

Recreation Use Values and Non-Use Values of Glen & Grand Canyons

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Types of Economic Values Provided by Glen & Grand Canyons

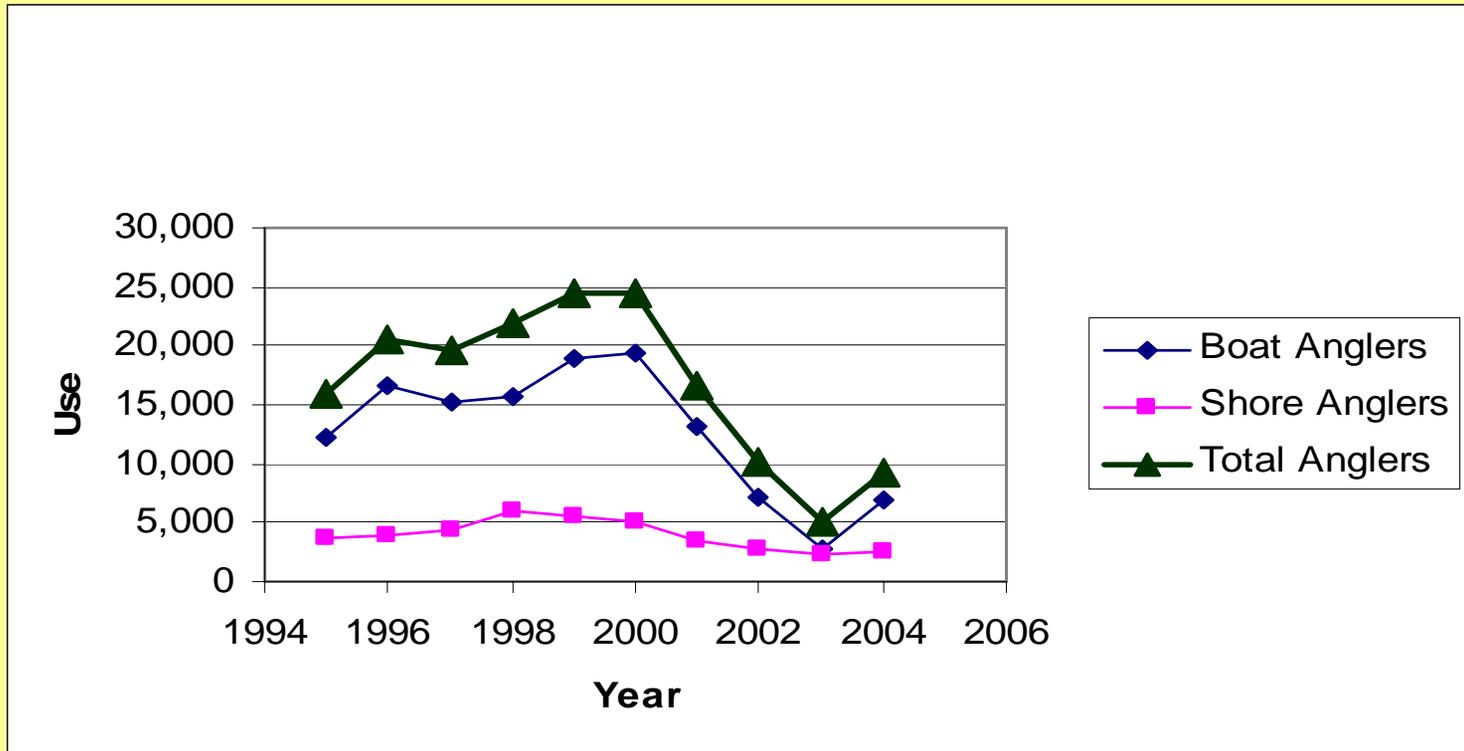
- Recreation Values to:
 - Rafters & Anglers themselves
 - Tourism Industry, Employees & County Economies
- Passive Use Values to:
 - Existence & Bequest Values to citizens of the U.S.

