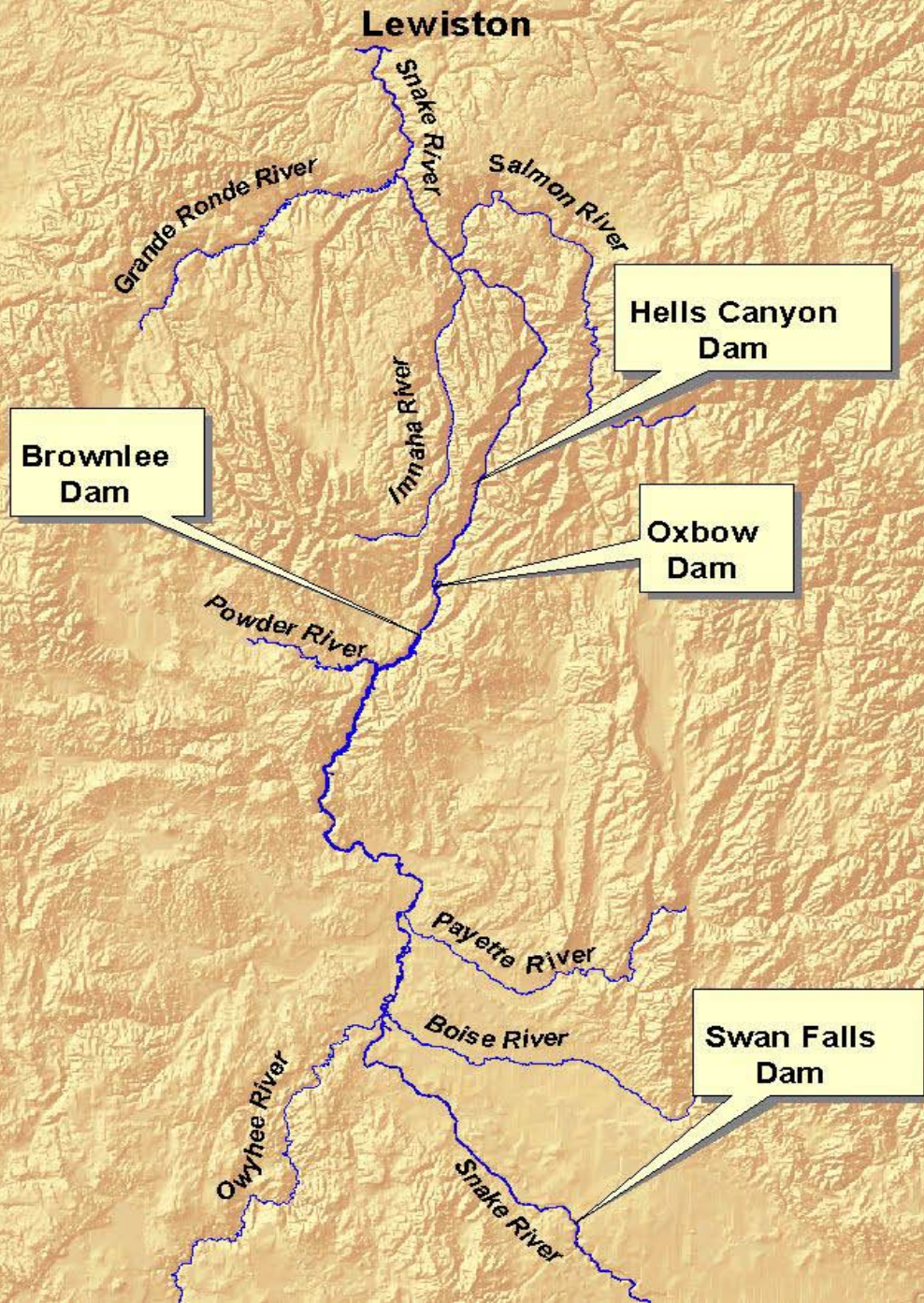


Non-native Fisheries Mitigation / Protection Brownlee Reservoir

James A. Chandler
Fisheries Program Supervisor



Brownlee Reservoir

- Storage Reservoir – 1 MAF of Active Storage
- Columbia Basin Flood Control Reservoir
- Anadromous fish flow augmentation
- Snake Basin upstream is 73,000 square miles – influences thermal and nutrient regimes
- Created large area of suitable habitat for warm water fisheries.

