



BOULDER COUNTY AUDUBON SOCIETY

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To: Division of Reclamation, Mining and Safety
Attn: Patrick Lennberg
From: Boulder County Audubon Society
Re: General Comments on Mining Permit #M-1977-410
Date: April 1, 2025

Dear Mr. Lennberg,

Boulder County Audubon Society (BCAS) is pleased to submit the following comments to the Division of Reclamation, Mining and Safety (DRMS) regarding Mining Permit #M-1977-410, relating to the Cross and Caribou Mines. BCAS represents over 1,400 members. We are a voice for birds and wildlife conservation through habitat protection, advocacy, and nature education.

Preservation of water quantity and quality for aquatic, human, and terrestrial life is of paramount importance. With human population growth comes an increasing demand for mineral extraction. But we can not afford to lose sight of the fact that access to sufficient clean water is among the foundational bases for life.

While we understand that advances have been made in mining extraction and reclamation techniques over the decades, this does not mean that the risk of devastating water quality and environmental damage has been eliminated. Consequently, we believe that the precautionary principle applies - i.e., that adoption of preventative measures to address potential risks to water, habitat, and aquatic, human, and terrestrial life is necessary and appropriate.

Please note that the Grand Island Resources LLC (GIR or Applicant) Quarterly Report for the Fourth Quarter of 2024 indicates that the Applicant faces staffing and fiscal constraints.¹ Further development of the site without adequate resources poses unacceptable risk to the local environment and all the downstream communities needing clean drinking water. It is critical to take all necessary measures now to protect water quality and prevent this site from becoming another Superfund site.

Our primary concerns and recommendations relating to mining permit #M-1977-410 follow:

1. In December 2024, Applicant reported a measurement of 3.4 mg/l for copper.² As you know, the regulatory standard for copper is just .2 mg/l. The Applicant's explanation is perfunctory, simply saying "GIR considers that the copper concentrations frequently observed in groundwater collected from the Caribou Well

¹ Mined Land Reclamation Board, Board Order File No. M-1977-410, MV-2021-017, Quarterly Report, Fourth Quarter 2024, Grand Island Resources, LLC, Cross and Caribou Mines, Nederland, Colorado, Prepared by Grand Island Resources ("Fourth Quarter Report"), Page 13.

² Letter to Daniel Takami, Grand Island Resources LLC, from Patrick Lennberg, Environmental Protection Specialist, Colorado Division of Reclamation, Mining and Safety, February 4, 2025; Reply letter sent to Patrick Lennberg, Colorado Division of Reclamation, Mining and Safety, from Daniel Takami, Grand Island Resources LLC ("GIR Reply Letter"), March 6, 2025.

are attributed to the natural mineralized environment where the well is installed.”³ This water quality violation when combined with the regulatory and water quality violations set out in Mined Land Reclamation Board’s 2021 Cease and Desist Order is a very significant red flag. The site’s history of repeated surface and ground water violations suggest that the existing water treatment system may not be adequate for active mining. Before permitting a 20-fold expansion, please require the Applicant to [1] demonstrate the ability to sustain compliance with water quality standards at current activity levels; [2] rigorously assess the likely impact of the proposed expansion of existing tunnels and the creation of new tunnels upon the quantity and quality of ground and well water; and [3] demonstrate that the upgraded water treatment system can effectively treat water from greatly expanded operations.

2. Fifty more years of mining is a really long time. Based on the considerations raised in #1 above and the expectation that mining technology and methodology will evolve, approval for a far shorter period of time, if approval is given, seems prudent. In any case, to ensure that downstream water quality complies with all applicable standards protecting humans, terrestrial, and aquatic life, we request that a rigorous and frequent water quality monitoring system be put in place for 100+ years. GIR’s plan not to monitor water quality after closure and reclamation is not acceptable.⁴
3. GIR intends to annually remove up to 40,000 cubic yards of waste rock for 50 years. Accordingly, measures to prevent acid mine runoff, including testing of waste and host rock, are needed. Please critically evaluate the Applicant’s assertion that there is “[a] lack of any acid rock drainage potential”⁵ and require regular testing so that mid-course corrections can be made as needed.
4. GIR intends to conduct – but has not conducted – a comprehensive hydrologic study. Thus, it appears that neither the Applicant nor the DRMS has sufficient information to assess the impacts of the proposed mining activity on water quantity and quality.

