**NMFS ROC on LTO**
**Draft BiOp Preparation Schedule**

| Date | Day | Task | Assumptions |
|---|---|---|---|
| February 1 | 1 | BA received: Formal Consultation Initiated | Initiation date not affected by BA re-issuance on 2/5/19 |
| March 1 | 29 | - Sufficiency Review Complete<br>- Draft Sections completed through Analytical Approach | 2/5/2019 BA revisions are not significant and that Reclamation itemized the changes to support sufficiency review |
| March 4-8 | 32-36 | NMFS Southwest Fisheries Science Center (SFWSC) Reviews Analytical Approach/Methods | N/A |
| April 15-19 | 74-78 | - Internal Program Manager and Lead Biologist Review of Draft Effects and Integration and Synthesis<br>- Drafting ITS | - Supplemental biological modeling runs completed by March 15 (need to double check this with Cathy)<br>- Assumes SWFSC has no major comments on Analytical Approach that would affect schedule of Effects Analysis |
| May 6-10 | 95-99 | Section 7, NOAA GC, ARA concurrent reviews | - Schedule holding |
| May 20-31 | 109-120 | Peer Review of Effects Analysis | - Contracting options work out |
| May 27-31 | 116-120 | BOR, DWR, Water Contractor review per WIIN Act 4004 | - External review completed within schedule |
| June 3-7 | 123 | Address comments received from peer review, BOR, DWR, Water Contractors | - No significant changes result from peer and external reviews |
| June 10-12 | 130-132 | Final Section 7 and NOAA GC review and clearance | - Short final review based on ongoing coordination and minor changes from initial review |
| June 13-14 | 133-134 | Prepare Final Biop | - Minor changes from final section 7 and NOAA GC review |
| June 15 | 135 | Final BiOp issued | - No Jeopardy conclusion with no RPA |

**Analytical Methods Requested for NMFS Consultation on the Reinitiation of Consultation on the Long-Term Operations of the CVP and SWP**

**All requests required ASAP for targeted mid-March effects analysis completion.**

**Highest Priority Analytical Needs**

- **SWFSC Winter-Run Life Cycle Model** (SWFSC)
  Supports evaluation of long-term population effects and jeopardy analysis.
- **SWFSC Enhanced Particle Tracking Modeling (ePTM)** (SWFSC)
  Supports evaluation of through Delta survival and salvage risk.
- **SWFSC RAFT/CVTemp Temperature Modeling** (SWFSC)
  Supports evaluation of temperature effects and potential take surrogate.
- **Salvage-Density Analysis** (ICF/CH2M)
  Supports evaluation of entrainment loss and take determination.
- **DSM2-HYDRO** (CH2M)
  Additional analyses to support evaluation of entrainment risk to species and inform take determination.
- **DPM** (ICF/Cramer) **or USGS Flow-Survival** (USGS)
  Supports evaluation of flow effects on through-Delta survival to inform take determination.

**Medium Priority Analytical Needs**

- **OBAN** (QEDA) **or IOS** (ICF/Cramer)
  Supports analysis of long-term population effects and jeopardy analysis.
- **USGS Entrainment** (USGS)
  Supports analysis of entrainment risk and determination of take.
- **SalSim** (ICF)
  Supports survival analysis of San Joaquin basin for determination of take.
- **Rearing WUA in Tributaries** (ICF)
  Combines multiple habitat characteristics to support productivity analysis and develop possible surrogate for take.
- **Spawning WUA in Tributaries** (ICF)
  Combines multiple habitat characteristics to support productivity analysis and possible develop surrogate for take.
- **DSM2 Fingerprinting Analysis** (CH2M)
  Supports evaluation of adult straying and entrainment risk.
- **SALMOD** (ICF)
  Supports analysis of temperature effects, dewatering risk, and habitat suitability that could be used as take surrogates for Sacramento River.
- **ICF Loss Analysis Update** (ICF)
  Provides context for loss estimates and determination of take.