# GCMRC's Draft FY 2006 Work Plan

- Continuation of Provisional Monitoring Projects
- Complete Some R&D for Monitoring & Start Others
- Continue Strategic Science Planning w/ TWG
- Completion of Research tied to Nov 2004 High-Flow
- Focused Implementation of HBC Measures
- Convene GCMRC Biennial Science Symposium (Oct)
- Continued Experimentation & Warm Species Initiative

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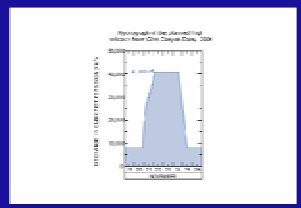

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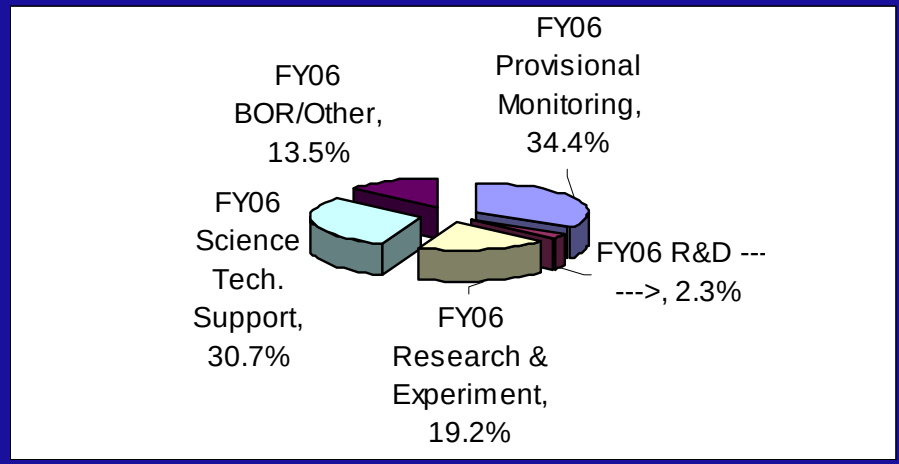
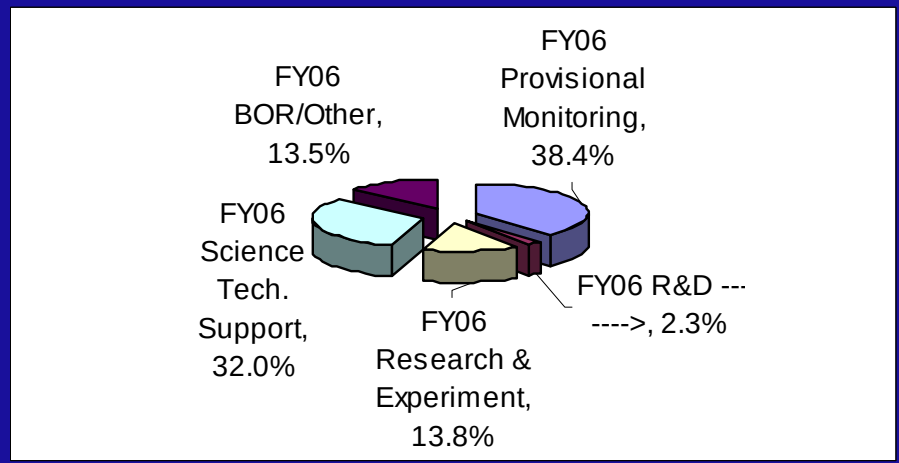
# FY 2006 Work Plan – EXP vs. Non-EXP

- **Provisional Monitoring Ongoing**
- **R&D for Food Base, Recreation & Cultural Monitoring**
- **Strategic Science Planning**
- **Completion of Reporting on Nov 2004 High-Flow**
- **Focused Implementation of HBC Conservation Measures**
- **GCMRC Biennial Science Symposium**
- **Continued Advancement of Experimental Results (2003-05)**




