

Project Management Plan/Task List

We will complete the Trinity River Refinements Coordinator work through a set of five specified tasks (Tasks 1-5) as described below. Place of performance: we will undertake document preparation, review, writing tasks, and teleconference meetings at our own facilities. All in-person meetings described below will take place in Trinity, Shasta, and Humboldt Counties in California in the Trinity River basin at existing tribal, federal, state, or local facilities. We will attend and participate in TMC and other meetings as described below in Weaverville, Redding, Weitchpec, Eureka, and/or Sacramento, California.

COVID-19 Caveat

In-person meetings as detailed in the PWS are conditional upon the public health regulations in place at the time in the State of California as well as any national and/or international travel restrictions or disruptions. If these regulations preclude a face-to-face meeting, we propose to facilitate meetings virtually, including brainstorming and subgroup sessions. Headwaters and ESSA have been advancing our expertise in techniques for remote facilitation including use of platforms such as Microsoft Teams, WebEx, and mural.co which facilitates idea generation and brainstorming exercises by participants that are physically isolated, including the use of tabular, hierarchical, and map-based frameworks. Our team is very familiar with using these tools in a way that is satisfying and meaningful and we are fully prepared to conduct in-person meetings as virtual meetings if conditions and regulations necessitate.

Proposed Task Schedule

A Proposed Task Schedule Table is provided for each of Tasks 1-5. Color coding for these Proposed Task Schedule Tables is as follows:

Task Requirement Category	Proposed Schedule Table Color
General task work	White
Teleconference	Purple
Drafting Committee or TRRP/TMC/Regional Directors in-person meeting	Orange
TMC in-person meeting	Green

Task 1: Project Management

Task 1. Contractor shall provide a project manager who tracks the scope, schedule, and budget and who serves as the single point of contact to the Government for the services required in this PWS.

Key Personnel	Task 1 Role
Chad Smith, Headwaters	- Task 1 lead. - Draft all written quarterly status reports. - Conduct all quarterly project management meetings with the TRRP Executive Director (by teleconference). - Attend up to three, two-day meetings per year to present findings or coordinate on-going work with other program partners (by teleconference).
Task 1 Results	Deliverable for Task 1: Quarterly written status reports. - Ten (10) quarterly status reports during the Period of Performance. - Ten (10) quarterly project management meetings (by teleconference). - Six (6) two-day coordination meetings (by teleconference).

Our Project Manager, Chad Smith of Headwaters, will serve as the single point of contact to the Government for the service described in the PWS. This includes:

- Written quarterly status reports submitted to the TRRP Executive Director by the tenth business day following the end of every quarter during the Period of Performance – the reports will include completed activities, activities for the next six months after the report, financial status, schedule, any outstanding issues. Reports will be submitted in Word format with full editing privileges and will be finalized in PDF format. Ten (10) total reports, see **Table 2** for a proposed schedule.
- Quarterly project management meetings with the TRRP Executive Director – these meetings will be conducted by teleconference. Our Project Manager will be fully available to participate in additional meetings if necessary to help coordinate work included in Tasks 2 through 4. Ten (10) total meetings, see **Table 2** for a proposed schedule.
- Coordination meetings – up to two, two-day meetings per year conducted by teleconference during the Period of Performance to present findings or coordinate ongoing work with other Program partners. Electronic copies of all materials and presentations from these meetings will be provided within two days of each meeting. Six (6) total meetings, see **Table 2** for a proposed Schedule.

Proposed Task Schedule

Table 2 – Task 1 Proposed Schedule. Proposed schedule for Quarterly Status Reports, Quarterly Project Management Meetings, and TRRP Coordination Meetings during the Period of Performance. Specific timing of the Quarterly Project Management Meetings and the biannual Coordination Meetings will be adjusted in coordination with the TRRP Executive Director and the TRRP based on availability.

Task 1 Requirements	Estimated Completion Date:
Quarter 1: June 2020-August 2020	
Quarterly Status Report	September 10, 2020
Quarterly Project Management Meeting <i>by teleconference</i>	September 17, 2020
Quarter 2: September 2020-November 2020	
Quarterly Status Report	December 10, 2020
Quarterly Project Management Meeting <i>by teleconference</i>	December 17, 2020
Year 1 Coordination Meeting #1 <i>by teleconference</i>	November 2020
Quarter 3: December 2020-February 2021	
Quarterly Status Report	March 10, 2021
Quarterly Project Management Meeting <i>by teleconference</i>	March 17, 2021
Quarter 4: March 2021-May 2021	
Quarterly Status Report	June 10, 2021
Quarterly Project Management Meeting <i>by teleconference</i>	June 17, 2021
Year 1 Coordination Meeting #2 <i>by teleconference</i>	May 2021
Quarter 5: June 2021-August 2021	
Quarterly Status Report	September 10, 2021
Quarterly Project Management Meeting <i>by teleconference</i>	September 17, 2021
Quarter 6: September 2021-November 2021	
Quarterly Status Report	December 10, 2021
Quarterly Project Management Meeting <i>by teleconference</i>	December 17, 2021
Year 2 Coordination Meeting #1 <i>by teleconference</i>	November 2021
Quarter 7: December 2021-February 2022	
Quarterly Status Report	March 10, 2022
Quarterly Project Management Meeting <i>by teleconference</i>	March 17, 2022
Quarter 8: March 2022-May 2022	
Quarterly Status Report	June 10, 2022
Quarterly Project Management Meeting <i>by teleconference</i>	June 17, 2022
Year 2 Coordination Meeting #2 <i>by teleconference</i>	May 2022
Quarter 9: June 2022-August 2022	
Quarterly Status Report	September 10, 2022
Quarterly Project Management Meeting <i>by teleconference</i>	September 17, 2022
Year 3 Coordination Meeting #1 <i>by teleconference</i>	September 2022
Quarter 10: September 2022-November 2022	
Quarterly Status Report	December 10, 2022
Quarterly Project Management Meeting <i>by teleconference</i>	December 17, 2022
Year 3 Coordination Meeting #2 <i>by teleconference</i>	December 2022
Quarter 11: December 2022-February 2023	
TRRP staff, TMC, and/or Regional Directors <i>teleconference</i> #5 to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements) – see Task 5	December 2022
Final Annual Report of progress on implementation of Program Document – see Task 5	January 2023
Quarter 12: March 2023-May 2023	
<i>Open quarter for task-based and/or time-based contract adjustments if necessary</i>	

