



SOUTH YUBA RIVER CITIZENS LEAGUE

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December 4, 2015

U.S. Army Corps of Engineers, Sacramento District  
Attn: Michael Fong, CESPK-PD-RP  
1325 J Street  
Sacramento, CA 95814-2922

Yuba County Water Agency  
Attn: Dianne Simodynes  
HDR Engineering, Inc.  
2365 Iron Point Road, Suite 300  
Folsom, CA 95630

Re: Scope of the Yuba River Ecosystem Restoration Feasibility Study

Dear Mr. Fong and Ms. Simodynes:

The South Yuba River Citizens League (SYRCL) respectfully submits comments and recommendations for the Yuba River Ecosystem Restoration Feasibility Study (Feasibility Study). We request that these comments be received in regards to the substance and process of the Feasibility Study, and the scope of the resulting Draft Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) documents as compliant with NEPA and CEQA.

SYRCL is a 32 year-old organization with a mission to unite the community in protecting and restoring the Yuba River watershed. Since 1997, SYRCL has been actively involved in the planning of restoration projects both on the lower Yuba River, and throughout the watershed. SYRCL has been a regular participant in virtually all forums concerning ecosystem restoration in the Yuba River watershed, including the Yuba River Fisheries Technical Working Group, the Yuba Accord River Management Team, the Yuba Salmon Forum, and two Integrated Regional Watershed Management groups overlapping the Yuba River watershed. In recent years, SYRCL's restoration program has increasingly involved project design and implementation, all the while emphasizing stakeholder collaboration and community outreach.

We commend the U.S. Army Corps of Engineers and the Yuba County Water Agency (YCWA) for providing this opportunity to submit comments on the Feasibility Study. I attended the public scoping meetings provided in Sacramento on November 28<sup>th</sup>, and in Nevada City on the 29<sup>th</sup>. Staff or Directors from our organization attended all four public meetings, including those in Marysville and Downieville

where we enjoyed the opportunity to meet you and others working on the Feasibility Study. I was impressed by the quality of information prepared for the meetings, and the sincerity of study team members in gathering input from the public and stakeholder organizations.

SYRCL is one of twelve conservation and fishing groups to jointly submit comments to USACE in a separate letter dated December 2, 2015. We expect the USACE and YCWA to carefully document and consider each point of that separate letter, as those points represent the consensus view of many organizations with knowledge of the Yuba River and established concern for the outcomes of the Feasibility Study.

For the purpose of brief summary, the main points of that letter are as follows:

- a) Focus on restoration and recovery of wild salmon, steelhead and green sturgeon populations in the Yuba River watershed as an approach to improving broader ecosystem benefits. Results of the Feasibility Study should benefit all three species listed as “threatened” under the Endangered Species Act, and thereby the Yuba River ecosystem as a whole.
- b) Primarily focus on the problems and opportunities associated with structures for which the Army Corps is directly responsible: Englebright Dam and Daguerre Point Dam. The Feasibility Study is the necessary step in developing contemporary and credible information regarding alternatives for improved fish passage at Daguerre, which has fish ladders, and to further evaluate passage options at Englebright.
- c) Develop alternatives for habitat restoration on the lower Yuba River that include expanding floodplain area past the existing constraints of dredger tailings piles (training walls) and levees, as well as actions to improve riparian communities, availability of large wood, and side-channel habitat.
- d) Provide the most thorough possible review and use of existing information, and utilize local and regional experts, including restoration practitioners and academics, during the Feasibility Study process. Also, conduct an external independent peer review of the Feasibility Study order to ensure that the adequacy and acceptability of study results.

In this comment letter, we provide additional detail regarding existing information that should be included in the Feasibility Study, the need for new analyses, and suggestions on the process of developing a Feasibility Study that can be successfully endorsed by the watershed community. A CD with referenced documents is provided as an attachment. Our comments are organized by the following topics, in bold.