GCMRC's Experimental Version




Non-Experimental Version

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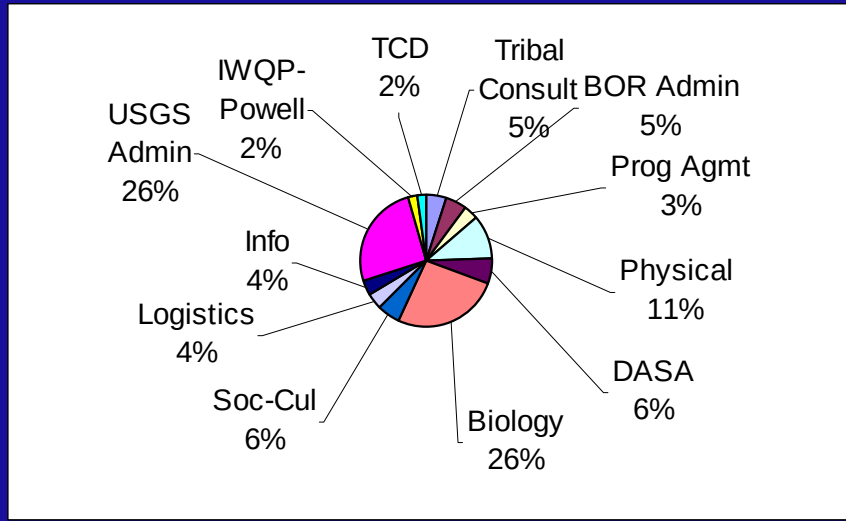
# FY 2006 AMP Program Breakdown (w/EXP)

- Science is 61% of Total Budget
- Admin is 31% of Total Budget
- Prog Agmt + Tribal Consult is 8%
- Provisional Approaches for 1 yr
- Focused Strategic Planning will Better Direct Science Program
- Added Program Evolution will Occur in FY 2007-08 Work Plans
- Phase V (07-11) will Link with Strategic Plan of the GCD-AMP
  - Advancement of Experimental Planning Promotes Learning & Resource Benefit
- Experimental Fund Established

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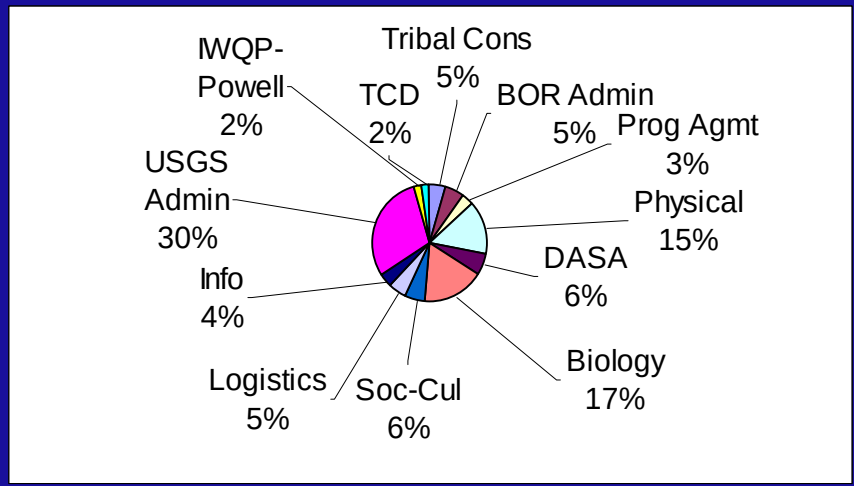


