

Design Team Meeting Notes
Weaverville Library
December 19, 2011

Stakeholder/ Design Team Meeting - 12:00-5:00pm

Design Team Participants:

Present: Mike Berry (CA DFG); Charlie Chamberlin (CA DFG); Sean Ludwin (Hoopa Tribal Fisheries); Scott McBain (McBain & Trush, Hoopa consultant); Andrea Hilton (Hoopa Tribal Fisheries); Fred Meyer (Hoopa Tribal Fisheries); DJ Bandrowski (Reclamation); Andreas Krause (Reclamation); Eric Peterson (Reclamation); Aaron Martin (Yurok Tribal Representative); Teresa Connor (CA DWR); Scott Kennedy (CA DWR); Eric Wiseman (USFS); Robin Schrock (Reclamation); Ernie Clarke (USFWS).
On phone: John Bair; George Kautsky
Note taker: Donna Rupp

Stakeholders Participants:

(Not complete list): Roger Jeagle, TMC and TC Board; Michael Corhansi, Fly shop and BOD for Guide's Association; Clark Juthill, homeowner and Guide's Association; Paul Cat?, Guide's Association; Travis Michel - Guide's Association; Bill Dickens, President Guide's Association; Liam Gougin, Guide's Association; Bob Norman; Doug Stratton; John Letton; Tim Hayden (Yurok); Arnold Whitridge, TMC; Steve Townsend; Jim Smith; Ann Garret, NW marine Fisheries; Joanne Harper; Dave Meurer, Deputy District Director, 2nd District (Congressman Herger); and Nancy Chilkis.

DJ: Focus today: Technical basis of gravel and design features in 2012 projects.

Tim Hayden: On behalf of the Yurok – we appreciate stakeholders attending and to get a dialog going.

DJ: Same for design team members.

Travis Michel (TM): What is our objective today? Two projects to get done. Are you going to be able to address our concerns on gravel and meet the program objectives?

DJ: Yes, we are here to listen to you and hope that you will listen to what some of our designs are and address where the projects are leading. I'm hopeful we can meet...

TM: Are the objectives to increase spawning habitat?

DJ: We're looking at "No net harm." We don't look at designs just for spawning, mostly for rearing.

TM: Not clear on objectives for each site. How does the gravel increase rearing habitat?

DJ: A lot of gravel is used to divert flow and create process and habitat. We're trying to create processes.

Bill Dickens (BD): Can you address our concerns from the Redding meeting?

DJ: Yes. We'll have to table the overall high flow, but we're prepared to talk about site specific.

Liam: What about spawning gravel below Douglas City?

SM: We've found that tributaries above Douglas City provide enough gravel for forming bars. We didn't specifically call for adding gravel, but if we need to create hydraulic diversity may possibly do it. More recent data on sediment budget... Andreas?

Andreas: From a larger perspective we restore habitat thru the use of river processes like flow and mechanical actions that enhance and form a dynamic river which will build and maintain habitat over time. Within that framework there are two sediment objectives: increase gravel storage – that means bars, and reduce fines – that means sands. We've monitored how much sand is moving and can compute how much is moving. Sand is moving out of the system and we are seeing some gravel storage increase in those areas. We add gravel for multiple purpose – one is to keep up with supply due to hi-flows. We'll also add gravel to build a feature – some intended to stay in place and some

not to stay in place. We don't need to add for supply below Douglas City, but may still want to add gravel in order to create a feature.

Aa: Begins presentation on habitat and features:

Lowden – bar formation below injection site. How habitat changes with flows. We have some shallow slow habitat and cover for fish.

Paul: Are we trying to make it look like it did before the dam in place? Is this to make it a giant spawning bed?

BD: What do you expect the river temperature to be?

Aa: Our objective is to keep it low for the fish. I don't have the exact number, but it would be in the hi 50's to low 60's.

BD: The point is, it will superheat as it widens and shallows.

Paul: How do you even know it's going to work without going back and see what's been done? It would be prudent to see what's been done and fix what's been done. I'm a taxpayer and I've seen billions spent. So far of what I've seen of them, I don't think it is worth it.

BD: We need independent study to see what should be done.

MB: Just for context – we speak for the fish also. We want to make sure that things are done according to the ROD and that it is not bad for fish. We want to present monitoring data, what kind of habitat has been created, and what fish are using it. Juvenile fish were the limiting factor at the time of the ROD, but then we will move onto the next limiting factor. Aaron will present what has happened. There's terminology that needs to be reviewed in this presentation. Can we go over the presentation so we're all on the same page?

Roger: Can we briefly review how the limiting factor of spawning habitat was determined?

CC: We used a tool that measured impact on fish production when habitat was changed.

BD: Was consideration given to adults as well?

CC: Yes. The model assumed certain levels of survival of eggs (represented adults).

Paul – Have you been incorporating adult holding into your data collection?

DJ: We've looked at collecting data and are collecting data on 90% of holes. Getting accurate to cm scale pre-and post high flow scales. We want to quantify the questions that you have.

Paul: Has substructure changed – boulders filling in with gravel. Especially in upper river – what's happened to bug life? Hatches have been down and we see smothering of bug life in river by covering it with gravel.

DJ: We're looking at multiple studies in parallel with each other and macroinvertebrate analysis is included, which includes LSF sampling that was conducted this fall. We'll get into site specific holding water at each site.

Discussion on gravel movement, how much gravel is appropriate, the challenges of fishing on a dynamic river, and how tributaries influence the amount of gravel in the mainstem.

