

McClenagan, Laura

From: Randy Klein <rdkhyd@gmail.com>
Sent: Saturday, November 20, 2021 1:32 PM
To: Planning Clerk
Cc: Dana Stolzman
Subject: Marshal Ranch Project
Attachments: R_Klein_comment on Marshall Ranch Project_11-20-21.docx

Follow Up Flag: Follow up
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Hello, please accept my attached letter of support for the revised Marshall Ranch Project, Record number PLN-2019-15661.

Thank you,

Randy Klein
Hydrologist
Arcata, CA

November 20, 2021

To: Humboldt County Planning Commission

Subject: Marshall Ranch Streamflow Enhancement Project

This letter is provided in support of the Marshall Ranch Streamflow Enhancement Project proposed for the Redwood Creek watershed, Humboldt County. By way of introduction, I am a hydrologist working on salmonid sustainability projects for the past three decades. I was lead hydrologic scientist for Redwood National and State Parks for 32 years. My primary areas of study included monitoring streamflow conditions for salmonids and design and evaluation of habitat enhancement projects. For the past twenty-six years I've also provided hydrologic consulting services on a wide variety of projects, including hydrologic designs and analyses of tidal marsh restoration projects, stream restoration projects, and analyses of the magnitude and effects of low flows on Humboldt County streams. Finally, I have served as lead scientist on the County of Humboldt Extraction Review Team (CHERT), coordinating Federal and State review of gravel mining on Humboldt County rivers and providing hydrologic and geomorphic input on gravel mining plans annually since 1992.

Since 2004, one of my clients has been the Sanctuary Forest based in Whitethorn. Tasha McKee has hired me for many projects over the past 16 years, most recently focusing on low flow problems in the Upper Mattole. For several years (2015-17) I provided similar services to the Salmonid Restoration Federation for analyzing low flow conditions in Redwood Creek watershed in which the Marshall Ranch project is located. I am quite familiar with both the Redwood Creek watershed and the seriousness of the low flow problem.

Sanctuary Forest has implemented numerous low flow enhancement projects over the years, starting with a program of increasing water storage capacity (tanks) among landowners willing to forbear removing water from streams in the Upper Mattole during the driest times of the year. More recently, the focus has been on near- and in-channel projects aimed enhancing low flows by slowing the release of groundwater to streams to extend groundwater contributions to streamflow further into the dry season. While each individual project contributes incrementally to low flow enhancement, the cumulative effects of these project certainly have had significant beneficial effects for juvenile salmonid drought survival. However, unlike numerous small-scale projects implemented over time, even at the reduced scale now under consideration, the Marshall Ranch project will provide immediate and dramatic benefits to Redwood Creek. There is a lot to be said for taking such a bold step where site conditions are favorable.

Based on my review of the revised preferred alternative scope, designs and analyses for the Marshall Ranch project, I am confident that due diligence has been done by the geologists and engineers working on the project and that their conclusions of low risk of project failure meet the high scientific and engineering standards required for a project of this magnitude.

I urge the Humboldt County Planning Commission to approve the Marshall Ranch flow enhancement project.

Thank you,

Randy D. Klein, Hydrologist
Arcata, CA