Techniques for Measuring Recreation Use Values

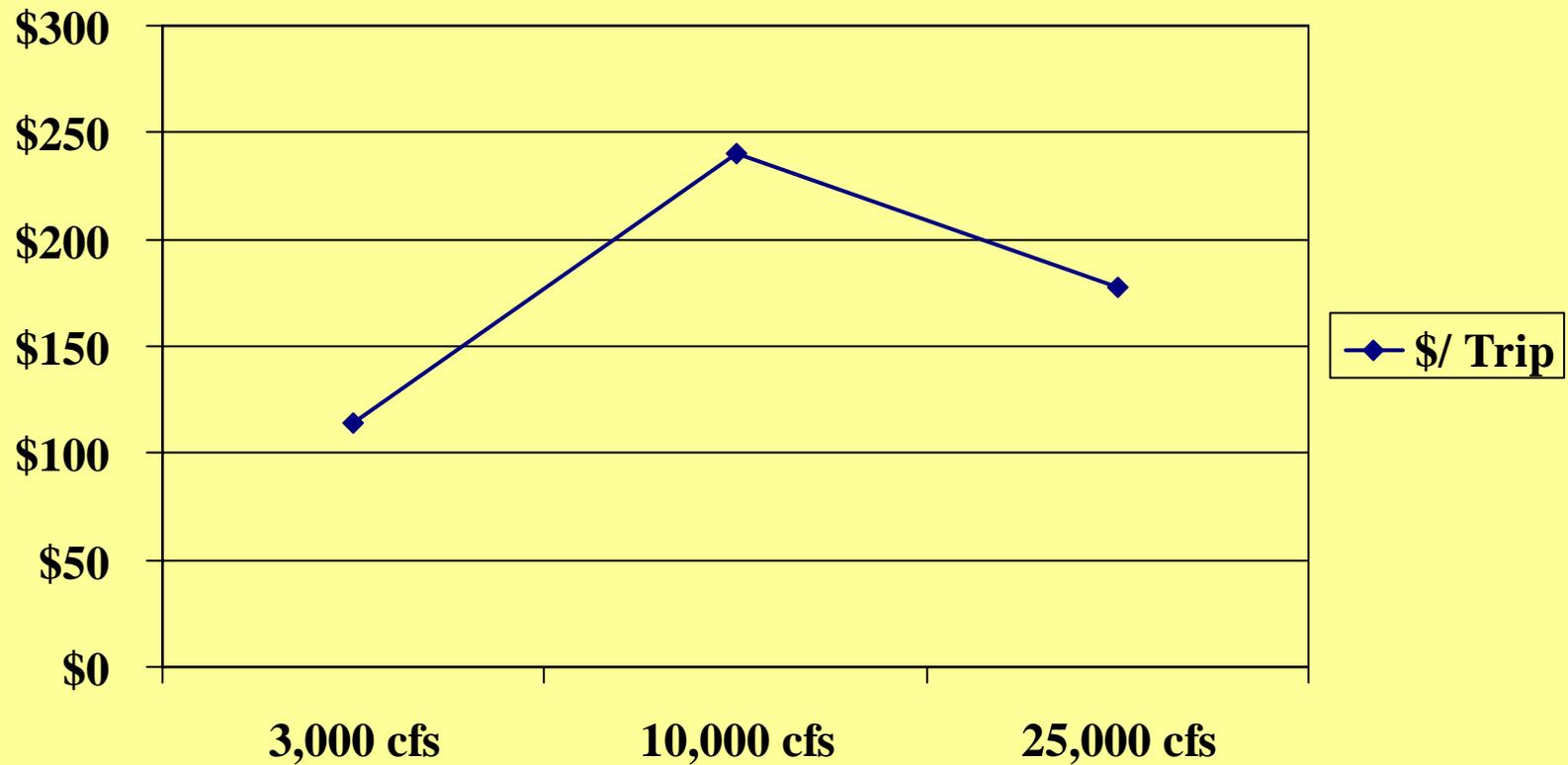


- **Recreation Use Values:**
 - **Travel Cost Method of Estimating Recreation Demand**
 - **Contingent Valuation Method-Simulated Market**