This proposed Task 1 schedule is matched to our overall Project Schedule and the Task/Deliverable/Date table in Section 5.0 of the PWS (as amended by the Bureau of Reclamation on May 12, 2020), both of which result in a conclusion of work on Tasks 1-5 at the end of January 2023. If necessary, additional

Quarterly Status Reports and Quarterly Project Management Meetings could be completed during the remaining four months of the Period of Performance (February 2023-May 2023). Our Project Manager, Chad Smith, will remain in regular contact with the TRRP Executive Director and the Contracting Officer to address any schedule issues and discuss potential changes in scope and budget as necessary.

Task 2: Program Review and Development of Programmatic Changes

Task 2. *Lead and participate in a series of meetings with the TRRP Program Document Drafting Committee to elicit ideas regarding potential improvement to TRRP organizational structure, staffing structure, financial management, and decision-making process to achieve effective implementation of the restoration program including recommendations of the TRRP Refinements Report.*

Key Personnel	Task 2 Role
Chad Smith, Headwaters	- Task 2 lead and facilitator for two (2) in-person meetings. - Lead author of report on components of other science-based natural resource management and restoration programs, recommendations for AM in the TRRP, and recommendations for proposed changes to TRRP structure. - Lead and attend all in-person meetings under Task 2. - Lead and participate in all teleconference meetings under Task 2. - Individual coordination with Program Document Drafting Committee members.
Darcy Pickard, ESSA	Virtual co-facilitation for all in-person meetings. - Participate in all meetings under Task 2. - Review of report on components of other science-based natural resource management and restoration programs, recommendations for AM in the TRRP, and recommendations for proposed changes to TRRP structure.
David Marmorek, ESSA	Review of report on components of other science-based natural resource management and restoration programs, recommendations for AM in the TRRP, and recommendations for proposed changes to TRRP structure.
Task 2 Results	<i>Deliverable for Task 2:</i> <i>Electronic and hard copy versions of presentation materials or handouts associated with meetings including report comparing/contrasting other restoration programs.</i> - Two (2) one-day meetings with the Program Document Drafting Committee via teleconference. - One (1) two-day in-person meeting with the TMC (within four months of initiating Task 2). - One (1) one-day in-person meeting with the TMC. - Three (3) four-hour conference calls with the Program Document Drafting Committee. - Three (3) days of individual coordination with Program Document Drafting Committee members. <u>Report</u> on organizational structure, staffing structure, financial management, decision-making process, and AM in other science-based natural resource management and restoration programs; proposed structural and process changes that would facilitate successful AM in the TRRP; and overall proposed changes to TRRP structure.

Reference Program Report Framework

The focus of our work under Task 2 will be completing a report that compares/contrasts several key attributes of other science-based natural resources management and restoration programs with the TRRP. Key attributes to be evaluated in other programs include *organizational structure, staffing structure, financial management, decision-making process, and use of adaptive management (AM)*. The intent of this report will be to provide background information to the Program Document Drafting Committee and the TMC on these components in other programs and how they relate to the current structure and function of the TRRP. Our team's role will be to use this information to *enable* the TMC to agree on structural changes for the TRRP. Regarding AM, our team will discuss with the Program Document Drafting Committee and the TMC how to facilitate successful AM in the TRRP, including considerations of which decisions require AM and which do not, both now and in the future, and what this implies for the structure of the program. This could include examples of actions where AM is not advisable (e.g., low uncertainty – no need; learning cycle is too long or uncertain due to high natural variability, risks of an experimental action are unacceptable).

The content of this report will be based on the previous experience and background knowledge of our team relative to several similar programs across the country, including the PRRIP, the Glen Canyon Adaptive Management Program, the Upper Colorado Endangered Fish Recovery Program, the San Joaquin River Restoration Program, the U.S. Columbia Basin Fish and Wildlife Program, and the Missouri River Recovery Program. We will structure our report in part based on a recent ESSA discussion paper (from October 2015) for the Missouri River Recovery Program titled *“Adaptive Management and the Missouri River Recovery Program: Attributes of Effective Governance for AM.”* That discussion paper was developed to summarize first principles and key attributes related to effective governance in the context of AM drawing upon lessons learned from other AM programs. We will also adapt similar work now being conducted by Headwaters for the Upper Colorado Endangered Fish Recovery Program comparing/contrasting key attributes of several major Reclamation recovery/restoration programs. **Table 3** below is presented as an example of the kind of information we will collect from other restoration programs for consideration by the TMC. This table and the included programs are not meant to be prescriptive; our team will work with the Program Document Drafting Committee and the TMC to identify the programs and the categories of information most on-point for TMC decision-making.

Table 3. Suggested set of restoration programs and program attributes to detail for the TRRP.