AK: We're doing surveys and finding deeper spots, when we get data in and do analysis. Sometime next summer will have more information

Guide: We're the best eyes as to what's happening out there.

DJ: That's why we want to get on the river with you and see and collect. We've heard you and are trying to respond but don't have quantitative information.

Clark: Comment on how far gravel moves. Had steelhead run in front of my house but it is now all filled in. We're really concerned about the gravel – injection and augmentation. We need a pause for Phase I Review and are frustrated that it appears projects will go ahead regardless of what the review says.

Guide: Perception that we're whining. We've all fished in dynamic rivers but what happens is losing spots and gain new ones. We fear that we won't gain new ones. Keep coming back that data is not in yet, but want to push forward while we don't know if past projects are working.

DJ: The data that we're collecting will determine if gravel is appropriate. When we get into these site designs look at today. Gravel that is proposed to be introduced is not necessarily mobile. Not mobilized at a lower discharge. We're hoping to disseminate that information today.

Roger: Phase I Review needs to be done. We're not only talking about gravel – we're talking about woody debris. A side channel study was done last year that shows increased juvenile use.

MB: I'd like to address the concern that we aren't listening. We are looking at pools, continue to monitor fisheries, but as far as design we can stop construction at anytime, but it takes 2 years to create design. If data comes back that it is working and we've stopped, the money may be stopped and spent somewhere else. Our main concern is to bring back the fishery and a dynamic system – we haven't seen any red flags. We want to be sure that we're set up so if we get the go ahead, we can go. Implementation can be stopped the day the bulldozer shows up.

Guide: What does the design do for steelhead?

MB: Steelhead track with Chinook.

Guide: It sounds like less than 5% of the budget is being spent on watersheds. They are critical element, but if we slow down on this, can we put that money into the watershed?

Aa: We don't have any design for watershed and no permits, etc for it.

Guide: So you don't have much concern on watershed?

DJ: No, there are components of the program that are concerned with watershed and those entities are doing watershed work. Today we're talking about main stem design. We're addressing compliance and peer-review.

MB: The watershed group is different. And we had to narrow down those projects. We're starting an effort for a larger scale planning on the watersheds.

Question regarding when the pool depth analysis will be complete and the information available. The data will be complete by the end of January, but analysis will take several months to complete. After that, the team will need to ask if gravel augmentation should be done at different, specific sites. Concerned with what happened at Sawmill, and there has been no augmentation there for two years. The physical work group will also have some analysis available regarding gravel movement.

Aa: Continue presentation: How is this changing through time is the real question. We have gone back year after year. We have defined different qualities of habitat and ranked them high, medium and low. Have mapped habitat. Examples on maps.

MB: High quality habitat is important because the larger the juvenile when it goes to ocean, higher percentage of success and grow faster in ocean and come back in higher numbers.

Discussion on temperature needed for juveniles, adults and spawning. Warmer side-channels (by one or two degrees) can be beneficial in certain instances.

FM: Comment on Sawmill site: As riparian grows back at Sawmill, it will return energy focus to mainstem. But it will take 20 years or so for it to return.

Aa: Continue and finish presentation.

DJ: Over the last couple of years we've made changes to our design processes. Especially based on TRGA. We originally had robust plans, but we've put many of those projects on hold and are on hold until next year. We won't consider them until we get the Phase I review. They are on hold with conceptual designs on table. Lorenz gulch, Douglas City and Limekiln Gulch are on hold and the only two we are considering are UJC and LSF. In October we made the decision to hold off on any additional designs for 2013 and changes to 2012 to wait for input from the Phase I review.

The LSF conceptual design is much different than final design. An evolution in the design process. Ch2MHill looked at existing habitat that don't want to touch and leave it alone. During process of listening to different stakeholders and peer reviews, looking at constructability and landowners concerns, in Oct 2011 we decided to remove the features on the left bank. Which resulted in about 50% removal of gravel addition at site.

Today we discussed this project, after several hours of deliberation, we decided that we aren't comfortable building upper portion of this project and need to take phased approach based on construction costs, and technical information upstream of IC -6. These features are designed to function together, and it would be best to hold off on that section. Recommend to move forward on lower portion of this project. We recognize concerns of mobile gravel. IC 14 is a geomorphic feature, which is intended to create diversity and to split flow and constrict river in this location. We discussed the composition of this bar and originally meant to be gravel, decided to make skeletal bar feature with 6 - 12 inch size gravel. We'll look IC-13 and change some particular pieces of the feature.

Discussion of pool elevations/depth and possibility of filling in Gravel size is .5-5" and have done very detailed modeling, which shows no change.

TM: Can see that there is a lot of thought in making these projects work and that sacrifices are being made.

DJ: Design team needs interaction w/ guides to make these changes work and complete. We need your eyes and ears to incorporate your concerns and comments.

Liam: What about harvesting boulders.

DJ: We can maintain that option in our design.

Liam: Is it still part of this plan?

DJ: Yes, BLM wants to close the road off so we want to keep in EC and keep that option. If we harvest in 2012 we wouldn't necessarily put spoils on top of it. Option would be left open.

MB: We're not compromising, we're learning. This is part of the information we need to learn.

Aa: We've been learning together.

BD: Concern over this work is community wide. Took terrible blasting for not announcing the meeting in Junction City.

TM: There could have been a better dialog with some TRRP reps there.

