

WELLS COALITION



wells@cea-nc.org

January 12, 2022

Nevada County Planning Commission
950 Maidu Avenue, Suite 170
Nevada City, CA 95959-7902
Idaho.MMEIR@co.nevada.ca.us
planning@nevadacountyca.gov

Subject: Protection for Wells Near Idaho-Maryland Mine Still Not Adequate

The Wells Coalition is a group of well owners near the Idaho-Maryland Mine. Our purpose is to protect our only source of water, our wells.

We are astounded that a comprehensive domestic well monitoring program was not established *before* the Draft EIR was published last year. Such a program is a necessary step to establishing the baseline data required by CEQA. It's clear that this omission was recognized in the Final EIR, but the proposed solution is little more than a band-aid that doesn't actually address the serious, underlying problem.

Even though there are over 300 properties with wells within 1000 feet of the Mine's mineral rights area, neither the draft nor final EIRs provided current monitoring data from these domestic wells. They relied only on *sparse patches of data from over 15 years ago*. The quality of this input data is one of many concerns identified by numerous experts who contradicted the findings of the Draft EIR's groundwater study in their written comments.

The EIR's primary approach is to install fifteen non-domestic *monitoring wells over a limited area* to do the job of predicting impacts for all water supply wells. With our complex fractured bedrock spread over thousands of acres, this approach is inadequate. This is further complicated by the fact that the estimated area of potential impact is based on the findings of a questionable study. In addition, the 378 properties identified in the Final EIR's *supplemental domestic well monitoring program* only capture about 150 of the 300 plus wells in the mineral rights area.

Timing of baseline data collection, however, is really the central issue. CEQA requires that a baseline be established prior to the evaluation of potential impacts. This was not done. With mine dewatering, previous dry years, and drought still predicted for the future, it is imperative that we get this right. Adding a well monitoring program *after* the project is approved and just one year before the mine is dewatered - as the Final EIR proposes - is not only out of compliance with CEQA, but is also extremely shortsighted and risky. Multiple experts provided comments telling us that it takes a minimum of 3 years to establish a reliable baseline in order to account for year-over-year variations.

Also, under CEQA a mitigation measure must be achievable, enforceable, and must be capable of actually reducing the Project's impacts. The Final EIR's supplemental domestic well monitoring program is not even defined as a mitigation.

Not having a baseline established by a properly constructed *domestic* well monitoring program before publishing a Final EIR is unacceptable. Our wells are not currently being monitored. Since it will take several years for Rise Gold to establish a reliable baseline, we request the current EIR be rejected and that any future EIRs include at least 3 years of comprehensive well monitoring data.

Sincerely,

Christy Hubbard (District 3 resident)
The Wells Coalition
wells@cea-nc.org



San Juan Ridge Taxpayers Association

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January 12, 2023

Nevada County Planning Commissioners
950 Maidu Avenue
Nevada City, Ca. 95959

Dear Commissioners,

My name is Sol Henson, I grew up on the San Juan Ridge and hold a master's degree in hydrology. I am the president of the San Juan Ridge Taxpayers Association and speak for the Association today. I'm here to talk about the importance of baseline monitoring for wells to protect our community from industrial mining impacts.

In 1995 Siskon Gold operated a gold mine in the North Columbia Diggings on the San Juan Ridge. During mining operations, they breached a water bearing fault-line 300 feet underground. This breach led to the loss of nearly a dozen wells including the well for our middle school and the community Cultural Center. This was a disaster for those who lost their wells, but we still do not know the extent of well impacts. Some wells may have lost 50% or even 75% capacity but without baseline data, owners could not prove that the mine had impacted their wells.

This was a single catastrophic event. Wells are more commonly impacted by the extraordinary amount of water pumped out of mine tunnels just to maintain daily industrial mining operations. Over time, millions of gallons of water a day must be removed from the surrounding fractured bedrock aquifer. In such cases, well impacts can be slow to develop and can be hidden within seasonal cycles.

In 2012, the San Juan Ridge Mine Corporation submitted a new permit application to mine the North Columbia Diggings. Exhibiting due diligence, and with community input, the County helped to create a baseline monitoring program for domestic wells. This program established a baseline through monthly collection of water quantity and quality data. This information would have been invaluable for the environmental review process. Should the mine have been permitted, well owners would have had recourse to say with some confidence if their well had been impacted.