Attribute	Trinity River Restoration Program	Platte River Recovery Implementation Program	Glen Canyon Dam Adaptive Management Program	Upper Colorado Endangered Fish Recovery Program	San Joaquin River Restoration Program	U.S. Columbia Basin Fish & Wildlife Program	Missouri River Recovery Program
Executive Authority for the Program							
Executive Authority for AM							
Program Development							
Organizational Structure							
Financial Management Structure							
Staffing Structure							
Policy Committee & Decision-Making Process							
Stakeholder Participation							
Technical Advisory Committees							
Independent Scientific Review							
Synthesis of Information							
Benefits							
Challenges							

Engagement with the Program Document Drafting Committee and the TMC

This effort will build on the recommendations in Headwaters' *TRRP Refinements Report* and is intended to result in providing guidance from the TMC as to the direction and content of the Program Document and the Science Plan. In addition to the report described above, our team will complete Task 2 via a series of in-person and teleconference meetings with the Program Document Drafting Committee and the TMC and individual coordination with Program Document Drafting Committee members. The purpose of these meetings and associated coordination will be to:

- Elicit ideas regarding potential improvements to TRRP organizational structure, staffing structure, financial management, and decision-making process to help the TMC effectively implement the program and the Refinement recommendations.
- Help the TMC evaluate and choose which ideas to implement regarding structure and decision-making process from other restoration programs.
- Inform the TMC of what TRRP structural and process changes would facilitate successful AM and facilitate discussion with the TMC whether and how to conduct AM in the TRRP.
- Propose solutions on topics on which the Program Document Drafting Committee and/or the TMC cannot reach consensus.

Electronic and hard copies of all presentation materials, handouts, and documents will be provided for all meetings, with electronic copies distributed at least one week prior to each meeting to provide adequate review time by Program Document Drafting Committee members and the TMC. Chad Smith of Headwaters will participate in all meetings for Task 2 and will provide notes for all meetings to all meeting participants and the TRRP Executive Director within one week of each meeting.

In-Person Meeting Facilitation

Chad Smith of Headwaters will attend and facilitate the two (2) in-person meetings identified for Task 2. Mr. Smith will also provide content expertise, group guidance, document editing, and note taking during all in-person meetings. Darcy Pickard of ESSA will participate in all in-person meetings virtually to provide co-facilitation and content expertise.

COVID-19 Caveat

Please see the paragraph on Page 1, which is also applicable to this section.

Proposed Task Schedule

Table 4 – Task 2 Proposed Schedule. Proposed schedule for report on organizational structure, staffing structure, financial management, decision-making process, and AM in other science-based natural resource management and restoration programs. Specific timing will be adjusted in coordination with the TRRP Executive Director and the TRRP based on availability.

Task 2 Requirements	Estimated Completion Date:
Program Document Drafting Committee member coordination	Throughout Task 2
Program Document Drafting Committee staff <i>half-day teleconference #1</i>	Mid- to Late August 2020
Program Document Drafting Committee <i>one-day teleconference #1</i>	Early to Mid-September 2020
Reference Restoration Program report	Late September 2020
Program Document Drafting Committee staff <i>half-day teleconference #2</i>	Early October 2020
Program Document Drafting Committee <i>one-day teleconference #2</i>	Late October 2020
TMC <i>in-person meeting</i> (2-day meeting) to present and discuss TRRP structural and process changes for AM and discuss whether and how AM to be conducted in TRRP	November 2020
Program Document Drafting Committee staff <i>half-day teleconference #3</i>	Early December 2020
TMC <i>in-person meeting</i> (1-day meeting) to present and discuss proposed changes to TRRP structure to be addressed in Program Document	Late December 2020

Task 3: Final TRRP Program Document Development

Task 3.1. Consolidate a single, concise foundational document that can guide TRRP implementation and decision-making (and that is consistent with the ROD).

Task 3.2. Consolidate review comments from the TMC. Present revised, final document from Task 3.1 at a one-day meeting of the full TMC.

Key Personnel	Tasks 3.1 and 3.2 Role
Chad Smith, Headwaters	- Task 3 lead and facilitator for four (4) in-person meetings. - Lead author of the Program Document, including coordinating engagement with the Program Document Drafting Committee and TMC, drafting materials, and ensuring appropriate integration and crosswalk with the Science Plan. - Lead for compiling and responding to all TMC comments. - Lead all in-person meetings under Tasks 3.1 and 3.2. - Lead all teleconference meetings under Tasks 3.1 and 3.2. - Coordination with individuals and small groups.
Darcy Pickard, ESSA	Virtual co-facilitation for all in-person meetings. - Program Document review. - Help to ensure synergy with the Science Plan.
David Marmorek, ESSA	- Program Document review. - Help to ensure synergy with the Science Plan.
Caitlin Semmens, ESSA	Technical review, document editing, and graphic design to improve the quality of the final product.
Task 3 Results	Deliverable for Task 3.1: Draft Program Document. - Two (2) two-day in-person meetings with the Program Document Drafting Committee. - Four (4) one-day conference calls with the Program Document Drafting Committee. - Ten (10) three-hour conference calls with the Program Document Drafting Committee. - Ten (10) days drafting/editing of content. - Four (4) days of coordination with individuals and smaller groups. - One (1) two-day in-person meeting with the TMC. - Draft Program Document.
	Deliverable for Task 3.2: Final Program Document. - Document, consolidate, and respond to comments from the TMC. - One (1) one-day in-person meeting with the TMC. - Final Program Document.

Chad Smith of Headwaters will lead Tasks 3.1 and 3.2 for our team, resulting in a Draft Program Document under Task 3.1 and a Final Program Document under Task 3.2. The purpose of these Tasks will be to develop for the TRRP a single, concise foundational document that will guide TRRP implementation and decision-making. We commit to ensuring this document is consistent with the ROD and that, if the TMC decides to move forward with implementing AM in the TRRP, the Program Document's organizational structure and process refinements are fully conducive to conducting AM.