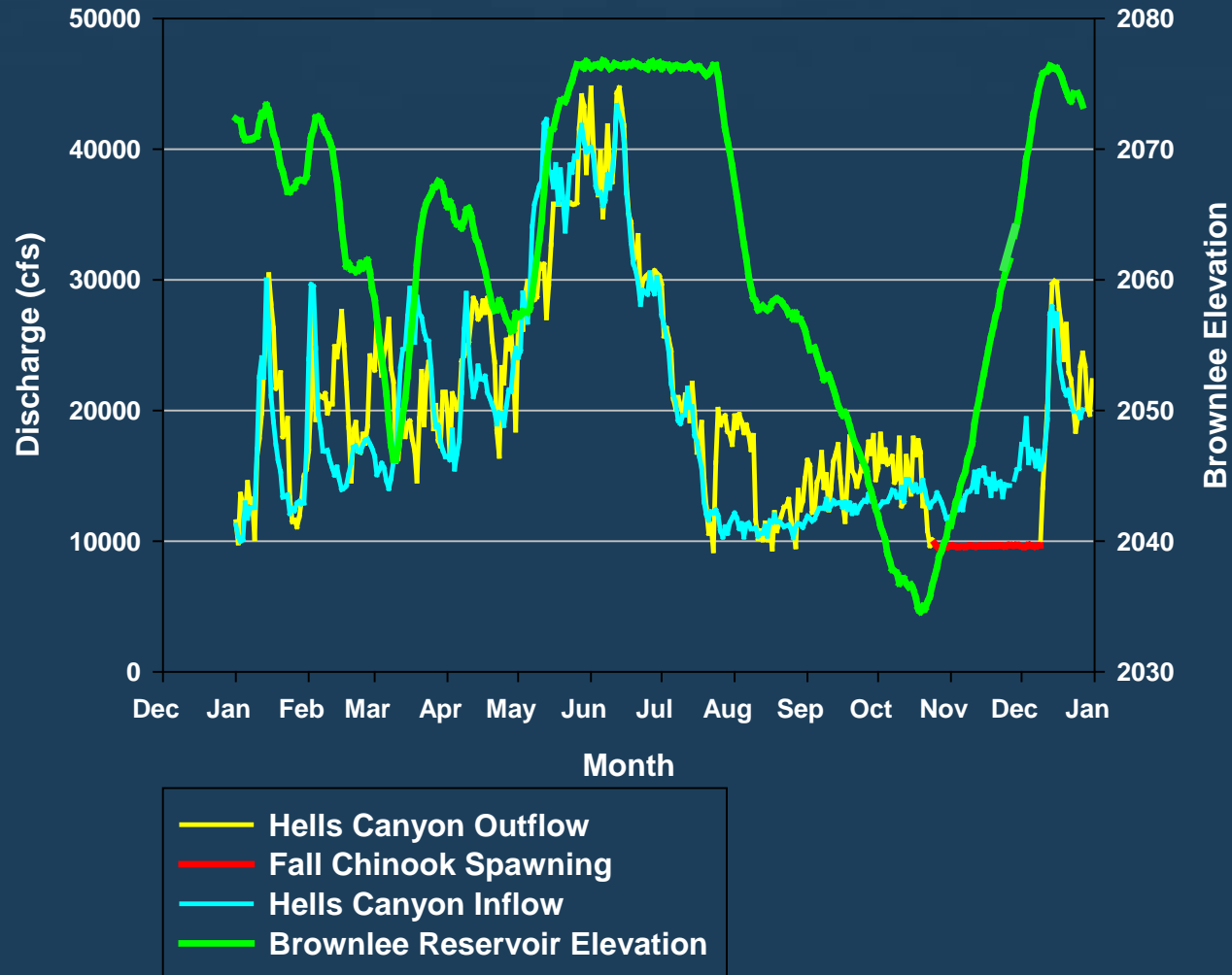


Water Level Fluctuations

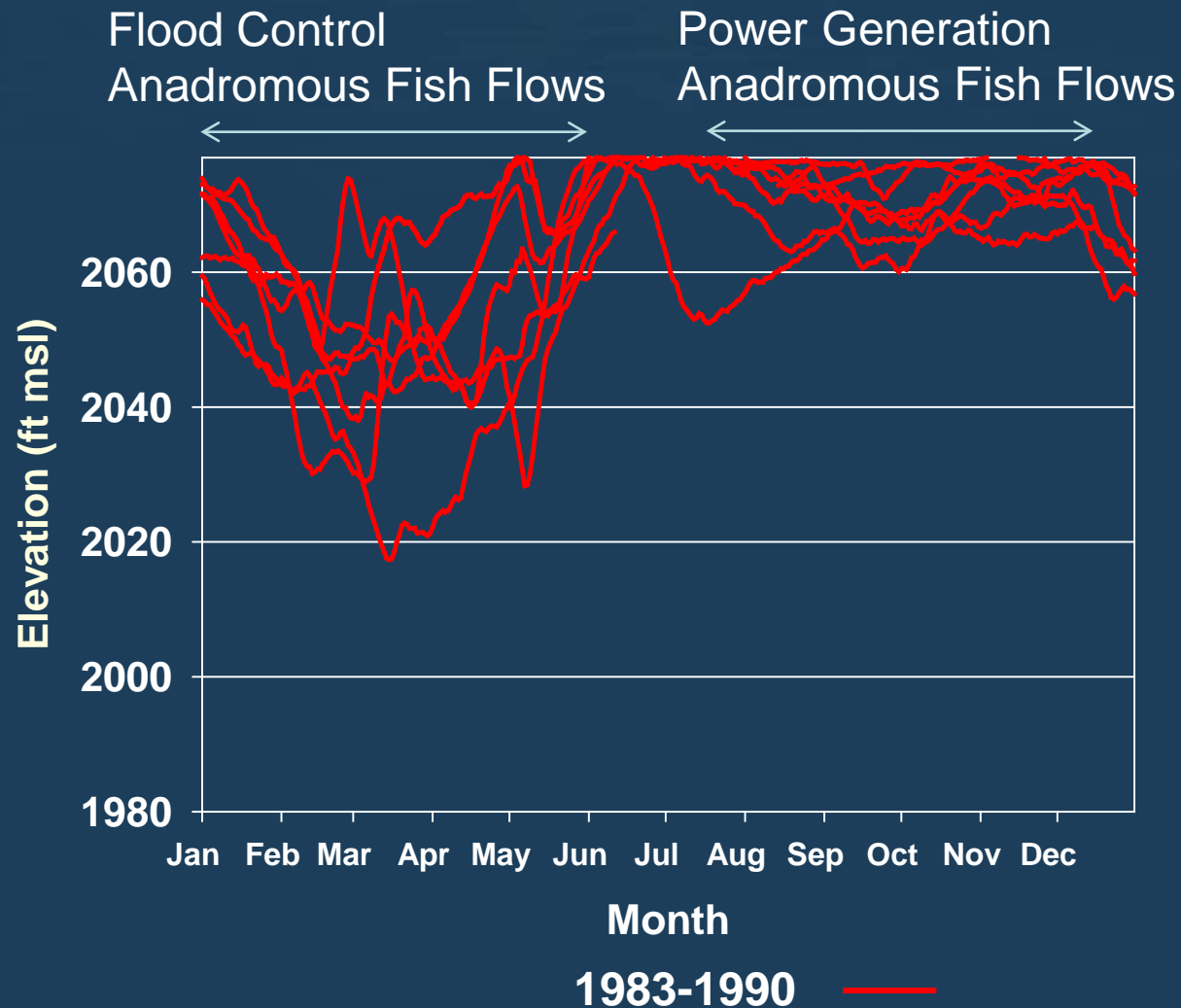
- **USACE Flood Control Requirements**
- **Anadromous Flow Augmentation**
 - **Shaping Federal Water**
 - **Contributing Brownlee Water**
- **IPC Fall Chinook Salmon Flow Program**

