



WOLF CREEK COMMUNITY ALLIANCE

"Grass Valley - A creek runs thru it."

Jan 20, 2009

Mr. Tom Last
Planning Director, City of Grass Valley
123 East Main St.
Grass Valley, CA 95945

RE: Comments on the Draft Environmental Impact Report for the Idaho Maryland Mine Project

Dear Mr. Last:

As you are aware, the Wolf Creek Community Alliance is a Grass Valley-based 501(c)(3) non-profit organization whose primary purpose is to protect the resources of Wolf Creek and maintain it as an amenity for our community. This letter contains our comments (**referenced to the DEIR by chapter and page**) on the draft Environmental Impact Report (DEIR) for the proposed re-opening of the Idaho-Maryland Mine, a project which we do not support. The project is inconsistent with the City's expressed goals of preserving and enhancing Wolf Creek and developing the Wolf Creek Parkway. Furthermore, even the partial analyses and incomplete data contained in the DEIR make it clear that that the project's actual impacts on ground and surface waters, including South Fork Wolf Creek and mainstem Wolf Creek, are unknown. Accordingly, the DEIR relies on speculative mitigation measures and assurances that compliance with regulatory requirements can mitigate almost all impacts to below the level of significance, even though the record is replete with the failures of these same authorities to provide the necessary oversight and take timely action when technical fixes have been poorly designed, incompletely implemented or poorly maintained at other mines and industrial sites in our local area.

Chapter 1. Introduction

The DEIR is clear that a central theme of public commenters, as detailed in the Scoping Report (Appendix A) prepared to guide the environmental review, was that the DEIR should substantially address "potential impacts to biological resources including wetlands, Wolf Creek and South Fork Wolf Creek and associated habitat and species" (1-3). Further, that the purpose of the DEIR is to "identify and evaluate potential environmental consequences of the proposed project, to identify mitigation measures that

would lessen or avoid significant adverse impacts, and to examine feasible alternatives to the project." (1-4). Based on our review of the DEIR, however, we find that potential impacts to local hydrology and biological resources in these two streams are *not* adequately addressed and request that the DEIR be rewritten and then recirculated for further public review.

One central point is the extent to which the DEIR study area is so narrowly defined as to wholly exclude potential biological and hydrologic environmental consequences beyond the boundaries of the project sites. Historic uses of surrounding lands are well documented: mining has resulted in substantial contamination of local soils and waters, resulting in continuing impacts on habitats and biota.

In particular, discussion of potential impacts of the project on resources in Empire Mine State Historical Park, just downstream, are not evaluated appropriately. While "The IS [Impact Statement] found that there are no adopted habitat conservation or natural community conservation plans in the project area. Therefore, the proposed project would have no impact to adopted habitat conservation or natural community conservation plans. This impact will not be addressed further in this EIR." (1-8). However, the Park *has* developed habitat conservation plans for areas within the park boundaries used by species of special concern, including the California Spotted Owl. Project hydrology and water quality impacts on these species and the plans protecting their habitats need to be fully considered.

This inappropriately telescoped perspective is also evident in the statement that "Therefore, solid waste impacts from mine tailings will not be addressed further in the EIR." (1-9). Disposal of waste rock through the ceramics plant and the prospective economic returns to the Town are central to the project's financial feasibility. Yet the technology for using mining tailings to create tiles has only been tested at the 'bench' scale and the company proposing such use is currently undercapitalized. Given these uncertainties, the DEIR needs to much more fully explore the subject of solid waste impacts from mine tailings.

Chapter 2. Project Description

A major project objective is stated as "rehabilitating the historic Idaho-Maryland Mine workings to transform the site from an underutilized and environmentally contaminated site." (2-3) Given the importance of this process, and the emphasis that project proponents have placed upon this activity in attempting to sell the project to the local residents, we find it unusual that so little information is provided in the DEIR regarding the specifics of the decontamination plan. After over a decade of project planning, one would expect a clear description of the extent and types of contamination found and the methods proposed to decontaminate the site. The DEIR should be amended to treat these issues more thoroughly, including how, when and where which specific decontamination methods would be applied.

