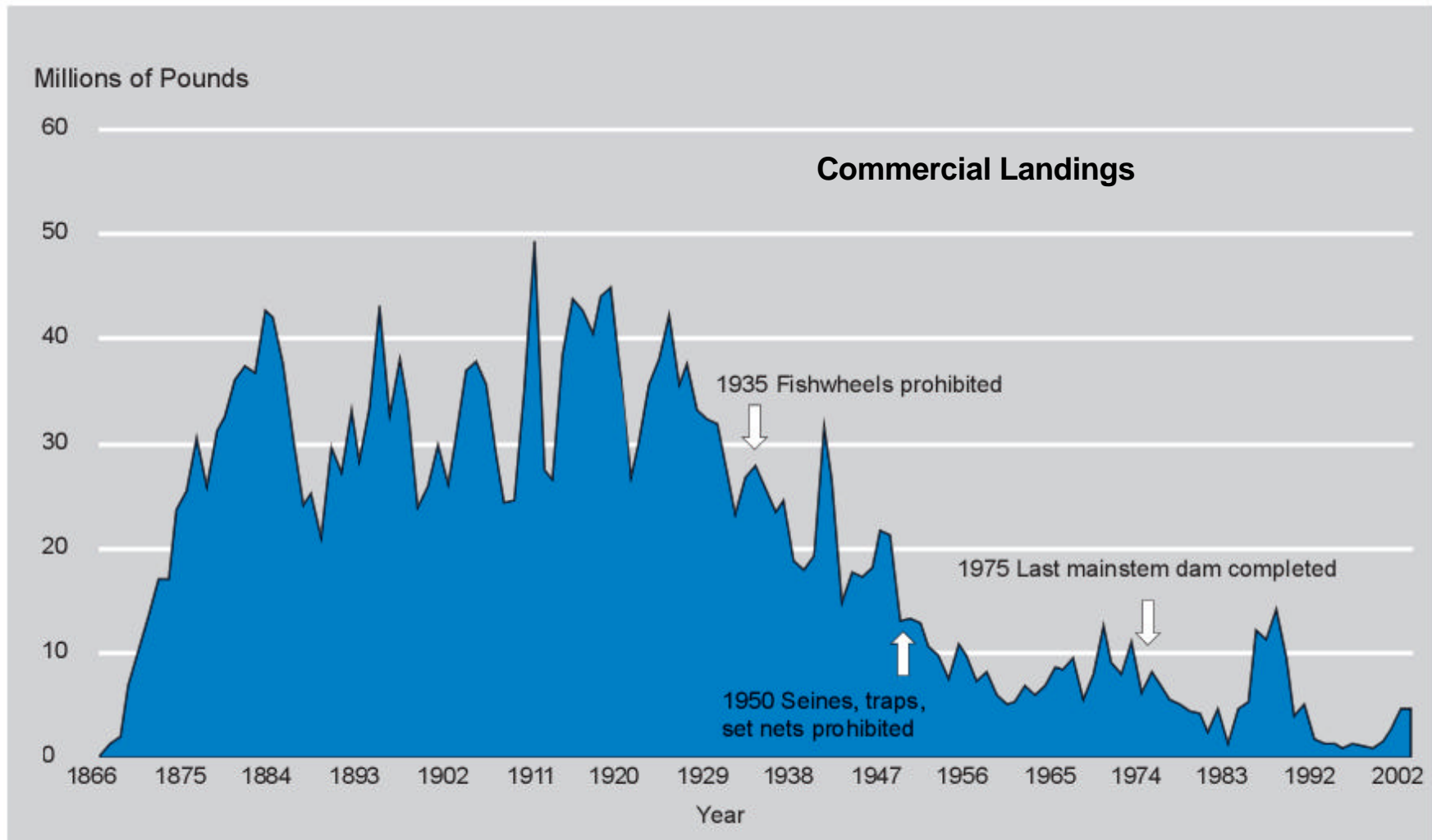


Hydropower & Salmon: Competing Uses for the Same Resource

