



December 13, 2022

Nevada County Board of Supervisors  
950 Maidu Avenue, Suite 170  
Nevada City, CA 95959-7902  
[bdofsupervisors@co.nevada.ca.us](mailto:bdofsupervisors@co.nevada.ca.us)

**Subject: Domestic Well Monitoring Program for Rise Gold's Proposed Reopening of The Idaho-Maryland Mine**

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 for Rise Gold's mine was published. Such a program is a necessary step to establishing the baseline data required by CEQA. We're here today to ask the County to facilitate the development of this program and work with the community to ensure its viability.

Even though there are over 300 properties with wells within 1000 feet of the Mine's mineral rights area, the DEIR did not provide current monitoring data from these domestic wells. It relied only on sparse patches of data from over 15 years ago.

The DEIR's proposed approach is to install just fifteen non-domestic *monitoring* wells in the future to do the job of estimating impacts for all water supply wells. With our complex fractured bedrock spread over thousands of acres, monitoring water levels at fifteen locations could not possibly provide the data needed to precisely and immediately identify or mitigate groundwater impacts across hundreds of wells.

Timing of baseline data collection is another issue. With mine dewatering, previous dry years, and the drought likely to continue, a *domestic* well monitoring program is vital in determining a baseline for groundwater quantity and quality prior to any dewatering of the mine. Collecting data on our wells takes time though, requiring a *minimum* of 3 years before a reliable baseline could be established. Also, this data is critical to assist in determining if mining or drought conditions are the cause of an impact to a well.

CEQA requires that a baseline be established prior to the evaluation of potential impacts. Also, under CEQA a mitigation measure must be achievable, enforceable, and must be capable of actually reducing the Project's impacts.

The DEIR's approach does not achieve any of these requirements. It acknowledges that more groundwater level data is needed to assess potential impacts, but the critical flaw is that it defers development of that data for "later". One place in the report says it would happen after the EIR is finalized. Another place says it would happen *after* dewatering begins. Neither approach is in compliance with CEQA.

Not having a baseline established by a *domestic* well monitoring program before publishing an 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 a domestic well monitoring plan be initiated sooner, rather than later. Your response is appreciated.

Sincerely,

Christy Hubbard  
The Wells Coalition  
wells@cea-nc.org



San Juan Ridge Taxpayers Association

P.O. Box 421, North San Juan, CA 95960

(530) 478-1941 info@sjrtaxpayers.org www.sjrtaxpayers.org

December, 13 2022

Nevada County Supervisors  
950 Maidu Avenue  
Nevada City, CA 95959

Honorable Supervisors,

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 water quantity and quality impacts to at least a dozen wells including the wells for our middle school and the community Cultural Center. These impacts occurred up to 2 miles from the breached location. This was a disaster for those whose wells were affected, but we still do not know the extent of well impacts in the area. Some wells may have lost 50% capacity or had arsenic levels rise above drinking water standards 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 before the DEIR was produced. 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 Taxpayers Association

# WELLS COALITION



wells@cea-nc.org

December 13, 2022

Nevada County Board of Supervisors  
950 Maidu Avenue, Suite 170  
Nevada City, CA 95959-7902  
[bdofsupervisors@co.nevada.ca.us](mailto:bdofsupervisors@co.nevada.ca.us)

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

The proposed well mitigations in the Draft EIR for Rise Gold fail to acknowledge risks posed to domestic wells in the surrounding area of the Idaho-Maryland Mine project, and in doing so does not provide protections to those wells from impacts due to dewatering the mine.

