PSPAP Workshop Objectives hierarchy

Workshop held March 21, 2017

# Objectives hierarchy and attributes

The numbered objectives correspond to fundamental objectives identified during the workshop. Bulleted lists within each numbered objective in bold are measurable attributes that can be used to quantify each objective. For example there are 3 attributes under objective 1 that can be quantified for each monitoring alternative. Assuming these attributes are scaled to a common scale (e.g., 0 to 1, 0 to 100) then each bullet may receive a weight of 33% if each attribute is equally important to decision makers. Alternatively these values can be weighted to reflect perceived importance by decision makers.

1. **Quantify PS recruitment to age-1 (Natural origin)**
   * Power to detect age-1 natural origin recruits if recruitment occurs
   * Segment level age-1 abundance
     + bias
     + precision
   * Estimate age-1 recruitment rate (natural origin)
     + bias
     + precision
2. **Quantify PS population trend (natural and hatchery origin)**
   * Estimate RPMA level population growth rate
     + bias
     + precision
3. **Provide relevant PS model inputs**
   * Estimate segment-level abundance, origin and stage specific
     + bias
     + precision
     + spatial distribution
   * Survival (RPMA level)
     + bias
     + precision
   * Fecundity (RPMA level)
     + bias
     + precision
   * Growth (RPMA)
     + bias
     + precision
   * Movement
     + fidelity
     + among segment movement
   * Population structure and characteristics (segment level)
     + Size structure
       - bias
       - precision
   * Sex ratio (segment level)
     + bias
     + precision
4. **Maintain compatibility with legacy PSPAP data**
   * Proportion of randomly selected bends within segment
   * Gears similarity: proportion of standard gears used by design
   * Effort similarity: deviation from average effort
5. **Stay below cost constraints**
   * Minimize costs

# Timeline

The timeline below represents an aggressive timeline to achieve preliminary results for alternative monitoring designs. It should be recognized that this timeline may and likely will change due to varying factors such as simulation time constraints and so on. The aggressive timeline will promote initial evaluation and allow for a revision and refinement process. There will be continuous input requested from USACE and USFWS to clarify objectives but USACE and USFWS input will be critical to clarify and revise objectives.

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| --- | --- | --- |
| Timeline component | Start | End |
| Effort analysis & appendix | 3/28/2017 | 4/7/2017 |
| Objectives hierarchy and attributes\* | 3/28/2017 | 4/14/2017 |
| Preliminary population run (10 yrs) | 4/14/2017 | 5/12/2017 |
| Robust design sampling simulation | 4/26/2017 | 5/24/2017 |
| Abundance and relative abundance estimation | 4/26/2017 | 5/24/2017 |
| Demographic rate estimation | 5/20/2017 | 6/17/2017 |
| Preliminary objectives valuation\* | 6/17/2017 | 6/24/2017 |
| Refining and revision\* | 6/24/2017 | 7/22/2017 |
| Preliminary write up and documentation\* |  | 7/22/2017 |

\* Timeline components where USACE, USFWS and state agencies input will be requested.