Non-Experimental Version

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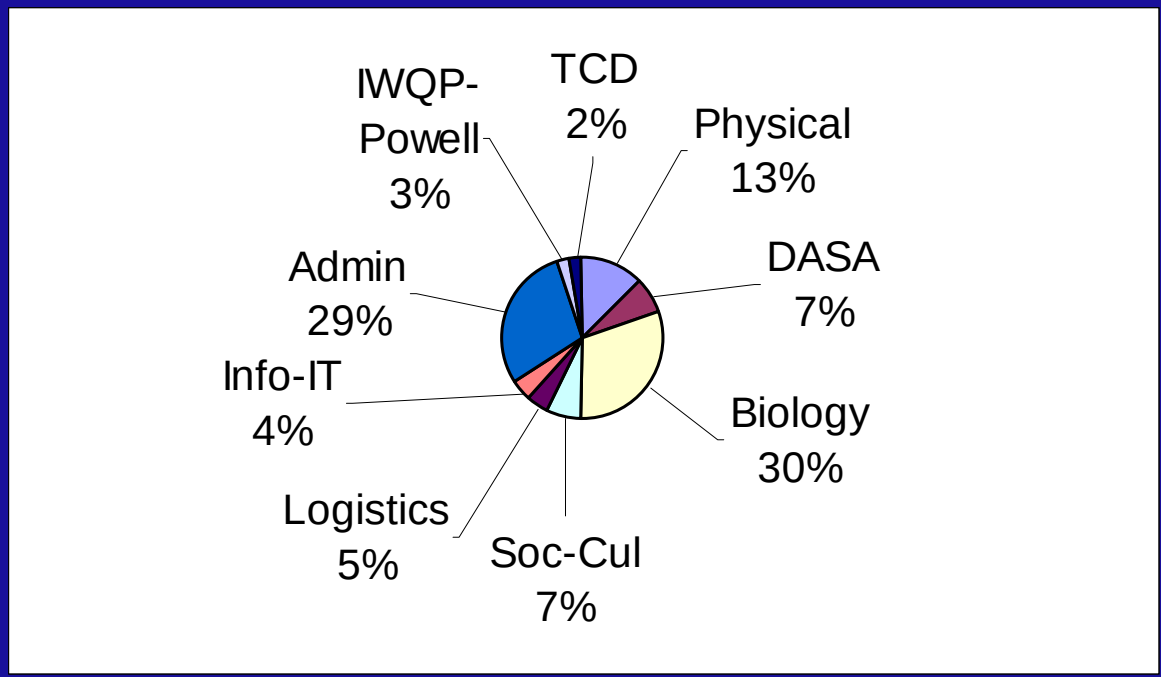
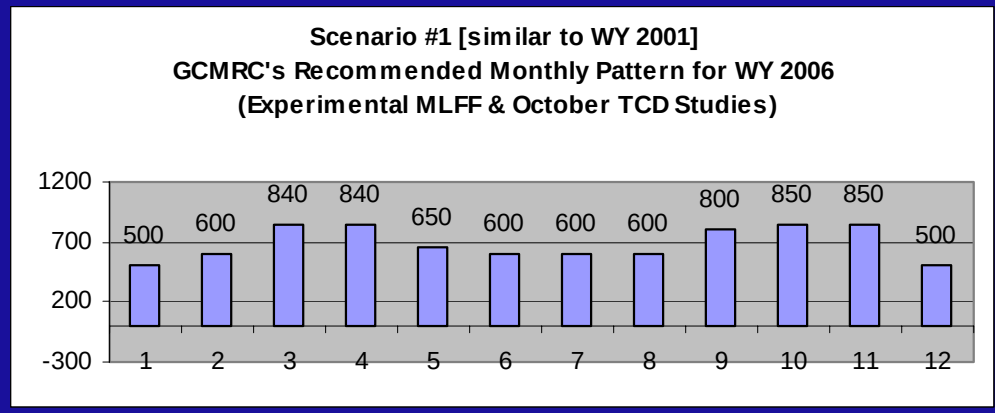
# GCMRC Only – Cost Breakdown (w/EXP)