We firmly support the precedent of baseline monitoring for projects of such scale and impact as the Idaho Maryland Mine. Significant monitoring programs have been developed in the past for the IMM site, including for the 1996 permit to dewater the mine for exploration and the 2008 Emgold Mine environmental review process. It is unclear why the current Rise Gold effort to permit the IMM lacks a monitoring plan that would form a baseline for water quantity and quality of domestic wells in the surrounding area. We believe that the community is owed these safeguards and that CEQA requires it. Thank you very much.

Sincerely,

Sol Henson

President of the San Juan Ridge Taxpayer's Association

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Subject: the Idaho-Maryland Mine Final EIR groundwater hydrological model predictions and risk to domestic wells in the area of the Project.

The proposed well mitigations in the Final EIR for Rise Gold fail to acknowledge that there are significant risks posed to domestic wells in the surrounding area of the Idaho-Maryland Mine project, and it does not comply with CEQA.

The Final EIR for Rise Gold states:

“ All potentially impacted wells are located in the E. Bennett Road area. Domestic water wells outside this area will not be impacted.” [1]

But expert opinions contradict the certainty of these statements, citing repeatedly the uncertainties in hydrologic predictions and impacts to wells:

Emgold’s 2008 DEIR for the Idaho-Maryland Mine states

*“Due to the uncertainties regarding the complex geology and groundwater flow, dewatering **impacts to domestic water supply wells cannot be accurately predicted.**”* [2]

Also, Emgold’s project description states

*“**The geologic formation in which the mine is located is fractured bedrock whose hydrogeology is difficult to predict.** Therefore, reliance on Domestic Well Level Monitoring Program data will be required to assess impacts and discern appropriate **mitigation measures for each domestic well owner.**”* [3]

After reviewing the hydrology computer model from the EIR for Rise Gold an expert hydrogeologist in groundwater modeling stated

*“**Even a well calibrated model has a large uncertainty to it, in its predictions.**”*

It turns out that this model is not well calibrated, so the uncertainties are almost certainly larger.”[4]

The hydrology report for the Idaho-Maryland Mine’s 2008 EIR affirms the uncertainty in predicting whether ground water from near surface well waters may drain down into the deeper mine workings.

“The groundwater in this particular area is contained in and flows through fractures in near surface bedrock and because of this fracture flow regime, the groundwater flow in quantity varies considerably with location and **cannot be predicted with certainty. Furthermore, complete hydraulic separation between the deeper groundwater within the underground mine workings and the shallow groundwater within fractures and supplying the domestic wells cannot be assumed.”[9]**

Even the hydrologist who prepared the hydrology computer model for the EIR, told the NID board of directors.

“With fractured rock there will always be uncertainty and during my career there won’t be any 100% confidence in predictions.”[5]

It is because of these uncertainties that we are appealing to you to require protection for all wells with a comprehensive well monitoring plan for at least 3 years to gather baseline data to be used in a revised EIR.

Thank You,

Gary Pierazzi
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Additional expert opinion quotes regarding uncertainties in groundwater modeling and fractured rock.

*“The EMKO Report describes a three-step procedure used to assess potential drawdown effects in perimeter areas. A major assumption underlying the procedure is that flow contributions from the workings are distributed uniformly across the mining areas after correcting for depth. **However, the subsurface distribution and orientation of bedrock fractures is not uniform and is subject to uncertainty. Discussion of this uncertainty and the overall uncertainty of the analytical and numerical model predictions with respect to groundwater level impacts on individual wells should be provided. expanded to include an assessment of the uncertainty in the conclusions developed by Todd Engineers.**”*[6]

*“Although the analysis is considered conservative in methodology, **several complexities in the groundwater system could potentially result in a larger or smaller radius of influence. Although larger impacts seem unlikely, it is difficult to prove that aberrations in the system do not exist.**”* [9]

*“**Uncertainties in the analysis indicate that monitoring should occur over a slightly larger area than where impacts are predicted. In addition, the monitoring program should consider adjustments specifically for geologic faulting.**”* [7]