The discussion of site clearing and grading (2-7) fails to consider how decontaminated

soil will be addressed during the process of cut-and-fill?

On page 2-16, the DEIR states that "Water from the mine water settling pond would be treated and also directed to the storm water detention pond. Drainage from the detention pond would then be discharged into Wolf Creek using a second diffuser." Prior to discharge, the co-mingled storm runoff and mine water in the storm water detention ponds should be directed through further water-quality treatment BMPs and tested to confirm lack of toxicity.

The discussion of the New Brunswick site (2-20), where significant surface developments would occur, lacks any consideration of potential surface contamination due to prior uses. If this evaluation has already been made, then it should have been included in the DEIR and, if not, then it needs to be undertaken. The DEIR further states "waste materials hoisted to surface may either be placed in an engineered storage area or transported to the Idaho-Maryland site for processing." (2-19) On-site management of these mine wastes should be more fully described in the DEIR and specific mitigation measures identified. How will mobilization of these potentially toxic materials by wind and rainfall be prevented? Will the stockpiles be covered? Will runoff from developed portions of this site be routed through water-quality BMPs and treated prior to discharge? It is also unclear from the DEIR if the inter-site transport has been incorporated into the analysis of traffic impacts and hazardous waste management.

The discussion of discharge of process water from mining (2-34) states that "The only loss of process water would be through water that would be contained in the tailings from the gold process plant. All recovered process water would be recycled back into the process continuously. Make-up water would be required and would also be drawn from treated mine dewatering water or NID water. It is estimated that less than 150 gpm would be required for make-up water for the gold processing plant." What is the disposition of this 150 gpm being lost from the system? Should the public simply assume that this extremely toxic, untreated water will be recharging the underlying aquifer, creating a plume that will eventually find its way into Wolf Creek?

On the following page (2-35), the DEIR states that "At the New Brunswick site, mine water would be pumped directly to the on-site water treatment plant". In contrast to the Idaho-Maryland site, no pre-treatment through a settling pond is proposed as part of the New Brunswick site plans. How will solids be removed from mine water at this site and why do the treatment processes differ between the two sites?

Incorporation of the toxic sludge into the tile production process as a colorant could prove infeasible for many potential reasons. Thus, it is appropriate that the DEIR states that "Alternatively, the sludge may be transported by truck offsite to a waste disposal facility." (2-35). Given the speculative nature of the ceramic tile process in the context of this project, transport of this sludge to a regulated waste disposal facility should be assumed in the DEIR, and not simply proposed as an alternative. Has transport of this toxic sludge been incorporated into the traffic and hazardous waste analyses?

Chaper 4/Section 4.3 Biological Resources

One of the major conclusions of Section 4.3 is that dewatering operations would have less than significant impacts to aquatic life. However, this finding is based solely on effects of potential contaminant concentrations and turbidity, leaving the following potential impacts entirely unaddressed:

- What are the potential impacts to aquatic life from year-round increase in flows?
- What are the potential impacts to aquatic life when the year-round increase in flows cease and the channel morphology has changed?

Potential Impacts to aquatic life from ground water and mine water discharges

Two other fundamental inadequacies involve the lack of baseline data for aquatic species and the omission of any monitoring program for aquatic species. For example, the DEIR does not include proposed assessment of potential impacts of ground water and mine waste discharges on benthic macroinvertebrates (BMI) in both South Fork Wolf Creek and Wolf Creek. Biological, physical, and chemical effects of these discharges will almost certainly include (but not be limited to): increased streamflows, increased turbidity, increased metal concentrations and changes in temperature, dissolved oxygen and pH. The DEIR does not include any data on BMI sampling to establish a baseline, nor is BMI sampling proposed. Given the wide recognition of BMI as sensitive indicators of water quality, the DEIR should include BMI evaluation and present a BMI monitoring program to determine shifts in BMI numbers, types, locations, and seasonality in both South Fork Wolf Creek and Wolf Creek. The DEIR needs to include a comprehensive monitoring plan for multiple aquatic species, including BMI. Monitoring should extend throughout the anticipated 15 to 20 year lifespan of the project, as well as the site reclamation period. Appropriate mitigation for potential detrimental impacts to different species should be proposed and a funding source to ensure implementation should be described.

