



SOUTH YUBA RIVER CITIZENS LEAGUE

August 17, 2020

Matt Kelley
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Re: Nevada County Idaho-Maryland Mine NOP Scoping Comments

Dear Mr. Kelley:

The South Yuba River Citizens League (SYRCL) respectfully submits comments and recommendations for the initial scoping process in response to Nevada County's (County) Notice of Preparation as required by the California Environmental Quality Act (CEQA) for Rise Gold Corporation's (Rise Gold) proposed re-opening of Idaho-Maryland Mine (Project or Mine). We request that these comments be received regarding the substance and process of the environmental review process, the potential impacts of an active gold mine on our watersheds and community, and the scope of the resulting Draft Environmental Impact Report (DEIR) document as compliant with CEQA.

For summary, the main points of the comments are as follows:

- a) Impacts to Water and Biological Resources
- b) Climate Change Concerns
- c) Fiscal and Aesthetic Concerns

SYRCL was disappointed that the public was not given the opportunity to provide oral comment at an NOP scoping meeting. We were also disappointed that the County limited the opportunity for engagement in the scoping process to 30 days, especially given the COVID-19 emergency and scale of potential impacts from the proposed Project. Robust public engagement is vital to truly assess the environmental impacts of this Mine to our community and precious waterways. In light of those circumstances, SYRCL requests that the County and Rise Gold Corporation produce a comprehensive DEIR that addresses the public's concerns.

Introduction

SYRCL was founded in 1983 by grassroots activists determined to protect the South Yuba River from dams. Ultimately, SYRCL won permanent protections for 39 miles of the South Yuba River under California's Wild and Scenic Rivers Act. Today, SYRCL is the central hub of community activism to protect, restore, and celebrate the Yuba River watershed. With 37 years

of achievements, 3,500 members and 1,300 active volunteers, SYRCL is doing great things for the Yuba and Bear River watersheds. Some of our work includes restoring wild salmon populations, meadow restoration, and inspiring activism across the globe with our environmental film festival.

SYRCL is committed to advocating for long-term solutions for sustainable water management in the Yuba River watershed, especially in light of the climate crisis.¹ The negative environmental impacts of gold mining range from water, soil, and air pollution to large-scale seismic instability. In California, outdated and ineffective land management strategies and the impacts of climate change have further exacerbated the historical environmental impacts of mining. Each of the important potential environmental issues are explored in more detail in the comments. SYRCL is watch dogging the Project due to negative mining impacts within the Yuba and Bear River watersheds from past operations and therefore has concerns about future mining activities.

SYRCL encourages the County to utilize the wealth of community and organizational resources during this environmental review process, and welcomes additional consultation.

I. Impacts to Water and Biological Resources

A. Legacy Mining Water Quality Impacts

First and foremost, SYRCL is concerned that the operation of a re-opened gold mine will exacerbate the legacy mining impacts that still persist throughout the Yuba and Bear River watersheds.

The mercury lost to the environment during the hydraulic mining era still persists in the Sierra Nevada, including the Bear River. Unfortunately, due to use of mercury in hydraulic mining, loss of mercury during the Gold Rush was estimated to be 10 to 30 percent per season,² totaling about 10,000,000 pounds across California.³

Today, hundreds of abandoned hydraulic mine sites remain, leaving thousands of acres of largely barren soil contaminated with mercury and exposed during large storms. Many parts of the Yuba and Bear River watersheds are listed as impaired under the Clean Water Act Section 303(d) listed for mercury contamination, including the confluence of Wolf Creek and Bear River, downstream of the Project.⁴ During rain events, these areas are highly susceptible to surface erosion, creating highly turbid run-off that contributes elevated levels of metals and sediments to our headwater tributary streams.

¹ See South Yuba River Citizens League Strategic Plan, 2019-2023. <https://yubariver.org/about/strategic-action-plan/>

² Bowie, A.J. 1905. A practical treatise on hydraulic mining in California: New York, Van Nostrand, p. 313.

