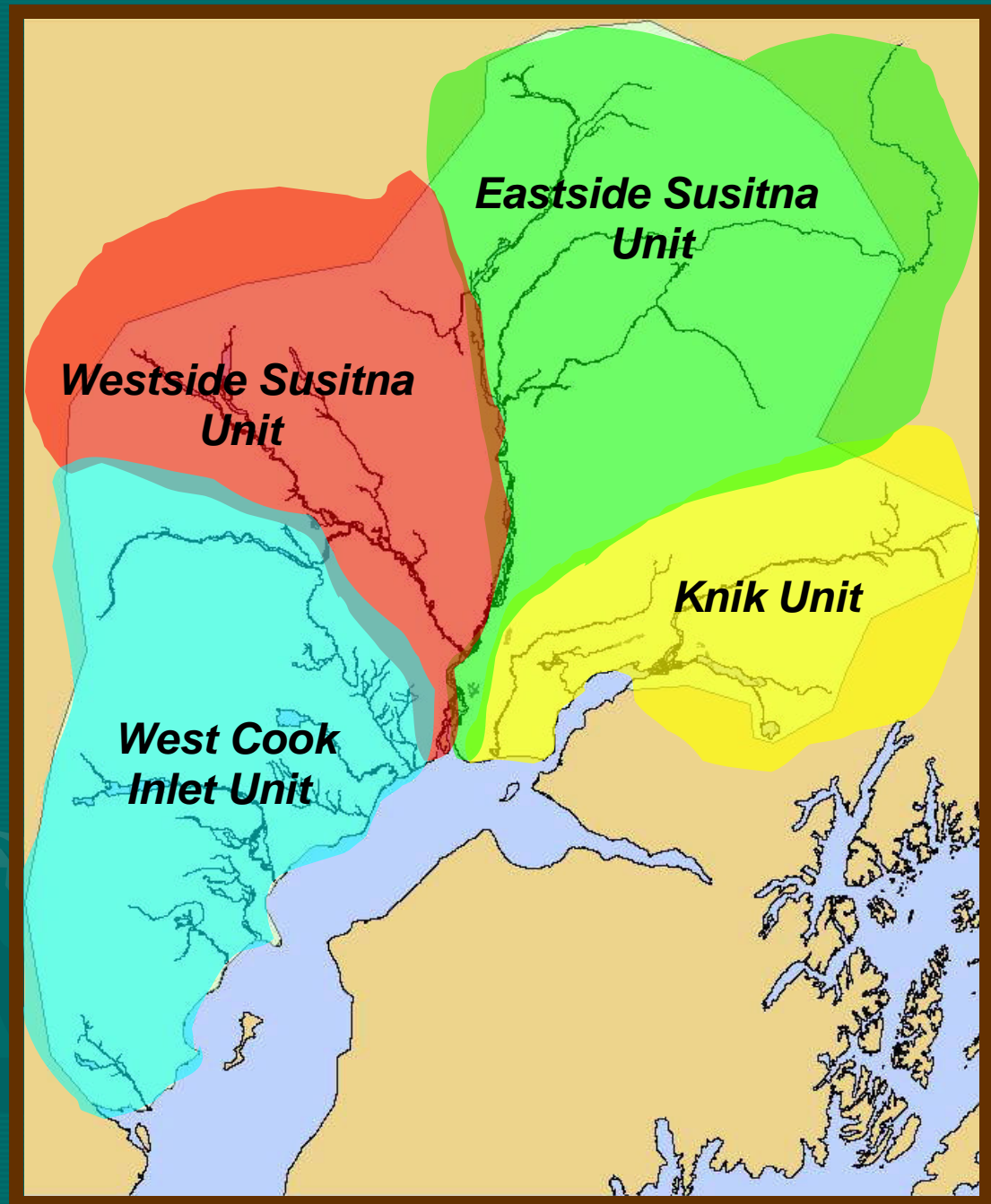
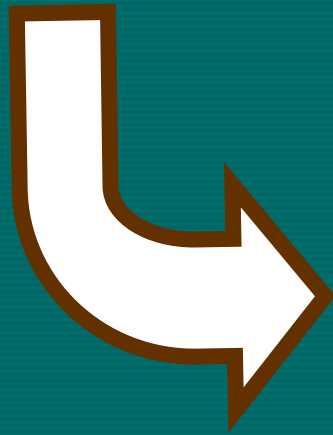


Figure 1. Sport Fishing Effort in Angler Days for Northern and Western Cook Inlet For All Species, 1990-2006

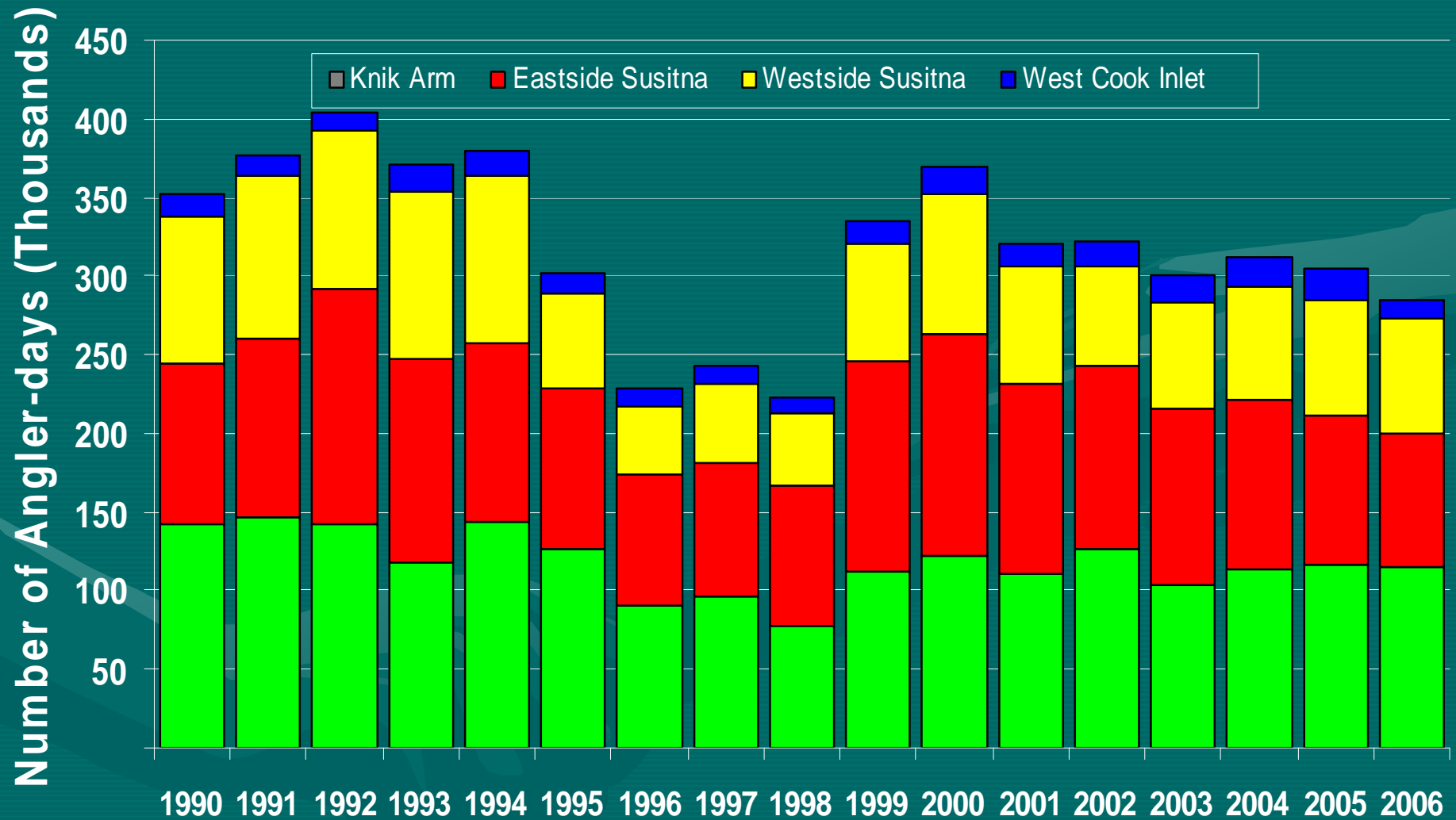


Figure 2. Estimated Harvests by All User Groups of King Salmon of Northern Cook Inlet Origin, 1893-2006