Paul: When we saw fines last year, we weren't happy, but now 8-12" that's going to be make better.

Guide: What is the timeline?

DJ Permits may be in hand by May; break ground - June; Only work in-channel between July 15 - Sept 15.

Paul: Significance of having boulders is that we don't want a flat homogeneous bottom, we want boulders in order to have diversity on the river bottom.

DJ: It's important to look all parts because there are different perspectives, not all design partners are in favor of static features.

Steve Townsend: Maybe in 10-15 years the pools will come back but guides don't have that much time. Maybe the boulders will be mitigation for losing pools.

DJ: We need to evaluate them site by site and see what happens.

Guide: What about the fish during construction?

Answer: Springers will be coming through at night when we don't work. They move through at night so we time our channel work to have the least impact. The reason the window is so tight is because want to protect the full life cycle. Can't work in the channel 24 hours a day.

Alex Cousins: What does the cut back do to budget?

DJ: Yurok tribe will be doing construction and we discussed flexibility and possibility of doing bank naturalization project at Indian Creek area.

Guide: What's going on at Lowden?

Answer: Revegetation that had to wait until after the high flow. An excavator is being used to hit ground water. Vegetation is being moved to more appropriate location after work is complete.

TM: Have you put together a final offer for us? Can we get back to that?

DJ: We hold off and do a phased approach. IC 6 to X1 left on table for re-implementation until after Phase I review is completed. Then look at details to see if still applicable All features below IC 9 would remain in place for 2012.

TM: What is the possibility of TMC passing that Brian?

Brian: If the Design Team can tell TMC that the key objectives are retained for this site and can get efficacy of site, and met your concerns, then there's a pretty good chance that the TMC will accept this.

TM: I think this addresses our concerns of adult holding water.

Brian: Half TMC is here and I feel encouraged by what I've heard.

Roger: I am encouraged by what I hear.

TM: How do you feel Tim?

Tim: I would like to discuss it with our staff. I agree with Roger that being able to compromise and come together with the stakeholder is very important. If we can compromise and move forward and meet our long term goals of improving fisheries.

Brian: TMC is in this interim period we want to be able to move forward and pick sites for 2012 that are more well defined and less controversial.

MB: Restoration isn't an exact science, but by modifying design we can find another good way to do it to achieve the same goal. We aren't compromising. DFG won't compromise fish habitat.

Roger: This is an adaptive management process. We have experience and science that is being done in other rivers that we can draw from. This is a really good group. I understand your needs as guides to look at short term and maybe we can look at that w/ boulders but that's part of adaptive management.

MB: Don't want to use compromise when we speak about this – maybe collaborate.

BD: We're just asking you to take a pause. We've seen what's happened in the past and don't want that to happen again. I understand that you're afraid to lose your money. But we are losing business.

DJ: I think we're all looking forward to and anticipating information from the Phase I review. I wish we had that today but we don't. It is underway and will get it to you as soon as possible.

Clark: We've talked about adaptive management before but this feels more like adaptive management group. Everyone in this room wants to have better fish.

Guide: When will see if we can go back to old sites and evaluate if haven't been successful?

DJ: Have to wait for Phase I review before we go back and review.

Guide: Will it be a priority?

DJ: Phase I review may have recommendation on revisiting Phase I sites. Not sure if that will be part of recommendation.

BD: Are you prepared to pause in channel work?

DJ: We will pause on the upper part of LSF, but in 2012 we will build on lower part of LSF.

BD: No pause?

DJ: We aren't designing new sites, don't want to go off and work on sties, but need to maintain momentum and meet concerns of stakeholders.

Mentioned that it is up to the TMC to determine if we go forward, not the design team.

Call for a break.

Break

DJ: Bill informed me during the break that the guides are encouraged by collaboration to look at designs more carefully and to adapt. Proposal as it stands now, the guides are supportive of it and if we don't change it, they won't challenge the Environmental Impact Statements. We have reached some consensus to move forward in 2012 and we will take it to the TMC to vote on it.

Liam: I think we are okay with it all. We are still concerned with Phase I review. We were never against restoration and are glad that we came together to make this thing work.

Next TMC meeting will be Jan 4, 2012 and the place has not been determined. A request is made for agendas to be published and distributed in advance.

Next steps for LSF?

DJ: The design process from here will be based on the technical recommendations laid out by the designer of record which is Ch2MHill. We are re-hiring them to come back and make specific technical changes. They'll be here on Wednesday to do feasibility at lower Bucktail and changes based on today's meeting minutes. The plan will undergo final hydraulic and sediment transport review and develop wood placement plan in a draft format. We will send the draft to the design team for final comments. Simultaneously will move forward with environmental documents.

SM: Since we are building transparency and trust today, when we have something more concrete, it seems like there should be a process to bring everyone up to speed on what it is going to be. Don't want to have surprises – need steps in between.

DJ: On Jan 23-24 the design team will be meeting. We could have draft of LSF design available for folks to see and make comments on it at that time so we could incorporate comments into final.

Alex: Having design firm come out, it gets expensive. Maybe have rep on design team from either guides or other stakeholders so they know what's going on.

MB: Who ever is interested needs to know when meetings are gong to occur.

DJ: We'll have the draft agenda for Jan 23-24 meeting before holidays. We can email and update on LSF part of agenda. Who ever wants to go onsite to look at changes, I would solicit guides reps to come on site on Wed.

MB: Would be nice to have a guide's representative on the design team.

