

| Model/Analysis | Model Run for ROC BA? | Model Used in CWF Consultation? | Utility and Notes | Model Implementors |
|---------------------------------|------------------------------|--|---|--|
| CalSim-II | Yes | Yes | Included in BA suite. BA effects analysis includes some specific evaluations. NMFS expects to obtain modeling data files for further analysis of specific relevant results. | DWR/USBR/USFWS/ NMFS Contractors/CH2M |
| DSM2-HYDRO | Yes | Yes | Included in BA suite. BA effects analysis includes some specific evaluations; however, these deviate from the approach NMFS used in CWF BiOp. NMFS expects to obtain modeling data files for further analysis of specific relevant results, and may need assistance in processing that information. | DWR/USBR/CH2M |
| ePTM (SWFSC) | No | Yes | Not included in BA suite. Expected to be included in SWFSC Winter-Run Life Cycle Model results. | NMFS SWFSC |
| HEC-5Q | Yes | Yes | Included in BA suite. BA effects analysis includes some specific evaluations. NMFS expects to obtain modeling data files for further analysis of specific relevant results. | USBR |
| DSM2-QUAL | No | Yes | Not included in BA suite. NMFS needs to evaluate priority for this model after better understanding the PA. | DWR/USBR/CH2M |
| DSM2-QUAL Fingerprinting | No | Yes | Not included in BA suite. NMFS needs to evaluate priority for this model after better understanding the PA. | DWR/USBR/CH2M |
| SALMOD | No | Yes | Not included in BA suite. Used as additional line of evidence in CWF to predicts effects of flows on habitat suitability and quantity for all races of Chinook salmon. | USBR |
| OBAN | No | Yes | Not included in BA suite. Used as additional life-cycle model line of evidence in CWF to predicts effects of flows on outmigrant survival for Chinook salmon. | QEDA |
| DPM | No | Yes | Not included in BA suite. Used as additional line of evidence in CWF to predict effects of flows on through-Delta survival for Chinook salmon. NMFS worked extensively with DWR/Reclamation to increase confidence in this model since 2010. | Cramer Fish Sciences |
| IOS | No | Yes | Not included in BA suite. Used as additional life-cycle model line of evidence in CWF to predicts effects of flows on outmigrant survival for Chinook salmon. | Cramer Fish Sciences |

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| Salvage-density Analysis | No | Yes | Not included in BA suite. Used in CWF as evaluation of entrainment as a function of flow. | ICF |
| USGS Flow-survival Model | No | Yes | Not included in BA suite. Used in CWF to assess travel time and survival for different operational scenarios. | USGS |
| USGS Entrainment Model | No | Yes | Not included in BA suite. Used in CWF as evaluation of entrainment as a function of hydrodynamic variables in the Sacramento River. | USGS |
| SWFSC Temperature-Dependent Egg | Yes | Yes | Included in BA suite. BA effects analysis includes some specific evaluations. NMFS expects to obtain modeling data files for further analysis of specific relevant results. | USBR/SWFSC |
| SWFSC WRLCM | No | Yes | Not included in BA suite. Used in CWF as evaluation of cohort replacement rate and long-term species survival. | SWFSC |
| ICF Loss Analysis | No | Yes | Not included in BA suite. Used in CWF as additional line of evidence of effects of salvage and loss. | ICF |
| SWFSC RAFT/CVTemp | No | Yes | Not included in BA suite. Used in CWF as additional line of evidence of effects of operations on upstream conditions. | SWFSC |