³ Churchill, R.K.. 2000. Contributions of mercury to California's environment from mercury and gold mining activities; Insights from the historical record, in Extended abstracts for the U.S. EPA sponsored meeting, Assessing and Managing Mercury from Historic and Current Mining Activities, November 28-30, 2000, San Francisco, Calif., p. 33-36 and S35-S48.

⁴ See 33 U.S. Code § 1313 (d).

Here, depending on the extent of the stream work and construction disturbance, this Project could not only increase sedimentation and erosion, but depending on timeline of construction and storm events, also disturb contaminated land. Land and tunnel disturbance could increase exposure to mercury, arsenic, and other heavy metals that are not properly remediated, which will then go down Wolf Creek. Wolf Creek flows into Bear River below Combie Reservoir, and that section of the Bear River is listed under 303(d) of the Clean Water Act for mercury impairment. Low levels of mercury can bioaccumulate to dangerously high levels in top predatory fish, posing a health concern for the watershed as well as our community.⁵

Therefore, SYRCL requests the County answer the following questions in the DEIR:

- Will the project operations exacerbate legacy mining impacts that already exist within and around the proposed project?
- How will Rise Gold mitigate for legacy mining impacts before, during and after project operations cease in 80 years?

SYRCL recently completed two reports as part of work that was funded by the Consumnes American Bear Yuba (CABY) Integrated Regional Water Management Group in partnership with The Sierra Fund and funded by California Department of Water Resources and The Rose Foundation for Communities and the Environment.⁶ Additionally, California's Legislative Analyst Office recently issued a report entitled "Improving California's Response to the Environmental and Safety Hazards Caused by Abandoned Mines."⁷ This report underscores the lasting expense and danger of mines that are developed without adequate planning and financial resources for reclamation. We encourage the County to consult these reports when analyzing potential environmental impacts from this Project in the DEIR.

B. Project Operation Water Quality Impacts

SYRCL is also concerned gold mining operations will have severe impacts on surface water resources within and around the project area. SYRCL requests the County answer the following questions in the DEIR:

- Why is Rise Gold using Ammonium Nitrate as an explosive in operations?
- Are there any other alternative methods for gold extraction that have less impact on the environment?

⁵ Fleck JA, Alpers CN, Marvin-DiPasquale M, Hothem RL, Wright SA, Ellett K, Beaulieu E, Agee JL, Kakouros E, Kieu LH, Eberl DD, Blum AE, May JT. 2011. The Effects of Sediment and Mercury Mobilization in the South Yuba River and Humbug Creek Confluence Area, Nevada County, California: Concentrations, Speciation, and Environmental Fate—Part 1: Field Characterization: U.S. Geological Survey Open-File Report 2010-1325A, 104 p. <http://pubs.usgs.gov/of/2010/1325A/>

⁶ See Ronning, K.F., R. Hutchinson. 2018. Mercury and Suspended Sediment in Spring and Shady Creeks: Present Day Impacts from Abandoned Mines; Ronning, K.F., R. Hutchinson. 2018. Scotchman Creek Watershed Assessment: A Focus on Abandoned Mine Impacts.

⁷ See The California Legislative Analyst Office. <https://lao.ca.gov/Publications/Report/4258>

- How will Rise Gold mitigate for any contamination that may result from using the Ammonium Nitrate compound, both to air and water?⁸
- Dewatering of the mine will dramatically increase flows year-round to Wolf Creek. How will Rise Gold mitigate for those impacts to the riparian area in addition to the required setbacks?
- Additionally, toxic piles of mine waste from project operations may increase stormwater impacts to other surface water tributaries in the region.⁹ How will Rise Gold mitigate these impacts?
- Will there be impacts to recreation in the region due to project operations? Current recreation that occurs in the project area include but are not limited to: whitewater rafting, tubing, hiking and mountain biking.