Guides will kick around idea of having representative. Guides on the water during the day – we need advance notice to make it. We need to be able to have written comments to be able to submit if we can't make the meetings.

DJ: One opportunity for input is that we maybe able to get on river w/ guides in January and look at that area in low flow conditions. I'll email with potential dates that work in schedule. Will get draft out to group to look at prior to Jan 23-24 meeting.

Brandt: We are also planning a January 12, 2012 meeting to review Environmental Documents. This might be another time to review. It will be 6 pm at the Douglas City fire hall. The main topic will be environmental design.

DJ: The Science Advisory Board will be here on Jan 23-24. The January 4, 2012 meeting of TMC will approve process to move forward, not specific designs.

UJC Review

Introduction of Jim Berouso (JB), land owner of most of property at the UJC site.

DJ: Review photos show site and erosion of banks after high flows. Discussion of high flow marks. We've been working on design since Jan 2010 and changes have been made over that time.

Review changes on site plan – changed side channel alignments, where to push gravel in, then design from 6 months ago – remove transverse bar and stop pushing in gravel, added habitat to address erosion concern; then design we are working on and modeling now includes changes – reduce bar size down consist of fines and large substrate; removed ponds that were connected at high flow and modified flood plain feature but maintained stabilization feature; Also concern about taking energy away from mainstem, converge water back to hole and not lower flood plain – will plant instead. Removed low flow connection from split flow to side channel. Excavated down and create ground water connection. Would overtop gravel at what flow? Cross sectional review – some water will come in at 2500. About 40% of water comes across split flow then reconverges before deep pool. Not typical side channel, it is true split flow. Then side channel is a notch at 2500, then at 7500 will overtop.

Where will deep water pool be?

Discussion on deep water pool at the site and concern that the results will be the same as at Alcatraz. Response that the flood plain won't be lowered, UJC is designed so water won't sheet across the flood plain and lose energy, and existing vegetation will be kept. We are using what we learned at Alcatraz so it doesn't happen again. After several iterations we came to this model to maintain good water through the bend.

Discussion on the split flow feature. Reason why it is being built is to try to create diversity and complexity and varied habitat for different life cycles. Want a lot more going on here instead of straight channel. Develop complex and range of flows. Let's the fish find their niche. Juvenile like edge habitat and this creates more water edge by doing this.

JB: Is it going to make matters worse or better?

AK: Dave modeled as-built and then let model say how gravels will move and how pools will evolve. Compared existing condition and as-built, need to look at relative position between two. If we did nothing today, model shows that upper end my fill in about 6 inches. As built would be about 6" – one rock difference so we're within the error of what this model can predict. Over all, the difference of whether we build this or not it will be about the same. Still going to have high flow confinement, with possibility of 6% over floodplain.

DJ: At 100 year event everything is under water. At 11k release from dam + 100 year event on tributaries, everything is still underwater.

Continued concern over comparison to work done that affected Alcatraz hole.

DJ: I characterize this more to steel bridge split flows – the natural ones. This one won't be lowered.

AK: This is significantly smaller than the one that filled Alcatraz. The setting here is much different.

DJ: We're really concerned here about listening to what happened before. There is a hydraulic structure that doesn't engage in low flow until depth is at 7500 so that wood structure will kick water back to bed rock and not sheet across floodplain. It will be embedded wood filled from site and then packed with vegetation.

CC: Riparian planting will slow water and create roughness. Pond feature is new, Coho require another year of growth in river and there are very few sites on Trinity River where there is the hyporheic connection and deep pond. It's a way to get that very rare habitat out there. Also habitat for turtles and others.

DJ: We also may do some excavation to get more ground water connection from river to pond.

Discussion on ground water vs. river water temperatures.

CC: Temperature complexity can also provide benefits. The intent to maintain hyporheic flow is so the temperature doesn't get too extreme.

DJ: We want to get this right. Concerned about maintaining adult holding and fry rearing at different flows and design gets at whole life style stages and maintains river energy.

AK: Another thing about side channels here, is they're designed to provide habitat at different flows. Lower one sees increase velocity at higher flows, the upper side channel becomes engaged and provides habitat at higher flow but with a lower velocity.

Discussion on post construction unsightliness, but that after a few years of plant growth the sites look okay.

Tim: The interior Design Team has done much to adjust this design. There's been more modeling at this site to make adjustments based on inputs. Are we moving closer to recommendations on this site?

DJ: The DT didn't get a chance to talk about this site prior to stakeholders coming in this afternoon. I'm looking to DT members to know what they'd like to see.

MB: From our agency, there are a couple of other members that I'd like to take a look at it.

AH: Maybe we can hear from the fishing guides?

DJ: We're also looking at a wood placement plan and will need to develop those before construction. We have a purchase requisition in place if stakeholders and DT members want to move forward.

TC: From DWR, we accept what's been laid out.

SM: Need to make sure that we explain the risks. After the first large flow, we could have changes and we need to talk about how this could evolve beyond the model. Side channels can close and there will be continuing bank migration. The bank protection on the downstream side is not there

for restoration and is kind of counter-productive to restoration. We need to be more up-front about that.

DJ: There are multiple ways to undergo stabilization. Our intent is to be transparent that this is a static feature but hopefully it will provide habitat even though that is not the main reason for it.

SM: We've observed that bank protection can cause future problems with erosion. If channel continues migration, you get more problems. You may be starting process that may extend in time and may have to go in and in again.