- **Science & Related Support is 71% of GCMRC Budget**
- **Administrative Costs are 29% of Science Budget**
- **Indirect Costs Vary from 6% (special pass-through) to 17% (DOI cost-share rate)**
- **Full Burden was Avoided, Owing to Continued Support from USGS Director**

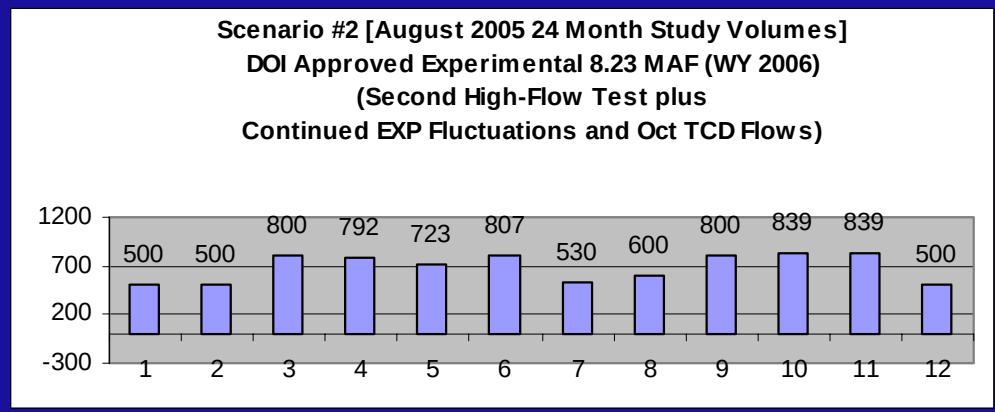


# GCMRC's FY06 Experimental Recommendations

- Continue Mechanical Removal (4th year)
- **Conduct Additional Studies on Trout Suppression Treatment (mortality & flow)**
- Return to MLFF (Jan-Mar) as Control Op.
- **Continue HBC Translocation in the LCR as EA Conservation Measure**
- Complete Analysis of High-Flow Sediment Research (Nov 2004 results)
- **Continue Experimental Planning with SPG, BAHG HBCCP and Cooperators**
- Report Preliminary Results at Oct 2005 Science Symposium (Tempe, AZ)




Monthly Releases Assoc. w/ GCMRC's Experimental Recommendations




Monthly Release Pattern Required to Implement <u>All</u> DOI Approved Treatments

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# GCMRC's Science Basis for '06 Flow Recommendation

- **No Additional Sediment Testing in 2006**
  - Expressed desire by AMWG (Mar '05) for more certain information about Nov 2004 test results
  - Lack of sufficient funds to conduct 2nd sediment test & biology treatments simultaneously (need to replenish fund)
  - Need for additional time to analyze & report 2003-05 results
  - Need to advance sediment experiments within long-term experimental design (planning not yet complete)


- **Return to "Control" (MLFF) in Winter 2006**
  - Final report conclusions by Korman et al. (July 2005)
  - Negative influence on sediment resource (see next slides)
  - Need to verify RBT mortality simulations (See next slides)