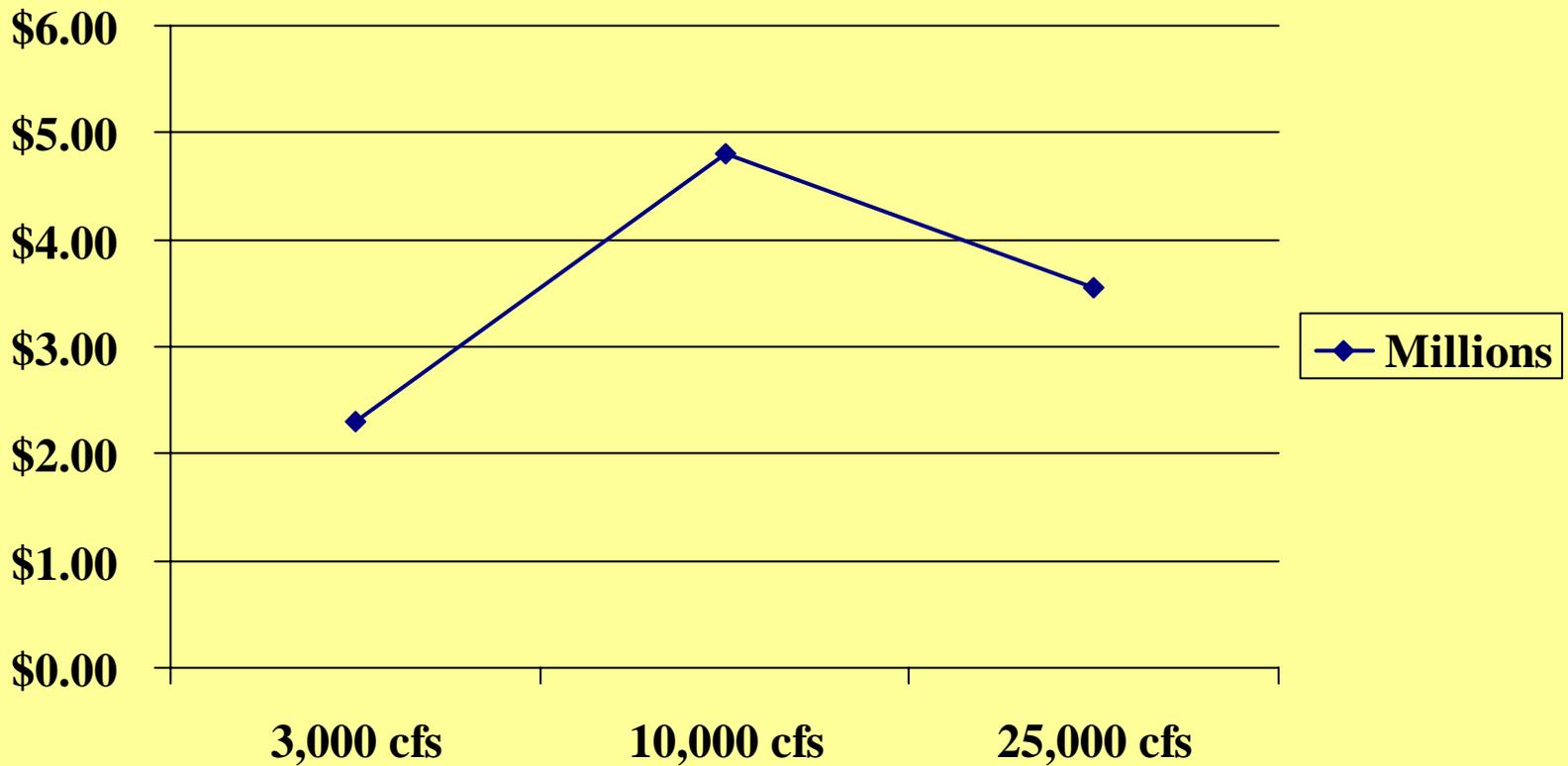
Lee's Ferry Angler Use