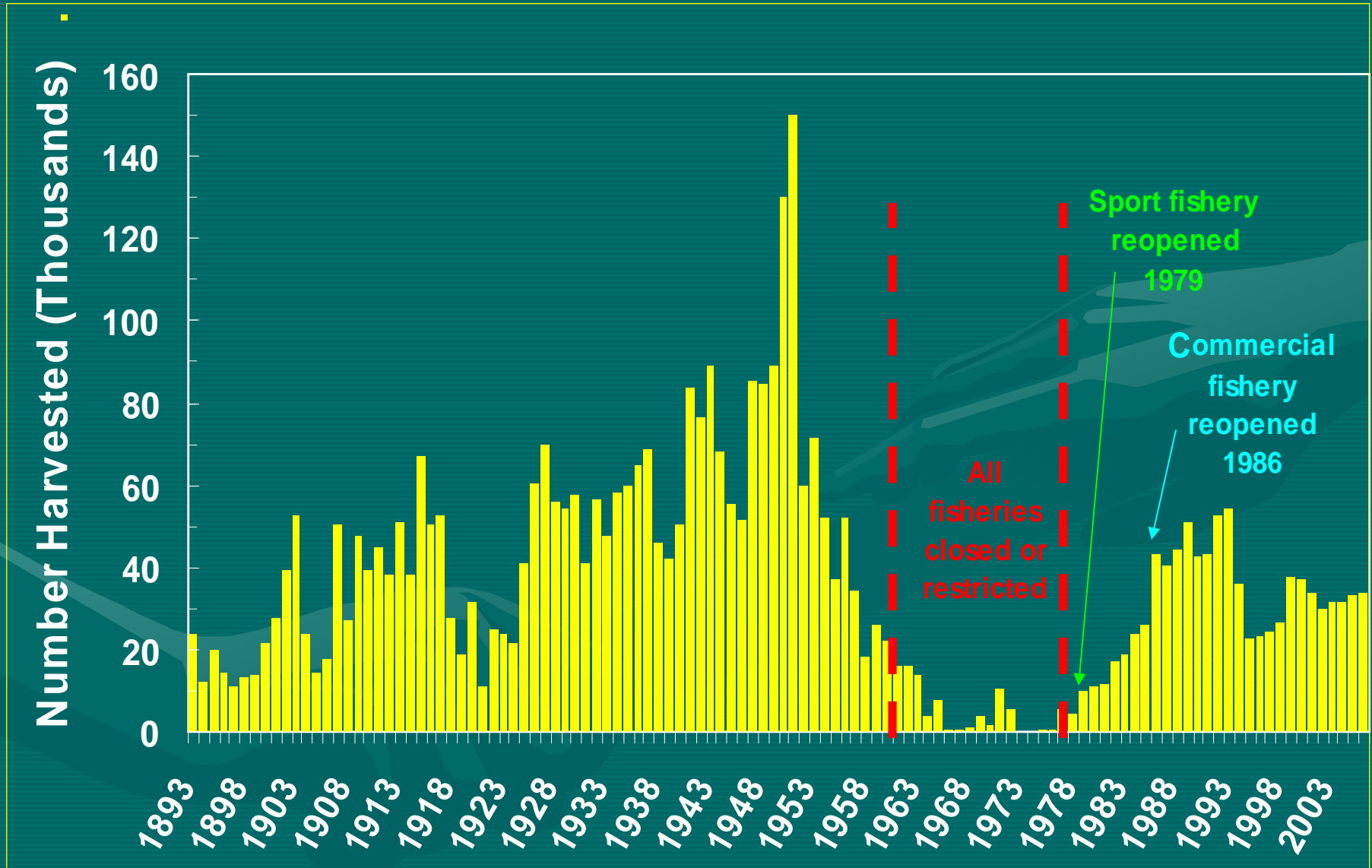
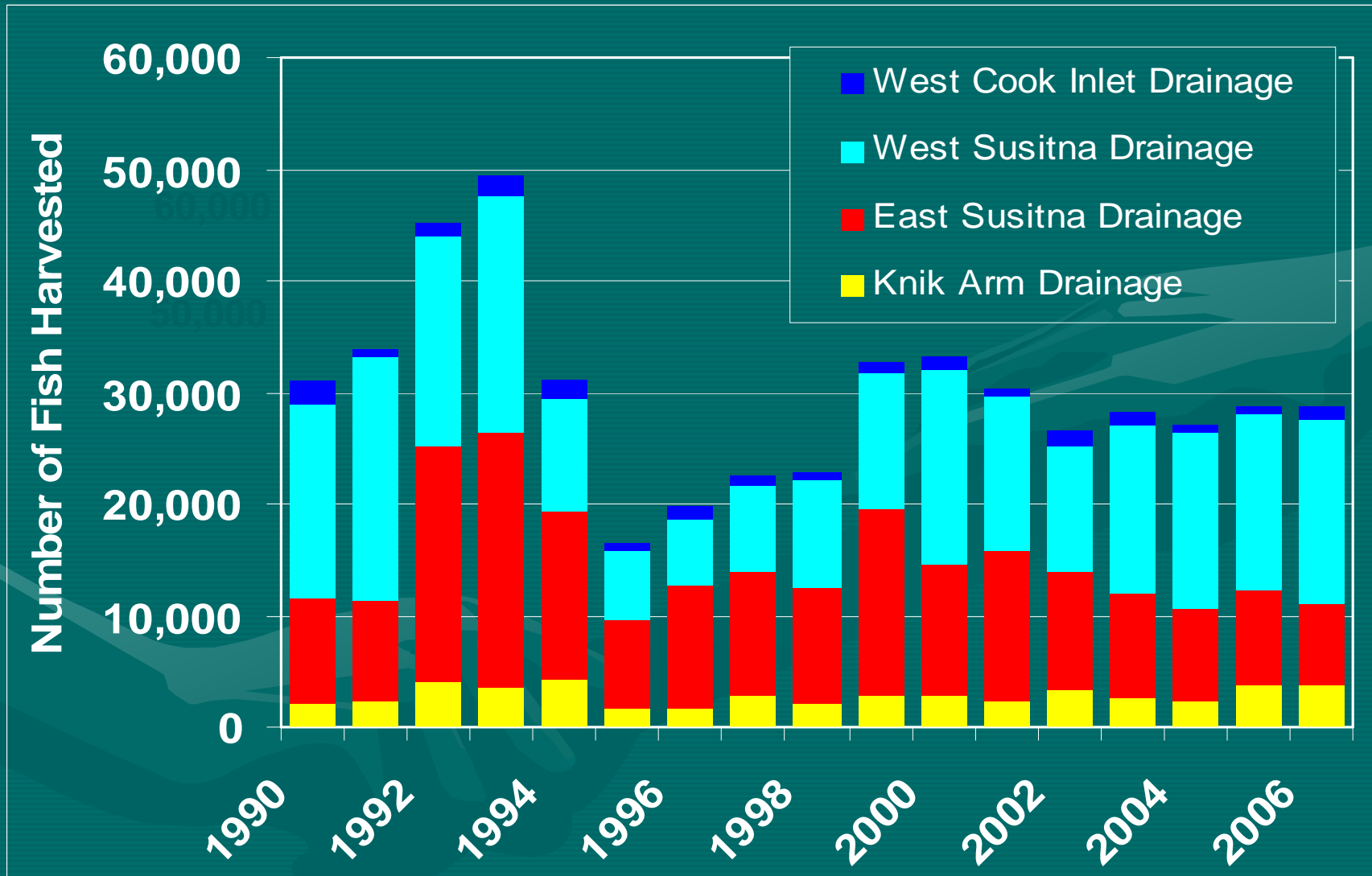


Figure 3. King Salmon Sport Harvest for Northern and Western Cook Inlet, 1990 - 2006

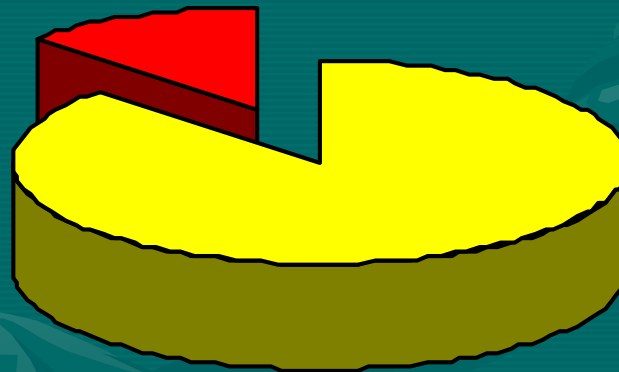


King Salmon Sport Fish Management Strategy

- Bait Restrictions
- Weekend Only
- Area Restriction
- Hook Restrictions
- Hour restrictions
- Annual Limits
- Quit Fishing After Harvest
- Bag & Possession
Limit Catch & Release
- Area Closures
- Steam Closures
- Reduced Seasons
- Don't Take Fish out of Water

Historical Average Harvest of Northern Cook Inlet King Salmon By User Group, 1990-2006

Commercial
13%



Sport
87%

King Salmon Sport Fish Management Tools

- Management Plans
- Commercial Catch Statistics
- Little Susitna Exit Survey
- Angler Reports
- Dershka Weir
- Statewide Harvest Survey
- Post Season Escapement Surveys