Many of the building blocks for this effort already exist. The Program Document will build on existing TRRP foundational documents (all of which were reviewed by Headwaters during the Refinements work and by ESSA during the IAP work) and the recommendations in Headwaters' TRRP Refinements Report. The Program Document will also build on the improvements to TRRP process and structure agreed to by the TMC during Task 2 as well as lessons learned from similar initiatives and past experience from the TRRP,

the PRRIP, and several other restoration programs. The end result will be an implementable Program Document for the TRRP centered on agreed-to goals, objectives, milestones, and core structural arrangements.

Program Document Framework

Chad Smith developed a proposed architecture for the Program Document during the previous Refinements work conducted by Headwaters. That architecture is included in **Appendix A**, but for quick reference we envision a Program Document that contains these key components:

- TRRP Purpose Statement – agreed to by the TMC in late 2019, incorporated into the Program Document structure and a jumping off point for drafting of additional document content.
- TRRP Goal Statement – agreed to by the TMC in late 2019, incorporated into the Program Document structure and a jumping off point for drafting of additional document content.
- TRRP Elements – including time increments and objectives.
- Milestones – how to assess progress toward TRRP goals and objectives.
- Guidance language on how to modify the TRRP and the Program Document in the future. This includes maintaining an online version of the Program Document that is routinely updated by the Executive Director and made publicly available, and that contains a Change Log at the end of the document each time there is a revision/update.
- Link to the Science Plan/AM by detailing how to adjust to learning during implementation.
- How to acquire and/or manage water and land (habitat) resources.
- If a time increment is agreed to, how to assess Program effectiveness at the end of that time increment and how to move into the next time increment.
- TRRP Finance Document – where money comes from, how much, how contributions are made and how finances are managed, base funding for existing projects, etc.
- TRRP Organizational Structure – TMC, Advisory Committees, SAB.
- TRRP Staffing Structure – ED and staff, roles relative to the TMC and TRRP decision-making.
- Adaptive Management Plan (Science Plan).

Engagement with the Program Document Drafting Committee and the TMC

Our team's most important role is to *enable* the Program Document Drafting Committee and by extension the TMC in development of the Program Document. This will require frequent communication and substantial pre-meeting planning to make the most of the Drafting Committee's time during in-person meetings and teleconferences. We will work with the Drafting Committee through a combination of conference calls and email to develop meeting agendas with clear objectives and well-defined task processes, as well as to confirm or explore ideas arising during the meetings. Our team will complete Tasks 3.1 and 3.2 via a series of in-person and teleconference meetings with the Program Document Drafting Committee and the TMC and coordination with individuals and smaller groups. The purpose of these meetings and associated coordination will be to:

- Ensure the Program Document is a single, concise foundational document for TRRP implementation and decision-making that is consistent with ROD.
- Ensure the document is conducive to implementing AM if the TMC decides to pursue AM in Task 2.
- Facilitate approval of language resulting in a negotiated and agreed-upon Program Document.
- Propose solutions for topics/verbiage on which the Drafting Committee and/or TMC cannot reach consensus.

Electronic and hard copies of all presentation materials, handouts, and documents will be provided for all meetings, with electronic copies distributed at least one week prior of each meeting to provided adequate review time by Program Document Drafting Committee members and the TMC. Chad Smith of Headwaters will participate in all meetings for Task 3 and will provide notes for all meetings to all meeting participants and the TRRP Executive Director within one week of each meeting. When issues arise where there is no consensus, our team will prepare a summary of possible solutions and associated tradeoffs. This resolution process will be determined through Tasks 2 and 3 as part of the development of the Program Document and will become guidance for resolution of future questions regarding Program Document language.

Program Document as a Deliverable

Based on Headwaters' previous work on the Refinements process, our work with other restoration programs, and our current thinking about the best way to move forward in the TRRP with a refined structure and function, the most successful approach for the TRRP will be to develop, as stated in the PWS, a **concise** foundational document. Our team believes the time allocation described in this PWS affords the time and coordination schedule to accomplish this at an adequate level to develop a guidance document that the TRRP can begin to implement. If additional and more extensive detail is necessary for any of the topical areas above, or if the TMC gets stuck at particular negotiation points on language for the Program Document, more time and effort may be needed to bring important issues to resolution. In those instances, Chad Smith of Headwaters will work with the Contracting Officer and the TRRP Executive Director to scope out time and budget changes that would be necessary to complete the additional work and complete any contract change orders that might be required.

In-Person Meeting Facilitation

Chad Smith of Headwaters will attend and facilitate the four (4) in-person meetings identified for Task 4. Mr. Smith will also provide content expertise, group guidance, document editing, and note taking during all in-person meetings. Darcy Pickard of ESSA will participate in all in-person meetings virtually to provide co-facilitation and content expertise.

COVID-19 Caveat

Please see the paragraph on Page 1, which is also applicable to this section.

Proposed Task Schedule

Table 5 – Task 3 Proposed Schedule. Proposed schedule for TRRP Program Document. Specific timing will be adjusted in coordination with the TRRP Executive Director and the TRRP based on availability.

Task 3 Requirements	Estimated Completion Date:
Drafting and/or editing of Program Document content	Throughout Task 3
Coordination with individuals and smaller groups	Throughout Task 3
Program Document Drafting Committee <i>one-day teleconference #1</i>	January 2021
Program Document Drafting Committee <i>3-hour teleconference #1</i>	January 2021
Program Document Drafting Committee <i>3-hour teleconference #2</i>	February 2021
Program Document Drafting Committee <i>3-hour teleconference #3</i>	February 2021
Program Document Drafting Committee <i>in-person meeting #1</i>	March 2021
Program Document Drafting Committee <i>one-day teleconference #2</i>	April 2021
Program Document Drafting Committee <i>3-hour teleconference #4</i>	April 2021
Program Document Drafting Committee <i>3-hour teleconference #5</i>	May 2021
Program Document Drafting Committee <i>3-hour teleconference #6</i>	May 2021
Program Document Drafting Committee <i>in-person meeting #2</i>	June 2021
Program Document Drafting Committee <i>one-day teleconference #3</i>	June 2021
Program Document Drafting Committee <i>3-hour teleconference #7</i>	July 2021
Program Document Drafting Committee <i>3-hour teleconference #8</i>	July 2021
Program Document Drafting Committee <i>3-hour teleconference #9</i>	July 2021
Program Document Drafting Committee <i>3-hour teleconference #10</i>	August 2021
Draft TRRP Program Document	August 2021
TMC <i>in-person meeting</i> for Draft TRRP Program Document (2-day meeting)	August 2021
Consolidate TMC review comments on Draft TRRP Program Document	August/September 2021
Program Document Drafting Committee <i>one-day teleconference #4</i>	September 2021
Final TRRP Program Document	October 2021
TMC <i>in-person meeting</i> for Final TRRP Program Document (1-day meeting)	October 2021

