



Dennis Jackson - Hydrologist

708 - 14th Avenue
Santa Cruz, CA 95062-4002
(831) 479-1265
djackson@cruzio.com

October 22, 2007

Chairwoman Valerie Brown
Board of Supervisors
575 Administration Drive, Room 100A
Santa Rosa, CA 95403-2887

Re: File No. UPE04-0040, Gualala Instream Gravel Mining, Gualala Redwoods

Dear Chairwoman Brown:

The Friends of the Gualala River have asked me to give you my independent, professional opinion on the proposed Mitigated Negative Declaration (UPE04-0040), dated August 5, 2007, for the instream gravel mining on Gualala Redwoods properties on the South Fork of the Gualala River and Wheatfield Fork of the Gualala River and the associated amendments to the Sonoma County Aggregate Resources Management Plan and the Sonoma County Surface Mining and Reclamation Ordinance.

I was the Hydrologist for the Mendocino County Water Agency (MCWA) from May 1989 to November 1994. One of my primary duties was to advise the Mendocino County Board of Supervisors on the appropriateness of instream gravel extraction operations on various rivers in Mendocino County, including the Garcia River which is similar to the South Fork of the Gualala River. I have a Masters in Physical Science specializing in Hydrology from Chico State University. Since 1994 I have been a consulting Hydrologist. I have also taught Hydrology at California State University, Monterey Bay.

I have submitted a more detailed comment letter to Mr. Ken Ellison, the Planner for this project.

The Mitigated Negative Declaration (MND), dated August 5, 2007, failed to note that the entire Gualala River watershed is listed as impaired for water temperature and for sediment under section 303d of the Clean Water Act. The impaired status of the watershed is an important consideration in environmental decision making.

The MND is flawed in several other respects.

- The MND does not identify all unavoidable adverse impacts.
- The MND does not recognize that the proposed project contributes to cumulative adverse impacts.
- The MND does not identify foreseeable future projects that will contribute to significant unavoidable impacts.
- The MND does not does not mitigate the impacts from all potential extraction methodologies used by the proposed project.
- Several of the proposed mitigation measures conflict with each other.

- Not all potential impacts of the project have been adequately mitigated.
- The current condition of the river has not been established. The O'Conner report (2003) was based on cross section data collected between 1996 and 2002. No analysis of data collected between 2003 and 2007 has been presented in the MND.

An EIR should be required for the proposed project.

Instream gravel extraction disrupts a river's dynamic process of adjusting its width, depth and gradient in a way that allows it to transport the sediment load supplied to it by the watershed. Continuous gravel extraction from 1960 through 2006 (47 years) has removed about 1,139,000 cubic yards (706 acre-feet) of gravel from the South Fork of the Gualala River in the vicinity of Valley Crossing. Fundamental geomorphic theory developed by Leopold, Wolman, Miller and many others suggests that if the 1,139,000 cubic yards (706 acre-feet) of material had not been removed from the river channel, the depositional areas would have built up to form geomorphic floodplains (2-5 year flood surfaces) and the active channel would have narrowed. A narrower active channel would transport a higher sediment load and the current depositional areas would appear less aggraded than they do today and may have even become transport reaches. Riparian vegetation would have been able to become denser and more vigorous. The banks of the narrower active channel would have been closer to the low-flow channel. The low-flow channel would have received more shade from the banks of the narrower active channel and from the more vigorous riparian vegetation which would have produced cooler water temperatures. The South Fork of the Gualala is a different, more environmentally degraded river today than it would have been without the continuous instream gravel extraction of the last 47 years.

Instream gravel extraction has kept the river out of balance with its sediment load giving it the appearance of being aggraded. The aggraded appearance of the South Fork and the fact that instream gravel extraction has reduced the sediment transport capacity of the South Fork of the Gualala River to below the amount supplied by the watershed are factors that contributed to the 303d listing of the Gualala River watershed as impaired regarding sediment.

The proposed instream gravel extraction project would contribute to the cumulative impact of the removal of about 1,139,000 cubic yards (706 acre-feet). This is an unavoidable adverse environmental impact. This unavoidable adverse impact has not been discussed by either the proposed Mitigated Negative Declaration (MND), the EIP Associates 1994 EIR for Gualala Redwoods or by the Sonoma County Aggregate Resource Management (ARM) plan, which is specific to the Russian River. In addition, the Sonoma County Board of Supervisors has not adopted a statement of over-riding consideration regarding the unavoidable significant adverse environmental impacts caused by the river being prevented from adjusting its channel geometry to carry its supplied sediment load due to continuous instream gravel extractions over the past 47 years. These significant adverse environmental impacts include, but are not limited too, a wider active channel in the vicinity of the mined bars; a lower sediment transport capacity which in turn causes a greater deposition including fine sediment and a decrease in the stability of the low-flow channel; less vigorous riparian vegetation and warmer water temperatures. Each of these factors affect salmonid habitat. Therefore, an EIR is required for the proposed project.

