

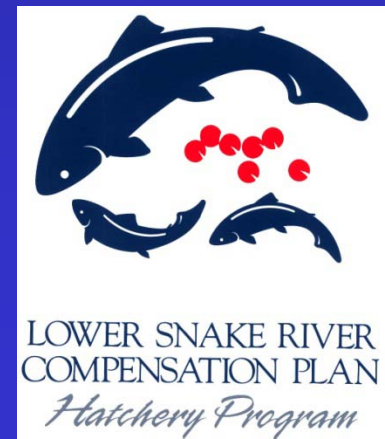
Spring Chinook Salmon

Dworshak National Fish Hatchery

Clearwater River, Idaho

Howard Burge
Ray Jones

U.S. Fish and Wildlife Service
Idaho Fishery Resource Office
Ahsahka, Idaho



Washington

Idaho

Oregon



Program Goals



- 9,135 adults above Lower Granite Dam
- Harvest of 36,500 in ocean, Columbia River, and Lower Snake River fisheries
- Original production goal of 1.4 mil smolts
- Current production goal of 1.05 mil smolts
- changed in 1996

Management Objectives

- Provide sport & tribal fishing opportunities in the Lower Clearwater River
- Return adequate broodstock to meet production needs
- Minimize impacts to natural populations
- Assist other programs in the Clearwater basin