IPC Fall Chinook Salmon Flow Plan

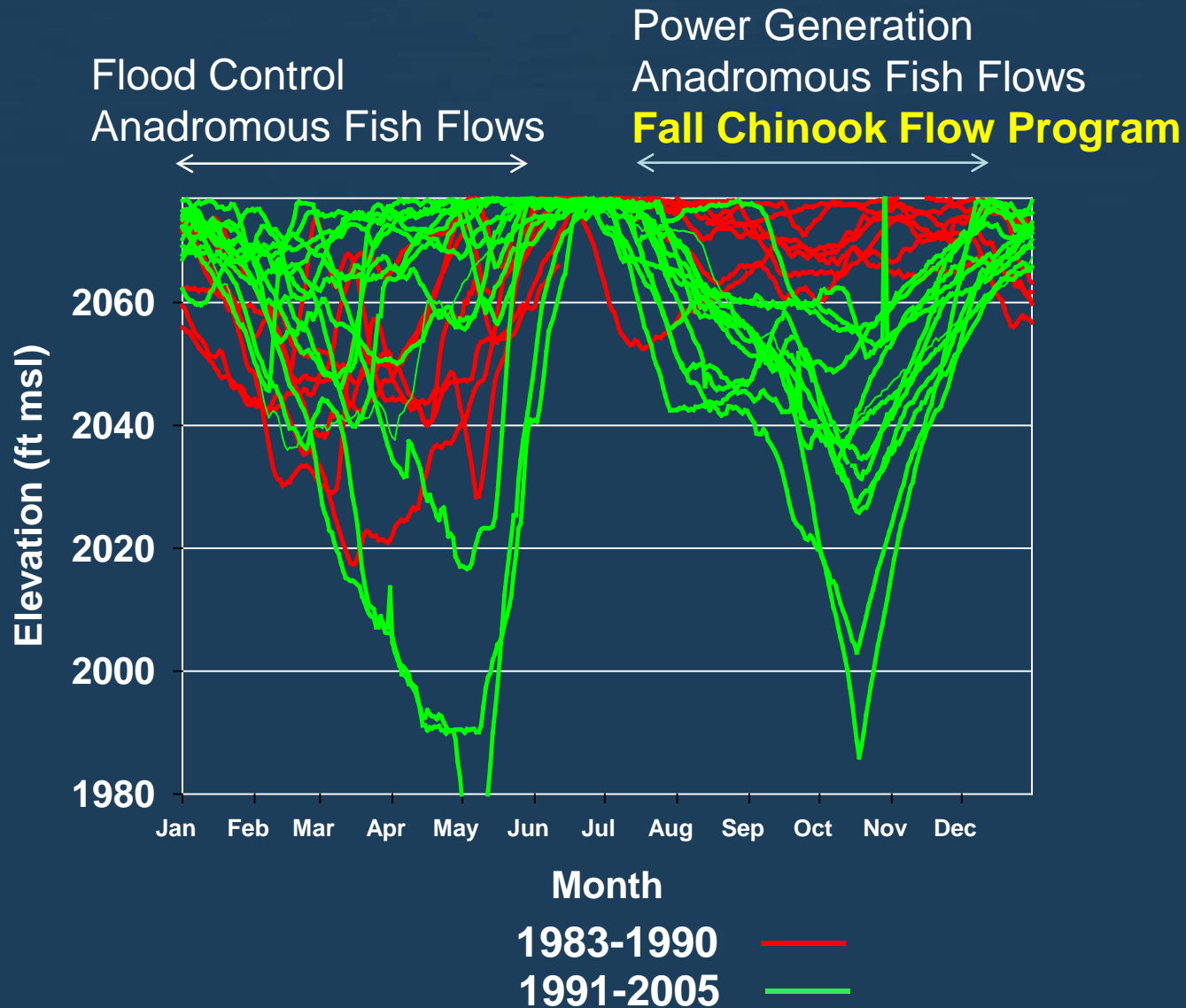
Hells Canyon Outflow
1995



Pre 1991 - Reservoir Fluctuations



Post 1991 - Reservoir Fluctuations



Fishes of the HCC

Centrarchids (Sunfish Family) – 7 species



Smallmouth Bass

White crappie