C. Water Quality Impacts to Groundwater

Sustainable water management is an important and crucial goal for this community, especially because it depends on unregulated groundwater resources for drinking water and agricultural production. Therefore, excessive and ongoing groundwater withdrawals through the dewatering process can damage the unstable fractured granite groundwater reserves that lie beneath Nevada County.¹⁰ Additionally, groundwater and surface water are hydrologically connected in the Yuba and Bear River watersheds. SYRCL requests that this review process consider and mitigate damage caused by overpumping in a sensitive groundwater region that provides drinking and agricultural water in this community, and give special attention to any impacts to the surface water resources.

Furthermore, Rise Gold is dependent on the Nevada Irrigation District (NID) for an unknown supply of raw water for mining operations. NID is currently taking a step towards sustainable water management by updating their Raw Water Master Plan (RWMP), which dictates the management of the main source of untreated water needed for agricultural production. It will be very difficult to obtain accurate estimates of the hydrology for this region or determine accurate water demand if there is a sudden increase in industrial usage in the Bear River watershed.

SYRCL requests the County answer the following questions in the DEIR:

- How many community members will lose access to groundwater and will have to switch to water supplied by NID? How will Rise Gold mitigate for that switch in water resources to individual residents, NID and any other associated environmental impacts?
- What is the extent of the contamination in the existing flooded mine tunnels, and what will the water treatment consist of?
- How will dewatering the tunnels impact surface stability?

⁸ Ammonia nitrate is highly explosive and since it will be released into air and water from processing both ammonia and nitrate, will likely result in increased nutrient levels in Wolf Creek. Algal blooms, fish kills, deoxygenated water, and other aspects of accelerated eutrophication result from increased nutrient loading.

⁹ NOP, pg. 4, “approximately 500 tons per day (182,500 tons per year) of barren rock” excavated and in piles.

¹⁰ For more information, please coordinate with the West Placer Groundwater Sustainability Agency and the Yuba Groundwater Sustainability Council, amid developing Groundwater Sustainability Plans that require water management strategies between groundwater and interconnected surface water sources, such as the Yuba and Bear rivers.

- Is the clay lined treatment pond sufficient to keep the contaminated water withdrawn underground from contaminating the site and nearby riparian areas?
- How many community members in the Wolf Creek region downstream that may be impacted by the increased flows from the “treated” groundwater?
- What are the downstream impacts to the mining operations? Wolf Creek is an important tributary to the Bear, which flows eventually to the San Francisco Bay Delta. How will Rise Gold mitigate for those larger downstream impacts?

In order to assess the most accurate impacts to groundwater resources from the Mine, SYRCL recommends the County hire a hydrogeologist to obtain a robust understanding of the groundwater resources in the County’s jurisdiction.

D. Impacts to Biological Resources

SYRCL strongly encourages the County to include impacts on “Biological Resources” in the DEIR, and was disappointed to not see any potential impacts to sensitive species in the NOP. Mining operations may impact native sensitive and threatened species in the Bear River watershed. Sensitive species potentially impacted by degraded water quality or less water available in the ecosystem are the Foothill Yellow Legged Frog, Western Pond Turtle, California Horned Lizard, Western Ridged Mussel, River Otter, Beaver, and Osprey.

Additionally, threatened local species that may be affected are the Layne’s ragwort, Vernal pool fairy shrimp, Valley elderberry longhorn beetle, California red-legged frog, Yellow-Breasted Chat, Olive-sided Flycatcher, Willow Flycatcher, steelhead, Chinook salmon and North American green sturgeon. A number of these species rely on the Bear River watershed for critical habitat that allows the continued survival of their species. Fish species are particularly affected because they are vulnerable to low flows, increased sedimentation and toxic contamination. Additionally, soil erosion also increases fine-sediment in streams, damaging spawning and rearing habitat for salmon, such as the local spring-run Chinook salmon.

SYRCL hopes to see all potential harms to Biological Resources assessed in the DEIR.

II. Climate Change Concerns

SYRCL has concerns that the re-opening of the Mine will make our community and watersheds more vulnerable to the impacts of climate change, rather than improve regional adaptation and resilience.