King Salmon Escapement Index Sites

Aerial Survey
Escapement
Index Streams

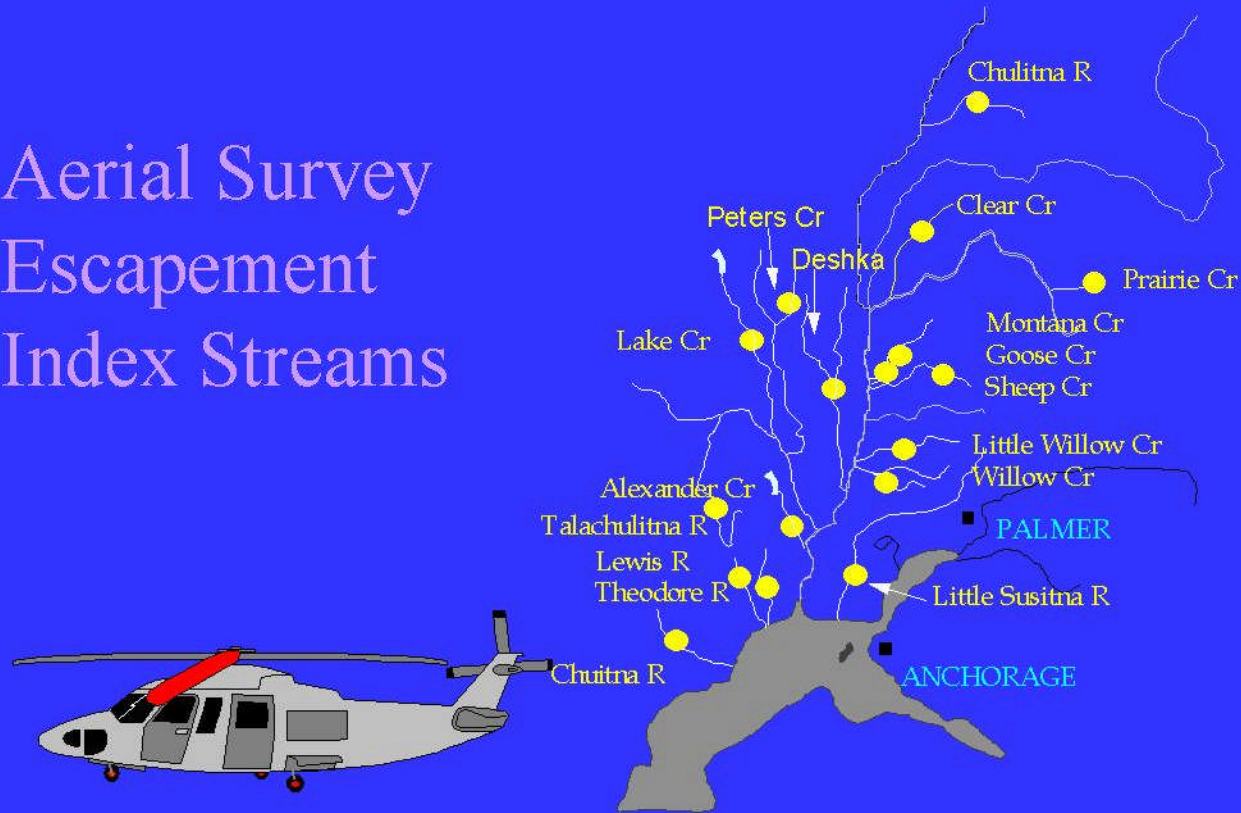
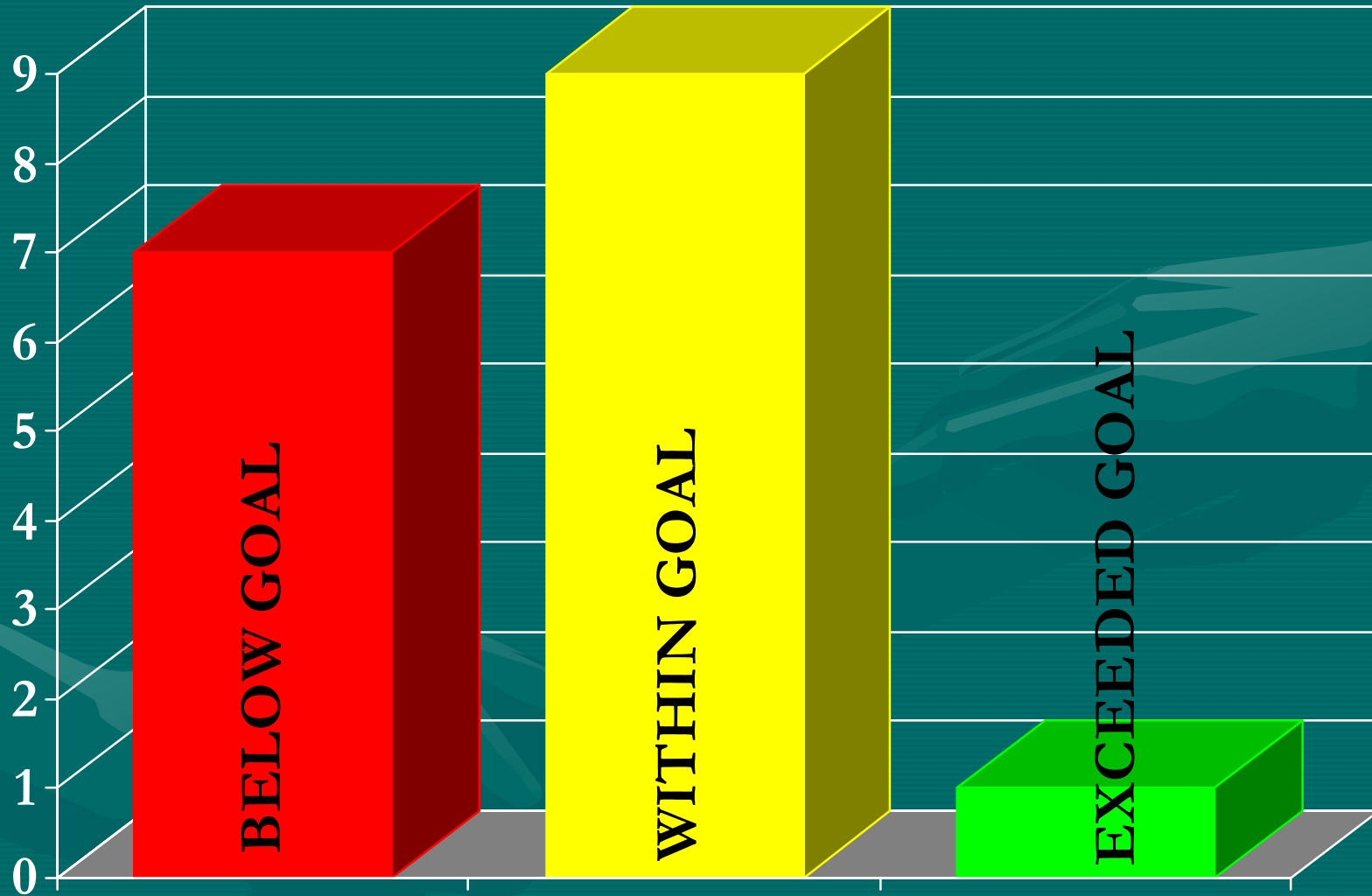


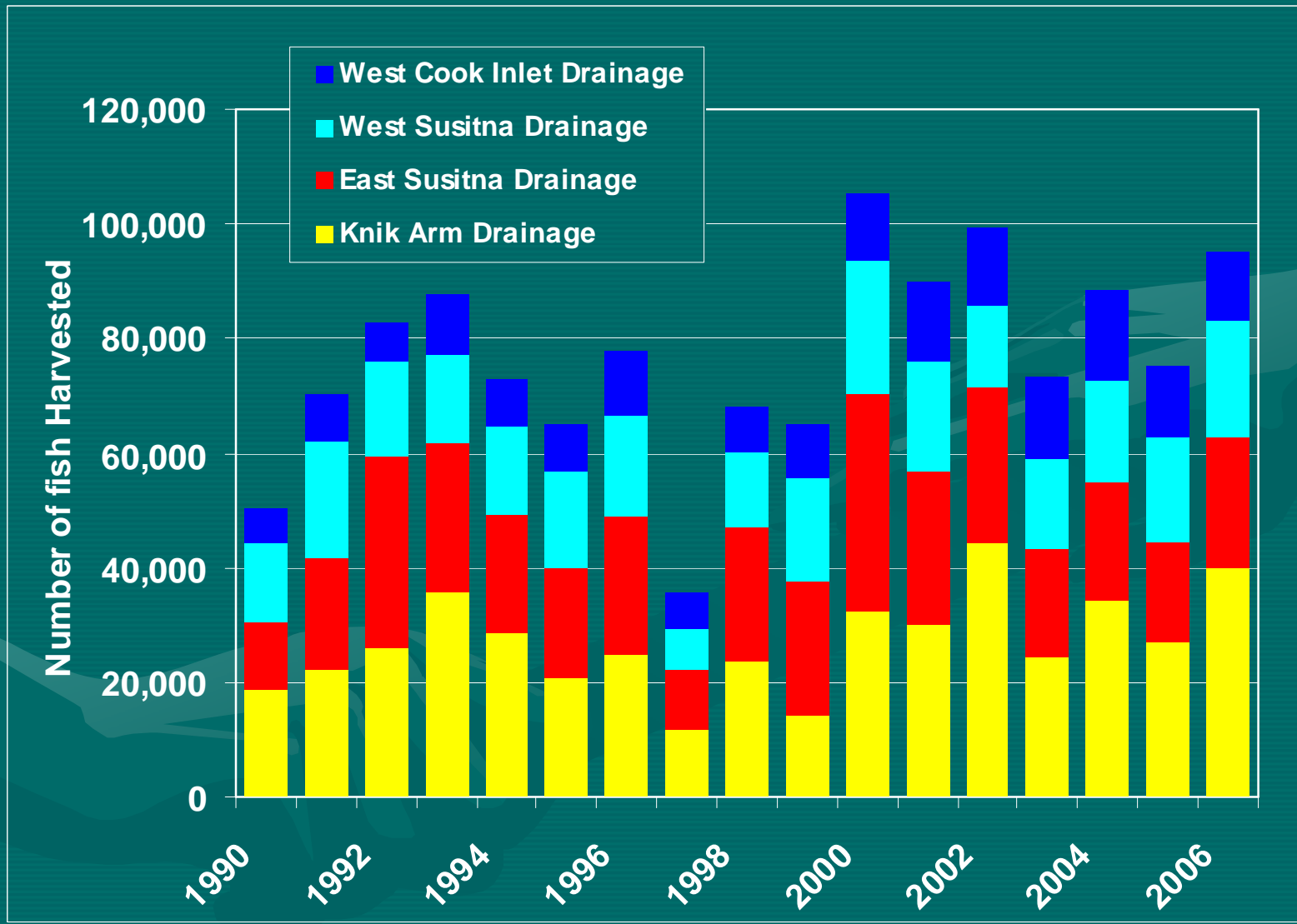
Figure 4. Escapement Goal Achievement Status For King Salmon Escapement Surveys of the 17 Major King Salmon Producing Systems in the Northern Cook Inlet for 2007



08 King Salmon Sport Fish Outlook

- Deshka Preseason Projection
- Average to Below Average Year
- Angler Success
- In-Season Weir Passage Data
- Restrictions To Sport & Commercial Users
- Flood Years

Figure 5. Coho Salmon Sport Harvest for Northern and Western Cook Inlet, 1990 - 2006



Coho Salmon Sport Fish Management Strategy

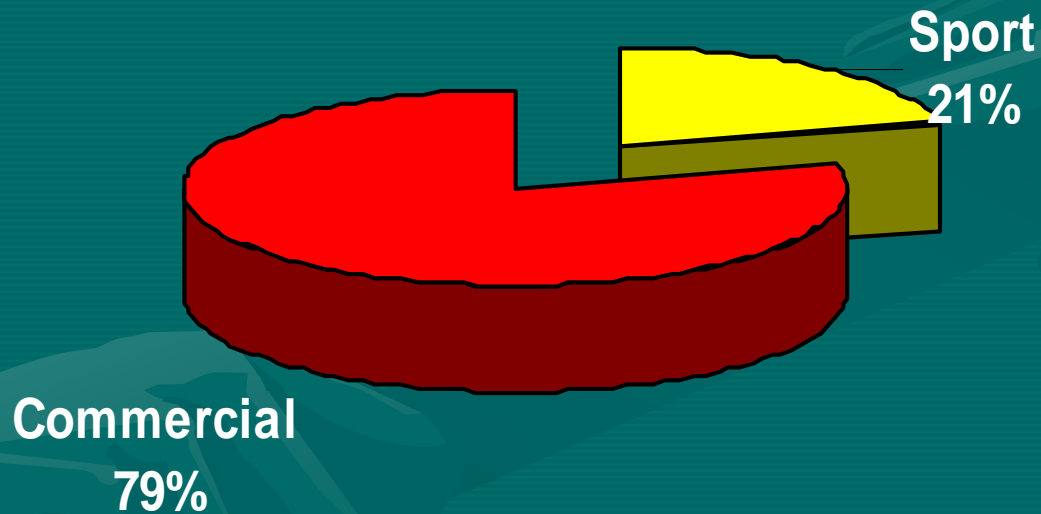
West Susitna

- Three Fish Bag & Possession
- No Area Restrictions

Knik Arm, WCI and East Susitna

- Two fish Bag & No Possession Limit
- Weekend Only
- Some Bait Restrictions
- Delayed Openings
- Area Closures
- Quit Fishing After Limit

