



Request for Quotations

Limiting Factors Analysis of Chinook Salmon in the Trinity River Watershed,
California

Deadline for Submission of Materials: June 14, 2024

Overview

The National Fish and Wildlife Foundation (NFWF) invites interested professional service providers to submit statements of quotations to conduct a Limiting Factors Analysis (LFA) in collaboration with the Trinity River Restoration Program (TRRP) in accordance with an existing LFA Study Plan recently prepared for the TRRP. This LFA Study Plan is included in this RFQ by reference options (<https://www.trrp.net/library/document/?id=2632>).

Background

NFWF is the largest private conservation grant-maker in the nation and is dedicated to sustaining, restoring, and enhancing the nation's fish, wildlife, plants, and habitats for current and future generations. NFWF advances these ideals through innovative public and private partnerships, and by investing financial resources and intellectual capital into science-based programs designed to address conservation priorities and achieve measurable outcomes.

NFWF is investing in conservation and restoration projects in the Trinity River Basin of California in partnership with U.S. Bureau of Reclamation (Reclamation) and the TRRP. The TRRP restoration actions correspond to an increase in the number of Chinook salmon smolts naturally produced within the Trinity River Watershed but with a concomitant decrease in the juvenile fish size at outmigration ([Pinnix et al. 2022](#)). However, no increase in returning adult Chinook salmon has been detected. While natural spawner populations have cycled over the duration of TRRP, numbers of returning adult salmon are currently low ([CDFW 2023](#)). To understand this apparent disparity, a Limiting Factors Analysis (LFA) for Chinook Salmon (*Oncorhynchus tshawytscha*) below Lewiston Dam was identified as a top priority by the TRRP ([Pickard et al. 2023](#)).

In September 2023, a qualified contractor was selected to develop a study plan for the LFA with three options for levels of effort. This LFA Study Plan (referenced above) is intended to inform adjustments in management actions by considering the complexity of the Chinook salmon life cycle, available data from ongoing population monitoring efforts, and the multitude of potential management actions, drivers, and causes under consideration for Trinity River Chinook salmon. In March 2024, the TRRP selected **LFA Study Plan Option 3** (which is cumulative with Options 1 and 2). This approach develops scenarios built into a Graphical User Interface (GUI) and uses an underlying Life Cycle Model (LCM) framework to allow the TRRP to run "what-if" scenarios. These scenarios could include management actions or suites of management actions (e.g. flow releases,



temperature targets, etc.), non-management or extrinsic factors (e.g., climate change, ocean productivity), or management actions outside of TRRP control (e.g., hatchery strategies, harvest and fisheries management, dam removal).

The primary purpose for this Request for Quotations (RFQ) is to identify contractors who are interested and qualified to conduct the Limiting Factors Analysis for Chinook salmon in the Trinity River in accordance with **LFA Study Plan Option 3** outlined in the LFA Study Plan (referenced above). This LFA is expected to be completed in 18-24 months from the contract award date. The TRRP will provide access to scientists as a Technical Advisory Group (TAG) of up to 10 scientists to support the selected LFA contractor. Interaction between the selected LFA contractor, the TAG, and the TRRP Science Advisory Board (SAB), is expected to be iterative as the LFA is carried out.

The referenced LFA Study Plan anticipated 16 tasks that were cumulative across the 3 options. Those 16 tasks are summarized into the five primary tasks listed below that potential contractors are requested to address for the recommended LFA Study Plan Option 3. Details of these tasks (and the 16 in the referenced LFA Study Plan) are subject to adjustment as additional information becomes available. The selected contractor will be expected to be responsive to task refinement recommendations that have concurrence among the TAG and SAB, and if those task refinements can be completed within the budget assumptions of the selected contractor.

Task 1. Regular interaction between the contractor and the TRRP. This interaction will include at a minimum: one 2-4-hour in-person kick-off meeting, eight approximately quarterly 1-2 hour virtual meetings with the TAG and SAB, one in-person workshop on use of the LCM interface (Task 3 below), one in-person presentation of the draft technical report to the TAG, and one in-person presentation of the final technical report to TRRP's Trinity Management Council (TMC).

