Update on Native and Non-Native Fish Populations

Scott VanderKooi
Southwest Biological Science Center
Grand Canyon Monitoring and Research Center

U.S. Department of the Interior
U.S. Geological Survey
Fish Sampling to Date in 2012

- Spring 2012: RTELSS Sampling in Glen Canyon, Lees Ferry Electrofishing, Mainstem Electrofishing, Natal Origins/Juvenile Chub Monitoring, HBC Monitoring in the Little Colorado River
- Summer 2012: Lees Ferry Electrofishing, Natal Origins/Juvenile Chub Monitoring
RTELSS Sampling in Glen Canyon

(Preliminary Data from Avery et al. 2012, Unpublished)
Lees Ferry Electrofishing (AZG&F)

(Preliminary Data from Bunch et al. 2012, Unpublished)
Lees Ferry Electrofishing (AZG&F)

(Preliminary Data from Bunch et al. 2012, Unpublished)
Mainstem Electrofishing (AZG&F)

(*Does not include data downstream of Diamond Creek)

(Preliminary Data from Bunch et al. 2012, Unpublished)
Mainstem Electrofishing (AZG&F)

(Preliminary Data from Bunch et al. 2012, Unpublished)
Mainstem Electrofishing (AZG&F)

(Preliminary Data from Bunch et al. 2012, Unpublished)
## Natal Origins – Rainbow Trout Data

<table>
<thead>
<tr>
<th>Reach</th>
<th>April, 2012</th>
<th>July, 2012</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Catch</td>
<td>pCap</td>
</tr>
<tr>
<td>I (Lees Ferry)</td>
<td>4,421</td>
<td>0.08</td>
</tr>
<tr>
<td>II (~ 20 Mile)</td>
<td>3,945</td>
<td>0.07</td>
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<tr>
<td>III (~ 40 mile)</td>
<td>2,689</td>
<td>0.13</td>
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<tr>
<td>IVa (Upstream LCR)</td>
<td>376</td>
<td>0.21</td>
</tr>
<tr>
<td>IVb (Downstream LCR)</td>
<td>55</td>
<td>0.17</td>
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<tr>
<td><strong>Total</strong></td>
<td>11,486</td>
<td></td>
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</tbody>
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(*Estimates of pCap and density affected by equipment issues)

(Preliminary Data from Korman et al. 2012, Unpublished)
Mainstem Juvenile Chub Monitoring

(Preliminary Data from Korman et al. 2012, Unpublished)
Fall & Spring Juvenile HBC Catches in the Little Colorado River (USFWS)

(Preliminary Data from VanHaverbeke et al. 2012, Unpublished)
Spring HBC Abundance Estimates in the Little Colorado River (USFWS)

(Preliminary Data from VanHaverbeke et al. 2012, Unpublished)
Length Structured Mark-Recapture Model (LSMR) Update

Preliminary Findings:

- Growth increment data suggest increases in growth rates since ~ 2001.
- Trends in abundance between LSMR and ASMR are similar for fish > 150 mm.
- Greater uncertainty in abundance estimates (as expected) using a length-based model.
- Greater recruitment variability in length-based model.
Acknowledgements

- Aaron Bunch – AG&FD
- Randy Van Haverbeke – USFWS
- Josh Korman – Ecometric
- Steve Martell – UBC
Mean monthly water temperature at RM 61, 2000-2011 (USGS data)

Year
- 2005
- 2011
- 2004
- Average 2000-2011

Month

Mean temperature (°C)

- 17
- 15
- 13
- 11
- 9
- 7
- 5

1 2 3 4 5 6 7 8 9 10 11 12

12.0