DJ: This is one feature that we've hired out to design. We'll look at specifics at January meeting and make recommendations. This polygon (map) doesn't represent exact feature like others.

MB: Is there a way to design it so river will actually build the protection? Instead of something that will get washed out?

DJ: Our intention is to start this feature, we feel that the bar complex will continue to build and get more pronounced. Possible that tailings pile may build up on wood feature. I think a key part of the feature is tying it back into the bank.

Gail: To property owner, contract language requires that they can come in for 10-15 years to do unspecified activity. It was very open-ended.

DJ: Thanks for pointing that out.

Gail: Conversation was over 2-3 yr period and not written locally.

MB: I am going to write up a contract with my own stipulations and get it in writing.

Brian: Regarding side-channel efficacy, because we are so rearing focused, that even if side channels provide habitat for even a few years, by that time other features – natural or man made – will provide more rearing hab. Now is that true?

DJ: Let's refer to IC 12 on chart. It is an anabranch. We've asked designers to come up with intent and anticipated evolution. For example, this design has that defined. Clear intent even if inlet does get filled in. We're filling it in with permeable materials instead of letting river fill it in with fines and close it up with no hyporheic flows.

Liam: Between pond and side channel there is the 6' high blocker...could another be put between pond and side channel below so it doesn't become one?

DJ: We had it at 40 ft and moved it up to 75 feet. Plus there are trees there and the root mass will provide some of that blocking. But if you remove root structure you may remove bank strength. Could potentially see small feature between tree and bank to keep the two apart.

AH: There's a balance between static features and dynamic. Features that are hard points are counter-productive.

Liam: It's only one we're not looking for more.

DJ: As mentioned, we have outside group coming in to look at this specific feature. We'll have a draft concept and present it at the January meeting. There will be ample opportunity to look at it and address other concerns. We're looking at the whole site to move forward on. Details usually come a little further in the process.

Further discussion on the hard structure to protect the property owner's structure.

Are we okay with bringing this to the TMC for vote?

Liam: We're okay with it.

TM: We're willing to have faith in modeling.

Steve: I'm still worried.

TM: We're willing to let you take that to TMC.

Guide: Are there provisions in place to go back and address it if something goes wrong?

DJ: It is up to the TMC, we haven't revisited any sites yet.

Brian: Interior has indicated that since we are responsible, if consequences are affecting structures, like bridge we'll fix it. If isn't functioning for the fishery, the TMC has said that we can go back. TMC is advisory to the Sect. of the Interior. We've abided by their advisement.

Gail: Regarding bank protection, we had some softer soils that did erode and now its gone. The goals of the project was to broaden and flatten floodplain. So whole neighborhood was considered to be part of river. Made it difficult to discern what is in EIR. For recourse we'd have to file a tort claim.

DJ: I hear that the group is cautiously supportive. Is it valid to move forward to TMC?

Tim: yes.

DFG: We'll need a copy emailed to us to discuss with others at the agency.

JB: My wife and I would like to use the fishing guides as our guidance.

DJ: Thanks to everyone for coming.

Adjourned at 5:24 pm.

Trinity River Basin Watershed Assessment - Cost Estimate

STATEMENT OF WORK

To fulfill the requirements of this agreement, the recipient will complete the tasks and provide the deliverables listed below:

1. Reconnaissance of Existing Data and Analyses Pertaining to Watershed Restoration in the Trinity-Klamath Region (Full Study Area) \$25,000

Identify existing documents (e.g., watershed analyses, TMDLs, road inventories, forest management plans, etc.) and spatial data sources relevant to assessing watershed and ecosystem conditions in the Full Study Area, with an emphasis on the Middle Trinity Basin. Coordinate with federal, state, county, and private interests to acquire all documents and spatial data available for the Middle Trinity Basin. Review these data and reports to make recommendations on the types of approaches that may be most suitable for use within the Middle Trinity River Basin.

2. Prepare and Present Detailed Work Plan \$10,000

Contractor shall submit a draft Year-1 Work Plan for review by TRRP after completing Task 1 within this SOW (expect within 3 months of project initiation). The plan will detail an approach for assessing watershed and ecosystem rehabilitation needs in the Middle Trinity Basin. TRRP partners will provide comments within 2 weeks. Comments will be incorporated and the plan finalized within 2 week of receipt.

3. Project Development Meeting \$10,000

Meet with TRRP partners, local representatives of land management agencies, and other stakeholders in Weaverville to present elements of the proposed watershed assessment, to solicit input, and to discuss availability and transfer of existing data.

4. Quarterly Coordination Meetings 4 at \$5000 EA = \$20,000

Contractor shall conduct quarterly coordination meetings with TRRP representatives at a location mutually agreed upon to inform, update, and present on all findings, recommendations, and work completed to-date. The first coordination meeting will be held approximately 6 months after project initiation and quarterly thereafter for the duration of the agreement. Contractor shall summarize meeting contents and decisions reached in the form of a memorandum or brief report within 5 days of the meeting date.

5. Develop Hierarchical Spatial Database Covering the Middle Trinity River Basin \$115,000

Assemble all available spatial data in a multi-scale hierarchical database.

- A. At the broad spatial scale, the database will be designed to support analyses for prioritizing sub-watersheds (12-digit HUC level) for habitat restoration or sediment control efforts, and will be structured to interface with other national databases targeting ecosystem function.
- B. The database will also support higher-resolution data needed to identify and prioritize individual restoration projects within high-priority sub-basins.