Task 2. Gather and review background information, address data gaps and conduct literature review as needed. Contractor will review the LFA Study Plan, review existing data and literature provided by the TRRP, and review applicable LFA literature from other watersheds. Based on this review of background information, contractor will determine the required data and data quality to prepare a quantitative LCM in Task 3, and conduct the LFA in Task 4.

Task 3. Develop draft and final parameterized quantitative LCM with a Graphical User Interface (GUI) format that supports analysis of scenarios. The LCM GUI must be open source, leverage empirical data from the Trinity River to the maximum extent practical, and enable future adaptations and updating by TRRP.

Task 4. Analyze current limiting factors. Using the LCM developed in Task 3 and other existing analytical tools (e.g., TRRP S3 model, RBM10 water temperature model), test hypotheses and evaluate potential restoration or management scenarios to identify and address current limiting factors including major factors both within, and outside of, the Trinity River or TRRP control. It will be important to understand the magnitude of potential influence from TRRP actions relative to other factors, e.g., ocean mortality. This effort includes developing management scenarios, evaluating



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management scenarios, sensitivity analyses, prioritizing and mapping projects based upon their overall benefit to species recovery, and some gaming based on results. This is expected to be an iterative process (hypotheses, develop model scenarios, model management scenarios, learning, revise hypotheses, revise management scenarios, learn, etc.) and will require regular interaction with the TAG across at least 4 quarterly meetings in this iterative process. Contractor will develop PowerPoint presentations of iteration results that can be used during TAG meetings, and results will be incorporated into the draft and final technical reports in Task 5.

Task 5. Prepare draft and final technical report documenting results. Contractor will prepare draft technical report (20-40 pages exclusive of appendices) for TAG review. The contractor must allow at least 4 weeks for review of the draft report by the TAG and the SAB, each of which will consolidate their comments (two sets of comments) and submit to the contractor for consideration. The contractor will prepare a response to the comments matrix for those comments rejected in the final technical report, including an acceptable rationale for rejecting the comment. The Final report is also anticipated to be 20-40 pages exclusive of appendices and will be submitted within 4 weeks of receipt of TAG and SAB comments.

Additional details on the expected scope of work and all accompanying deliverables under the LFA Study Plan (referenced above).

Instructions for Providing Quotations

1. Address each item in the Outline of Quotations below.
2. Limit your response to a maximum of eight (8) pages (not including resumes).
3. E-mail a PDF or Word version of your responses to erica.engstrom@nfwf.org. In the subject line, please indicate *Response to RFQ for Trinity Chinook LFA – [name of respondent]*. Applications will not be accepted in hard copy form or alternate electronic form.
4. Applications must be e-mailed no later than **11:59 pm PDT on June 14, 2024**.

Please send questions and related inquiries to erica.engstrom@nfwf.org.

Outline of Quotations

The description of your and/or your organization's quotation should include the following elements:

- 1. Contact information.** Please provide a Primary Contact Person, Entity Name, Address, Phone, Email, Website, and EIN or SSN.
- 2. Expertise.** Please list the Principal Investigator(s), type(s) of services your team provides relating



to the required qualifications and your scientific expertise in Limiting Factor Analyses.

3. Past Experience. Please detail your experience in providing services like those required per this RFQ, including collaboration with federal agencies and experience conducting Limiting Factors Analyses.

4. Fee structure. Please provide a proposed budget with cost quotes for each Task for your proposed services, including hourly rates for proposed job classifications and, if available, audited overhead rates. The proposed budget should itemize work in sufficient detail to enable reviewers to evaluate the appropriateness of the entire funding request. You must use the attached [Contractor Budget Template](#). Please highlight any non-profit discounts on the services you provide.

5. Capacity and Schedule. Please provide a brief overview of the overall strategy and schedule to conduct the work.

6. References. Please include contact information for three client references relevant to the services described above.

Evaluation Criteria

NFWF will emphasize the following factors in its evaluation of responses submitted pursuant to this RFQ:

1. Knowledge and experience with LFAs.
2. Experience with federal agencies/tribes, anadromous salmonid ecology, especially in relevant geographies.
3. Cost and associated task cost rationale in budget spreadsheet.
4. Capacity and schedule to deliver services.
5. Past performance, including responses from references.