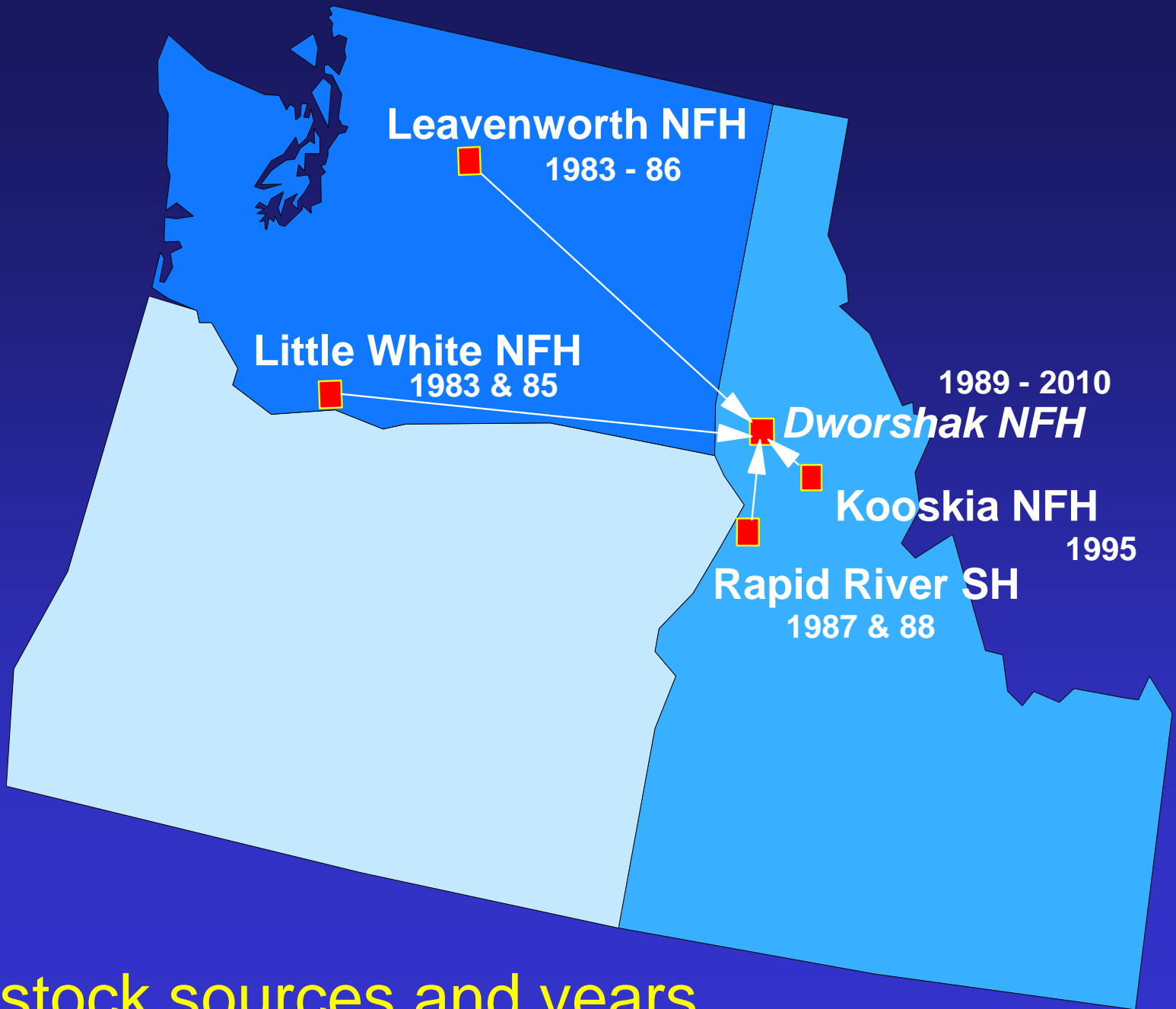
M & E Objectives



- Evaluate the effectiveness of the program so that it can be managed adaptively
- Determine the total adult return to assess if the program is meeting its mitigation goals
- Document and communicate programs success at meeting its program and management goals
- Coordinate hatchery and R,M & E activities

Lewiston Dam 1929-1972





Broodstock sources and years

Dworshak Spring Chinook Broodstock

- 50:50 ratio of males to females
- Approximately 65% of returning adults are 2-ocean
- Average size of a 2-ocean adult is 29 inches
- Average pre-spawn mortality (1995-2010) 3.1%
- Chinook arrive ~ May - August
- Spawning ~ late Aug - early Sept