*“**Monitoring locations should also include areas outside of the predicted impact zone to account for uncertainties in the analysis,**”* [7]

*“**The fracture systems existing in buried bedrock beneath Grass Valley are not mappable within the resolution needed to predict specific dewatering effects. Technology and state-of-the-art hydrogeology have not developed to a level that fracture mapping is possible. Due to this limitation, hydrogeologic modeling is attempted by making an assumption on fracture connectivity.**”* [8]

*“**Based upon the significance criteria established on page 4.3-4, the risk to all wells within the study area, regardless of risk category, represent a potentially significant impact.**”* [10]

*“**The study area has not been monitored by an approved groundwater monitoring system designed to observe the dynamics associated with subsurface hydrology. Therefore, many of the initial unknown hydrogeologic and geologic parameters located within the earth between well and mine elevations still exist.**”*

- [1] Idaho Maryland Mine Project FEIR, December 2022, Volume VII, Appendix D, Page 2.
- [2] Idaho-Maryland Mine Project Draft EIR (2008) p4.7-34
- [3] Idaho-Maryland Mine Project, Revised Project Description (May 2011) Appendix N-T-3
- [4] June Oberdorfer, PhD, PD, Certified Hydrogeologist (CHG), Review of the March 2020 EMKO Groundwater Hydrology Report, Minewatch Virtual Community Meeting Video Presentation (October 2021)
- [5] Houmau Liu, hydrologist for Itasca, February 9, 2022 NID board of directors meeting.
- [6] Appendix K.7 West/Yost Peer Review (August 27, 2020), p8-9, p18, Idaho-Maryland Mine Draft DEIR (December 2021)
- [7] Todd Engineers (2007), Final Report Hydrogeologic Assessment Idaho-Maryland Mine, prepared for Idaho-Maryland Mining Corporation, August t.p22, p25, p26 [6] Idaho-Maryland Mine Project Draft EIR (2008) p4.7-34
- [8] Steve Baker, Certified Hydrogeologist, Response Comment Letter to 2008 Idaho Maryland Mine DEIR
- [9] Idaho-Maryland Mine Project Draft EIR (October 2008) 4.8 Hydrology and Water Quality, p 4.7.29
- [10] Draft Environment Impact Report for The Idaho-Maryland Mine (May 1995) p4.3-5

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I'm a resident & well owner in district 1.

I can appreciate the inclusion of a well monitoring program in the FEIR, but it falls significantly short of what we really need. I should not have to beg for protection from the county to keep our sacred resource safe. Our well is amazing! It provides safety from wildfires by allowing us to maintain green space. It keeps my family and pets healthy and happy. Just imagine what you would do if the water in your own home suddenly vanished. Your spouse and kids, asking what's wrong with the water? Oh my god! Without water my property is worthless! How could this have happened? Where is the protection from my county?

Experts have weighed in on the amount of monitoring time necessary to obtain a dependable baseline. In some cases, 3 years is not even enough. It's also a stretch to accept a program that is deficient in infrastructure to replace my water resource if it becomes damaged? As I read the details, I would be subject to some sort of nebulous negotiations with Rise Gold to get my water connected to NID. Would this make you feel protected? To be forced to deal with a CEO that has demonstrated severe environmental failures in Canada, and spreads contrary information through press releases and interviews, stating, "there will be no impacts", or, "the community overwhelmingly supports the project"?

I should not be required to compromise or negotiate when it comes to an intruder causing harm to my family and home. None of the hundreds of well owners asked for this. None of us would be the recipient of any benefit whatsoever. We need complete protection from this potential catastrophe, with a comprehensive well monitoring program that is designed around the adequate years necessary to produce dependable data. This data should have been obtained before the DEIR, according to CEQA. This program must also lay out, in specific details, the transfer to an equal replacement water source, with all necessary infrastructure in place, and independent from Rise Gold for immediate implementation when a well fails.

Our stress levels are off the charts dealing with these potential consequences, including financial ruin and loss of our nest egg. The fact that I must beg for protection in 3 minutes here is just as stressful. No one here today would accept even the tiniest risk that they could lose their water in exchange for gold in the pockets of strangers. I implore the board reject this FEIR and take everything back to the drawing board with our protection as top priority.

Tony & Lauren Lauria
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