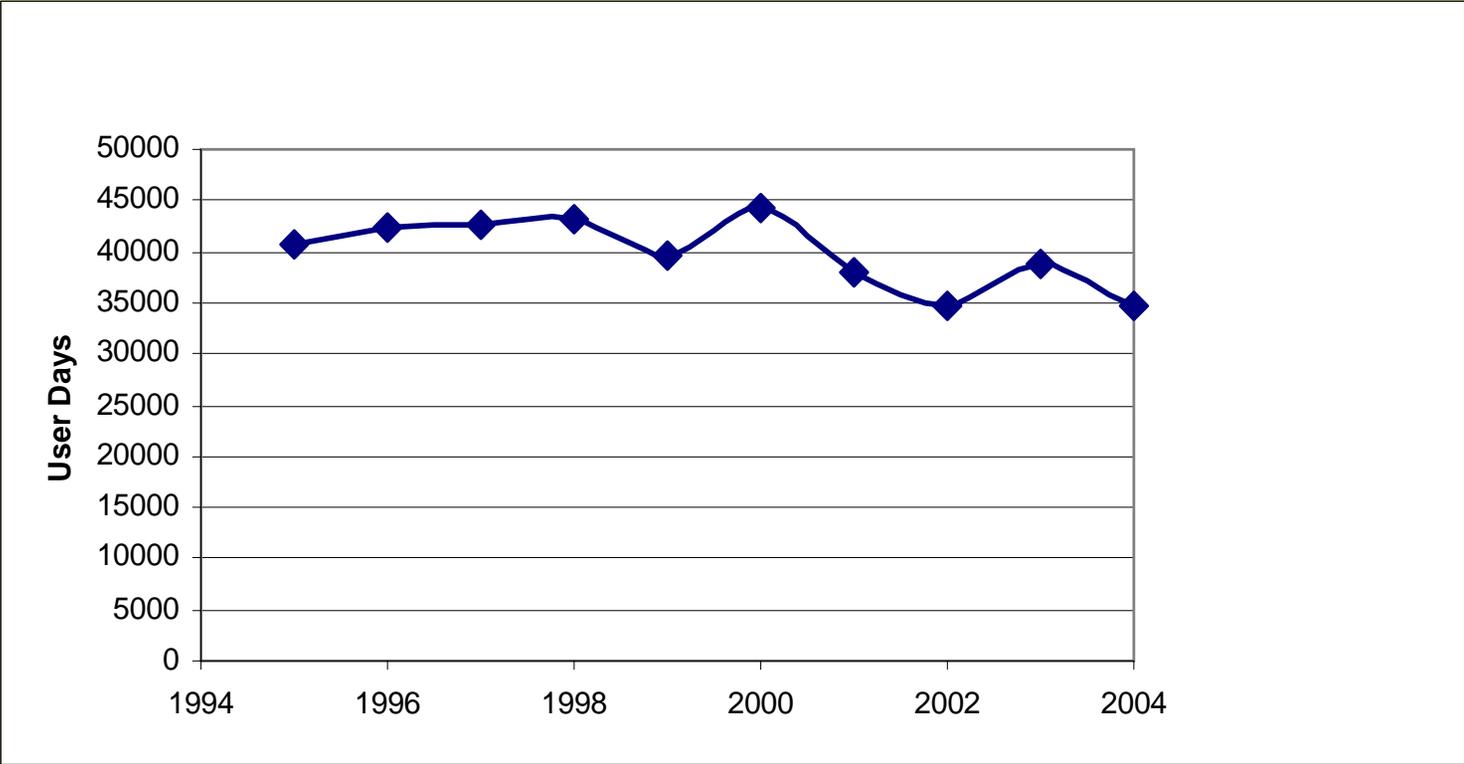
How Value per Angler Trip Varies with Flow