6. Watershed and Ecosystem Assessment Report for the Middle Trinity River Basin \$42,000

Prepare draft and final versions of a Watershed and Ecosystem Assessment report for the Middle Trinity River Basin. The report will fulfill the following functions:

- A. Review and synthesize existing watershed restoration strategies and related information for the Middle Trinity River Basin. Identify information gaps and propose steps to obtain the necessary data.
- B. Identify information gaps and additional data collection and/or analyses needed to address information gaps.
- C. Propose a basin-scale strategy for reducing sediment production and delivery and for restoring aquatic habitat throughout the Middle Trinity Basin. Identify priority sub-basins where restoration efforts will be most effective.
- D. Develop criteria for evaluating and comparing watershed restoration actions, and document a protocol for identifying and prioritizing specific restoration projects within high-priority sub-basins.
- E. Apply the criteria and selection protocol described in D to develop a prioritized list of potential projects targeting one or more of the following objectives:
 - i. Reduce fine sediment production and delivery to the stream network.
 - ii. Removal of barriers to anadromous fish migration.
 - iii. Improve aquatic habitat and ecosystem function.
- F. Document database content and structure. Propose a plan for long-term database management that incorporates network access and linkages to other national databases that target ecosystem function and that is ready for expansion to the Full Study Area as funding becomes available.

7. Develop Proposal for Extending the Analysis to the Full Study Area \$25,000

Prepare a proposal summarizing a study plan to:

- A. Review and synthesize existing watershed restoration strategies that have been implemented within the Trinity-Klamath region.
- B. Identify information gaps and identify additional data collection and/or analyses needed to address information gaps.
- B. Extend the spatial database developed for the Middle Trinity River Basin to cover the Upper Trinity, Lower Trinity, South Fork Trinity, and Lower Klamath River basins.
- B. Propose a regional database for restoring ecosystem function throughout the Full Study Area.
- D. Revise database documentation and recommendations for database management plan as needed.

Deliverables:

A draft Work Plan will be submitted to TRRP within 8 weeks of project initiation. The final Work Plan will be submitted within 2 weeks of receiving TRRP comments on the draft.

Contractor will be available for a Project Initiation Meeting as described in Task 3 within 2 weeks of finalizing the Work Plan.

Contractor will submit quarterly coordination briefings as described in Task 4.

A copy of all layers, metadata, and associated data comprising the spatial database described by Task 5 will be delivered to TRRP within 1 year of project initiation. Data will be delivered in ESRI format or other industry standard format on CD, DVD, removable hard drive or other suitable media.

A Draft Watershed and Ecosystem Assessment Report as described in Task 6 will be delivered to TRRP in a standard electronic format (e.g., Microsoft Word, Microsoft Excel, Adobe Acrobat) within 1 year of project initiation. TRRP will provide review comment within 4 weeks.

A Final Watershed and Ecosystem Assessment Report as described in Task 6 will be delivered to TRRP in a standard electronic format (e.g., Microsoft Word, Microsoft Excel, Adobe Acrobat) within 4 weeks of receiving TRRP comments on the draft.

A proposal for extending the analysis to the full study area as described in Task 7 will be delivered to TRRP in a standard electronic format (e.g., Microsoft Word, Microsoft Excel, Adobe Acrobat) within 1 year of project initiation.

PERFORMANCE PERIOD AND FUNDING LEVEL

Performance period is from the date of execution through date. Total funding for the tasks listed above is estimated at **\$247,000**.

**BYLAWS OF THE
TRINITY MANAGEMENT COUNCIL**

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BYLAWS OF THE TRINITY MANAGEMENT COUNCIL

ARTICLE I

NAME

SECTION 100. NAME. The name of this organization shall be the Trinity Management Council (TMC).

ARTICLE II

PURPOSES

SECTION 200. GENERAL PURPOSE. The purpose of the TMC is to provide overall guidance and direction to the Trinity River Restoration Program (Restoration Program) in order to restore, enhance, and conserve natural production of anadromous fisheries, native plant communities, and associated wildlife resources of the Trinity River basin in sufficient quantity and quality to ensure long-term sustainability.

SECTION 201. SPECIFIC PURPOSES. To achieve the general purpose stated in Section 200, the TMC shall:

- (a) Establish and guide implementation of an adaptive management program to implement and monitor the physical and biological components of the December 19, 2000 Record of Decision (ROD) and Implementation Plan.
- (b) Guide the development of recommended annual flow schedules.
- (c) Operate as a governing board in making decisions regarding the program.
- (d) Refer unresolved conflicts within the TMC to the Secretary of the Interior (Secretary).
- (e) Give due consideration to issues identified by the Trinity Adaptive Management Working Group (TAMWG), other stakeholders, regulatory agencies, and other interested entities.
- (f) Coordinate actions of the Restoration Program with other interested entities as appropriate.
- (g) Acknowledge the federal government's trust responsibilities to the Hoopa Valley and Yurok Tribes in the protection and management of fish and water resources.
- (h) Ensure that the implementation of the Trinity River Restoration Program is consistent with the fish and wildlife restoration goals of PL 98-541, as amended.
- (i) Identify opportunities to obtain additional funding for restoration activities.