Jim Litchfield

June 21, 2006

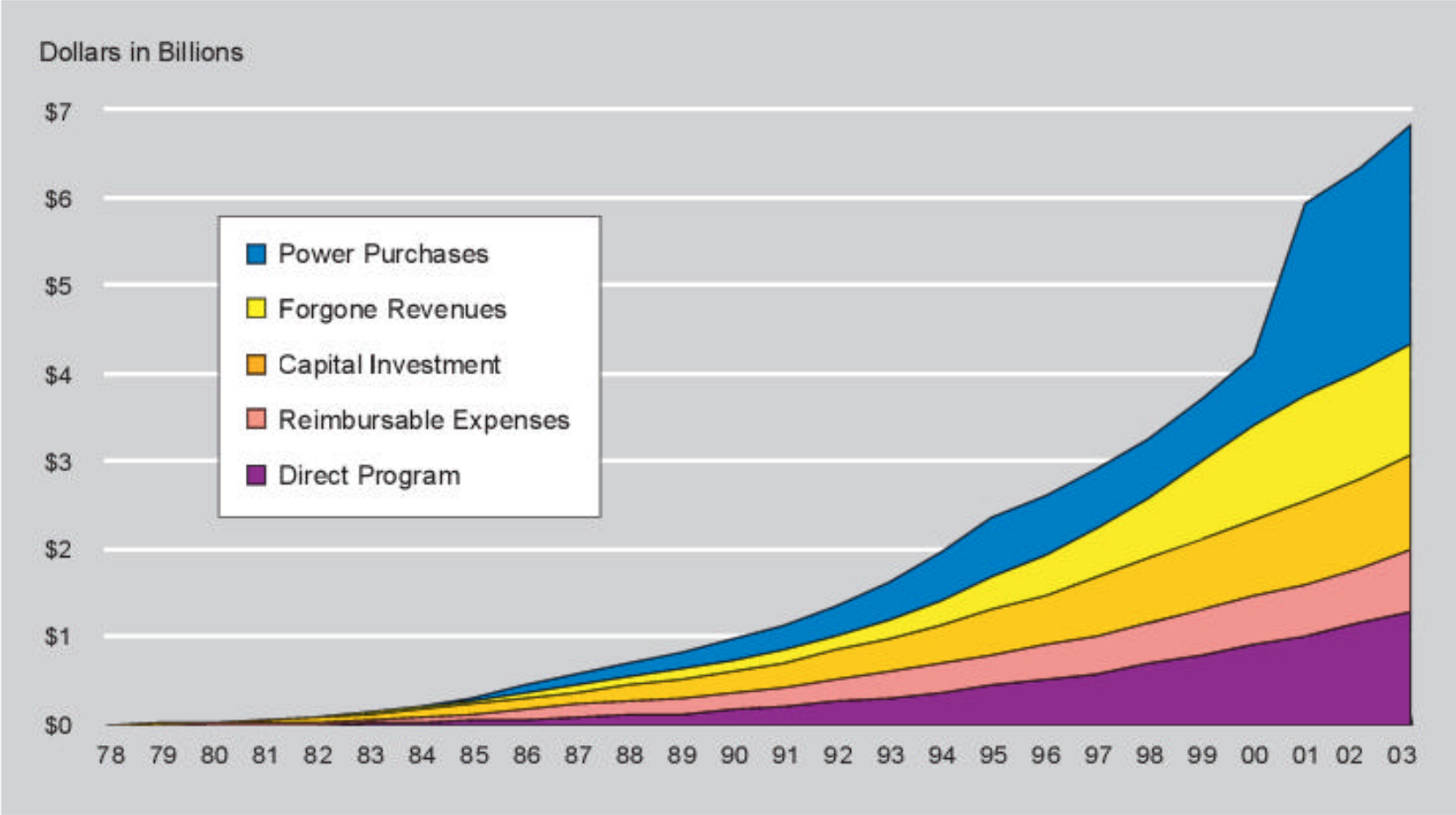
What Happened to the FISH?