How Annual Fishing Value Varies with Flow



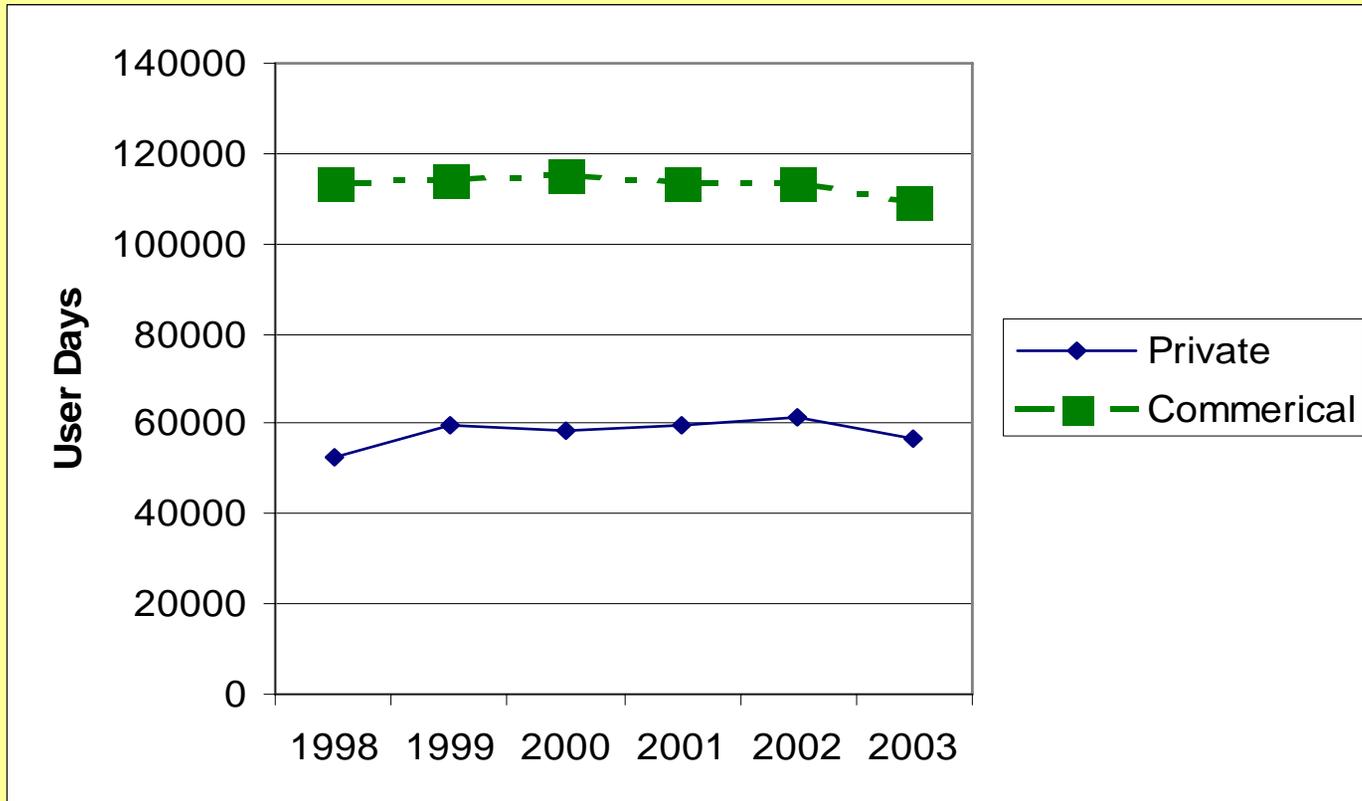
Glen Canyon Day Use Rafting



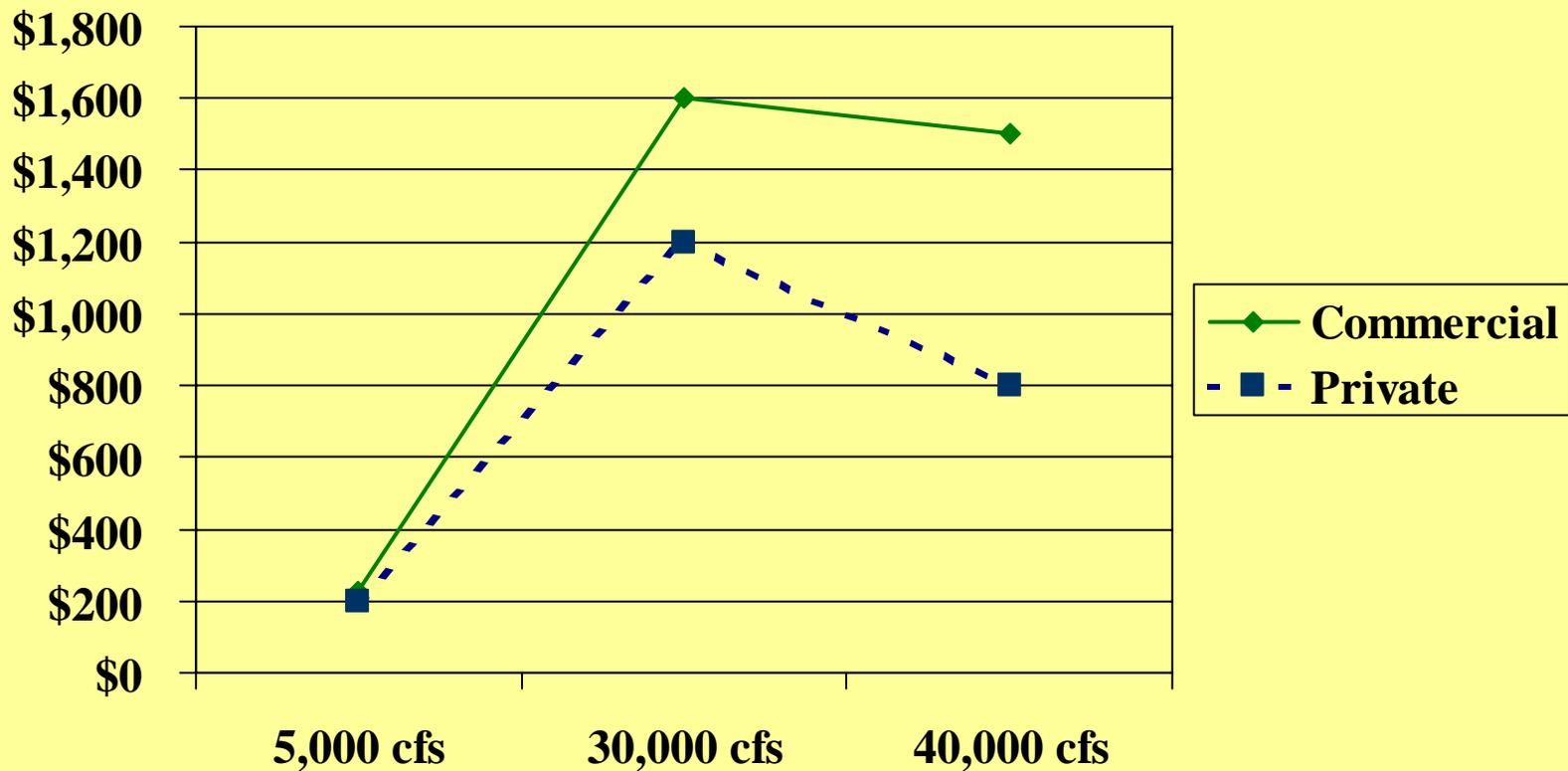
Glen Canyon Day Use Rafting Economics

- \$2 million in benefits to day use rafters
- \$3.8 million in visitor spending translates into 100 jobs in northern Arizona

Grand Canyon NP Rafting Use



How GCNP Rafting Values Vary with Flow



Grand Canyon Whitewater Rafting Economics

- \$34 million in visitor benefits at optimum flows
- \$5 million in visitor benefits at low flows

Grand Canyon Whitewater Rafting Economics

- \$34 million in visitor benefits at optimum flows
- \$5 million in visitor benefits at low flows
- \$17 million in visitor spending translates into 440 jobs in northern Arizona
- These values need to be updated (done pre-EIS), as they are probably larger today
- Need to include tourism effects outside of just northern Arizona