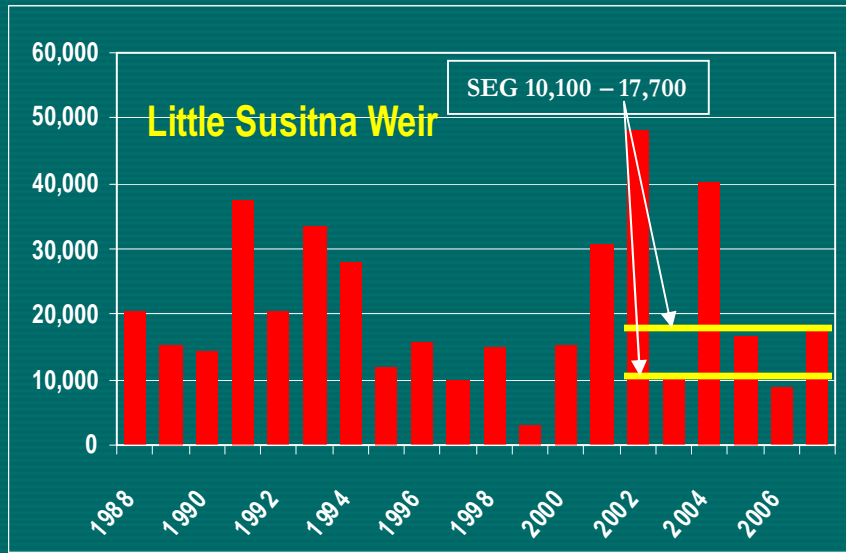
Historical Average Harvest of Northern Cook Inlet Coho Salmon By User Group, 1990-2006



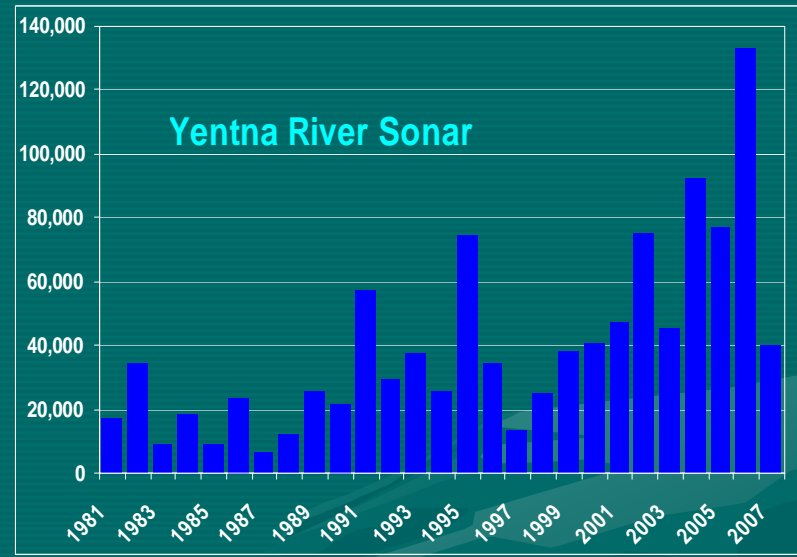
Coho Salmon Sport Fish Management Tools

- **Management Plans**
- **Commercial Catch**
- **Little Susitna and Deshka River Weirs and Yentna Sonar**
- **Angler Reports**
- **Angler Exit Surveys at Little Susitna**
- **Statewide Harvest Survey**
- **Post Season Foot Surveys**

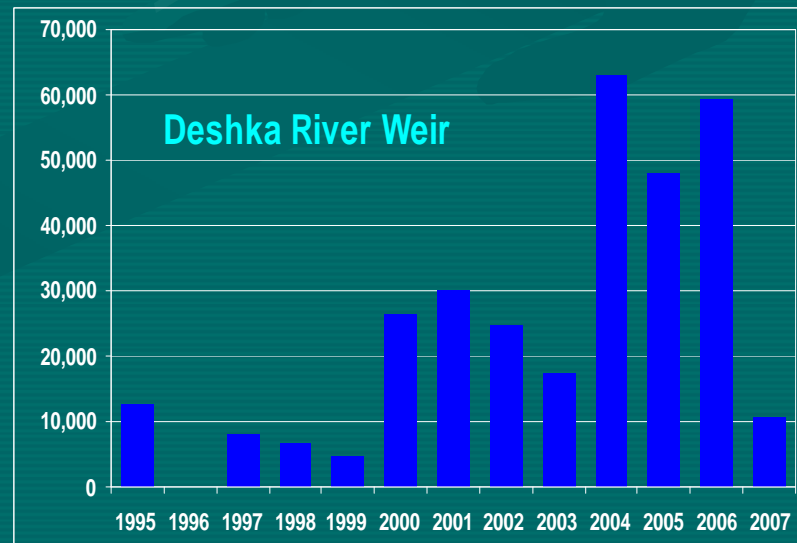
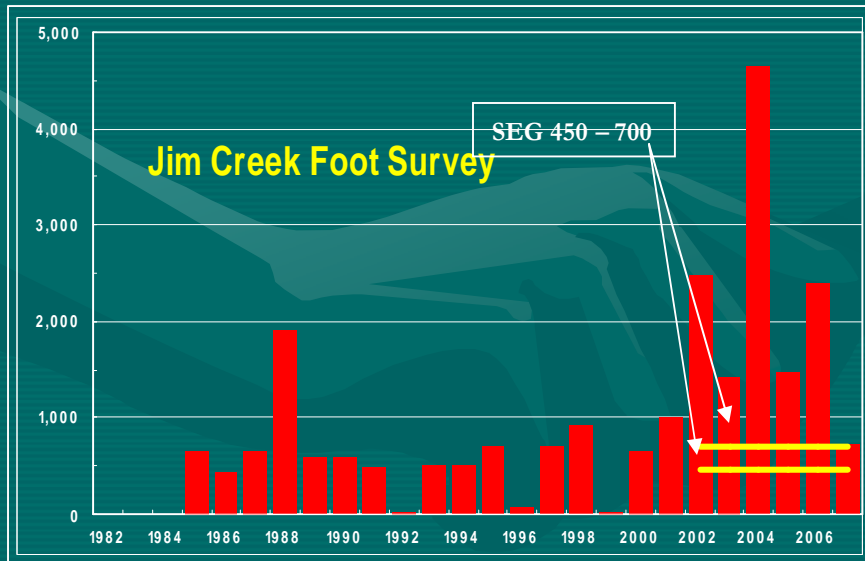
Figure 6. Coho Salmon Escapement Counts Into N&WCI Streams