Task 4: Final TRRP Science Plan Development

Task 4.1. Work with the TRRP Monitoring, Research, and Decision Support Plan Drafting Committee (Science Plan Drafting Committee; composed of TRRP scientists and other support staff) to develop a Science Plan to guide the program in science-based decision making.

Task 4.2. Consolidate review comments from TMC and TRRP staff. Present revised, final document to full meeting of the TMC.

Key Personnel	Tasks 4.1 and 4.2 Role
Chad Smith, Headwaters	• Virtual co-facilitation for four (4) in-person meetings. • Technical support including participation in all meetings (in-person and teleconferences). Key role for this task is to ensure the Science Plan aligns with and complements the Program Document. • Provide drafting/editing assistance to Task 4 lead.
Darcy Pickard, ESSA	• Task 4 technical lead including coordinating engagement with Science Plan Drafting Committee and TMC, drafting materials, and ensuring appropriate integration and crosswalk with IAP and Program Document. • Facilitator for four (4) in-person meetings. • Lead for compiling and responding to all TMC comments. • Content expert for all in-person meetings under Tasks 4.1 and 4.2. • Lead all teleconference meetings under Tasks 4.1 and 4.2. • Coordination with individuals and small groups.
David Marmorek, ESSA	• Senior Advisor to ensure the Science Plan leverages best practices from other initiatives, facilitates effective AM, and provides pragmatic guidance for implementation.
Caitlin Semmens, ESSA	• Technical review, document editing, and graphic design to improve the quality of the final product.
Task 4 Results	Deliverable for Task 4.1: Draft Science Plan. • Two (2) two-day in-person meetings with the Science Plan Drafting Committee. • Five (5) three-hour conference calls with the Science Plan Drafting Committee. • Ten (10) days drafting/editing of content. • Four (4) days of coordination with individuals and smaller groups. • One (1) one-day in-person meeting with the TMC. • Draft Science Plan.
	Deliverable for Task 4.2: Final Science Plan. • Document, consolidate, and respond to comments from the TMC. • One (1) one-day in-person meeting with the TMC. • Final Science Plan.

Darcy Pickard of ESSA will lead Tasks 4.1 and 4.2 for our team, resulting in a Draft Science Plan under Task 4.1 and a Final Science Plan under Task 4.2. The purpose of these Tasks is to develop a concise and practical Science Plan to guide the TRRP in science-based decision-making. We commit to ensuring this document is consistent with the ROD and that, if the TMC decides to move forward with implementing AM in the TRRP, the Science Plan is fully conducive to conducting robust AM.

Many of the building blocks for this exercise already exist. The Science Plan will build on the Integrated Assessment Plan (IAP) and leverage the considerable expertise of the Science Plan Drafting Committee. Lessons learned from similar initiatives and past experience from the TRRP will inform the development of the Science Plan. The plan will focus on the latest version of the objectives and targets providing a summary of the key questions and associated monitoring, management, and decision-making processes.

Priority Questions & Actions

Our team will work with the Science Plan Drafting Committee during the first face-to-face meeting to identify priority research questions and management actions. An effective restoration program requires focus to make the best use of resources, however identifying priorities does not mean that other questions should be dropped permanently. We propose developing a process for adding or removing questions from the focal list based on agreed-upon prioritization criteria. We will identify the linkages between the IAP, priority questions, and the latest objectives and targets. Management actions will be identified in parallel to ensure that questions are focused on learning that may influence management decisions.

Gap Analysis & Monitoring Recommendations

Once an initial set of priority questions is identified, our team (with support from the Science Plan Drafting Committee) will complete a gap analysis comparing current monitoring to the needs associated with the priority questions. Where gaps are identified, the IAP and other existing initiatives both within and outside of the TRRP will be reviewed to inform the development of options for consideration. Mismatches (i.e., where data do not inform a priority question) will be identified for review by the Science Plan Drafting Committee to re-evaluate the priority of current monitoring efforts.

Science-Based Decision Framework

There are several different types of decisions that occur each year in the TRRP, including: (1) deciding on current priorities; (2) deciding which management actions to implement (e.g., type, location, timing, intensity); and (3) deciding what monitoring activities to implement. The process by which these decisions are made and how they are informed by science will be collaboratively developed in the Science Plan. This will be the focus of the second in-person meeting. The Program Document will inform the process by which these priorities are incorporated in decision-making. The Science Plan will include a process and timeline for re-evaluating priorities including annual reporting of how monitoring has informed important hypotheses and progress toward objectives. The most efficient process for development of the Science Plan is to build consensus on a detailed annotated outline, revise that as required, and then relatively quickly write the Science Plan itself.