The proposed permit term is 10 years. At the end of the permit period, another renewal can be applied for. The application by Gualala Redwoods for the proposed permit says that gravel extraction from the Gualala River is expected to continue indefinitely. The future renewal(s) of the project is a reasonably foreseeable project under CEQA and should therefore be evaluated in light of a cumulative impact under environmental checklist item 17b. The MND has failed to recognize that future renewals of the proposed

project will contribute to the cumulative impacts caused by continuous instream gravel extraction. Therefore, an EIR is required for the proposed project.

The Mitigated Negative Declaration (MND) does not require a particular extraction methodology to be used. The MND says that the “horseshoe skim” method will be the primary method but the applicant has proposed six extraction methodologies, including the horseshoe skim. The MND does not mention or evaluate the environmental impacts of “horseshoe skimming” or the other methodologies proposed by the applicant. In addition, there is nothing in the MND that would prevent the applicant from utilizing additional unevaluated extraction methodologies. Since the MND has not evaluated the potential of each of the other proposed extraction techniques to cause significant adverse environmental impacts additional study is required. Since all of the extraction techniques have not been evaluated, it not known if additional mitigations are required. Therefore, an EIR should be required for the proposed project.

The proposed Mitigation Measures conflict with each other. For example Mitigation Measure Bio-6 conflict with Bio-12. Mitigation Measure Bio-12 requires a buffer between the low-flow channel and the extraction area. Mitigation Measure Bio-6 requires that, “The downstream 20% of the extraction area shall be graded and day-lighted to the edge of water.” So, Mitigation Measure Bio-6 would damage the buffer required by Mitigation Measure Bio-12. Intrusion into the buffer area to implement Mitigation Measure Bio-6 has the potential to harm riparian vegetation and grading the buffer will remove the armor layer in the buffer which has the potential to decrease the amount of available salmonid spawning habitat. Grading the buffer between the extraction area and the low flow channel will decrease the confinement of the low flow channel. A decrease of the confinement of the low flow channel will reduce the scouring action in the low flow channel and promote deposition leading to a loss of pool depth and area.

The MND points out that a temporary stream crossing could present a problem to salmonid migration if it is not properly installed. However, the MND fails to recognize that instream gravel extraction can create conditions on riffles that become barriers to salmonid migration. Instream gravel extraction can produce wide flat areas of low relief at approximately the elevation of the low-flow water surface. The finished surface of an extraction site reduces the local sediment transport capacity of the river and induces deposition. Downstream the river will erode additional material to compensate for the upstream deposition. The downstream erosion could widen a riffle in the low-flow channel by removing material from its sides. Water flowing over the wider riffle would spread out and become shallower. Fish and Game (CDFG) refers to riffles that are migration barriers as “critical riffles”. The shallow riffle (critical riffle) could become a migration barrier to adult steelhead over a certain range of streamflow. No mitigation measure has been proposed to reduce the potential of this impact to less than significant.

Water diversion to meet processing water needs for the processing plant could reduce streamflow and create a barrier at riffles downstream of the diversion where none existed before the pumping. A cumulative impact could occur if the instream extraction operations created a wide riffle and the process water diversion reduced the streamflow enough to make it a critical riffle. The MND has not considered this potential impact. No mitigation measure has been proposed to reduce the potential of this impact to less than significant.

The MND, dated August 5, 2007, prepared for the proposed instream gravel mining on the South Fork of the Gualala River and Wheatfield fork of the Gualala River fails to address several important issues. An Environmental Impact State (EIR) should be required for this project.

Sincerely,

A handwritten signature in black ink that reads "Dennis Jackson". The signature is written in a cursive style with a long, sweeping underline that extends to the left.

Dennis Jackson
Hydrologist

cc: Dick Butler, NOAA Fisheries
David Hines, NOAA Fisheries
Dan Torquemada, NOAA Fisheries
Peter Straub, Corps
Jane Hicks, Corps
Scott Wilson, CDFG
Stacey Martinelli, CDFG
Serge Glushkoff, CDFG