Potential Impacts to aquatic life after pumped dewatering ceases

The DEIR also inadequately addresses potential impacts on aquatic life in South Fork Wolf Creek and Wolf Creek once mining activities stop and mine dewatering ceases. Fifteen to 20 years of prolonged elevated flows will likely have widened the channel and modified the riparian canopy coverage (addressed below). Concurrently, ground water pumping will likely have depleted and lowered the local ground water table. The combined effects of the dramatic decrease in flows and changes in water temperatures could profoundly affect aquatic life, especially in South Fork Wolf Creek. The DEIR should be amended to include an evaluation of potential impacts on aquatic species once mine dewatering is reduced or ceases. Mitigation measures to reduce stress on and mortality of aquatic species should be proposed and a funding source to ensure implementation should be described.

Potential Impacts to riparian habitat after pumped dewatering ceases

Similarly, the DEIR fails to address potential impacts to riparian habitat along South Fork Wolf Creek and Wolf Creek once mining activities stop and mine dewatering ceases.

Potential impacts to the riparian habitat may include stress on, mortality of, and changes to riparian vegetation composition due to lowering of the ground water table from mine dewatering and/or channel degradation and incision, and introduction of invasive plant species along dry creek banks. To the best of our knowledge, the DEIR does not include maps of the riparian habitat along the potentially affected portions of South Fork Wolf Creek and Wolf Creek. The DEIR should be amended to include an evaluation of potential impacts on riparian habitat once mine dewatering is reduced or ceases. Mitigation measures to avoid or minimize such impacts should be proposed and a funding source to ensure implementation should be described.

Potential Impacts to meadow habitat

A sizeable area of wet meadow is located along South Fork Wolf Creek just downstream of the locations where discharges from mine dewatering operations are proposed. Potential impacts to this habitat as the mine is dewatered, and later as dewatering ceases and mining activities halt remain unaddressed in the DEIR. The DEIR should assess the potential impacts of changes in local hydrology on this sensitive habitat area and its component plant species, include mitigation measures to avoid or minimize such impacts, and describe a funding source to ensure implementation.

Water quality monitoring as mitigation

Proposed mitigation for potential impacts of mine dewatering activities includes mitigation measures 4.3-2a and 2b, wherein dissolved oxygen and temperature would be monitored weekly between May 1 and October 31 of each year. As elevated water temperatures and low flows, both acute stressors on aquatic life, are not limited to the proposed monitoring period, we recommend that the DEIR be revised to amend these mitigation measures to include monitoring of these factors year-round. In addition, other water quality parameters which are good indicators of potential chemical and mineral contaminants, such as pH, total dissolved solids (TDS), and total suspended solids (TSS), should be added to the NPDES permit monitoring program. Finally, given the severity of potential impacts of contaminated discharges on creek biota, monitoring should be both automated and continuous using electronic probes, with manual verification periodically used to calibrate the electronic record. These types of probes, now widely available and relatively inexpensive, would serve to document transient excursions of the treatment plant operations and lessen the likelihood that contaminated discharges would remain undetected until weekly monitoring is conducted and the results analyzed.

Chaper 4/Section 4.7 Hydrology and Water Quality

Peak flows in South Fork Wolf Creek

According to page 4.7-1 of the DEIR, a study by Todd Engineers estimated peak flows of 700 cubic feet per second (cfs) the South Fork of Wolf Creek during a 10-year storm event. Without reviewing a copy of the report, we cannot assess the accuracy of their estimate, which seems highly inflated based on monitoring data for this stream collected by the Wolf Creek Community Alliance. We submit that this report should have been incorporated into the DEIR appendices and made available to commenters during the public review period, and that not doing so is a deficiency which should be addressed.