### **Daguerre Point Dam**

Daguerre Point Dam involves a host of problems to be resolved by a project resulting from the Feasibility Study. Problems for fisheries include delays in migration of adult salmon and steelhead, increased predation on juvenile salmon and steelhead, impacts to juvenile fish from associated diversion structures, total blockage of migration for green sturgeon. Other problems include impaired river recreation and deaths to humans from drowning. While there may be cost-effective alternatives for improving fish passage by renovating the old fish ladders, we urge the USACE to develop a multi-benefits solution that permanently resolves issues for threatened fish, compliments habitat restoration

actions, reduces the environmental impacts associated with water diversions, enhances recreation and protects public safety.

Removal of Daguerre Point Dam is an alternative that should be diligently explored in this Feasibility Study. The dam removal option has been described in a recent study by NMFS (Gathard Engineering Consulting 2014). New damless diversion projects on large rivers (e.g. Sacramento River at Red Bluff, Yellowstone River at Buffalo Rapids and Rogue River at Savage Rapids) should be studied for applicability to a multi-benefits solution at Daguerre Point on the Yuba River. A damless diversion facility could potentially contribute to habitat restoration, flood protection, water supply reliability, public safety and recreation. Such a multi-benefits solution involving dam removal would require careful integration with floodplain habitat and flood management projects.

### **Fish Passage at Englebright Dam**

Englebright dam has blocked the passage of salmon and steelhead to the upper Yuba River watershed since its construction in 1941. The feasibility study should include a thorough description of how salmon and steelhead could pass to and from the upper Yuba River watershed through volitional means (not by truck). We encourage the Corps project team to draw on ingenuity and new ideas as well as existing information. It is not acceptable to dismiss volitional fish passage concepts because of mercury, flooding risk, cost or even biological issues; rather, **these should be seen as challenges to solve**. Our joint comments with other NGOs listed several key questions that must be addressed in developing a credible volitional fish passage plan. Here, we offer ideas and resources that would be helpful to this analysis.

According to a technical report prepared for the National Marine Fisheries Service (Stillwater Sciences 2013, Gathard 2014), removal of Englebright dam would increase risk of flooding downstream due to aggradation of the river channel and increased water surface elevation during flood flows. The documents predict the length and scale of levee reconstruction that would be required to mitigate this increased flood risk. Are those estimates generally accurate, and if not what would be required to mitigate increased flood risk? What would the cost and feasibility be for dam removal? What alternatives can be identified to manage sediment so as to minimize downstream impacts?

The same studies conclude that Englebright dam could be lowered by 100' without impacts to flood risk downstream, as sediment stored in the reservoir would remain contained and only spill over the dam in the form of spikes of suspended sediment. How can this scenario be further developed as part of a volitional fish passage concept? What are the impacts and benefits of increased suspended sediment delivery to the lower Yuba River, including potential floodplain enhancement where substrates are currently deficient in fine sediment thereby limiting the establishment of healthy riparian communities?

New technologies are being developed to provide volitional passage for salmon and steelhead over high dams (e.g. Whoosh Industries 2015). Considering this emerging technology, and the variety of alternatives briefly described in existing documents (e.g. MWH 2010, MWH 2013, and Gathard 2014) What are the potential options for adult fish lift systems on a lowered Englebright Dam? What are the options and expected survival rates for volitional passage of juvenile fish past Englebright dam including over the spillway, and existing and modified hydropower facilities? These questions are

critical to the development of fish passage options, as suggested in the Upper Yuba River Anadromous Salmonid Reintroduction Plan (R2 Resource Consultants and Stillwater Sciences 2014).

In the case of both Daguerre Point Dam and Englebright Dam, we encourage additional analysis of alternatives beyond what is required under NEPA, and sufficient to inform selection of a preferred alternative that can be broadly supported by watershed stakeholders.

### **Upper Yuba River Habitat**

Evaluation of options for fish passage past Englebright requires an understanding of available habitat for salmon and steelhead in the upper Yuba River watershed. Such evaluations should use updated information for the expected flows and habitat mitigations to be included in new FERC licenses for the Yuba-Bear, Drum-Spaulding and Yuba River Development Project hydropower projects. Some of this information is available from FERC (e.g. FEIS for Yuba-Bear and Drum-Spaulding projects) but for the case of the Yuba River Development Project, some critical information will not be on the official record until late 2016, at the earliest. For example, in the collaborative relicensing forum with the Yuba County Water Agency there exist proposals for increased flows in the Middle Yuba River and the North Yuba River below New Bullards Bar Dam. Additionally, resource agencies have provided proposals for a fish ladder at Our House Dam and habitat enhancements in the North Yuba River below New Bullards Bar dam.