Knik Arm

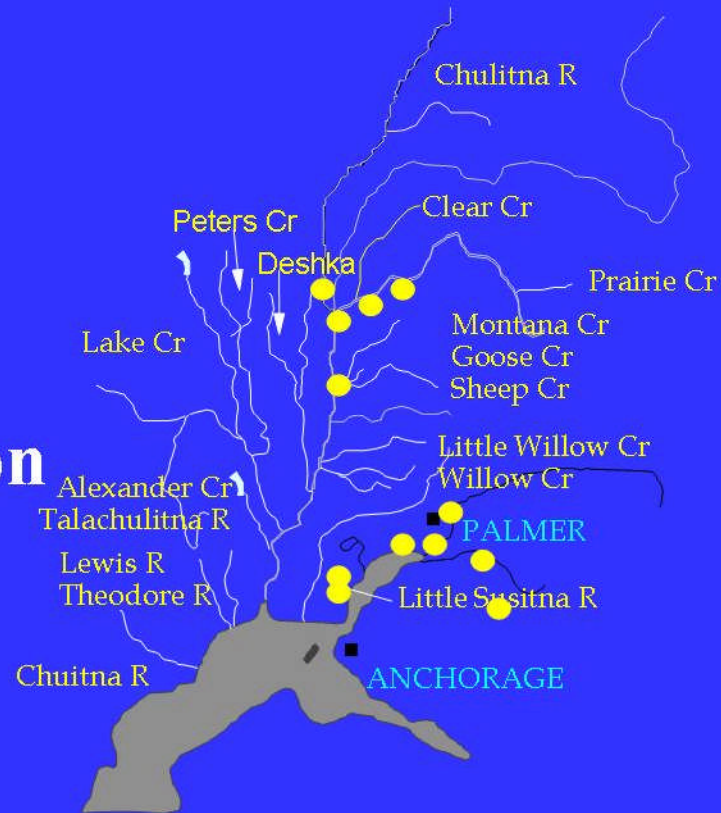


Susitna River



Coho Salmon Foot Survey Index Areas

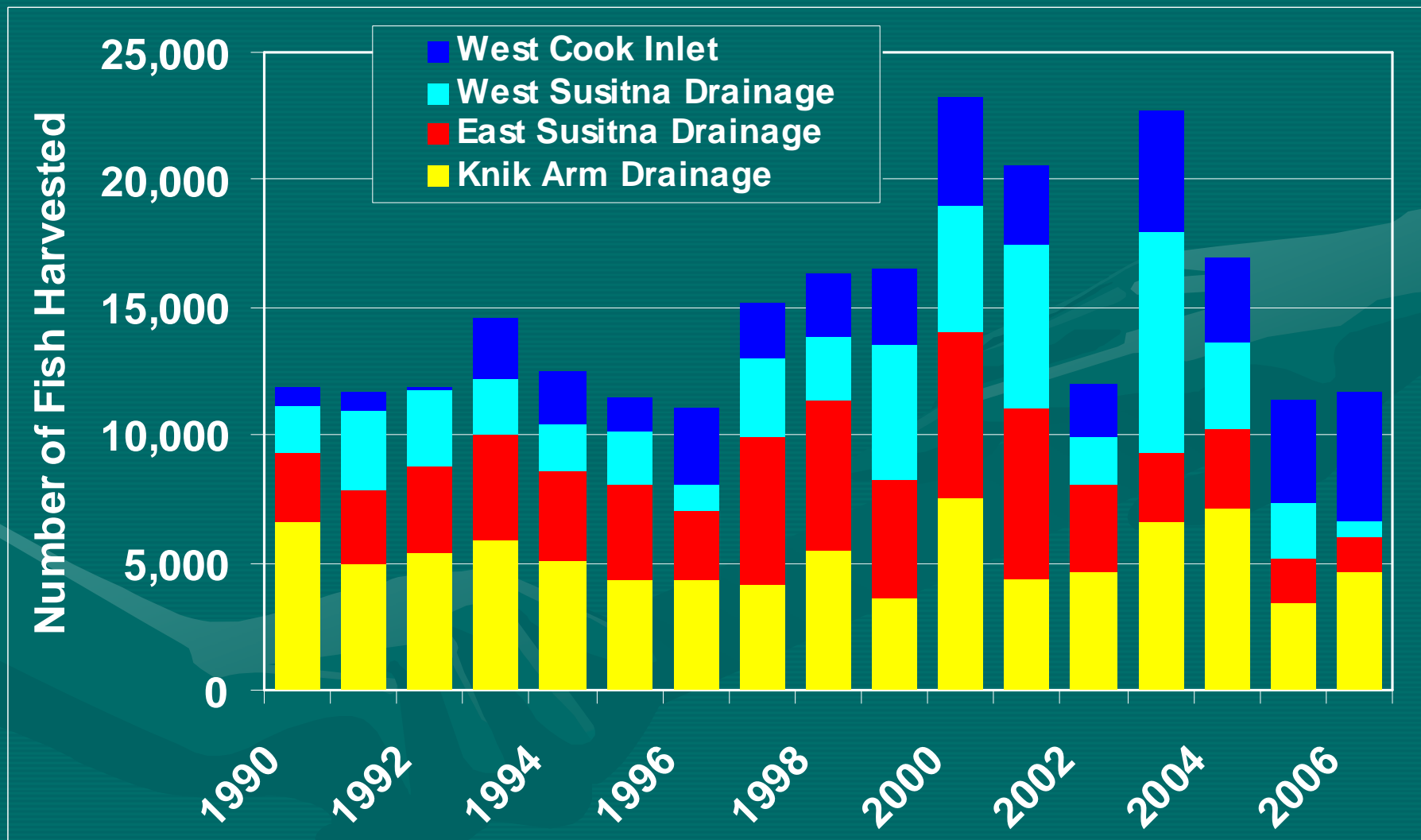
Stream Walk
Escapement
Index Systems
For Coho Salmon



08 Coho Salmon Sport Fish Outlook

- 2008 return is progeny of the 2004 and 2005 brood year which were both strong returns
- 2006 Flood may impact this year's return
- 08 Possible Management Actions

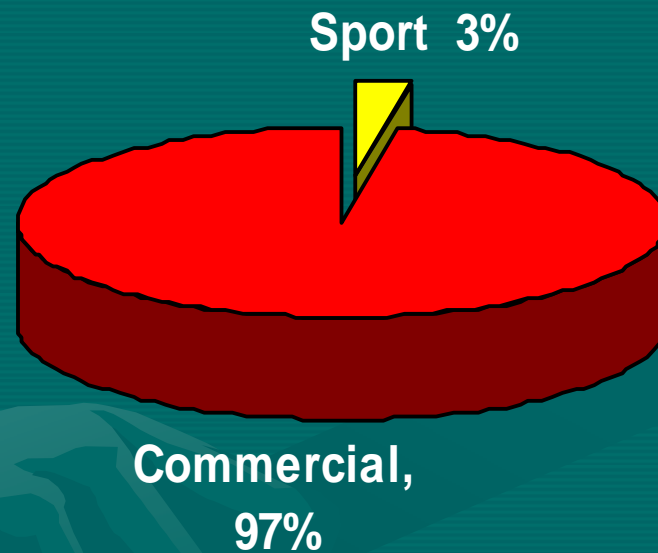
Figure 7. Sockeye Salmon Sport Harvest for Northern and Western Cook Inlet, 1990 - 2006



Sockeye Salmon Sport Fish Management Strategy

- Area Restrictions
- Sport Fish Closures on Fish Creek
- Weekend only Fishery
- Delayed Seasonal openings
- Three Fish Bag Limit

Historical Average Harvest of Northern Cook Inlet Sockeye Salmon By User Group , 1990 - 2006



Sockeye Salmon Sport Fish Management Tools

- Numerous Management Plans
- Commercial Catch & Offshore Test Fish Data
- Angler Reports
- Yentna Sonar
- Pre Season Projection
- Fish Creek Weir
- CIAA Susitna Drainage Weirs
- Mark Recapture Project
- Crescent River Sonar (Pre Season Projection)
- Stream Walks
- Statewide Harvest Survey