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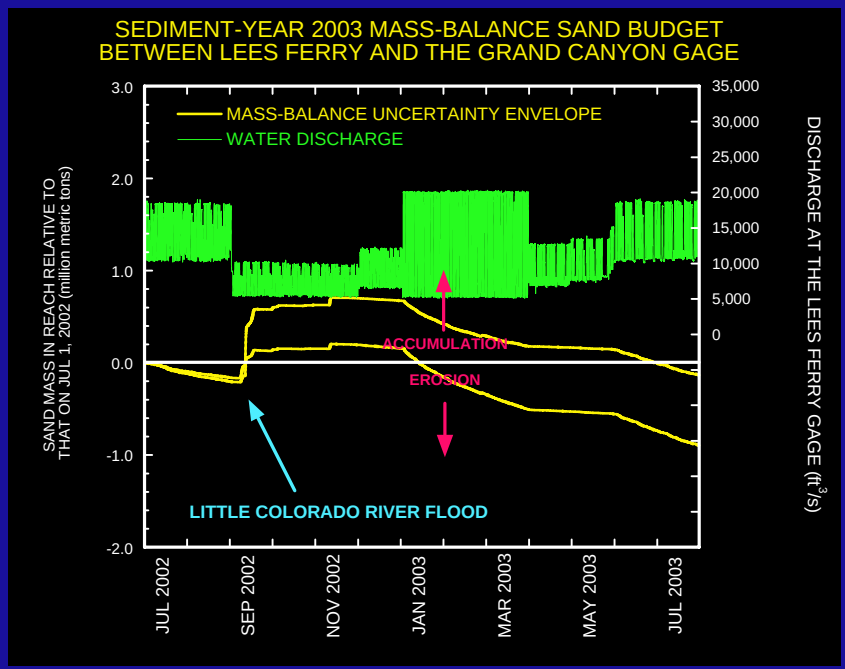
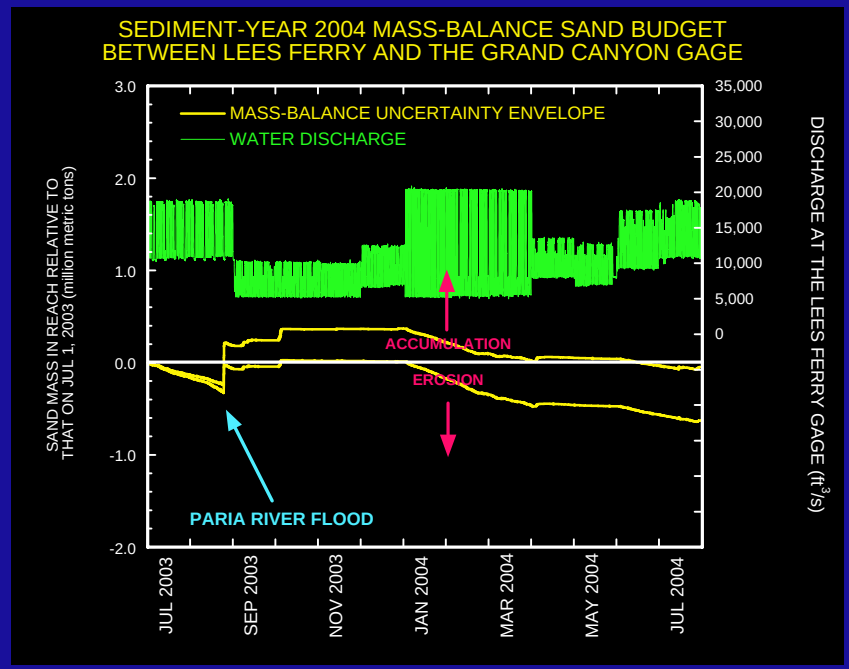
# Return to MLFF = Increased Sand Conservation

- **EXP FF Data**
  - Enhanced sand transport (’03 & ’04)
  - Winter EXP FF exported all tributary inputs of previous year