The Draft 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], [2]

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.**”* [3]

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.**”* [4]

After reviewing the hydrology computer model from the DEIR 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.**”*[5]

A review of the current Draft EIR by Baseline Environmental Consultants states

***"there is a high level of uncertainty associated with the groundwater model that was used in the DEIR as justification to identify a very small subset of the domestic wells in the East Bennett area that are likely to be adversely affected by the project, and to characterize impacts to a vast number of other domestic wells in the project vicinity as less than significant. This is a flawed approach and provides no assurance for residences and businesses that rely on groundwater wells in the region."***[6]

Even the hydrologist who prepared the hydrology computer model for the current Draft 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."***[7]

**It is because of these uncertainties that we are appealing to you to require protection for all wells with a domestic well monitoring plan before the Draft EIR is finalized and prior to any dewatering of the mine.**

Thank You,

Gary Pierazzi  
The Wells Coalition  
wells@cea-nc.org

**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.”[8]*

*“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.” [9]*

*“Monitoring locations should also include areas outside of the predicted impact zone to account for uncertainties in the analysis,” [9]*

*“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.” [10]*

*“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.” [11]*

*“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.” [12]*

*“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.”*

---

footnotes

[1] Appendix K.9 Idaho Maryland Well Mitigation Plan, p1, p3, Idaho-Maryland Mine Draft DEIR (December 2021)

- [2] EMKO Environmental, Inc. (2020). Groundwater Hydrology and Water Quality Analysis Report for the Idaho-Maryland Mine Project, Nevada County, California. El Dorado Hills, CA.
- [3] Idaho-Maryland Mine Project Draft EIR (2008) p4.7-34
- [4] Idaho-Maryland Mine Project, Revised Project Description (May 2011) Appendix N-T-3
- [5] June Oberdorfer, PhD, PD, Certified Hydrogeologist (CHG), Review of the March 2020 EMKO Groundwater Hydrology Report, Minewatch Virtual Community Meeting Video Presentation (October 2021)
- [6] Baseline Environmental Consulting, Review of DEIR for Idaho-Maryland Mine, February 15, 2022 (page 9)
- [7] Houmau Liu, hydrologist for Itasca, February 9, 2022 NID board of directors meeting.
- [8] Appendix K.7 West/Yost Peer Review (August 27, 2020), p8-9, p18, Idaho-Maryland Mine Draft DEIR (December 2021)
- [9] 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
- [10] Steve Baker, Certified Hydrogeologist, Response Comment Letter to 2008 Idaho Maryland Mine DEIR
- [11] Idaho-Maryland Mine Project Draft EIR (October 2008) 4.8 Hydrology and Water Quality, p 4.7.29
- [12] Draft Environment Impact Report for The Idaho-Maryland Mine (May 1995) p4.3-5



[wells@cea-nc.org](mailto:wells@cea-nc.org)

December 13, 2022

Nevada County Board of Supervisors  
950 Maidu Avenue, Suite 170  
Nevada City, CA 95959-7902  
[bdofsupervisors@co.nevada.ca.us](mailto:bdofsupervisors@co.nevada.ca.us)

**Subject: Well Monitoring - Protection for homeowners from proposed IMM Mine**

As a well owner in district 1, I need to make sure you all know how serious our concerns are regarding the IMM mine.

It is imperative that we have a process in place to gather baseline data for our wells before there is any further movement on this proposal. We could, literally, be facing life altering consequences and complete financial ruin without it.

For miles in every direction from the IMM site, we have densely populated land, and hundreds of homes with domestic wells that produce our only source of clean water. In the event of a well gone dry during dewatering, we would be thrown into chaos trying to save our families from severe undue hardship.

Imagine this real possibility in your own home; You wake up and discover all the pressure is gone from your faucets. The toilet flushed, but it's not refilling. Your spouse, and maybe kids, are asking, what's wrong with the water? Your face goes pale. A million thoughts race through your mind. Oh my god! Without water, my property is worthless. How could this have happened? Where is the protection from my county, whom I pay to do so?

It's catastrophic, and you have no recourse to blame the obvious cause, let alone, options for a solution, since no plans were in place to secure your rights and prevent the demise of your well.

This is by no means, overstating the danger. There are facts by historical example all over the gold mining west. There are facts by expert hydro professionals, and, then there's the grand daddy of all facts: "Gravity"! Nothing can stop it from drawing down water to the lowest point. Undeniably, it is impossible to know where the water highways are below us.

