

# Biological Opinion Independent Review

National Marine Fisheries Service and U.S. Fish and Wildlife Service

## 1. Project Understanding

The Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR) jointly reinitiated Endangered Species Act (ESA) Section 7 consultation in August 2016 and submitted a Biological Assessment to support this consultation on January 31, 2019. The Biological Assessment documents the potential effects of the proposed action on federally-listed endangered and threatened fish species that have the potential to occur in the action area and their critical habitat. The proposed action involves a Core Water Operation that provides for Reclamation and DWR to operate the Central Valley Project and State Water Project for water supply and to meet the requirements of State Water Resources Control Board (SWRCB) Water Right Decision 1641 (D-1641), along with other project purposes. As part of the ESA Section 7 consultation, the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) are evaluating these effects and are developing coordinated, but separate, biological opinions to summarize their findings.

NMFS is seeking input from independent scientists on whether the biological opinion is scientifically sound and the conclusions are based on the best available scientific information as it pertains to salmon, steelhead, green sturgeon, and Delta smelt. Specifically, the scope of work consists of a report from each independent reviewer that addresses specific questions related to the analysis in the Effects of the Proposed Action section and how those analyses are carried through the Integration and Synthesis section of the multi-species biological opinion that covers listed salmon and steelhead, and green sturgeon and into scientifically supported conclusions. The expected timing for this review is from May 20 to May 31, 2019.

The draft questions being asked of the reviewers by NMFS are:

1. How well does the analytical approach explain how the exposure, response, and risk from project operations will be assessed for:
  - individuals, populations, and diversity groups of the listed species?
  - physical and biological features of designated critical habitats?
2. How effectively is the analytical approach applied in the effects analysis on the listed species and designated critical habitats?
3. To what extent does the approach for assessing effects provide a scientifically defensible approach for evaluating adverse effects to listed species and their designated critical habitats throughout the action area?
4. How well does the draft biological opinion use best available scientific and commercial information in the effects analysis and findings?

5. Does the draft biological opinion adequately address data gaps and uncertainties? Specifically:
  - a. Are uncertainties and assumptions in the effects analysis clearly stated and reasonable based on current scientific knowledge?
  - b. How extensively are gaps in aquatic species life history information considered and appropriately addressed?
6. How adequately does the draft biological opinion address the key operational effects of the proposed action? Specifically:
  - a. Do the analyses provide sound information and analyses to adequately characterize the effects of operations on spawning, incubating, rearing, and outmigrating salmonids and sturgeon?
  - b. How thoroughly do the data, analyses, and findings presented in the biological opinion capture the risks to individuals and populations, and to critical habitat, from the proposed action? Are there significant risks that have been overlooked or other scientific information that should be considered?
  - c. Have the appropriate analytical tools (i.e., models) been used for the analysis and what, if any, additional currently available tools should have been considered? Were available models appropriately applied and interpreted in the analysis?

## 2. Scope of Services and Deliverables

Reviewer XX will work independently to review the sections of the multi-species biological opinion and deliver an independent report with conclusions on specific questions provided by NMFS. The focus of this independent review is to obtain the opinions of technical experts on whether the biological opinion is scientifically sound and the conclusions are scientifically defensible. Relevant background materials will be provided immediately upon contract initiation, and sections of the biological opinion to be reviewed will be provided on or before April 12, 2019. At least one conference call will be required with the other reviewers and potentially NMFS representatives. The purpose of the call(s) is to provide an opportunity for the reviewers to discuss key topics prior to submitting the individual review report. The call(s) will occur approximately 1 week into the review period. Work will be completed within the approximate timeframe listed above and Reviewer XX will be paid a lump sum fee based on a daily stipend.

The official charge from NMFS, as well as a document template with format and content requirements for the independent review report, will be provided at least 1 week prior to the start of the review period.

### Deliverables

- Participate in one or two conference calls in the middle of the review period with the other reviewers and potentially agency representatives; each call is expected to last 2 to 4 hours.

- Provide a report using the format provided that addresses the questions posed by NMFS.

### **3. Assumptions**

- No travel will be required.
- All materials needed for review will be provided electronically prior to the start of the review period.
- The final report will be delivered electronically to the Anchor QEA representative, Michelle Havey, for consolidation with other review reports.

### **4. Budget**

The budget is based on a daily stipend of \$800 per day for 10 working days. Therefore, the total budget is on a lump sum basis for \$8,000.

### **5. Schedule**

The review will be conducted over 10 business days between May 20 to May 31, 2019, and the independent synthesis of conclusions document will be submitted electronically to Anchor QEA by May 31, 2019.