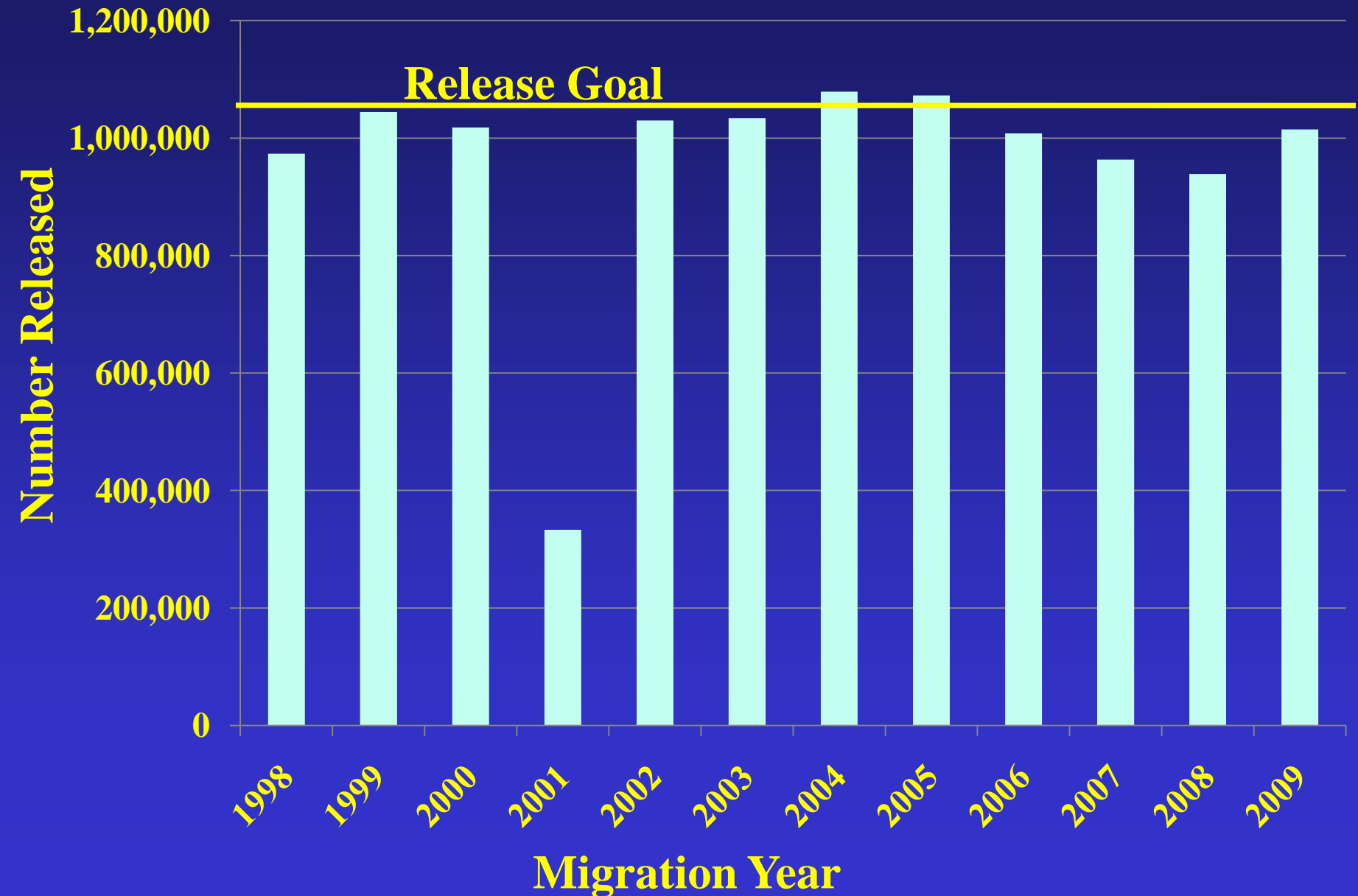


Juvenile Performance

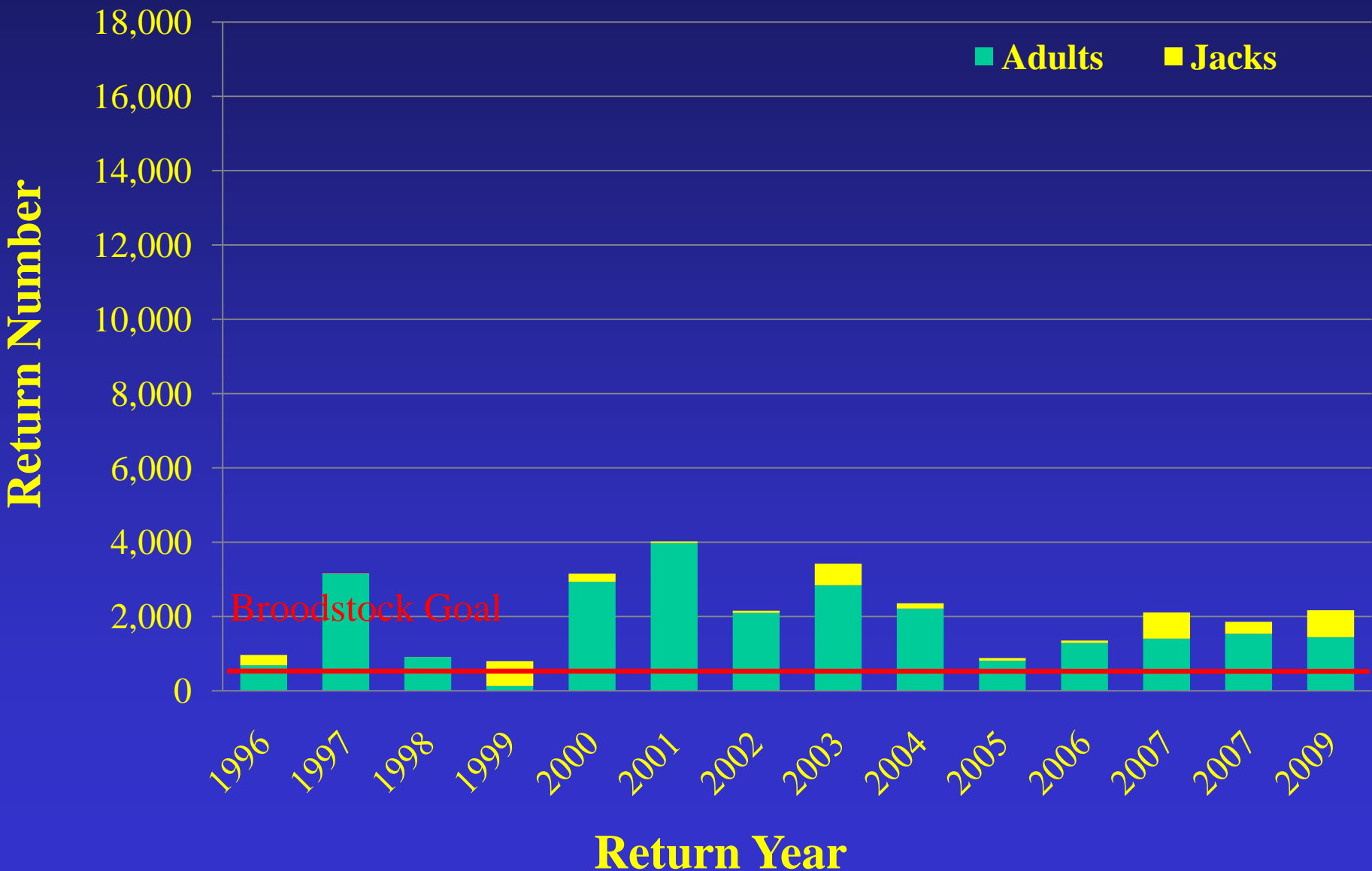
- Rearing ~ approx. 20 months
- Chinook direct released
~ late March
- Egg-to-smolt survival, 1998-2009 avg. 83.2%
- Smolt release to Lower Granite Dam survival,
1998-2009 avg. 79.6%