### **Habitat Enhancement in the Lower Yuba River**

We are encouraged by the presentation at the public scoping meetings which included a long list of potential projects to improve habitat on the lower Yuba River, many of them drawing on studies with which SYRCL has been involved (e.g. cbec et al. 2010, cbec 2013). For specific information regarding riparian planting, please see the Hammon Bar Riparian Enhancement Project Report (SYRCL 2013) which includes project results and recommendations for future riparian planting projects. Also, SYRCL continues to monitor the Hammon Bar project and has additional and updated information useful to considering future projects. This information can be made available in a forthcoming annual report to the U.S. Fish and Wildlife Service.

SYRCL has worked collaboratively with stakeholders of the lower Yuba River since before 2008, when a Lower Yuba River Issues Assessment (Center for Collaborative Policy 2008) was produced for SYRCL and Yuba County. This assessment confirmed a universal interest by stakeholders in improving fish habitat, and recommended an expanded Technical Working Group of stakeholders to plan, fund and implement fisheries habitat improvements.

The USACE has substantial responsibility for degradation of the lower Yuba River downstream of Englebright Dam where the channel is devoid of spawning gravels except where supplied through gravel augmentation. Gravel augmentation is providing benefits, but is limited by the area of the channel area that the equipment can deliver gravel to and the legacy impacts from dam construction. The channel is impacted by “shot-rock” or irregular-shaped angular cobbles and boulders blasted from surrounding hillsides during dam construction. The “shot-rock” severely limits the opportunities to rehabilitate this section of the lower Yuba River though additional gravel augmentation and other habitat enhancements.

The Corps should prioritize the removal of this material, especially at Sonoro bar (ESA 2014), combined with the expansion of gravel augmentation into this area.

SYRCL is knowledgeable of two potential projects on the lower Yuba River that were not identified in the potential projects list presented at the public meetings due to lack of available documentation. These projects are 1) Salmonid Spawning Enhancement at Upper Rose Bar, and 2) Long Bar Mine.

A feasibility and alternatives report on Salmonid Spawning Enhancement at Upper Rose Bar (SYRCL 2015) was completed in recent days and is included on the attached CD. Upper Rose Bar is located at the bottom of the Narrows Reach and upstream of all terraces supplying mining deposits to the river. The feasibility and alternatives analysis was funded by the PG&E Narrows Fisheries Enhancement Fund. We analyzed the feasibility of a gravel augmentation at Upper Rose Bar, including the suitability of utilizing on-site hydraulic mining sediments and the potential benefits to the fisheries of the Lower Yuba River, and found:

- Utilization of on-site materials for spawning substrate would be more cost-effective than purchasing similar material from an off-site source.
- Processing of on-site materials would yield the substantial additional benefit of stabilizing the slopes of two eroding drainages, which currently have the potential to deliver mercury-laden sediments to the river channel and downstream habitats.
- Placement of processed gravels, with the specifications known to be utilized by salmonids as spawning substrate, into the LYR at the Narrows Pool is likely to provide a substantial increase in quality and quantity of spawning habitat at the treatment site. These benefits may be temporary due to potential mobility of these materials during high flows. However, spawning habitat throughout the Timbuctoo Bend Reach could be enhanced by the redistribution of this material to sites downstream.
- The smaller diameter size classes of sediments in the proposed processed gravel mix could specifically enhance spawning habitat for steelhead trout, which are not able to utilize much of the substrate currently represented in the Timbuctoo Bend Reach, due to its large size.

A second report on the Upper Rose Bar habitat enhancement opportunity will be forthcoming in the next few months and include an analysis of gravel placement alternatives.