Black crappie



Fishes of the HCC

Ictalurids (Catfish Family) – 5 species

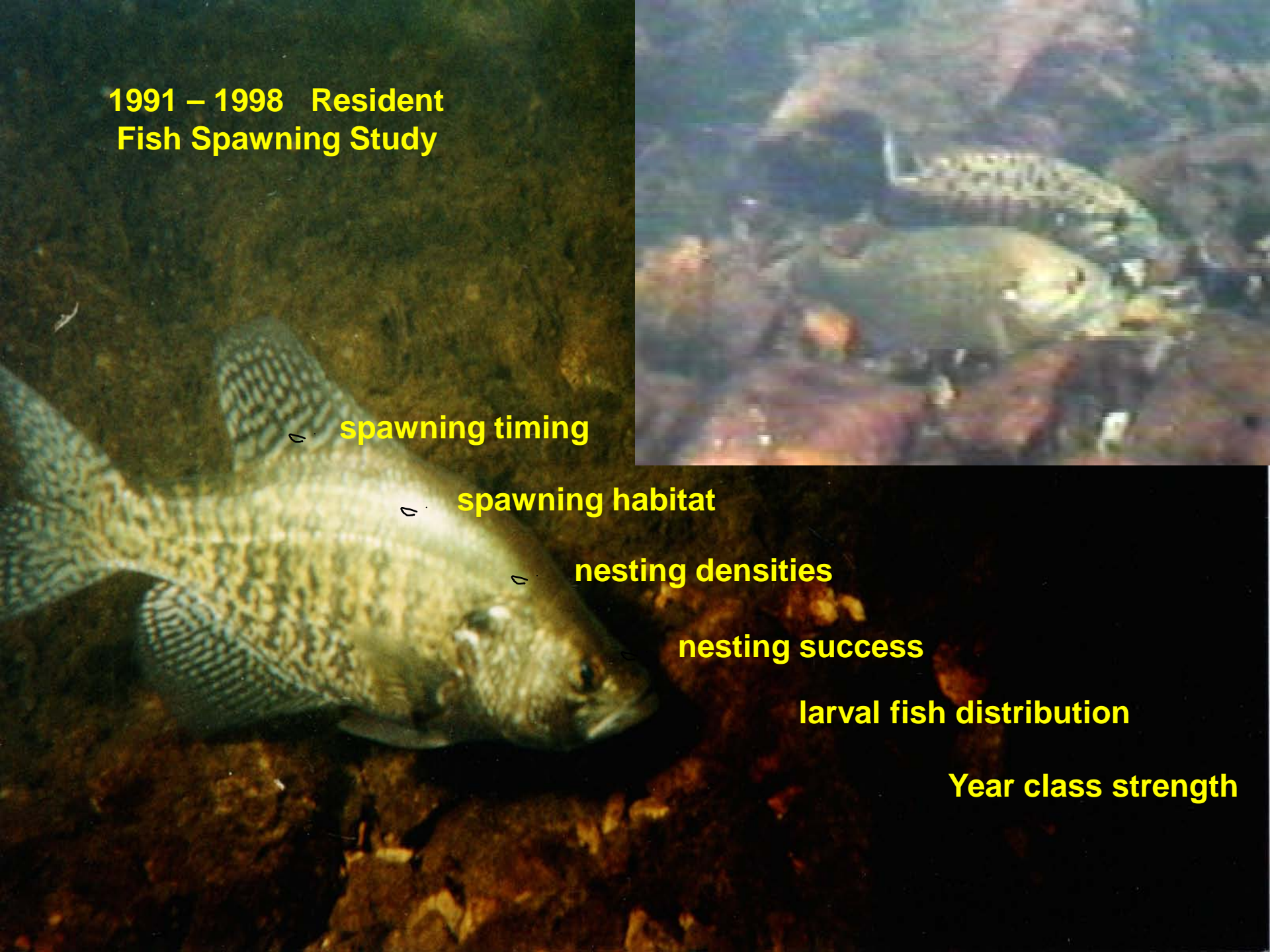


Flathead Catfish



Channel Catfish

**1991 – 1998 Resident
Fish Spawning Study**



spawning timing

spawning habitat

nesting densities

nesting success