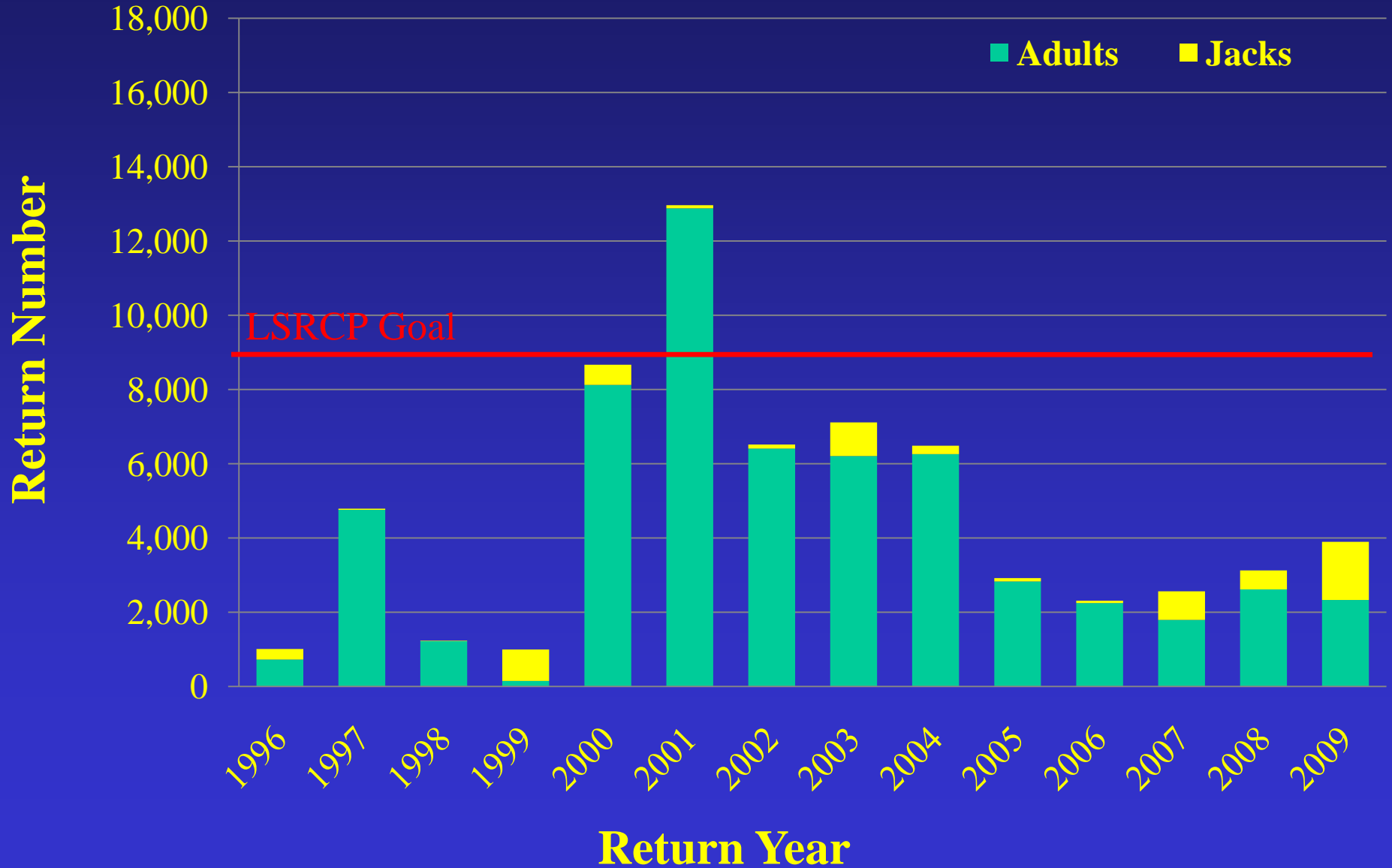
Dworshak NFH Smolt Releases



Spring Chinook Returns to Dworshak NFH

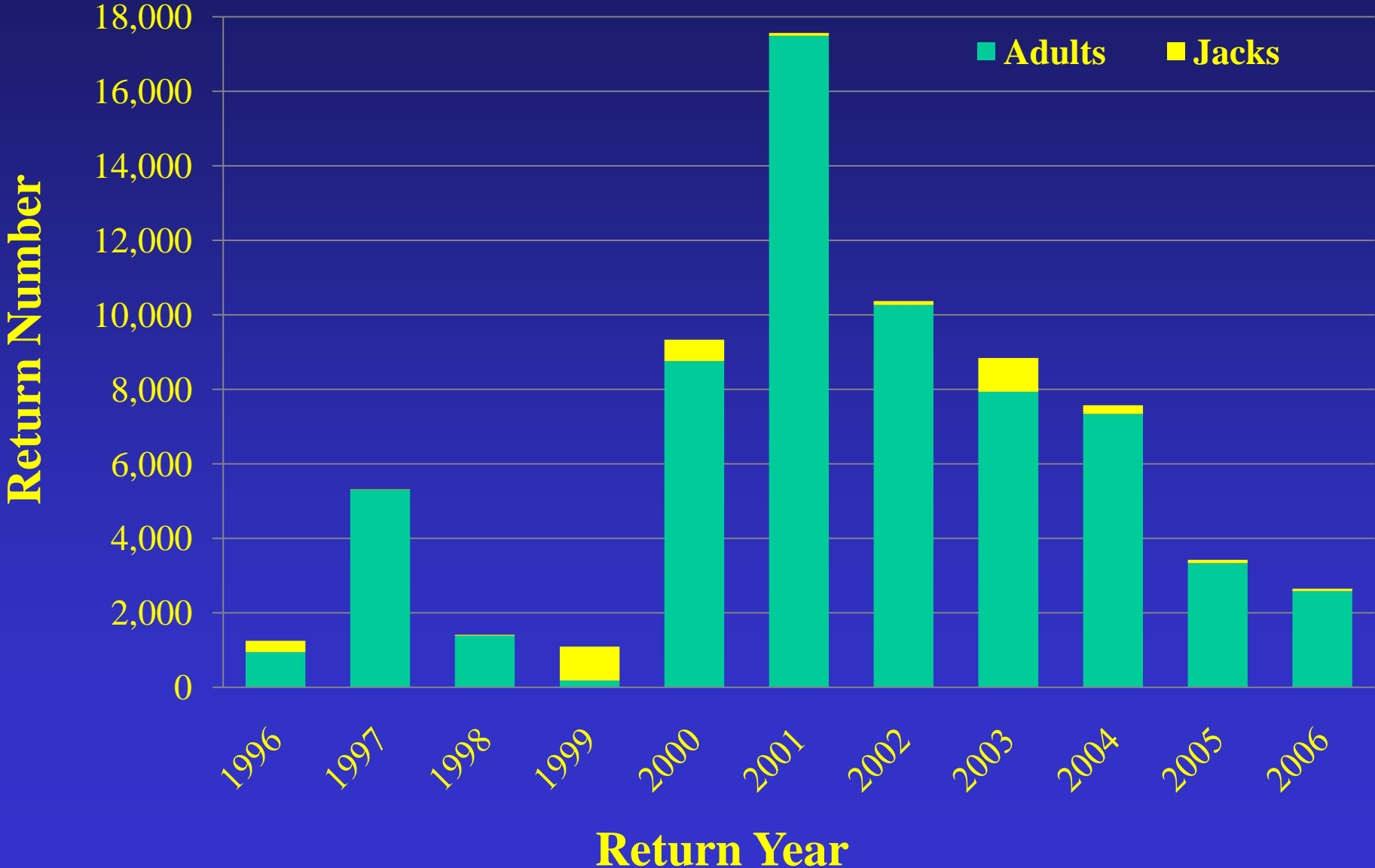


Dworshak Spring Chinook Returns above Lower Granite Dam

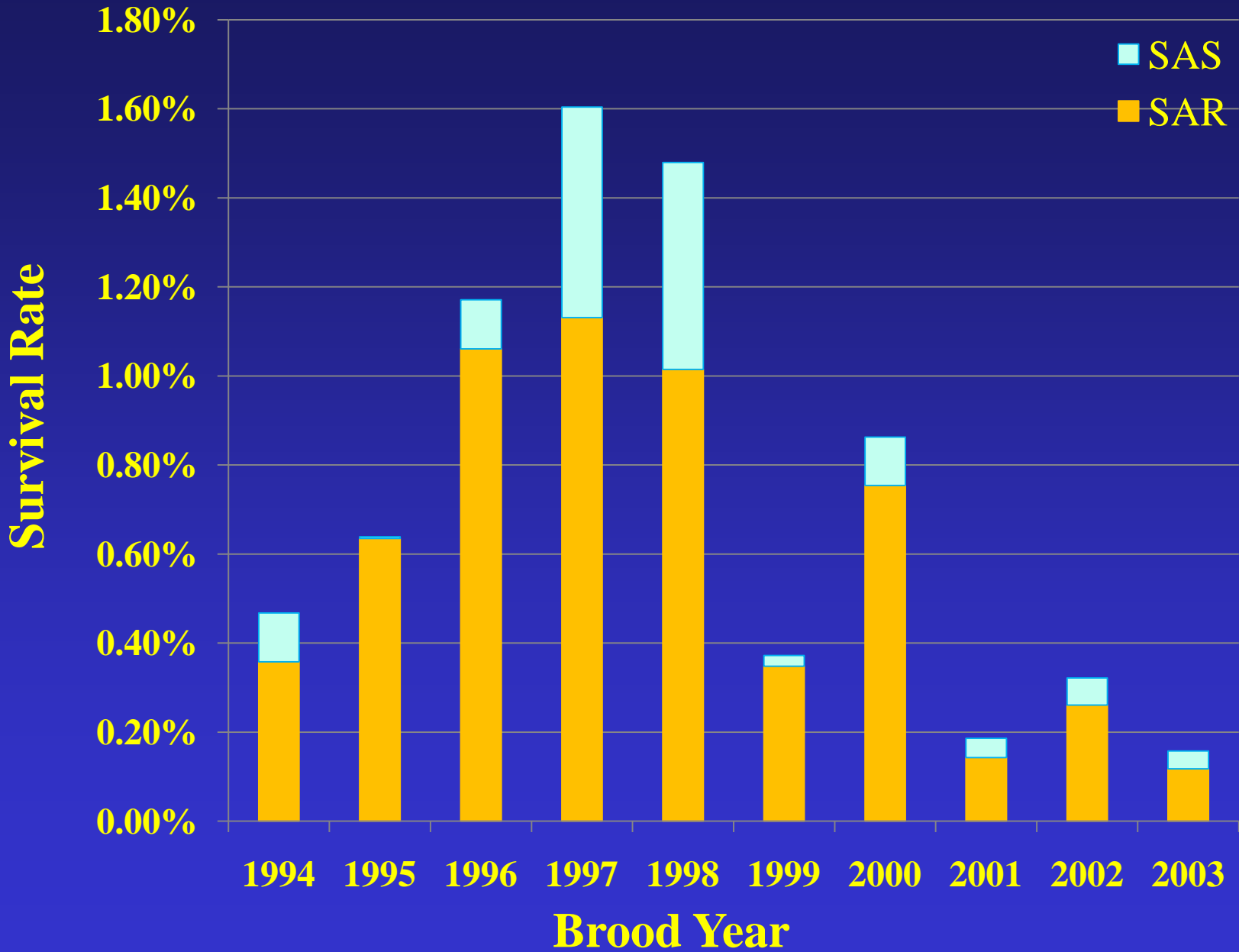