It is simply not acceptable to overlook the necessary protections, or downplay the high risk consequences of mining operations in populated areas with hundreds of primary water source wells. There should be no expense spared by the proposing mine company and governing county, to ensure every well owner will be 100% protected from loss, damage and contamination. This begins with a comprehensive well monitoring program before any other due process continues. This should have been in place long ago.



Ultimately, the future must include infrastructure, for immediate transfer to an equal alternative water source, at zero cost to all residents, forever. No one would want anything less for their family and life investment in their home.

I don't believe anyone here today would accept even the tiniest risk that they could lose their water in exchange for gold in the pockets of strangers. We implore the board to mandate this well monitoring starting point for our protection, immediately.

Thank You for addressing this matter with action.

Tony & Lauren Lauria  
13784 Greenhorn Rd  
Grass Valley, CA 95945  
530-273-3106



PO Box 972, Cedar Ridge, CA 95924-0972  
www.cea-nc.org / email: info@cea-nc.org

## **Groundwater Baseline Requirements and the Idaho-Maryland Mine EIR**

*Presented as Public Comment to the Board of Supervisors, Dec 13, 2022.*

The California Environmental Quality Act (CEQA) does not allow the deferral of important studies necessary to characterize a project's impacts.

According to CEQA Guidelines § 15125(a), an Environmental Impact Report (EIR) must include an accurate description of a project's environmental setting, which provides "the baseline physical conditions by which a lead agency determines whether an impact is significant." [1] It goes on to state: this baseline "should describe **physical environmental conditions as they exist at the time the notice of preparation is published.**" [2] (i.e. before the Draft EIR is prepared.) The purpose of this requirement is, per CEQA Guidelines, "to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts." [3] And the court case of *Save Our Peninsula Com. v. Monterey County Bd. of Supervisors (2001)* affirmed that point: "Without a determination and description of the existing physical conditions on the property at the start of the environmental review process, the EIR cannot provide a meaningful assessment of the environmental impacts of the proposed project." [4]

Note that the Rise Gold project Draft EIR clearly acknowledges that this baseline is needed. It states that for each domestic well, a projected and seasonally averaged water level shall be estimated **"...which will serve as a baseline groundwater level."** [5] But **this incorrectly defers** the collection of the needed additional groundwater data to after the EIR process is over.

Let's look at it using common sense. Unless the EIR identifies current well levels and related data, it cannot establish performance criteria and evaluate how dewatering may impact wells, and it's not possible to define appropriate mitigations. For example, Rise Gold's hydrology model estimates that water levels will drop between 1-10 feet for over 150 wells. But there is no current data that could tell what the impact would be to well owners. A two foot drop could be critical. How would that be determined? Are some wells near failure? We don't know.

CEQA law, County precedents, and common sense all say the same thing: Collection of data must not be deferred until some future date, as proposed in the current Draft EIR. Current domestic well monitoring data needs to be included in a revised Draft EIR to establish a baseline so that it can be reviewed and then used in the decision making process.

The Wells Coalition members are alarmed that the County seems to be skipping this important step.

Thank you.

Ralph Silberstein, President  
CEA Foundation

\*\*\* References\*\*\*

[1] CEQA Guidelines § 15125(a), <https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-9-contents-of-environmental-impact-reports/section-15125-environmental-setting>

-Refer to complete comments provided by Shute, Mihaly & Weinberger,  
[https://www.cea-nc.org/wp-content/uploads/2022/04/SMW\\_FinalComments.pdf](https://www.cea-nc.org/wp-content/uploads/2022/04/SMW_FinalComments.pdf) , pgs 15-23.

[2] Ibid.

[3] Ibid.

[4] See <https://casetext.com/case/save-our-peninsula-v-monterey-county>

[5] Idaho-Maryland Mine Draft EIR 4.8-2(a) -(4), pg 4.8-67,  
[https://www.nevadacountyca.gov/DocumentCenter/View/41605/48\\_Hydrology-and-Water-Quality](https://www.nevadacountyca.gov/DocumentCenter/View/41605/48_Hydrology-and-Water-Quality)