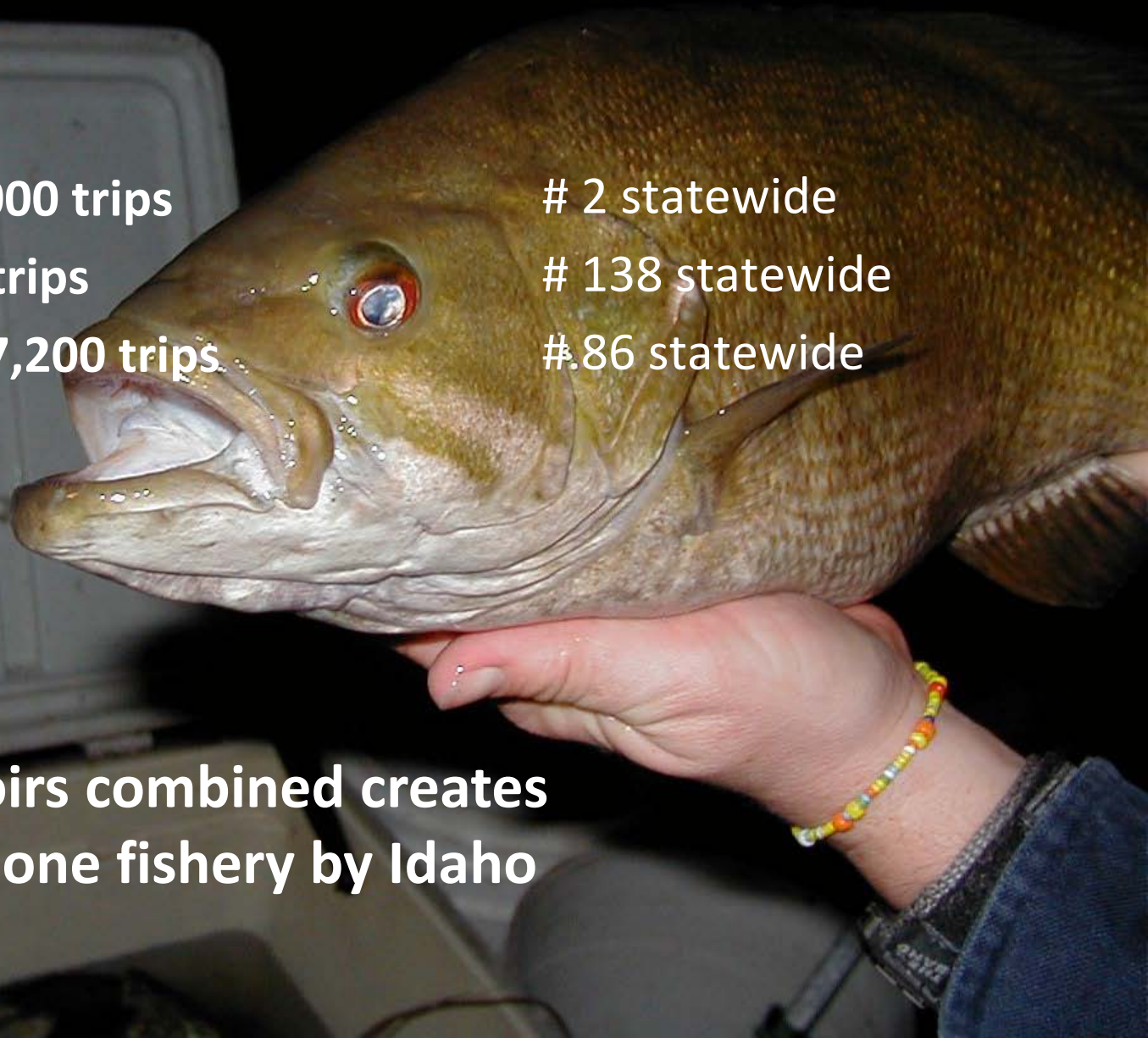
larval fish distribution

Year class strength

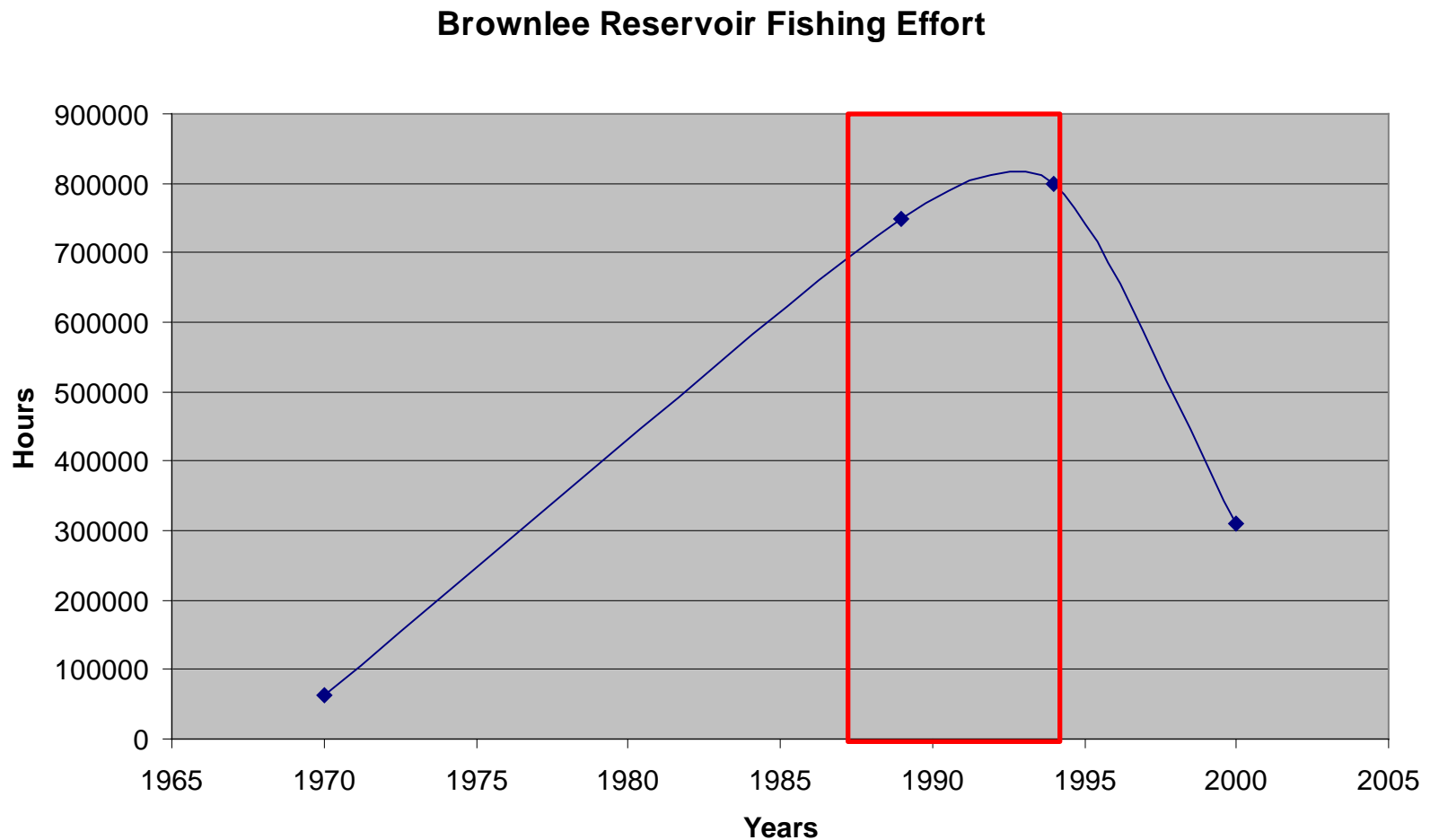
Idaho Angler HCC Effort

- Brownlee 83,000 trips # 2 statewide
- Oxbow 4,000 trips # 138 statewide
- Hells Canyon 7,200 trips #.86 statewide