Columbia River Harvest Goal = 36,500 + 9,135 Return above Granite

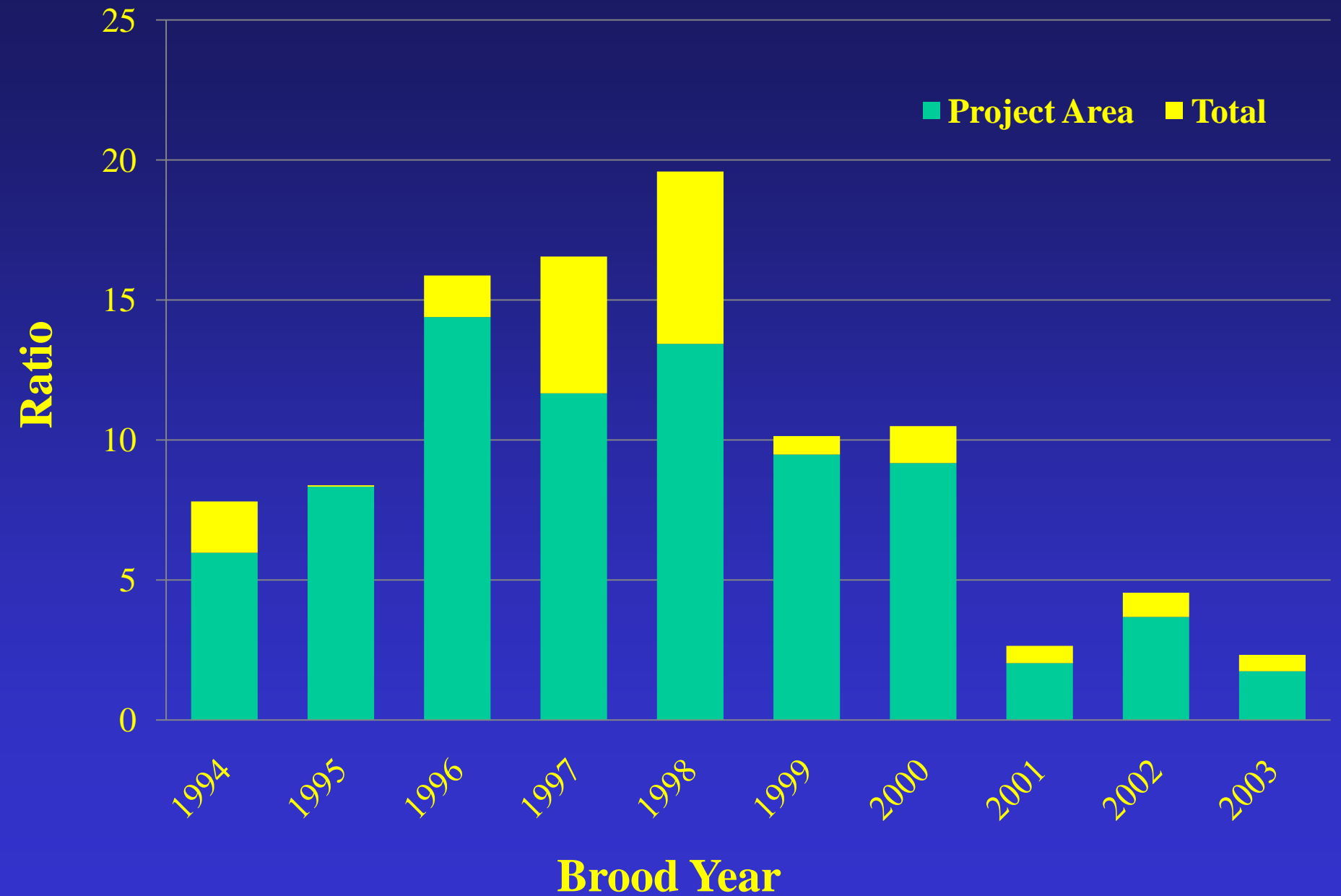
Dworshak Spring Chinook Returns to the Columbia River



Dworshak Spring Chinook Adult Survival



Dworshak Progeny : Parent Ratio



Dworshak Spring Chinook Salmon Strays

Columbia & Snake rivers



Fish Health

- BKD culling - late 80s
- 100% sampling of adult females
- Erythromycin injections of females prior to spawning
- ELISA monitoring of juveniles
- Treatment of juveniles as warranted