SYRCL has also been collaborating with the owners of Long Bar Mine LLC to develop a habitat enhancement plan for this private land located on the north bank of the river downstream of Parks Bar. A planning project proposal (Habitat Enhancement Plan for Long Bar, Yuba River) has been submitted to the California Department of Fish and Wildlife and received letters of support from the landowner, the Bureau of Land Management and Congressman Garamendi. As noted by the Congressman, “this is precisely the type of collaboration that we need on the lower Yuba River”. The Long Bar Mine includes over 100 acres of floodplain for which mining equipment (the mining is leased to Silica Resources Inc.) might be utilized under a reclamation plan to achieve desired habitat enhancement features. This situation makes Long Bar a site where costs of topographic contouring would be substantially less than at other locations. I would be happy to provide additional information on this project concept and opportunity, so that it can be included for consideration in the Feasibility Study.

The quantity and quality of juvenile rearing habitat is one of the most important factors limiting Yuba salmon populations. Scientific approaches to evaluating potential actions to benefit juvenile salmonid habitat are critical to this Feasibility Study. We encourage the use of analytic results and project design

principles presented in *Hydrologic and Geomorphic Analysis to Support Rehabilitation of the Lower Yuba River* (cbec 2013) as that study addressed biological needs of target salmonid species with analysis of actual conditions in the lower Yuba River to provide a framework for combining three basic types of actions: grading floodplain surfaces, riparian planting and placement of large wood. As presented during the public meetings, there are many potential locations on the lower Yuba River for these actions. The Feasibility Study should develop a framework for designing and prioritizing specific projects to achieve maximum ecological benefits per unit cost. The area, frequency and duration of inundation for juvenile salmonid habitat is a critical basis for planning either topographic or hydrologic modifications necessary to achieve substantial juvenile habitat improvements. Hydrologic conditions are essential to understanding ecological benefit, and it will be necessary to evaluate potential future hydrology of the lower Yuba River if different from the current hydrology under the Yuba Accord. It will also be important to recognize that landowner cooperation is a fundamental factor in providing feasible project sites.

One of the most promising opportunities to improve juvenile rearing habitat is topographic modification and other enhancement actions adjacent to the Teichert Industries Plant near Hallwood in the north Goldfields (cbec 2014). This project is currently funded by the US Fish and Wildlife Service but would benefit from the support of USACE and YCWA. In addition, the Hammon Bar Riparian Enhancement project provides evidence that certain methods could be used to successfully restore large areas of riparian habitat from barren gravel bars (SYRCL 2013).

Restoration planning documents for the lower Yuba River (PWA 2004, cbec et al. 2010, and cbec 2013) describe options for habitat restoration which include floodplain enhancement and also re-connection of portions of the historic floodplain. The Feasibility Study should identify ways to integrate restoration actions with the efforts by the Three Rivers Levee Improvement Authority (TRLIA) to improve flood protection in the Goldfields (TRLIA 2015). TRLIA's project options have different consequences for aquatic habitat restoration opportunities on the lower Yuba River, and it would be a productive outcome of this Feasibility Study to describe alternatives for achieving the maximum combined benefits of ecosystem restoration and flood risk management.

## **Consultation and Review Process**

We request that local and regional experts, including restoration practitioners and key stakeholders, be included in the Feasibility Study process. Such experts should be given the opportunity to review and comment on draft reports, at a minimum. We request that the Feasibility Study involve a Technical Advisory Committee of experts from relevant fields to help define ecosystem restoration goals and objectives, describe alternatives, and establish metrics for defining project success. Other Feasibility Study processes, such as the Matilija River Ecosystem Restoration Project (USACE 2004), have used an organizational structure with formalized involvement of technical experts and local stakeholders, and we urge the USACE and YCWA to provide a similar structure for the Yuba River Ecosystem Restoration Feasibility Study. This request is consistent with the findings of the Lower Yuba River Issues Assessment (Center for Collaborative Policy 2008) and the history of collaborative processes on the Lower Yuba River. Most importantly, participation of experts and stakeholders will that results from the Feasibility Study can lead to implemented projects that achieve success.

## Local Cost Share Opportunities

The full and necessary scope of the Yuba River Ecosystem Restoration Feasibility Study may be greater than the interest of the Yuba County Water Agency as a local sponsor. Therefore, we request that the USACE evaluate the opportunity for additional local cost share partners. The California Department of Water Resources would be a good candidate for sponsoring studies and potential actions concerning Englebright and Daguerre Point dams, floodplain enhancements and flood management. Currently, California Proposition 1 Bond Funds potentially provide more than \$2M for projects on the Yuba River through grants or funding to state agencies. We request that the USACE consider additional local cost share partner that could manage state and matching funds to be applied to feasibility studies and implementation of projects.