Engagement with the Science Plan Drafting Committee

Our team's most important role is to *enable* the Science Plan Drafting Committee in development of the Science Plan. This will require frequent communication and substantial pre-meeting planning to make the most of the Drafting Committee's time during in-person meetings. We will work with the committee through a combination of conference calls and email to develop meeting agendas with clear objectives and well-defined task processes, as well as to confirm or explore ideas arising during the meetings. Draft materials will be provided at least one week in advance of in-person meetings. When issues arise where there is no consensus, our team will prepare a summary of possible solutions, associated tradeoffs, and a summary of the available evidence. The process for resolution will be determined through Tasks 2 and 3 as part of the development of the Program Document. Chad Smith of Headwaters will participate virtually in all meetings for Task 4 and will provide notes for all meetings to all meeting participants and the TRRP Executive Director within one week of each meeting.

Science Plan as a Deliverable

The final deliverable will be influenced by the Program Document (Task 2 and Task 3) as well as the Science Plan Drafting Committee. However, our initial vision for the Science Plan is to create a concise (e.g., ~20 pages excluding the cover page and references) and practical guide written for a broad audience, with references to detailed documents as appropriate. It should include a short narrative describing the

evolution of the science leading up to the ROD and since initiation of the TRRP. The priority questions and management actions should be described using plain language. The associated monitoring priorities should be described at a high level including a short summary of: *what, why, where, when, and how* the monitoring occurs and *who* is responsible for the data collection, analysis, and synthesis. The final section should describe the decision process and feedback loops that will allow the program to improve over time through science-based learning.

Based on ESSA's previous work on the IAP, Headwaters' previous work on the Refinements process, our work with other restoration programs, and our current thinking about the best way to move forward in the TRRP with AM and a Science Plan, the most successful approach for the TRRP will be to develop, as described above, a **concise** Science Plan that will be read and used by all TRRP personnel. Our team believes the time allocation described in this PWS affords the time and coordination schedule to accomplish this at an adequate level to develop a guidance document that the TRRP can begin to implement. If additional and more extensive detail is necessary for any of the topical areas above, or if the Science Plan Drafting Committee or TMC get stuck at particular negotiation points on language for the Science Plan, more time and effort may be needed to bring important issues to resolution. In those instances, Chad Smith of Headwaters will work with the Contracting Officer and the TRRP Executive Director to scope out time and budget changes that would be necessary to complete the additional work and complete any contract change orders that might be required.

In-Person Meeting Facilitation

Darcy Pickard of ESSA will attend and facilitate the four (4) in-person meetings identified for Task 4. Ms. Pickard will also provide content expertise, group guidance, document editing, and note taking during all in-person meetings. Chad Smith of Headwaters will participate in all in-person meetings virtually to provide co-facilitation and content expertise.

COVID-19 Caveat

Please see the paragraph on Page 1, which is also applicable to this section.

Proposed Task Schedule

Table 6 – Task 4 Proposed Schedule. Proposed schedule for TRRP Science Plan. Specific timing will be adjusted in coordination with the TRRP Executive Director and the TRRP based on availability.

Task 4 Requirements	Estimated Completion Date:
Drafting and/or editing of Science Plan content	Throughout Task 3
Coordination with individuals and smaller groups	Throughout Task 3
Science Plan Drafting Committee <i>teleconference</i> #1	January 2021
Science Plan Drafting Committee <i>teleconference</i> #2	February 2021
Science Plan Drafting Committee <i>in-person meeting</i> #1	March 2021
Science Plan Drafting Committee <i>3-hour teleconference</i> #3	April 2021
Science Plan Drafting Committee <i>3-hour teleconference</i> #4	May 2021
Science Plan Drafting Committee <i>in-person meeting</i> #2	June 2021
Draft TRRP Science Plan	July 2021
TMC <i>in-person meeting</i> for Draft TRRP Science Plan (1-day meeting)	August 2021
Consolidate TMC and TRRP staff review comments on Draft TRRP Science Plan	September/October 2021
Science Plan Drafting Committee <i>teleconference</i> #5	November 2021
Final TRRP Science Plan	December 2021
TMC <i>in-person meeting</i> for Final Program Document (1-day meeting)	January 2022

Task 5: Program Document Implementation Assistance

Task 5. *Through preparing briefings, convening meetings to resolve issues, and providing feedback, assist the TMC to implement recommended structural and process changes in the Program Document for a period of 12 months once it is adopted.*

Key Personnel	Task 5 Role
Chad Smith, Headwaters	- Task 5 lead. - Lead all in-person meetings, conference calls, and briefings including final TMC meeting in Sacramento, CA. - Lead author of quarterly progress reports, draft Annual Report, and final Annual Report.
Darcy Pickard, ESSA	- Contributions to and review of all quarterly progress reports, draft Annual Report, and final Annual Report. - Virtual attendance at final TMC meeting in Sacramento, CA.
Task 5 Results	Deliverables for Task 5: <i>Quarterly progress reports, draft Annual Report, Final Annual Report.</i> - Two (2) one-day in-person meetings with TRRP staff, TMC, and/or Regional Directors. - Five (5) three-hour conference calls with TRRP staff, TMC, and/or Regional Directors. - One (1) one-day in-person final meeting with the TMC in Sacramento, CA. - Four (4) quarterly progress reports. - Draft Annual Report. - Final Annual Report.

The purpose of this Task is both to provide one year of guidance to the TRRP as it begins implementation of the Program Document and the Science Plan, and to help the TRRP achieve buy-in to the new Program Document with higher-level agency personnel. As discussed with the TMC during the Refinements process, Headwaters strongly believes successful implementation of the TRRP Refinements will only work if changes to structure and function are understood and supported by high-level leaders within the Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (Service), the National Marine Fisheries Service (NMFS), the U.S. Forest Service, the Tribes, the State of California, and other agencies and entities involved in the TRRP. We believe successful completion of Task 5 is critical to ensuring long-term implementation success for the TRRP.