Dworshak Spring Chinook Salmon Harvest Ocean & below Bonneville Dam



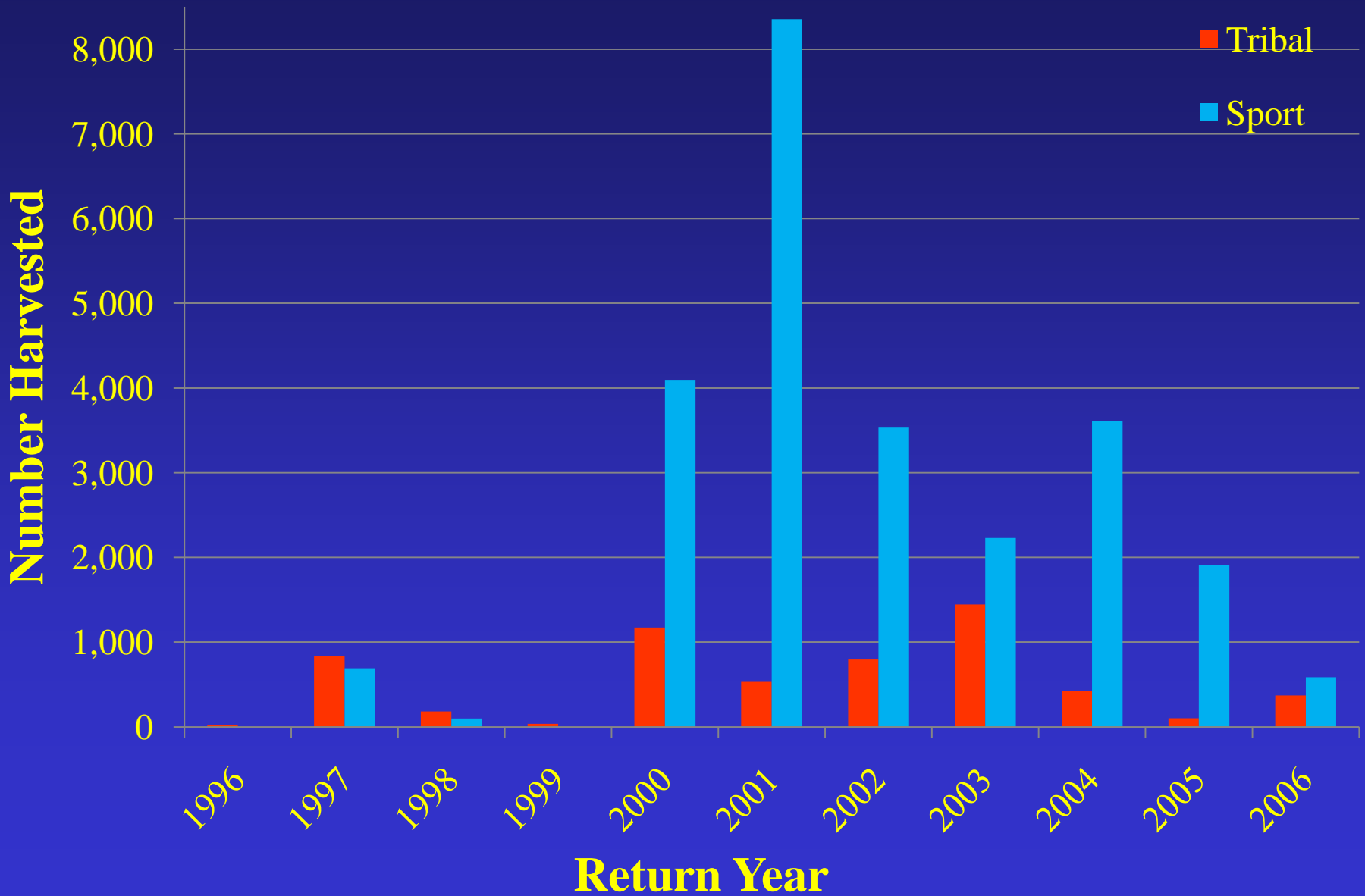
Dworshak Spring Chinook Salmon Harvest above Bonneville Dam Sport & Tribal



Dworshak Spring Chinook Salmon Harvest Snake River mainstem



Dworshak Spring Chinook Salmon Harvest Clearwater River Sport & Tribal



Angler Effort NF Clearwater to Lewiston



Dworshak NFH Spring Chinook Release Year 2006 Economic Impact

Commercial

Dock Sales

\$72,817

Job Income

\$207,051

Angling Retail

\$2,399,946

Angling Days

31, 842

Industrial

\$3,817,704

Job Income

\$1,210,315

Fed Tax

\$170,472

State and Local Tax

\$152,734

Total

\$8,031,038

Recreational

Summary



- BKD under control
- Change in size and time of release reduced straying
- Sport fishery - 13 out of the last 14 years
- Tribal fishery - 21 out of the last 24 years
- Well below the downriver harvest goal

HSRG Recommendations



- Coordination of all salmon production programs in the Clearwater basin
- Continue implementation of successful BKD risk management strategies
- Improve water supply at the facility to address disease and temperature

HRT Recommendations



- Improve water supply
- Maintain a locally-adapted stock
- Other facility improvements
- Continue to improve assessment and tagging programs
- Improve documentation of program