ARTICLE III

MEMBERSHIP

SECTION 300. MEMBER AGENCIES AND TRIBES. As identified in the Implementation Plan (Appendix C, p. 21), the members of the Trinity Management Council shall include the following agencies and tribes:

- (a) Bureau of Reclamation, Department of the Interior;
- (b) Fish and Wildlife Service, Department of the Interior;
- (c) National Oceanic and Atmospheric Administration Fisheries, Department of Commerce;
- (d) Forest Service, Department of Agriculture;
- (e) Hoopa Valley Tribe;
- (f) Yurok Tribe;
- (g) Resources Agency of California;
- (h) Trinity County.

As future circumstances warrant, additional entities may be added to the TMC by unanimous vote of the TMC as described in Section 603. Such additions to the membership of the TMC shall only be to governmental agencies or entities (federal, Tribal, state, or local) which have either as a primary mission or key responsibility the restoration and or subsequent management of the fishery, wildlife, and other natural resources of the Trinity River and the Trinity River Basin. In the event that additions are made to the membership of the TMC, the TMC shall revise, as appropriate, Section 602, QUORUM, Section 603, VOTING RIGHTS, MAJORITY, and Section 604, ABSTENTIONS.

SECTION 301. AGENCY AUTHORITIES. All federal, state, and local agencies and tribes shall retain their existing authorities, and reserve the right to comply with internal policies and procedures.

SECTION 302. PRIMARY REPRESENTATIVES, QUALIFICATIONS, COMPENSATION. Each member organization of the Trinity Management Council shall designate a primary representative authorized to speak and vote on behalf of the member organization. Such designation shall be in writing and on file with the Executive Director. Representatives shall be a current employee or active member of his/her agency or tribe. No member of the TMC shall receive compensation for his or her services other than their regular salary paid by the member organization.

SECTION 303. ALTERNATE REPRESENTATIVES. Each member organization of the Trinity Management Council shall designate an alternate representative authorized to speak and vote on behalf of the member organization in the absence of the primary representative. Such designation shall be in writing and on file with the Executive Director. If the primary and alternate representatives are unable to attend a scheduled meeting, the primary representative may designate an interim representative with full voting privileges for that specific meeting by obtaining verbal approval of the Chair (or Vice-Chair) in advance.

SECTION 304. TERM OF OFFICE. Primary and alternate representatives shall be appointed by the governing body of the member organizations in a manner and for a term of the member organization's choosing. Vacancies shall be filled by member organizations within 60 days to ensure continuity of representation.

SECTION 305. ABSENCE FROM MEETINGS, INACTIVE MEMBER STATUS.

Unexcused absences, without attendance of the designated alternate representative, for three (3) consecutive quarterly meetings of the TMC will result in loss of voting privileges until the member organization in question has resumed regular attendance for at least two (2) meetings. Loss of member voting privileges shall not count against the quorum requirement in Section 602.

SECTION 306. WITHDRAWAL FROM MEMBERSHIP. A member of the TMC may only withdraw from membership on the TMC subsequent to the provision of written notice, provided not later than seventy-five (75) calendar days prior to the anticipated effective date of the withdrawal from such membership. The written notice shall be provided to both the chairperson of the TMC and the Executive Director. The notice shall state with specificity the reasons for such withdrawal from membership on the TMC.

ARTICLE IV

OFFICERS

SECTION 400. TITLES AND TERM OF OFFICE. The officers of the TMC shall consist of a chairperson and vice chairperson. Other officers may be established as need arises by majority vote of the TMC. The terms of all current and future positions shall be for two years.

SECTION 401. QUALIFICATIONS. As identified in the Implementation Plan (Appendix C, p. 21), the TMC members shall choose a federal agency employee from their number as chairperson and as vice chairperson. Other officers that may be created by vote of the TMC in the future may be filled by any member of the TMC, as consistent with such vote by the TMC.

SECTION 402. DUTIES OF CHAIRPERSON. The chairperson shall preside at all meetings of the TMC and shall perform such other duties as may be prescribed by the TMC.

SECTION 403. DUTIES OF VICE CHAIRPERSON. The vice chairperson shall have and exercise all the powers, authority and duties of the chairperson during the absence or inability of the latter, and shall perform such other duties as may be prescribed by the TMC.

SECTION 404. EXECUTIVE DIRECTOR. The members of the TMC may employ an executive director, who shall execute policy and management decisions of the TMC, supervise operations of the Trinity River Restoration Program office, and serve as ex officio (non-voting) member of the TMC.

ARTICLE V

COMMITTEES

SECTION 500. FORMATION. The TMC may form and disband standing and ad hoc committees of its members and alternates as necessary and appropriate to facilitate the mission of the TMC as described in Section 200.

SECTION 501. RECOMMENDATIONS. Recommendations of such committees shall be presented to the full TMC, and shall not take effect until passed by a majority vote of the TMC as described in Section 603.

SECTION 502. COMMITTEE CHAIRPERSONS. Upon formation of a committee, a chairperson will be selected from among the appointed members subject to the approval of the TMC Chair.

ARTICLE VI

MEETINGS

SECTION 600. REGULARLY SCHEDULED MEETINGS.

- (a) Quarterly meetings of the TMC shall be held on or about the dates in the following schedule and for the stated primary purposes:
 - April (2nd week) – annual flow recommendations;
 - June (3rd week) – annual budget review and approval;
 - September (3rd week) – fisheries status reports; and
 - December (2nd week) – review of annual program accomplishments.
- (b) Written notice of specific details (time, location, and agenda items) for quarterly meetings will be provided to each member at least fourteen (14) days prior to the meeting.
- (c) At least ten (10) but not more than thirty (30) days before the date of any quarterly meeting the Executive Director shall mail or otherwise notify stakeholders and other interested parties the hour, day and place of such meeting.
- (d) All regularly scheduled and special meetings of the TMC shall be open to the public.