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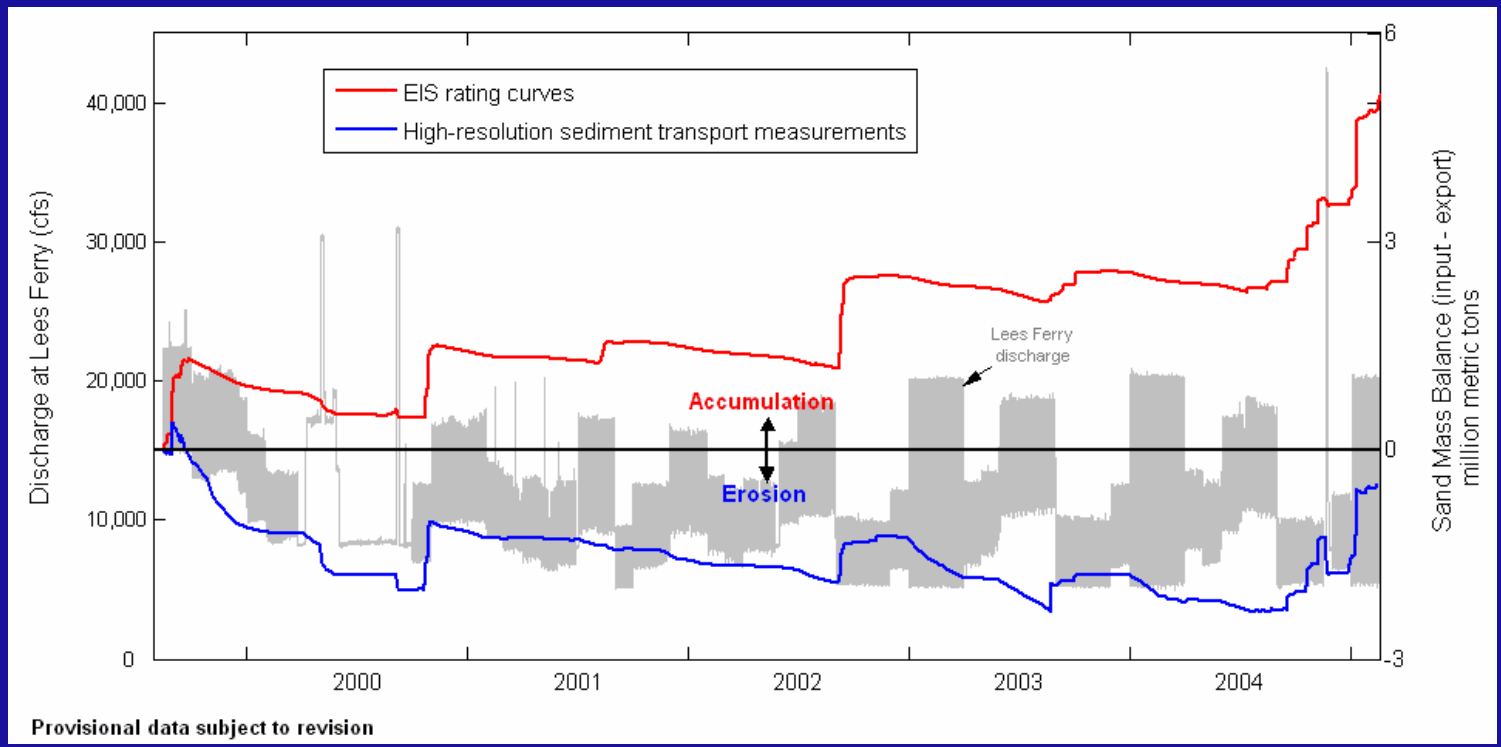
# Ex-Post Facto on MLFF & Sand Conservation (1999-2005, Between Paria River & Phantom)

- **With Respect to Sand Management, where we would Assume we would be today on basis of 1995 EIS?**
  - Stable Rating Curve Approach (as proposed in EIS) Projects Surplus
    - Estimated 5,000,000 metric tons accumulation since 1999 (RED line)
  - Monitoring Program: measurements for sand flux contradict this EIS estimate
    - Measurements indicate net loss of about 500,000 metric tons (BLUE line) since 1999
    - Disparity of 5.500,000 metric tons between EIS approach and Monitoring data
    - More on this topic at the upcoming 2005 Science Symposium in October

