

## McClenagan, Laura

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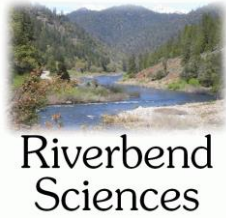
**From:** Eli Asarian <eli@riverbendsci.com>  
**Sent:** Sunday, November 21, 2021 3:52 PM  
**To:** Planning Clerk  
**Subject:** Comments on PLN-2019-15661: Marshall Ranch Streamflow Enhancement Project  
**Attachments:** AsarianLetterMarshallRanch\_Nov2021\_PLN-2019-15661.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Please accept the attached comments on PLN-2019-15661, the Marshall Ranch Streamflow Enhancement Project.

Sincerely,  
- Eli Asarian

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November 21, 2021

Humboldt County Planning and Building Department  
3015 H Street  
Eureka, CA 95501

Re: Marshall Ranch Streamflow Enhancement Project; PLN-2019-15661; SCH # 2019109088

Dear Planning Director, Planning Staff, and Planning Commissioners:

I am writing to encourage you to approve the Mitigated Negative Declaration for the Salmonid Restoration Federation's Marshall Ranch Streamflow Enhancement Project PLN-2019-15661, SCH # 2019109088.

I have 20 years of experience studying California's rivers and streams and am the owner of the Eureka-based consulting firm Riverbend Sciences. I have expertise in aquatic ecology, water quality, hydrology, data management and analysis, geographic information systems, and historical ecology. I have authored or co-authored over 25 technical analyses on stream flow, water temperature, water quality, and algae in the Klamath and Eel River watersheds, including several peer-reviewed journal articles, as a consultant to state and federal agencies, Native American tribes, private industry, and non-governmental organizations including CalTrout, Friends of the Eel River, and the Eel River Recovery Project. I have assisted National Marine Fisheries Service in developing and implementing Endangered Species Act recovery plans for salmon and steelhead throughout California, including the South Fork Eel River. In recent years, my work has focused on water temperature and I am currently completing a study of temperatures within the South Fork Eel River watershed, including Redwood Creek, as a contractor to the State Water Board. I have served on the Salmonid Restoration Federation's board of directors since 2015. The opinions I offer here are my own, based on my professional experience.

Although much reduced from historical abundances, the South Fork Eel River watershed is still a regional stronghold for salmon and steelhead. Adequate summer stream flows are particularly important for coho salmon, a species that requires year-round cool water to survive. Long-term measurements from the U.S. Geological Survey that I analyzed as part of my work on the coho salmon recovery plan show that in recent decades, summer river flows declined across the South Fork Eel River and much of the North Coast, coincident with a warming climate and increasing human populations. Absent decisive action to change course, these trends are likely to continue, with summer water becoming increasingly scarce for both human uses and fish.

*That is why projects such as the Marshall Ranch Streamflow Enhancement Project are so vitally important.* Redwood Creek and its fish are currently at a tipping point, with their fate depending on what actions we take. In some other South Fork Eel tributaries such as Salmon Creek, existing land and water use are already too intensive, and intervention is unlikely to be fruitful. Too many straws drawing too much water from too widespread an area around the watershed. Conversely, other South Fork Eel tributaries such as Bull Creek are fully protected as public land, resulting in less need for summer flow enhancement. Redwood Creek has a diverse mix of conditions, with some stream reaches already dewatered but reliable flows in other reaches. Redwood Creek is impacted enough that it needs help, but not so damaged as to be irreparable. If adequate flows were present, Redwood creek could provide excellent fish habitat.

*Salmonid Restoration Federation and its partners have followed a strategic and methodical approach in Redwood Creek, first learning the lessons of previous efforts within the region (e.g., Sanctuary Forest's work in the Mattole River, as well flow augmentation projects in Sonoma County), then designing and implementing a long-term program to monitor flows and build an understanding of the watershed's hydrology, then considering various strategies for improving summer flows, and then inventorying potential project sites.*

*The project team has carefully considered the neighbor's concerns and reconfigured the project multiple times to address those concerns.* The level of planning, engineering, geotechnical, and seismic analysis that has gone into this project likely far exceeds that of any other pond of comparable size within the region. In response to neighbor's concerns, the current proposed project is substantially smaller than original proposed.

The Marshall Ranch Streamflow Enhancement Project would meaningfully improve the low-flow conditions that are the limiting factor for Redwood Creek's salmon, bolstering the creek's contribution to sustaining the salmon populations within the larger South Fork Eel River watershed and the region. I am not aware of any other single project that could do as much good for salmon in the South Fork Eel River as this one. In addition, this project could serve as a demonstration that could be replicated around the region.

Our iconic salmon will need help if they are to survive the hot droughts coming in the 21<sup>st</sup> century, and projects such as this are precisely what is needed. It is the right project in the right place at the right time.

Sincerely,



J. Eli Asarian