Power System Changes for Fish

- Storage reservoirs must be as full as possible every April
- PNCA critical period shrunk from 4 years to one!
- Loss of about 1100 MWa of firm energy
- Large amounts of spill from April through August
- Proposals continue to remove 4 Lower Snake River Dams

BPA's Fish & Wildlife Investment



Lower Snake River Dams



Lower Snake River Dams

- 4 dams in Eastern Washington operated by the Corps of Engineers
- Total electric capacity = 3030 MW
- Energy generation = 1063 MWa
- Current fish survival is greater than 90% per dam and reservoir
- Removable Spillway Weirs (RSW) have been added to Lower Granite and Ice Harbor – further increasing survivals

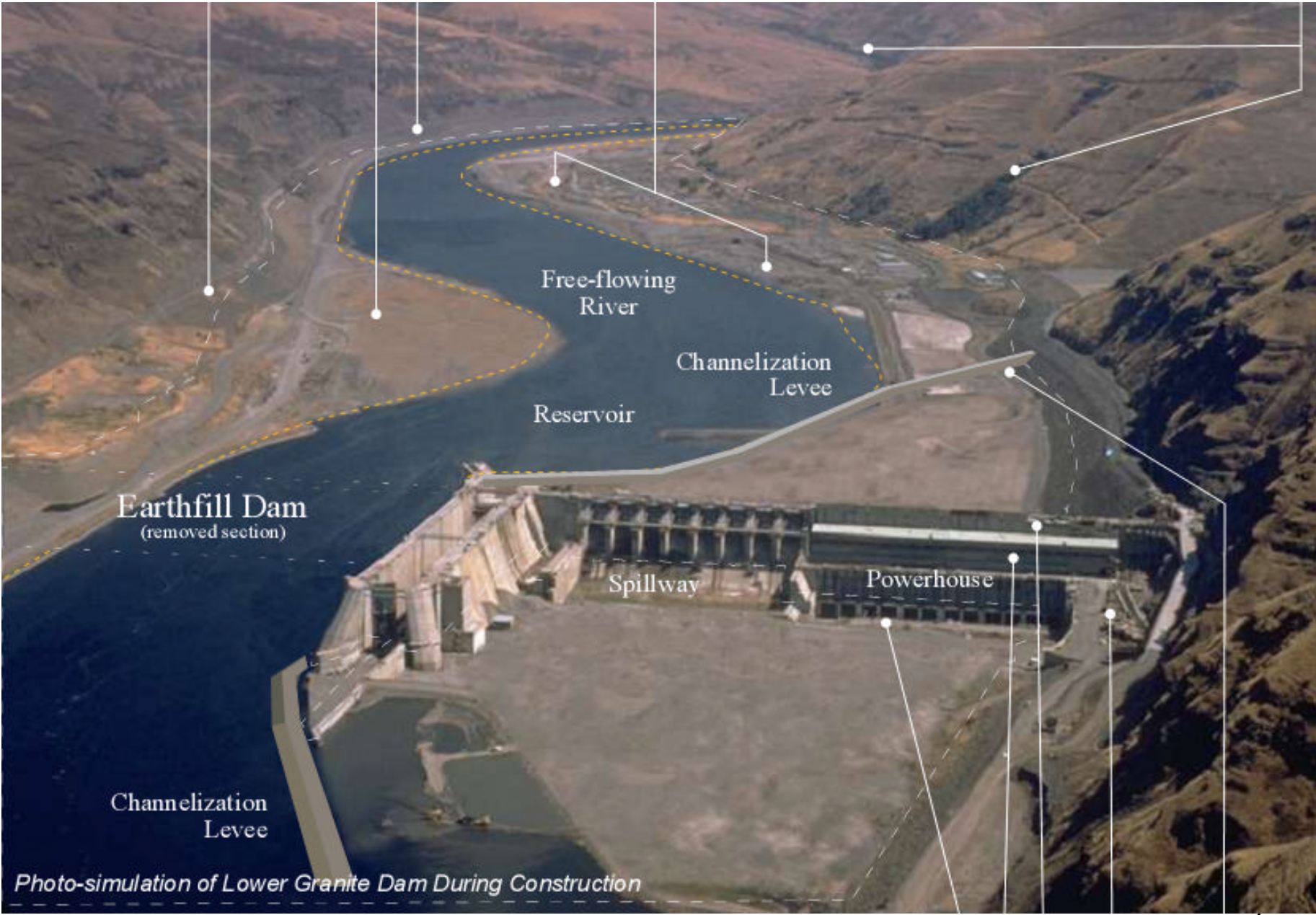


Photo-simulation of Lower Granite Dam During Construction

Public Policy Issues

- Snake River Dams energy production will be replaced with thermal resources
- Council study of CO₂ production found an average of 0.468 tons CO₂/MW-hr
- Removing Snake River dams will increase CO₂ production about 4.4 million tons/year
- Can only benefit 4 ESUs while 13 are listed under the ESA
- Current survivals are very high and cannot get much higher

Impacts of Spill

- Strategy has been to spill to the gas caps at all non-collector dams to allow transportation of fish
- Judge Redden changed that strategy for last summer to include spill at collectors
- Summer spill increased from \$70 to 80 million per year to about \$130 to 150 million
- Summer spill occurs in two months for one ESU

Council's Estimates of Costs Before Redden

• John Day Summer Spill	\$25 million
• Bonneville Summer Spill	\$23 million
• The Dalles Summer Spill	\$21 million
• John Day Spring Spill	\$18 million
• The Dalles Spring Spill	\$14 million
• Ice Harbor Spring Spill	\$13 million
• Ice Harbor Summer Spill	\$11 million
• Bonneville Spring Spill	\$ 9 million