Mercury in stream banks and sediment

The DEIR notes (4.7-3) that “Mercury is present in both watersheds; an average high of 4.6 µg/l was calculated for the lower reaches of Wolf Creek and an average high of 11 µg/l was calculated from samples collected in the lower reaches of South Fork Wolf Creek (mercury target concentrations are not currently specified in the Basin Plan).” Then, on page 4.7-19, the DEIR states that “A comment received during a City-sponsored public outreach meeting on the project expressed concern that mercury laden sediments may be present in the banks of Wolf Creek and South Fork Wolf Creek and these sediments could become mobile through increased creek flows and subsequent erosion generated by the project. There is no indication that the sediments within either of the creeks are laden with mercury. Furthermore, samples collected from historic mine tailings in the area do not exhibit mercury as a common contaminant; therefore, it is unlikely that sediment in Wolf Creek and South Fork Wolf Creek would be laden with mercury.” On page 4.7-21, the report concludes that “The proposed project would not increase erosion to the beds and/or banks of Wolf Creek and/or South Fork Wolf Creek. Accordingly, potential impacts caused by erosion of mercury laden sediment are not considered an impact and are not analyzed further in this EIR (Walker and Associates, 2008).”

The DEIR is clearly inadequate in not presenting any data, citations or references in support of its assertions regarding mercury in sediments or in tailings. Neither does the DEIR include any data regarding erosion to stream beds and/or banks. Simply saying that “There is no indication” merely admits the obvious, that the necessary studies have not been conducted. The assertion that: “samples collected from historic mine tailings in the area do not exhibit mercury as a common contaminant” is in error, according to the CA Dept. of Toxic Substance Control, which reports that tailings from the Empire Mine just downstream do contain mercury. We also know that a large area along the banks of South Fork Wolf Creek is labeled (on the 1901 USGS map) as “Placer Diggings”. As placer mining used large amounts of mercury, we suspect that large areas of the banks of the South Fork Wolf Creek contain significant deposits of mercury.

We want to see such a study performed (specifically in the area denoted on the 1901 map as Placer Diggings) – stating that it is “unlikely” is not sufficient.

We submit that the DEIR is deficient in not including a geomorphic study of the downstream reaches of Wolf Creek and South Fork Wolf Creek where flows will be modified significantly by mine dewatering discharges and other project activities, and in omitting any assessment of mercury contamination in stream beds and banks through these reaches. We recommend that the DEIR be amended to identify potential mercury sources and evaluate potential impacts from channel erosion due to increased mine discharges in advance of project approvals.

Wastewater treatment

Pages 4.7-27 to 4.7-29 describe the proposed wastewater treatment system, which excluded consideration of wastewater created in the gold milling process. Rather than

propose a mitigation measure stating that a system to treat this component be developed and submitted for regulatory review at a later date, the DEIR should have included a description of the redesigned treatment system now so that the public could assess its suitability, rather than leave this key aspect until after EIR approval.

Wolf Creek Parkway

Jonathan Keene has previously submitted a document detailing our concerns regarding the impact that this project could have on the proposed Wolf Creek Parkway. Please refer to the document submitted Jan. 12, 2009 for details of our concerns regarding the Wolf Creek Parkway.

Comments With Respect to the City's General Plan

The draft EIR identifies only one item in the General Plan of the City of Grass Valley that "*would be applicable to the proposed project*". For a review of the concerns that our organization has expressed concerning this topic, please review the document previously submitted by Jonathan Keene on Jan. 18, 2009.

In closing, we would prefer that the applicants withdraw this project from consideration, as its potential benefits to the City are miniscule in relation to its potential impacts on our quality of life, and particularly to the Wolf Creek watershed, Wolf Creek and South Fork Wolf Creek. We believe that this draft EIR is an entirely inadequate representation of the scope of the impacts of this project. Indeed this document is so seriously flawed that we must respectfully ask that it be either withdrawn entirely, or seriously revised before this project review process is continued.

Respectfully,

David Brownstein

Jonathan Keene

On behalf of the Board of Directors of Wolf Creek community Alliance and all of the many members who contributed to the effort to review the IMMC draft EIR.