SECTION 601. SPECIAL MEETINGS. Special meetings of the TMC may be held upon the request of at least four (4) members or upon joint agreement by the Chair and Executive Director, with time and location designed to accommodate a quorum of the members. The Executive Director shall provide both telephonic and facsimile notification at least five (5) business days prior to the date of such meeting, to be followed with written notice by mail.

SECTION 602. QUORUM. A quorum for the transaction of business at any meeting of the TMC shall be six of the eight members.

SECTION 603. VOTING RIGHTS, MAJORITY. It is the intent of the TMC that as designated representatives of member agencies and tribes, there will be active participation in setting policy and making decisions for the Program. No member shall have more than one vote. Except as provided in Section 604 below, seven affirmative votes are required to pass a motion when all 8 members are present, and six affirmative votes are required to pass a motion when 6 or 7 members are present.

SECTION 604. ABSTENTIONS. The need for abstentions should be rare. However, circumstances may arise where members of the TMC need to abstain due to conflicts of interest or other legal constraints which may otherwise be outside of their control. The TMC recognizes the need to be able to conduct business of the council without being paralyzed through the inability to establish a voting majority due to abstentions. As a result, the effect of abstentions upon establishing a majority for voting purposes shall be as follows:

When eight members are present and one abstains, six affirmative votes are required to pass a motion.

When eight members are present and two or more abstain, five affirmative votes are required to pass a motion.

When six or seven members are present and one or more abstain(s), five affirmative votes are required to pass a motion.

SECTION 605. VOTING BY WRITTEN BALLOT OR CONFERENCE CALL.

- (a) Any matter of business to be voted upon by the members at a quarterly or special meeting of TMC members, may be submitted by mail to all of the members for their written vote without a meeting of the members, at the motion and approval of a majority of the members. Any written ballot distributed to all members entitled to vote shall be in accordance with procedures established by the TMC subject to the provisions of this section.
- (b) Any matter of business to be voted upon by the members at a quarterly or special meeting of TMC members, may be submitted by individual and/or conference telephone calls to all of the members for their verbal vote without a meeting of the members, at the motion and approval of a majority of the members.
- (c) An attempt will be made to notify the Chair of the TAMWG of the pending action, but failure to notify shall not preclude a timely vote.
- (d) A summary of the items discussed under (a) or (b) and results of any action taken will be recorded and on file at the TRRP office.

SECTION 606. POSTPONEMENT FOR LACK OF A QUORUM. If the Executive Director determines that a quorum is unlikely to be present at any quarterly or special meeting of the TMC, the meeting shall be postponed (rescheduled) to a date not less than seven (7) nor more than thirty (30) days thereafter, at which time those present shall constitute a quorum for the transaction of business. To the extent possible, members will be advised of such circumstances at least two days prior to the original meeting date.

SECTION 607. BUSINESS. The business at the quarterly or special meetings shall be guided by Robert's Rules of Order as applied by the Chair, and shall be conducted as follows:

- (a) Introductions and Ascertainment of Quorum.
- (b) Review and approval, or correction, of the minutes of the last meeting.
- (c) Comments from the public.
- (d) Report by the TMC Chair.
- (e) Report by the TAMWG Chair.
- (f) Report by the Executive Director.
- (g) Scheduled Agenda Items.
- (h) New Agenda Items.
- (i) Comments from the public.
- (j) Adjournment.

SECTION 608. MINUTES. Detailed minutes of each regularly scheduled and special meeting shall include a record of persons present, and a description of topics discussed and actions taken, including motions, seconds, and recorded votes. The minutes shall be distributed to TMC members within 30 days of such meetings. The Executive Director has responsibility for recording and distributing the minutes by the most appropriate means at his or her disposal. Minutes shall be presented for approval at the next scheduled meeting, and upon approval of the TMC, be certified by the Chair as an accurate representation of the proceedings.

ARTICLE VII

GENERAL

SECTION 700. AUTHORITIES AND RESPONSIBILITIES. The authority, duties, and functions of the Trinity Management Council are derived from the Secretary of the Interior as stated in the ROD and accompanying Implementation Plan.

SECTION 701. RECORDS OPEN TO INSPECTION. Copies of TMC meeting agendas, minutes, formally submitted reports, and related handouts shall be available for public inspection at the Trinity River Restoration Program office in Weaverville, California.

ARTICLE VIII

AMENDMENTS TO BYLAWS

SECTION 800. BYLAWS. Amendments to these bylaws may be adopted by the TMC at any duly held meeting, pursuant to Section 603.

KNOW ALL PEOPLE BY THESE PRESENT:

That we, the undersigned members of the Trinity Management Council, do hereby certify that the above and foregoing bylaws were duly adopted as the bylaws of this organization, and

IN WITNESS WHEREOF, we have hereunto subscribed our names this ____th day of _____, 2011.

Brian Person, Chair
Bureau of Reclamation

Nancy Finley, Vice Chair
U.S. Fish and Wildlife Service

Ann Garrett
NOAA Fisheries Service

Sharon Heywood
U.S. Forest Service

Michael W. Orcutt
Hoopa Valley Tribe

Dave Hillemeier
Yurok Tribe

Curtis Milliron
CA Department of Fish and Game

Roger Jaegel
Trinity County