Chad Smith of Headwaters will lead Task 5 for our team, including preparation of all reports and attendance at and participation in all briefings and meetings associated with the Task. Mr. Smith is prepared to attend briefings with Reclamation, Service, and NMFS Regional Directors and Area Managers as necessary and can also attend briefings with the Department of the Interior and/or other agencies in Washington, DC if necessary. Mr. Smith will provide notes for all meetings to all meeting participants and the TRRP Executive Director within one week of each meeting. Our work on this Task will focus on preparing briefing materials that center on the structural and process changes being undertaken by the TRRP, their relationship to the ROD, and the positive direction on which they set the TRRP. Our work on Task 5 will culminate in a final meeting of the full TMC in Sacramento, CA to present and discuss the draft Annual Report, the status of implementation of the Program Document and the Science Plan so far, and a report on briefings of Regional Directors and Area Managers of the key federal agencies.

COVID-19 Caveat

Please see the paragraph on Page 1, which is also applicable to this section.

Proposed Task Schedule

Table 7 – Task 5 Proposed Schedule. Proposed schedule for Program Document Implementation Assistance. Specific timing will be adjusted in coordination with the TRRP Executive Director and the TRRP based on availability.

Task 5 Requirements	Estimated Completion Date:
TRRP staff, TMC, and/or Regional Directors <i>teleconference #1</i> to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements)	February 2022
Quarterly progress report to TMC, Area Managers, and Regional Directors (NMFS, USFWS, Reclamation)	April 2022
TRRP staff, TMC, and/or Regional Directors <i>teleconference #2</i> to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements)	April 2022
TRRP staff, TMC, and/or Regional Directors <i>in-person meeting #1</i> to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements)	June 2022
Quarterly progress report to TMC, Area Managers, and Regional Directors (NMFS, USFWS, Reclamation)	July 2022
TRRP staff, TMC, and/or Regional Directors <i>teleconference #3</i> to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements)	July 2022
TRRP staff, TMC, and/or Regional Directors <i>teleconference #4</i> to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements)	August 2022
TRRP staff, TMC, and/or Regional Directors <i>in-person meeting #2</i> to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements)	September 2022
Quarterly progress report to TMC, Area Managers, and Regional Directors (NMFS, USFWS, Reclamation)	October 2022
Draft Annual Report of progress on implementation of Program Document	October 2022
TMC <i>in-person meeting</i> for Draft Annual Report of progress on implementation of Program Document (1-day meeting @ Sacramento, CA)	October 2022
Consolidate TMC review comments and input on Draft Annual Report	November 2022
Quarterly progress report to TMC, Area Managers, and Regional Directors (NMFS, USFWS, Reclamation)	December 2022
TRRP staff, TMC, and/or Regional Directors <i>teleconference #5</i> to assist implementation of Program Document (strategy, troubleshooting, structure/process refinements)	December 2022
Final Annual Report of progress on implementation of Program Document	January 2023

Proposed Overall Project Schedule

Table 8 lists our proposed schedule during the 36-month Period of Performance from June 1, 2020 through May 31, 2023. This amended schedule assumes a start date of no later than June 1, 2020 and that all TRRP participants will be available during the required periods. Our Overall Project Schedule is a higher-level rollup of the individual nested Proposed Task Schedules discussed previously. The listed deliverables include all of those from the PWS. If events occur beyond our control which necessitate a change to the schedule outlined below (e.g. more time required for document preparation or review and this change is agreed to by the contracting authority), then we will adapt our schedule accordingly. We assume the additional four months of the Period of Performance (February 2023 – May 2023) will be available for time- and task-based adaptations as necessary.

COVID-19 Caveat

Please see the paragraph on Page 1, which is also applicable to this section.

Table 8. Proposed Overall Project Schedule.

Tasks and Deliverables	Specified Timeline	Estimated # of days from Award	Estimated Months (June 1, 2020 start; meetings and most work begins August 2020)
Task 1: Project management			
<u>Deliverable:</u> Quarterly written status reports.	Throughout life of contract	0-900	June 2020 through November 2022
Task 2: Program review			
<u>Deliverable:</u> Report on key components of other science-based restoration programs.	Due approximately 5 months after award	150	June 2020 through December 2020
Task 3: TRRP Program Document			
<u>Deliverable:</u> Final TRRP Program Document.	Due approximately 15 months after award	450	January 2021 through October 2021
Task 4: Science-Based Monitoring, Evaluation, and Decision Support Plan			
<u>Deliverable:</u> Final TRRP Science Plan.	Due approximately 18 months after award	540	January 2021 through January 2022
Task 5: Program Document Implementation Assistance			
<u>Deliverable:</u> Quarterly progress reports, Final Annual Report.	Due approximately 12 months after completion of Task 4.	900	February 2022 through January 2023

Appendix A – TRRP Program Document (Discussion Draft)

The following document was developed by Chad Smith of Headwaters as part of the ongoing work of the TMC in consideration of the Headwaters Refinements recommendations. This document is presented as a Discussion Draft, reflects the most recent agreement among the TMC on a Purpose Statement and Goal Statement, and suggests other components of a Program Document and a Science Plan that can be considered as part of the work of the Trinity River Restoration Coordinator.

