Lower Columbia River tule Chinook Harvest Guidance

Pacific Fishery Management Council

March 8, 2010
Sources of Information

- Recovery Plans
- Earlier Technical Work and Biops
- Hatchery Scientific Review Group (HSRG)
- Species Life-Cycle Analysis Model (SLAM)
Recovery Plan Goals

- Delisting/ESA Requirements
- Broad sense recovery that goes beyond delisting to also provide for healthy and harvestable populations
Recovery Planning Principles

• Collaborative process designed to include all stakeholders
• Solution designed to address all limiting factors
• Fundamental policy decision of recovery plans is to continue hatchery production and harvest as part of a balanced strategy for recovery
Recovery Plan Recommendations for Hatcheries

- Hatchery strategy
  - Aggressive schedule of hatchery reforms designed to reduce the effect of hatchery fish on the spawning grounds
Recovery Plan
Recommendations for Harvest

- Front-loaded impact reduction strategy – harvest rate of 25-35% (LCFRB)
- Harvest rate “guideline” modeled at 35% (Oregon)
- Develop and implement mark selective fisheries
- Develop and implement abundance based management framework
Fishery Impact Distribution

- AK/BC: 0.15
- Treaty Troll: 0.06
- Non-Treaty Ocean: 0.09
- Columbia River Net: 0.05
- Columbia River Sport: 0.03
Results of Technical Analyses
<table>
<thead>
<tr>
<th>Population</th>
<th>RER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coweemen</td>
<td>0.34 – 0.58</td>
</tr>
<tr>
<td>East Fork Lewis</td>
<td>0.44 – 0.52</td>
</tr>
<tr>
<td>Grays</td>
<td>0.00 – 0.20</td>
</tr>
</tbody>
</table>
## SPAZ Analysis from 2008 and 2009 BiOp

<table>
<thead>
<tr>
<th>Population</th>
<th>Probability of meeting viability criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>QET = 50</td>
</tr>
<tr>
<td></td>
<td>0 harvest</td>
</tr>
<tr>
<td>Coweeman</td>
<td>1.00</td>
</tr>
<tr>
<td>EF Lewis</td>
<td>1.00</td>
</tr>
<tr>
<td>Grays</td>
<td>0.43</td>
</tr>
</tbody>
</table>
Natural Origin Spawners
Current Abundance
pHOS slope = -0.7
General Conclusions

• Lewis, Washougal, Coweeman show low risk at rates from 30-55% depending on populations and assumptions
• Scappoose, Clatskanie, Elochoman show high risk even at very low harvest
• Mill/Germany/Abernathy, Hood show intermediate risk at intermediate harvest
Coastal Populations

- Coastal populations are at risk regardless of the harvest strategy.
- Biop must explain why harvest strategy is not likely to appreciably reduce the survival and recovery of the ESU, which requires consideration for these coastal populations.
Coastal Populations

- Populations subject to high harvest, hatchery stray rates, and habitat degradation for decades – e.g., Clatskanie
- Populations likely have generic tule-like characteristics, but are no longer uniquely adapted or genetically distinct
- Survival and recovery therefore depends on long term transition strategy
Transition Strategy for Coastal Populations

- Steady implementation of recovery actions
  - Reduce harvest
  - Reduce hatchery strays
  - Improve habitat
- Better monitoring to improve understanding of what we have
- Hatchery conservation program if appropriate
- Allow time for readaptation and recovery