The NOP indicates that mining will begin with diamond drilling and ammonia nitrate fuel oil (ANFO) to create a series of tunnels and shafts to get to the gold, once the initial dewatering process is complete. Specifically, “[t]he project applicant has approximately 2,585 acres of underground mineral rights, as shown in Figure 2, which would be available for mining as part of the proposed project. The location, size, and depth of new underground workings would depend on surface and underground drilling and mineral testing.”¹¹ This is a much larger impact scope

¹¹ NOP, pg. 4.

than the “disturbed” surface area of 200 acres, and therefore SYRCL is concerned that the Project will impact the seismic stability of our community in unknown ways.

In addition, SYRCL is concerned about the new development, air quality, greenhouse gas emission, energy usage and seismic impacts of the Project. In addition to the water discharges and mine waste, the NOP states that

“[m]ine development in nonmineralized “barren” rock (i.e., non-gold bearing) is expected to result in the production of *approximately 500 tons per day (182,500 tons per year)* of barren rock. The barren rock would be transported from the tunnel face to the mineshaft (using electric or diesel-powered load/haul/dump vehicles, rail cars, and/or conveyors) to underground rock bins located adjacent to the shaft. The rock would then be loaded into the shaft skips, hoisted to the surface, and dropped into one of the compartments of the concrete silo located on the surface. The barren rock will then be transported by trucks on the surface for use as engineered fill.”¹²

SYRCL requests that the County answer the following questions in the DEIR:

- How will the new developments for the Mine impact the open space in the Brunswick Basin?
- How will Rise Gold mitigate the negative air quality impacts from both the increase in greenhouse gas emissions¹³ and mining operations?
- How will Rise Gold mitigate for the increase in energy usage due to mining operations?
- Will the California Department of Toxic Substances Control plan to consolidate and “cap the contaminated soils” at the Centennial Site be a complete remediation of the site?
- Will the cleanup of the Centennial site be completed before mining operations are allowed to begin?¹⁴
- What are the details of the clean up plan for the Centennial site?
- The Centennial Industrial Site has “unstable soils” in addition to contamination. How is Rise Gold planning to address this issue?

III. Fiscal and Aesthetic Concerns

SYRCL believes that the re-opening of such a large gold mine in Grass Valley may negatively impact the rural character of our community, and therefore is a threat to the social and fiscal foundation of the community that SYRCL is dedicated to serve and unite. Therefore, SYRCL formally requests the County include a robust economic study in the DEIR.

Additionally, SYRCL request the County answer the following questions in the DEIR:

- What is Rise Gold’s fiscal plan to pay for continued remediation of the project after the 80 years of operation?

¹² NOP, pg. 4.

¹³ See Air Quality and greenhouse Gas Emissions Analysis Technical Report for the Idaho-Maryland Mine Project, Feb 2020, pgs 73-74, <https://www.mynevadacounty.com/DocumentCenter/View/33583/Air-Quality-and-GHG-Report—ADDED-392020>

¹⁴ NOP, pg. 7.

- What is Rise Gold’s plan to house any new employees that are required to operate the Mine that are not already housed in the community?¹⁵
- What is Rise Gold’s plan to mitigate the Mine’s severe aesthetic impacts to the rural character of the Brunswick Basin and downtown Grass Valley?

Conclusion

In closing, we appreciate the County’s time and dedication to a robust environmental review of this Project. Our community needs a thorough evaluation of overarching environmental impacts from past and proposed future gold mining operations.

We welcome the opportunity to collaborate during the study period. For coordination, clarification or discussion of any matters raised in this letter, please do not hesitate to contact our Executive Director, Melinda Booth, or River Policy Manager, Ashley Overhouse, by email or phone (530-265-5961).

Sincerely,



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¹⁵ The application to re-operate the Idaho-Maryland mine states that 312 jobs would be created by the mine operations. Of those jobs, 242 jobs are specialized technical positions likely taken by people recruited from outside the area. The remaining jobs, truck transport of mine waste, and mineral processing, could provide approximately 70 jobs for current local residents.