The HCC reservoirs combined creates Idaho's number one fishery by Idaho anglers



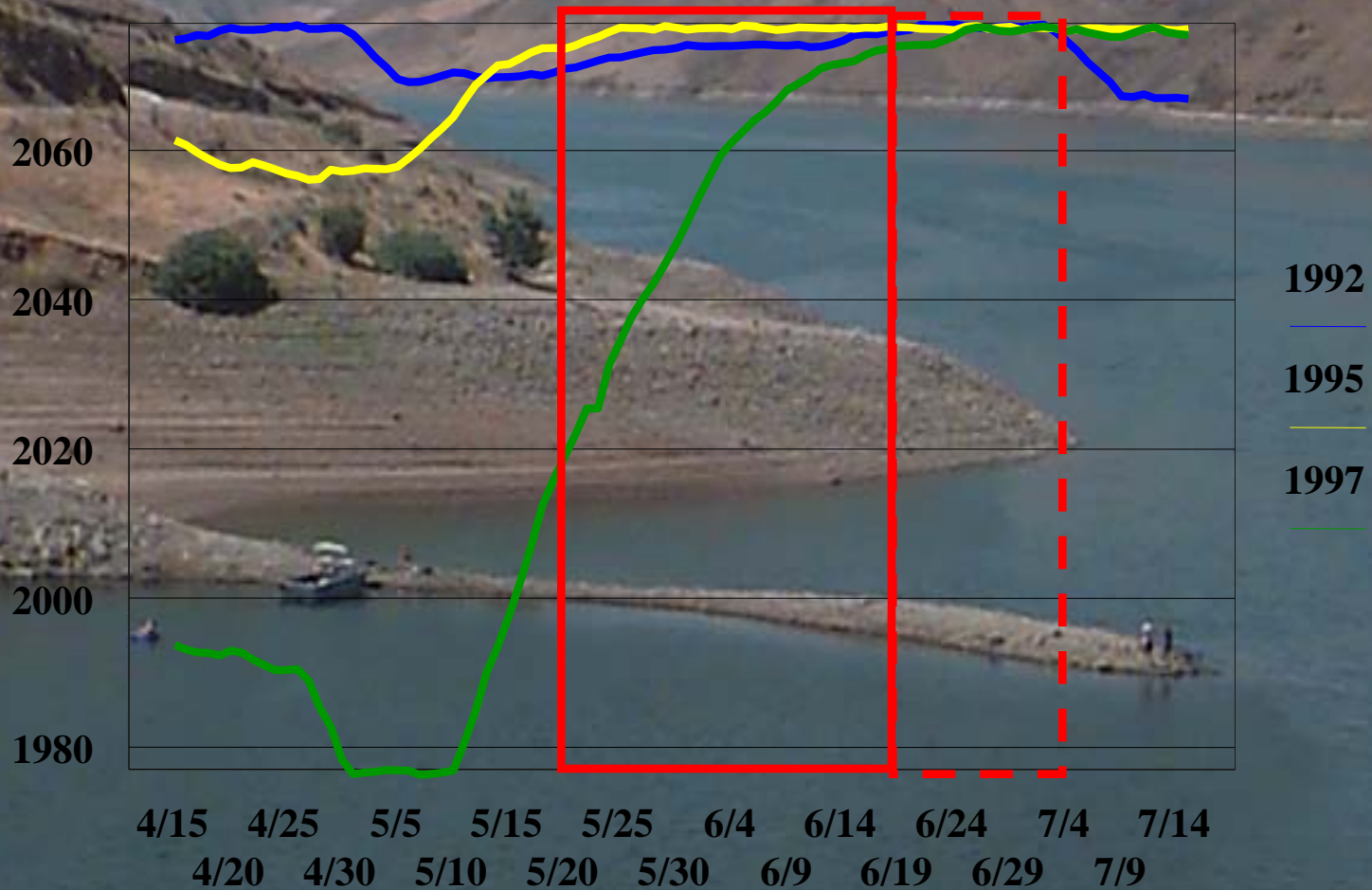
Estimated non-winter fishing effort on Brownlee Reservoir