Figure 8. Escapement of Sockeye Salmon Into Fish Creek, 1968-2007

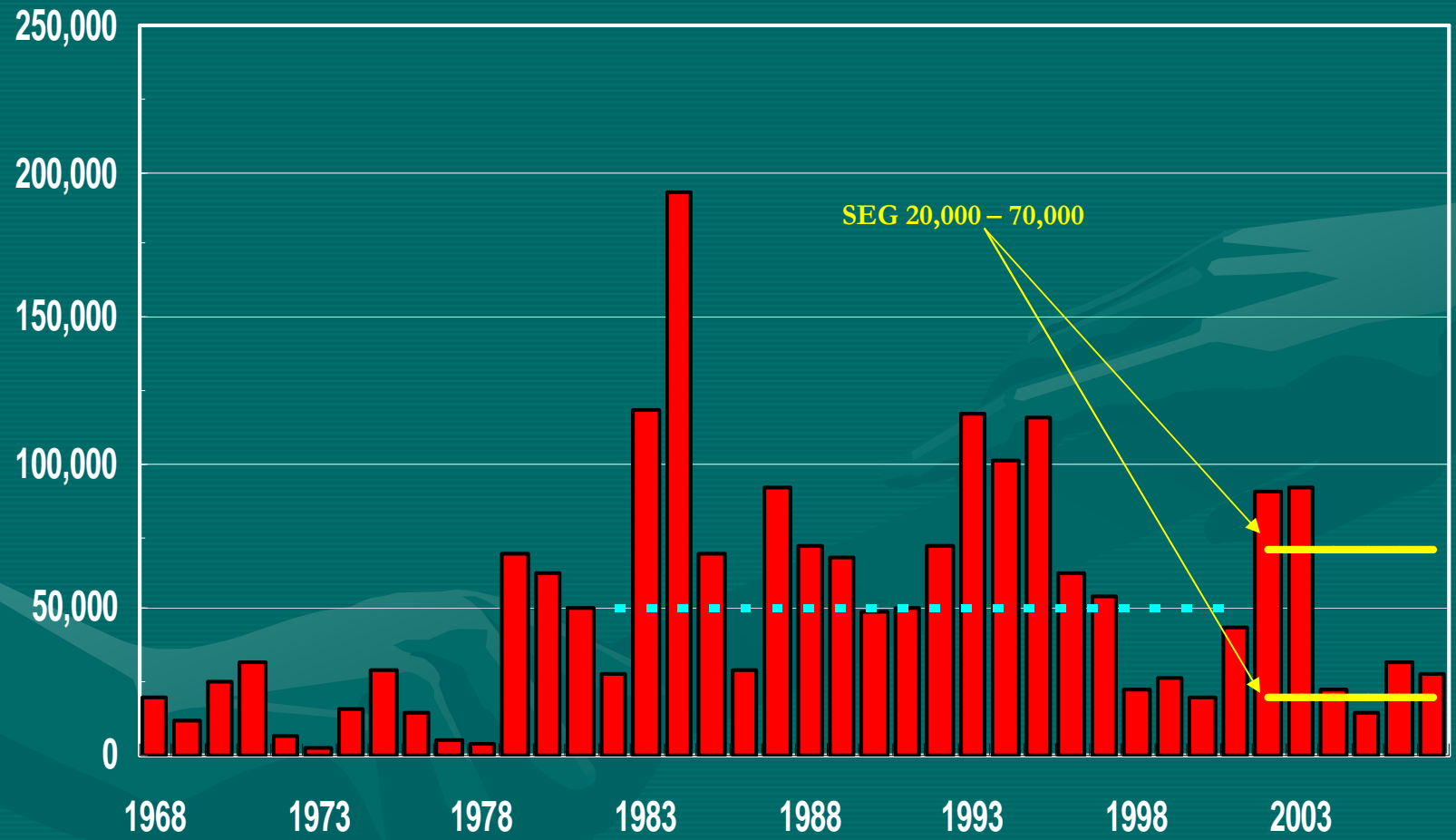


Figure 9. Escapement of Sockeye Salmon Into The Crescent River, 1979-2007

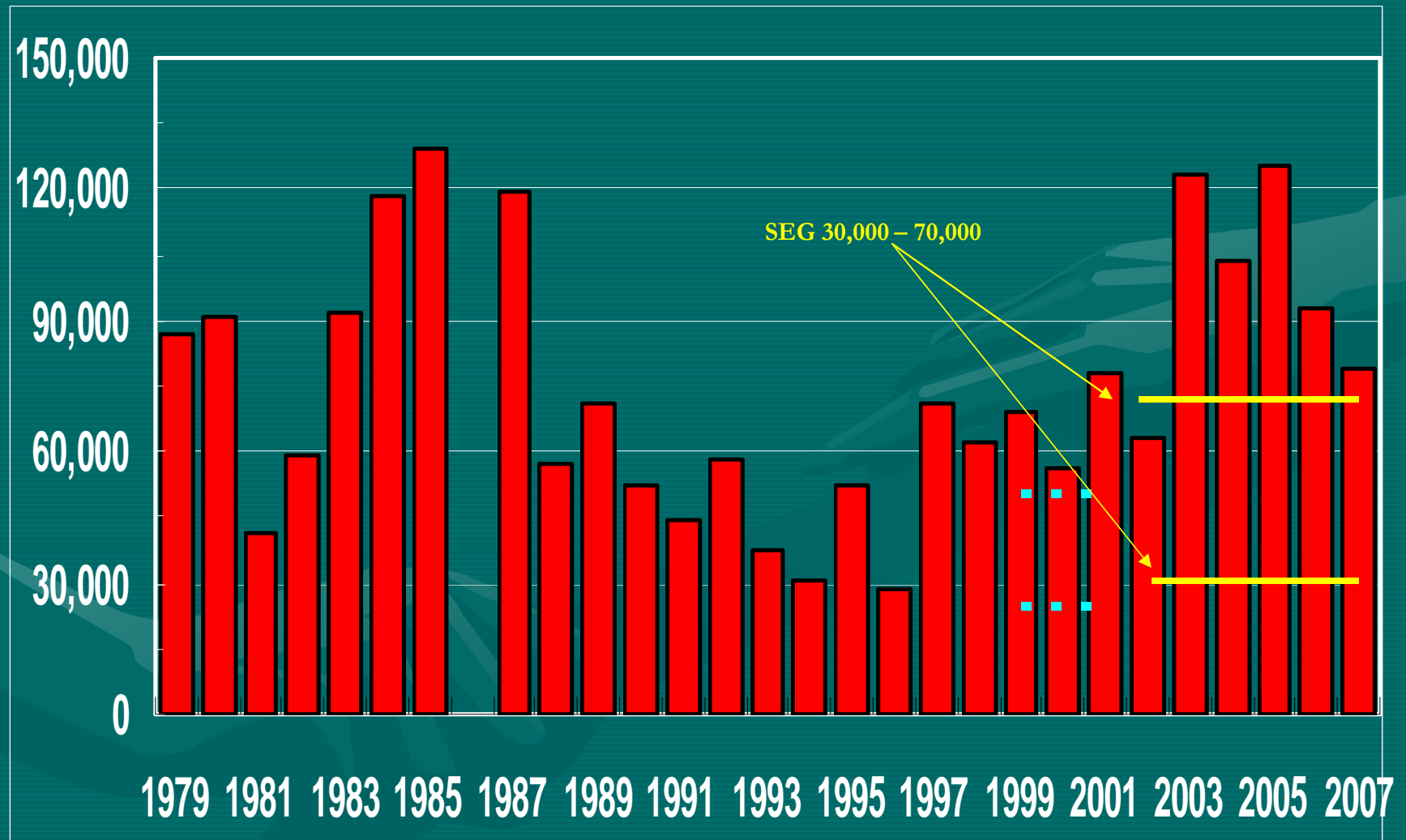
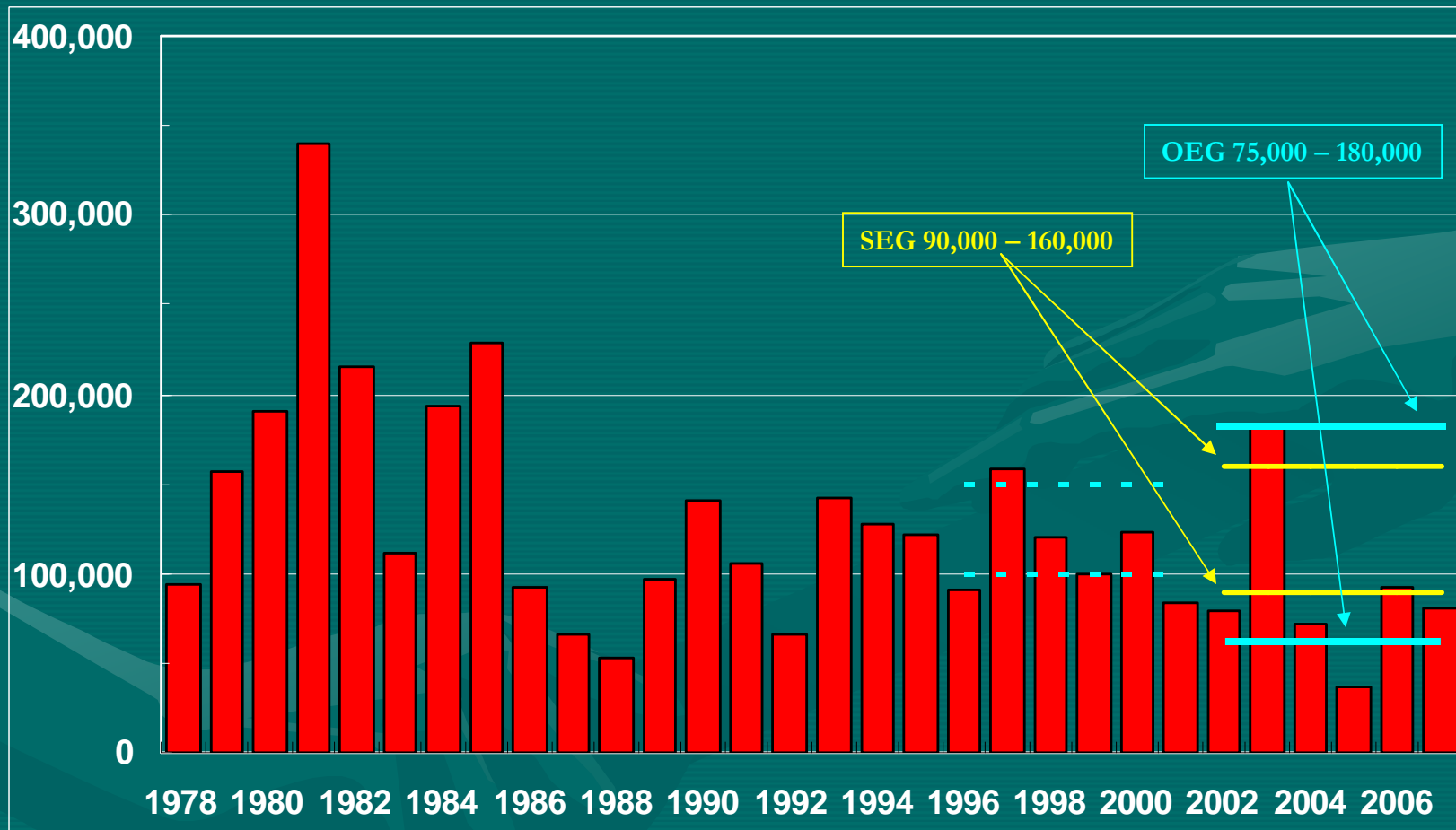


Figure 10. Escapement of Sockeye Salmon Into The Yentna River, 1978-2007



Recent Sport and Personal Use Actions For Sockeye Salmon

- A Decade of Restrictions in the Fish Creek PU Fishery
- Sport Fish Closures on Fish Creek
- 3 Years of Sockeye Salmon Sport Fish Non Retention Restrictions on the Susitna River

08 Sport Fish Sockeye Salmon Outlook

- Forecast
- Recent Performance
- Commercial Restrictions
- Sport Restrictions (Bendix Sonar)

Figure 11. Pink Salmon Sport Harvest for Northern and Western Cook Inlet, 1977- 2006