Passive Use Values

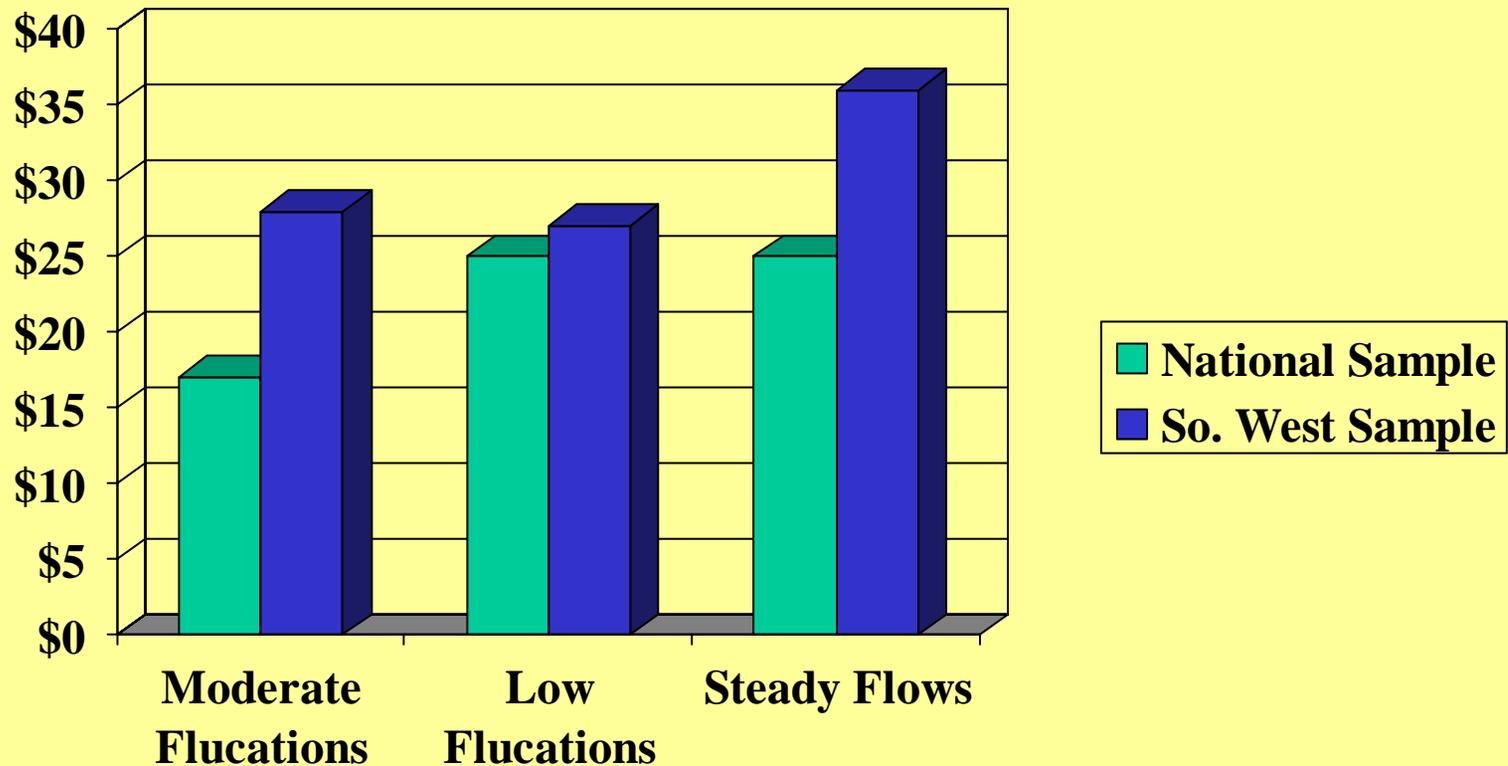
Existence Value

Bequest Value

Technique for Measuring Passive Use Values

- Contingent Valuation Method
 - Survey of general public regarding whether they would vote to pay higher taxes for maintaining natural rivers & native species
 - Mail Survey of Southwest & rest of US households done in 1995 (pre-EIS)
 - Very high survey response rates: 74%-83%

Annual Amounts Households Would Pay for Alternative Flow Regimes in GCNP



Conclusions

- Recreation
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 - These level of benefits are sensitive to flows
 - Nearly 600 jobs just in northern Arizona
 - These values need to be restudied in post EIS flow regimes & with experimental flows

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- Passive Use Values
 - The \$26-\$36 per imply \$4 billion in annual benefits to U.S. citizens

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- Recreation Use values have not been updated since the EIS despite changes in flow regime & experimental flows
- NPS is considering increasing private user days, monitoring of how this affects recreation user benefits is needed