FERC FEIS

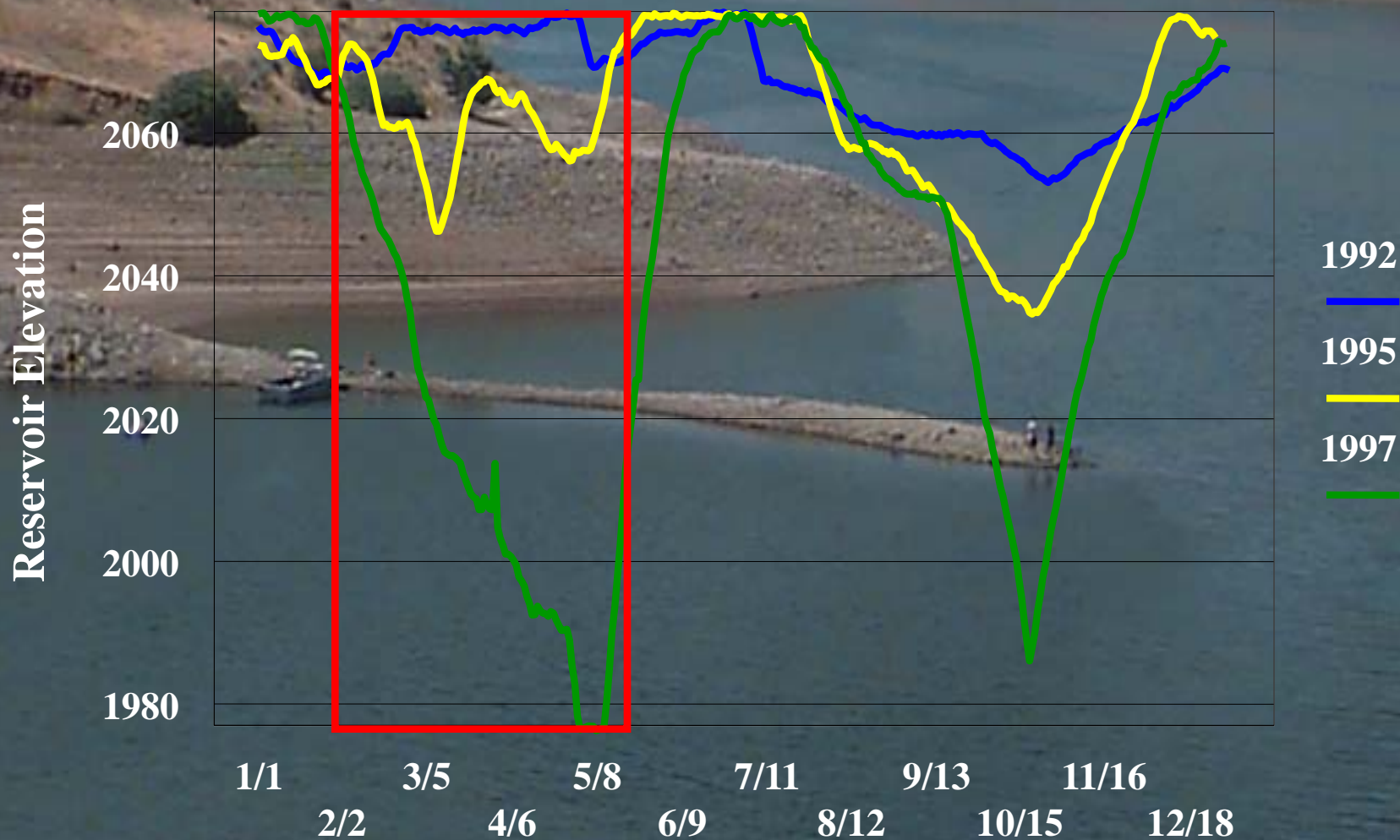
1. Protect peak spawning periods for smallmouth bass and crappie by limiting Brownlee reservoir drafts to no more than 1 ft from the highest elevation reached during a 30-day period starting on May 21, and by maintaining an elevation of at least 2,069 ft msl the end of the 30 day period.
2. Continue warmwater fish population monitoring to detect long-term effects on fish populations and include means of monitoring catfish abundance; file report annually on the results of warmwater fisheries monitoring including an assessment of any operational effects on warmwater fisheries; consult with IDFG, ODFW, BLM on feasible means to minimize or avoid adverse effects on the warmwater fishery in Brownlee Reservoir.


Spawning window protection period



Not a perfect solution for warm water fish ... but an effort to balance multiple demand

- Flood control
- ESA – anadromous fish
- Power generation



- 
- Recognition of a high-value fishery opportunity
 - Public support
 - Fish Management Agency support
 - Sound science - effective protection / mitigation
 - Recognition of multiple demands / laws / regulations
 - Balance resource needs