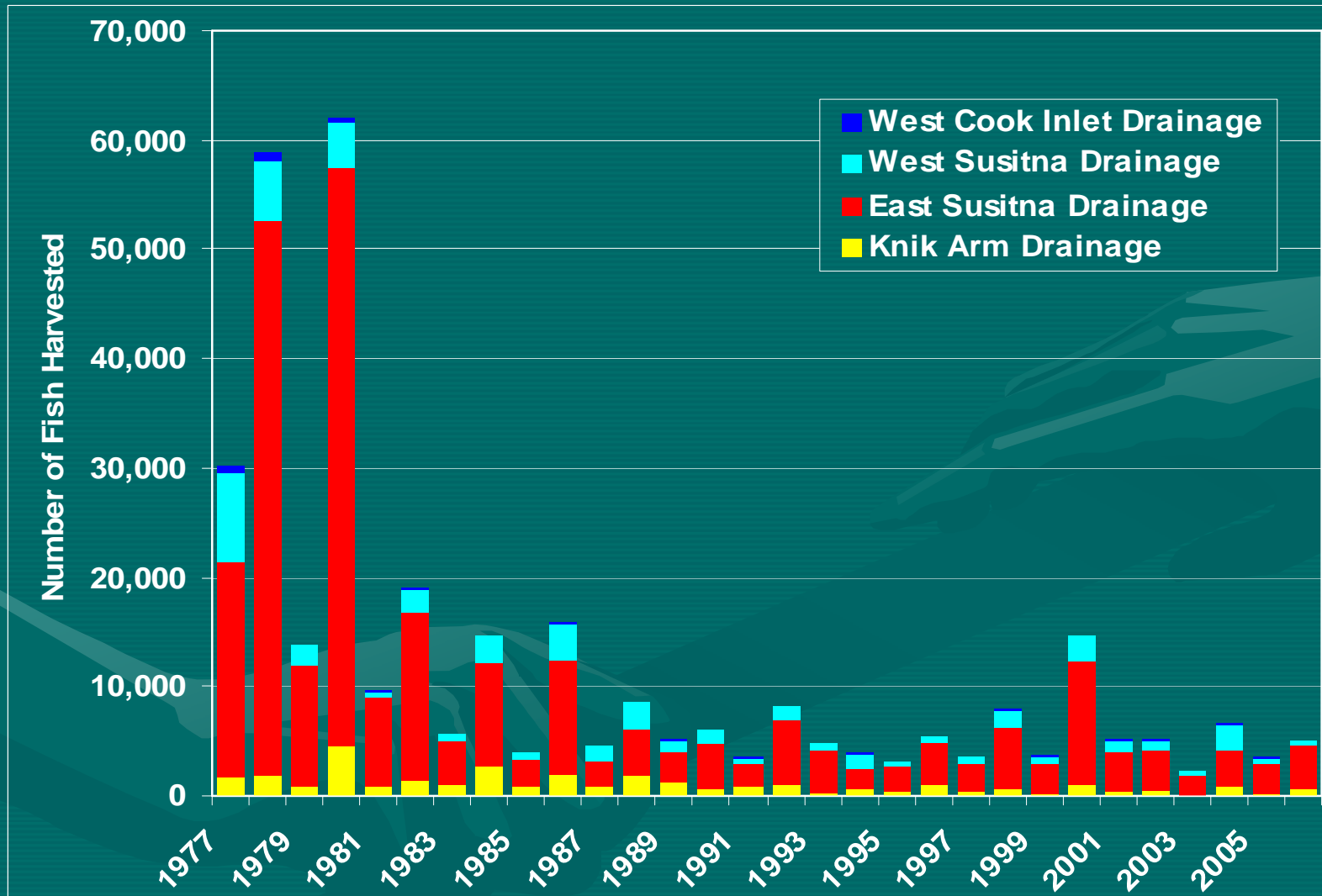
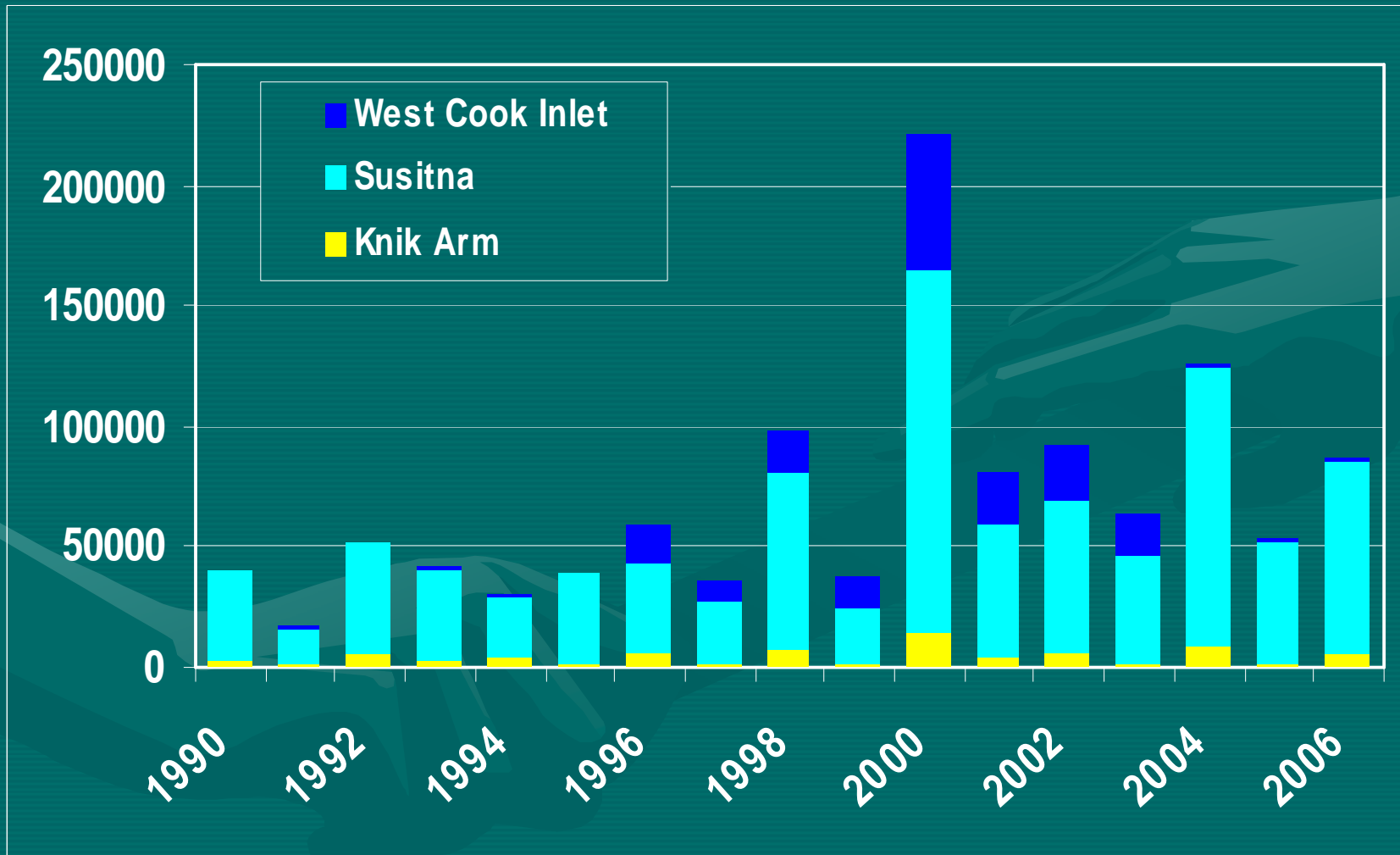


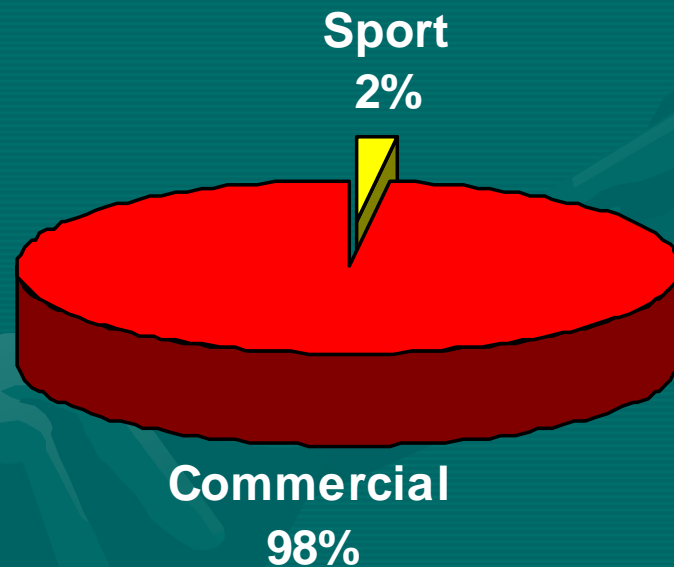
Figure 12. Pink Salmon Sport Catch for Northern and Western Cook Inlet, 1990 - 2006



Pink Salmon Sport Fish Management Strategy

- Three Fish Bag limit
- Some Area Restrictions

Historical Average Harvest of Northern Cook Inlet Pink Salmon By User Group, 1990 - 2006



Sport Fish Pink Salmon Management Tools

- **Commercial Catch Information**
- **Statewide Harvest Survey**
- **Angler Reports**
- **Deshka Weir**

Figure 13. Pink Salmon Escapement Into the Deshka River, 1995 - 2007



08 Pink Salmon Sport Fish Outlook

- Even Year Returns are Usually Large
- 06 Flood May Have Impact on 08 Return

Figure 14. Chum Salmon Sport Harvest for Northern and Western Cook Inlet, 1977- 2006