• Lower Monumental Spring Spill	\$ 8 million
• Total	\$142 million

BPA's Total Fish & Wildlife Program: Total Annual Average Cost to All BPA Rate Payers

Percentage of Budget Categories Allocated to F&W

FY 2007-2009 (\$ in Millions)

UNSLICED 50-year Annual Average Hydro Operations Effects (Power Purchases & Foregone Revenues)		356.9*
Integrated Program – Annual Average	100%	139.0*
NWPCC – Annual Average	50%	4.6
US Fish & Wildlife Service – Annual Average <small>Lower Snake Compensation Plan</small>	100%	19.8
Corps of Engineers O&M – Annual Average	~25%	37.5
Reclamation O&M – Annual Average	~7%	4.2
Total repayment obligations for current & past F&W investments		129.6

..... Plant in Service

- COE/Reclamation/USF&WS Appropriation for Capital F&W Investments
- BPA Borrowing for Capital F&W Investments

Total 691.6

Northwest RiverPartners

- A large number of utilities and businesses formed NW RiverPartners last year
- RiverPartners' goal is to insure science-based, cost-effective salmon recovery
- Terry Flores is the Director
- She is assisted by utility and industry folks and a few consultants and attorneys

RiverPartners Accomplishments

- Formed a Regional Coalition for Biop Litigation
- Coalition is continuing to function during the Remand
- Provided press releases and briefings
- Conducted a regional public opinion survey
- Working closely with federal agencies

Future Challenges

- New Biop could require new actions to prevent jeopardy and move to recovery
- BPA's financial health is much better
- Council F&W Program has demands for 3X the BPA budget of \$143 million/yr
- Litigation before Redden is expanding to include the upper Snake River
- Dam remove campaigns continue

They Thank Us!



US Army Corps
of Engineers®
Portland District

PINNIPED DETERRENTS AT BONNEVILLE DAM 2005-2006

Fisheries Field Unit