Intellectual Property and Data Ownership Rights

The TRRP requires all data, analyses, and work generated for independent review, analyses, and documentation of program performance be submitted to the program for use and archiving. The TRRP shall have unlimited rights to all data and other work generated under this contract. Examples of such work may include, but are not limited to, raw and final data, analyses, spreadsheets, databases, maps, images, reports, memorandums, sampling design, and sampling methodology. The Contractor shall not patent, copyright, trademark or withhold any such work. The TRRP intends to make all data, analyses, reports, sampling designs, and sampling methodologies available for public use. The TRRP shall have rights to analysis methods (programming code, software) developed by the Contractor in support of this contract.



Copyrighted deliverables will not be accepted. Licenses more restrictive than [Creative Commons "Attribution-ShareAlike"](#) license will not be accepted.

ELIGIBLE OFFERORS & CONFLICT OF INTEREST STATEMENT

Eligible applicants include institutions of higher education, other nonprofits, commercial organizations, international organizations, and federal, local, state and Indian tribal governments. Small and minority businesses, and women's business enterprises are strongly encouraged to apply.

By submitting a proposal in response to this solicitation, the offeror warrants and represents that it does not currently have any apparent or actual conflict of interest, as described herein. In the event an offeror currently has, will have during the life of the contemplated contract, or becomes aware of an apparent or actual conflict of interest, in the event an award is made, the offeror must notify NFWF in writing in the proposal, or in subsequent correspondence (if the issue becomes known after the submission of the proposal) of such apparent or actual conflicts of interest, including organizational conflicts of interest. Conflicts of interest include any relationship or matter which might place the contractor, the contractor's employees, or the contractor's subcontractors in a position of conflict, real or apparent, between their responsibilities under the award and any other outside interests, or otherwise. Conflicts of interest may also include, but are not limited to, direct or indirect financial interests, close personal relationships, positions of trust in outside organizations, consideration of future employment arrangements with a different organization, or decision-making affecting the award that would cause a reasonable person with knowledge of the relevant facts to question the impartiality of the offeror, the offeror's employees, or the offeror's future subcontractors in the matter. Upon receipt of such a notice, the NFWF Contracting Officer will determine if a conflict of interest exists and, if so, if there are any possible actions to be taken by the offeror to reduce or resolve the conflict. Failure to resolve conflicts of interest in a manner that satisfies NFWF may result in the proposal not being selected for award.

By submitting a proposal in response to this solicitation, the Offeror warrants and represents that it is eligible for award of a Contract resulting from this solicitation and that it is not subject to any of the below circumstances:

- Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to a Contract with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless the agency has considered suspension or debarment of the corporation and made a determination that this further action is not necessary to protect the interests of the Government; or
- Was convicted (or had an officer or agent of such corporation acting on behalf of the corporation convicted) of a felony criminal violation under any Federal or State law



within the preceding 24 months, where the awarding agency is aware of the conviction, unless the agency has considered suspension or debarment of the corporation and made a determination that this further action is not necessary to protect the interests of the Government; or

- Is listed on the General Services Administration's, government-wide System for Award Management Exclusions (SAM Exclusions), in accordance with the OMB guidelines at 2 C.F.R Part 180 that implement E.O.s 12549 (3 C.F.R., 1986 Comp., p. 189) and 12689 (3 C.F.R., 1989 Comp., p. 235), "Debarment and Suspension, " or intends to enter into any subaward, contract or other Contract using funds provided by NFWF with any party listed on the SAM Exclusions in accordance with Executive Orders 12549 and 12689. The SAM Exclusions instructions can be found here: <https://www.sam.gov/SAM/>.

SUBMISSION DEADLINES

June 14, 2024

Deadline for receipt of quotations to NFWF.

Quotations must be sent electronically as an email attachment to erica.engstrom@nfwf.org by **11:59 pm PDT on June 14, 2024**.

Quotations must be provided in Word format or searchable PDF.

May 22, 2024

Deadline for submission of questions to be answered and posted to the RFQ webpage as Frequently Asked Questions.

August 2024

Contract award to selected Offeror.

August 2026

Deliverables due.