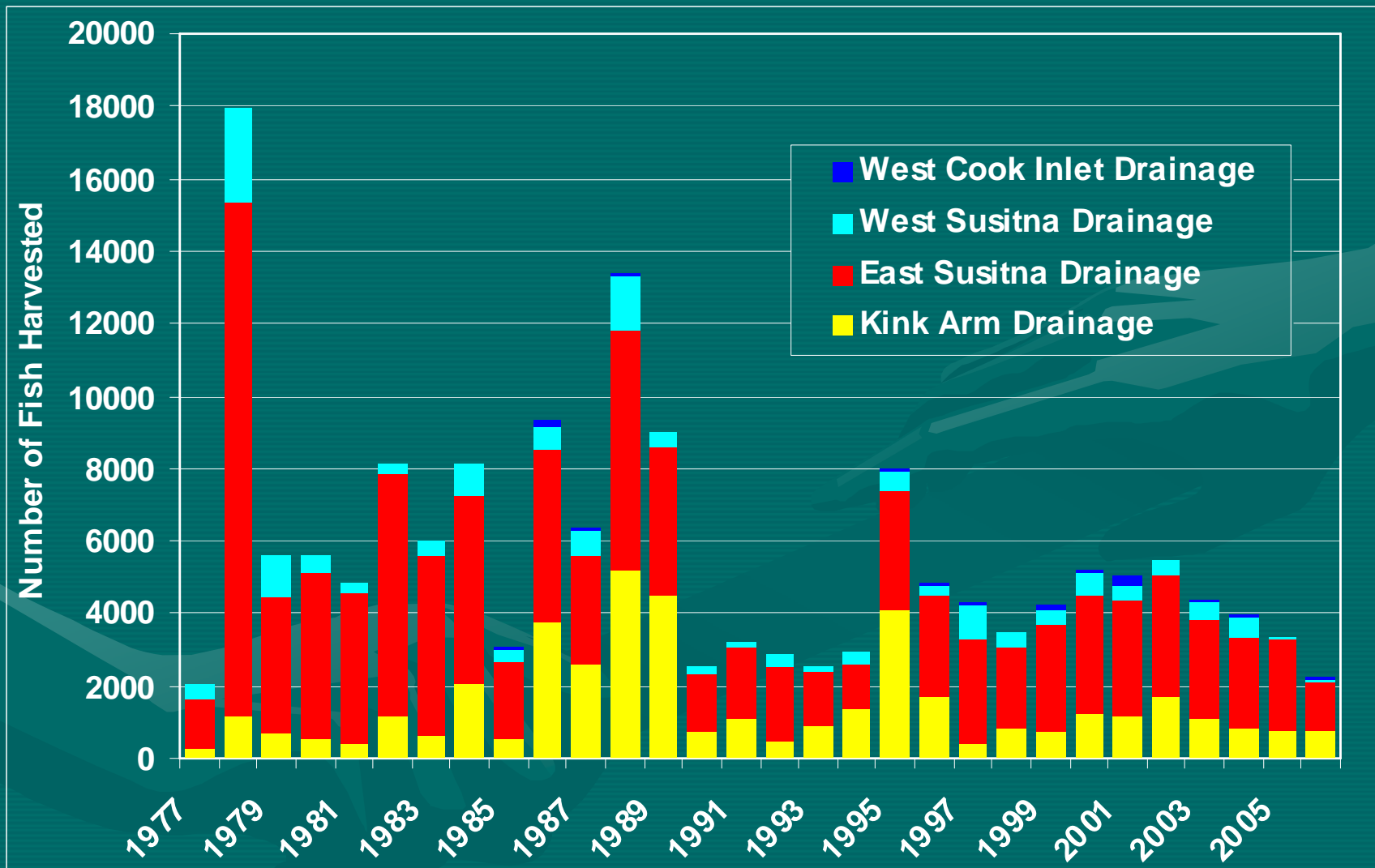
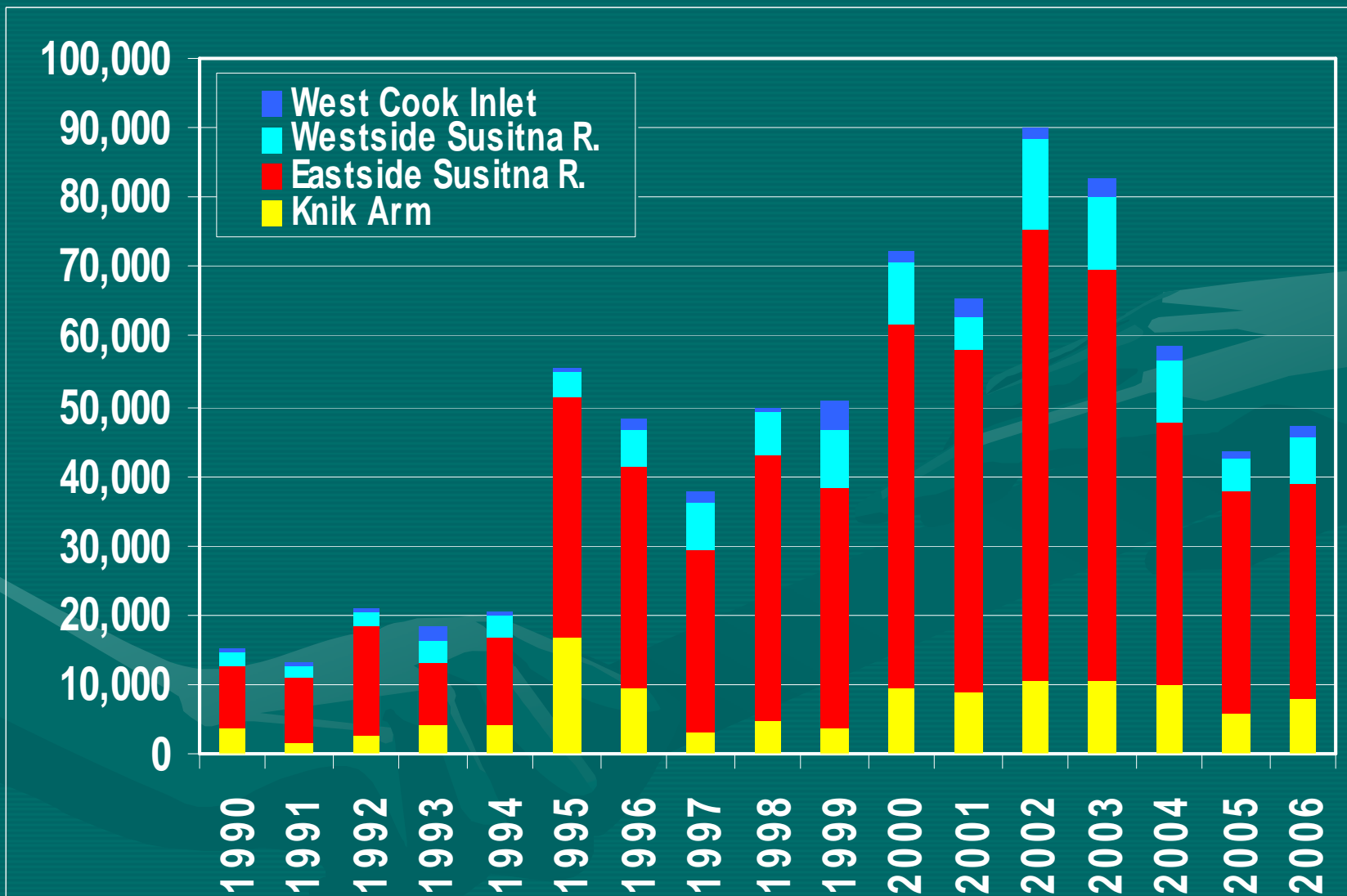


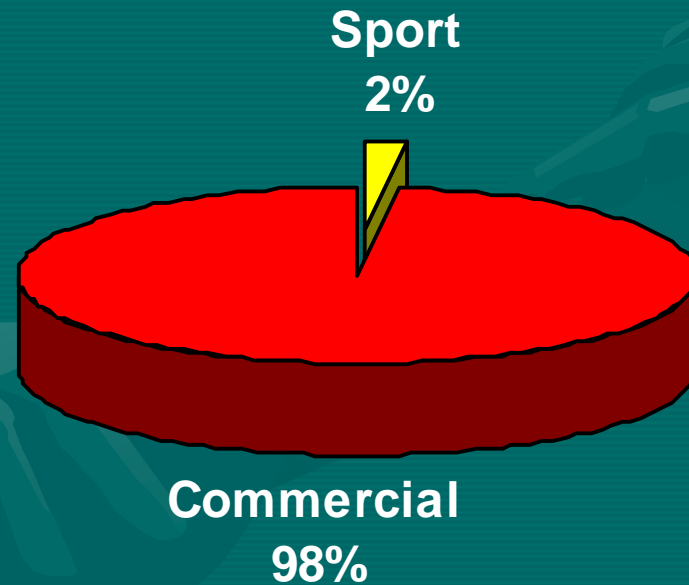
Figure 15. Chum Salmon Sport Catch for Northern and Western Cook Inlet, 1990 - 2006



Chum Salmon Sport Fish Management Strategy

- Three fish Bag limit
- No Directed Restrictions

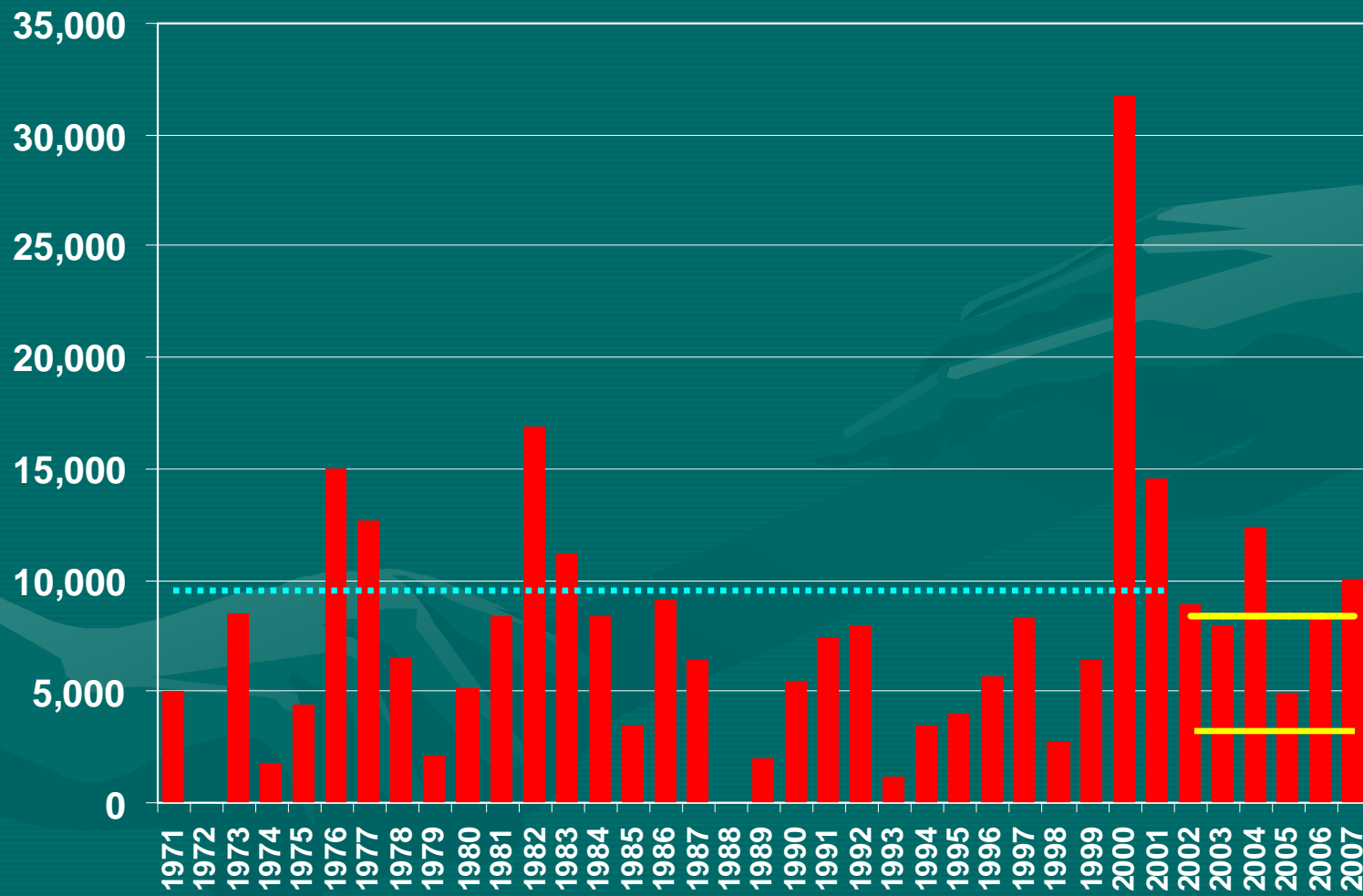
Historical Average Harvest of Northern Cook Inlet Chum Salmon By User Group, 1977-2005



Sport Fish Chum Salmon Management Tools

- **Management Plans**
- **Statewide Harvest Survey**
- **Commercial Catch Information**
- **Angler Reports**
- **Lower West Cook Inlet Only Chum Index Area**

Figure 14. Chum Salmon Escapement (Single Aerial Survey) Into Clearwater Creek in Lower Cook Inlet (Chinitna Bay) 1971 - 2007



08 Chum Salmon Sport Fish Outlook

- Production Level down from the late 70's to Mid 80's
- No Restriction

Conclusion

- **Sport Fishing Effort Has Decreased in the Northern Cook Inlet**
- **Sport Harvest of Chinook, Sockeye, Chum and Pink salmon have decreased**
- **Coho Salmon Returns Appear to be Strong**
- **Chinook Returns Appear to be Below Average**
- **06 Flood May Impact Pink and Coho Returns in 08 and King Salmon Production in Future**

The End