In closing, we appreciate the opportunity to comment on the scope of the Feasibility Study, as we intend to help the USACE and YCWA in developing measures that will become successful ecosystem restoration projects on the Yuba River. For this purpose, we also offer our experience, our extensive relationships with stakeholders, and scientific and outreach capabilities.

We welcome the opportunity to collaborate during the study period. For coordination, clarification or discussion of any technical matters raised in this letter, please do not hesitate to contact me by email or phone (530.265.5961 ext. 208).

Sincerely,



Gary Reedy  
*Senior River Scientist, SYRCL*

cc:

Curt Aikens, YCWA  
Howard Brown and Gary Sprague, National Marine Fisheries Service  
Kim Webb and Elizabeth Campbell, U.S. Fish and Wildlife Service  
Tina Bartlett and Michael Healey, California Dept. of Fish and Wildlife  
Marc Commandatore, California Dept. of Water Resources

## Referenced Documents (see attached CD)

- Cbec, SYRCL, and McBain and Trush, 2010. Concepts for Rehabilitation of the Parks Bar Reach of the Lower Yuba River. Prepared for the U.S. Fish and Wildlife Service.
- Cbec, 2013. Hydrologic and Geomorphic Analysis to Support Rehabilitation of the Lower Yuba River, Parks Bar to Marysville. Prepared for the U.S. Fish and Wildlife Service.
- Cbec, 2014. Development of Habitat Enhancement Alternatives for Teichert Hallwood Facility and Adjacent Areas, Lower Yuba River. cbec Project #: 12-1034
- Center for Collaborative Policy, 2008. Lower Yuba River Issues Assessment. Produced for SYRCL, Yuba County Community Services District and the Yuba County Water Agency.
- ESA, 2014. Yuba River Canyon – Englebright dam and Narrows Reaches of the Lower Yuba River, Habitat Management and Restoration Plan. Prepared for the U.S. Fish and Wildlife Service.
- Congressman Garamendi, 2015. Letter of support for the proposed Long Bar Habitat Enhancement Plan.
- Gathard Engineering Consulting, 2014. Yuba River Fish Passage Improvement Program. Prepared for the National Marine Fisheries Service.
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- MWH, 2013. Assessment of Infrastructure and Related Items to Support Anadromous Fish Passage to the Upper Yuba River Watershed. Prepared for the Yuba Salmon Forum. Montgomery-Harza-Watson Americas, Inc.
- R2 Resource Consultants and Stillwater Sciences, 2014. Upper Yuba River Anadromous Salmonid Reintroduction Plan. Prepared for the National Marine Fisheries Service.
- PWA, 2004. Ecosystem Restoration and Flood Hazard Opportunities for the Lower Yuba River. Prepared by Phillip Williams and Associates for the Yuba Feather Workgroup. PWA REF. # 1529
- Stillwater Sciences, 2013. Modeling Sediment Transport Dynamics and Evaluating Flooding Risks in the Yuba and Feather Rivers, California, Following Modifications of Englebright and Daguerre Point Dams, Technical Report. Prepared for the National Marine Fisheries Service.
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- SYRCL, 2015. Salmonid Spawning Enhancement at Upper Rose Bar, Lower Yuba River. Prepared for PG&E, U.S. Fish and Wildlife Service and the California Dept of Fish and Wildlife.
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- TRLIA, 2015. Draft Environmental Impact Report for The Yuba Goldfields 200-year Flood Protection Project. Prepared for the Three Rivers Levee Improvement Authority by AECOM.
- USACE, 2004. Matilija Dam Ecosystem Restoration Project. Reports available at [www.matilijadam.org/reports.htm](http://www.matilijadam.org/reports.htm)
- Whooshh Innovations, 2015. Design-build proposal for fish passage transport at BOR's Cle Elum Dam. Whooshh Innovations, Bellevue, WA.