DISCUSSION DRAFT

TRINITY RIVER RESTORATION PROGRAM

June 01, 2020

I. PREAMBLE

In the December 2000 U.S. Department of the Interior (“DOI”) Trinity River Mainstem Fishery Restoration Environmental Impact Statement/Impact Report (“EIS/EIR”) Record of Decision (“ROD”), the DOI and the Hoopa Valley Tribe concurred with the recommendations to implement a set of actions determined to be necessary and appropriate to restore and maintain the anadromous fishery resources of the Trinity River. The ROD formalized adoption of these actions (described as the “Preferred Alternative” in the EIS/EIR) and initiated the Trinity River Restoration Program (“TRRP” or “Program”) as a result of DOI statutory obligations and the federal trust responsibility to the Hoopa Valley and Yurok Indian Tribes. Within these statutory, trust, and administrative obligations, this document (“Program Document”) presents unified and negotiated foundational guidance for further implementation of the TRRP beginning in 2022 and ensures compliance with the ROD, the National Environmental Policy Act of 1969 (“NEPA”), and the California Environmental Quality Act (“CEQA”). The Program includes certain activities and contributions from the federal, state, local, and Tribal governments to be conducted during the incremental time period as defined below. TRRP participants agree that implementation of this Program will be through the Trinity Management Council (TMC) consisting of representatives of federal, state, local, and Tribal governments and stakeholders as described in the Program Organizational Structure in **Attachment X**.

For consideration/discussion:

- This language was added as an introductory paragraph for the Program Document to make formal linkage to the ROD and the EIS/EIR. It is very early draft language but serves as a placeholder and needs TMC review, input, and editing.
- The language refers to the Program Organizational Structure being provided as “Attachment X.” I anticipate that the structure of the TRRP moving forward, including charters for TMC membership, Advisory Committee membership, independent Science Advisory Board (“SAB”) membership, etc., will be part of the final Program Document and will need to be negotiated by the TMC.

II. PROGRAM PURPOSE

From the TMC, 2019 – The purpose of this Program is to mitigate impacts of the Trinity River Division of the Central Valley Project on anadromous fish populations in the Trinity River by successfully implementing the 2000 Trinity River Record of Decision and achieving Congressionally mandated restoration goals.

For consideration/discussion:

- May need to insert footnote, appendix, etc. defining “Congressionally-mandated restoration goals”; list statutes, year of passage, purpose of legislation, link to the TRRP, and specific goal language)

III. PROGRAM GOAL

From the TMC, 2019 – The long term goals of the Program are to restore the form and function of the Trinity River; restore and sustain natural production of anadromous fish populations in the Trinity River to pre-dam levels; and to facilitate full participation by dependent tribal, commercial, and sport fisheries through enhanced harvest opportunities.

For consideration/discussion:

- The TMC should think forward about what achieving this goal would mean, what the Program would then do differently, and how that thinking might influence what the Program includes in this Program Document and does on the ground in the near term.

IV. PROGRAM ELEMENTS

1. Elements. The Program has five elements: 1) ability to implement a variable annual flow regime through releases from Lewiston Dam; 2) mechanical channel habitat restoration; 3) sediment management; 4) watershed restoration; and 5) accommodating Tribal harvest and Tribal, commercial, and sport fishing activities.
2. Time Increment. Need to discuss.
3. Objectives. The TMC commits to achieving the following objectives by the end of the time increment specified above:
 - (1) Providing water capable of – what? How much? Just specify ROD flows?
 - (2) Providing habitat capable of – what? How much? Just restoration sites/projects included in ROD? Does this include watershed restoration activities and sediment augmentation? Should this be some measurable reference to alluvial river processes that also incorporates the ROD habitat restoration sites?
 - (3) Anything else?

For consideration/discussion:

- Listing the elements is an attempt to bound more specifically what the Program will do on the ground and what the TMC will have control over in terms of making decisions. Right now, this list is tied to ROD actions plus a specific mention of harvest and fishing activities. Need to discuss if these are correct and if the language is too restricting in terms of what the Program might do in the future.
- The TMC needs to discuss if it makes sense to build this document around a specific time increment for the next phase of implementation (10 years, 15 years, 20 years, more?).
- This language is a very early first crack at organizing concepts for objectives. This is where the aspirational language of the Purpose statement and the intent of the Goal statement are linked to something that is measurable and that can be tracked over time. These objectives need to be worded in a way so that implementation itself is not the measure, rather something more specific. Maybe the

water objective is just a statement of ROD flows, maybe the habitat objective is just a statement of the 47 project sites. But why are those actions being implemented? How do you make them relevant and measurable in terms of fish and alluvial river processes?

Additional Concepts to be Negotiated for Program Document (not a full list but some priorities):

- How to assess progress toward Program objectives (milestones)
- How to modify the Program
- How to adjust to learning during implementation (this is where the link to adaptive management lands in the Program Document)
- Acquiring and managing water
- Acquiring and managing land/habitat
- If a time increment is agreed to, how to assess Program effectiveness at the end of that time increment and how to move into the next time increment
- Attachments/Appendices:
 - Program Finance Document – where money comes from, how much, base funding for existing projects, etc.
 - Program Organizational Structure – TMC, Advisory Committees, SAB
 - Adaptive Management Plan (Science Plan)

For development and discussion in the process of writing a TRRP Science Plan:

Just an early note that as the Program Document begins to come together and a way forward as a collaborative body becomes clearer, the process of writing the Science Plan will be where more specifics from documents like the Integrated Assessment Plan (IAP) and from the 2013 Objectives Workshop will come into play. Some key items:

- What decisions does the TMC need to make, and what information does the TMC want/need that would be helpful in making these decisions?
- Management strategy. That is generally noted now as being “to restore the processes and produce a healthy alluvial river ecosystem” but this will have to be linked to the Program’s overall goal and objectives.
- Management objectives. Specific measures for salmonids, other species, river processes, etc. that will be how the technical side of the Program talks to the TMC about progress through adaptive management.
- Conceptual Ecological Models (CEMs)
- Uncertainties, expressed in the form of Big Questions (the list that George Kautsky showed at the meeting in Redding is a great starting point for this)
- Priority hypotheses and alternative hypotheses
- Management actions
- Experimental design
- Implementation strategy
- Monitoring, research, data collection
- Data analysis and synthesis
- How to link data synthesis to TMC decision-making, and how the TMC will make decisions (consider use of tools such as Structured Decision Making or some other Decision Support System)