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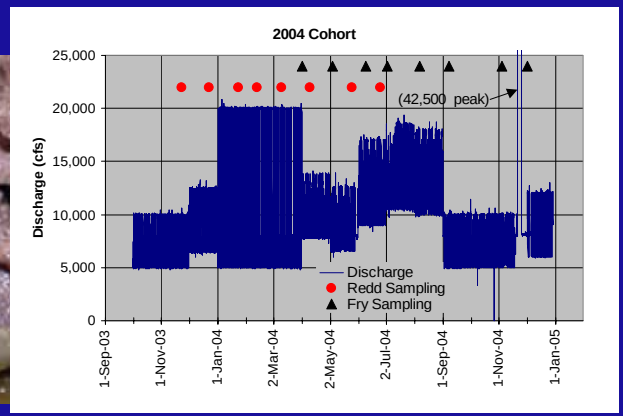
# Return to MLFF Needed to Verify Trout Model

- **Additional Field Data (redds & fry) Under Control**
  - Distribution, abundance & fate of winter/spring redds & fry need to be collected in Lees Ferry reach under non-EXP FF operations to verify or refute the predicted incubation and early life-stage mortality responses of Rainbow Trout
  - EXP FF were continued in 2005, but no science was funded to advance studies beyond the first two years of experimental releases?

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# Effects of GCD Flows on Incubation Survival (Korman et al. 2005)

| Scenario | % Redds Lost |
|---|---|
| 2004 | 33 |
| 2004 with ROD Flows | ca. 30 |
| Jan: 12-20 with Sunday 12 | 14 |
| Feb-Mar: 8/15 with Sunday 8 | 33 |
| 2004 + Sunday Steady Flow of 5 kcfs | 49 |
| Pre-ROD | ca. > 75 |

- **Model predicts inconsequential impact of experimental 5-20 kcfs on incubation survival**
- **Prediction requires validation by comparing ratio of redds to emergent fry in experimental (5-20) and non-experimental (MLFFA) years.**
- **MLFFA with a daytime Sunday flow of 5 kcfs would be much more effective at reducing incubation survival (an alternate to MLFFA)**

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# Other Alternatives for Trout Suppression Flows

- Experimental flows were intended to disadvantage fry in Marble Canyon, but instead only marginally effected incubation in Lees Ferry reach.

**What are the alternatives given new info?**

- High fluctuations following emergence (May-June/July).
- Stranding flow events following emergence.
- Very few YoY observed in Marble Canyon in 2004. If this observation holds in future, none of these treatments are likely to have an effect on trout densities in this reach assuming no downstream migration from Lee's Ferry Reach.
- Flows will be effective in reducing trout densities in Marble Canyon if there is a significant migration (more research needed).

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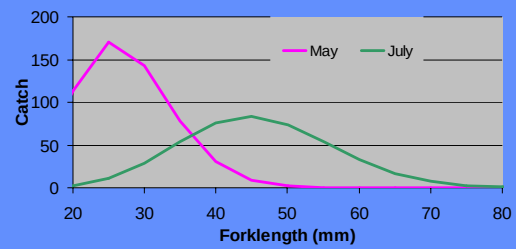

# GCMRC's Recommendation for Warm Species Initiative in FY 2006 (generally supported by BAHG+HBCAHG)

- **Phase I - Warm-Species Suppression Study Plan**
  - GCMRC leads Workshop in fall 2005 to develop study plan
  - Support from B.9. (planning funds) or F.8 (AMWG/TWG requests)
  - Integrate study efforts with advance of native monitoring
  - Plan promotes coordinated efforts throughout ecosystem
  - Gear testing coordinated with below Diamond Creek work
  - Integrate project into the HBC Comprehensive Plan
  - Build project out-year support into FY 2007-08 work plans

- **Phase II – Year-1 Implementation (start in 2nd half of FY 2006)**
  - Seek peer review from SA's and other external experts
  - Present Study Plan to AMWG at spring 2006 meeting
  - Seek approval of year-1 start up activities
  - Funding is suggested to come from '06 Experimental Fund
  - Coordinate with SPG on EXP design w/ future Mechanical Removal

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# Thank You for Your Attention

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