Our information about the missing hydrological study comes from GIR’s most recent quarterly report which states:

GIR intends to conduct a comprehensive Hydrogeologic Study of the Mining Complex. **The [missing] Study is considered critical and essential** for near future and long-term operations and water quantity and quality management.⁶ (Emphasis added).

Then, in the column labelled “Progress (% complete)”, the Applicant entered zero, indicating that nothing has been done.

We agree with GIR that the missing hydrological study is both critical and essential. Accordingly, we recommend that no action be taken on the pending application until a comprehensive hydrologic study is submitted.

³ Reply letter to Patrick Lennberg, Colorado Division of Reclamation, Mining and Safety from Daniel Takami, Grand Island Resources LLC, March 6, 2025.

⁴ Cross Gold Mine, 112 Designated Mining Operation, Colorado Division of Reclamation, Mining, and Safety, December 2024 by Grand Island Resources Represented by Lewicki & Associates, Exhibit L, Reclamation Cost Estimate, Page 367.

⁵ *Id.*, Page 45.

⁶ Fourth Quarter Report, Reclamation Cost Estimate, Page 9.

5. As recently as December 15, 2021 and January 19, 2022 at a hearing conducted by the Mined Land Reclamation Board prior to issuing a Cease and Desist Order (C & D), GIR asked to be held to the easier to meet drinking water standard, not the higher standard protecting aquatic life.⁷ Should the issue arise again, for the health of the watershed and the aquatic and terrestrial life that depends upon it, it is critically important that DRMS continue to require GIR to meet the higher standard protecting aquatic life.
6. Ensure that the environmental protection plan: [1] addresses the adjoining area as well as points downstream; [2] specifies which minerals and chemicals will be present in the ponds and at what anticipated concentrations; and [3] explains how birds, aquatic, and land-based native wildlife will be protected. Additionally, the Applicant plans to re-route surface water flows uphill of the operation around the disturbance area. Again, require the Applicant to explain how Coon Track Creek, its associated wetlands, and the surrounding ecosystem will be impacted by this re-routing and how GIR will mitigate the impact.
7. Living as we do in a landscape that is fire adapted, but also fire prone due to fire suppression and climate change, require GIR to explain how explosives will be stored and used so that the fire danger is reduced to the absolute minimum possible. Then consult with experts, including the U.S. Forest Service, about the adequacy of these measures.
8. We strongly agree with Colorado Parks and Wildlife's (CPW's) positions that: [1] while the mine is operational the native plant community should be maintained so that its habitat values are preserved during this time; [2] at the end of operations, the site is restored back to the current existing native plant community; [3] a noxious weed management plan needs to be developed before activities begin; and [4] as part of the process for developing its noxious weed management plan, consultations with both the Natural Resources Conservation Service (NRCS) and Boulder County are appropriate. Both of these entities have localized information about current best practices for noxious weed management.
9. While we agree with CPW that steps to minimize impacts of lighting on plants, insects, and other animals are important, we recommend going one step further and asking the Applicant to minimize lighting at all phases of development and to explore the possibility of participating in the National Audubon Society's Lights Out Program. Among other things, Audubon's Program recommends down-shielding, avoiding over-lighting, and when feasible turning off outdoor lighting to protect night migrating birds during migration season. More information is available here: <https://www.audubon.org/our-work/cities-and-towns/lights-out> We strongly support CPW's recommendation that where outdoor lighting is needed, warmer rather than cooler lights are used.
10. High elevation mining poses unique risks to the environment. Please curtail mining activity during higher-risk times of the year, such as winter when snow cover can disguise environmental impacts.

⁷ Cease and Desist Order relating to Notice of Violation No. MV-2021-017, February 18, 2022, Paragraphs 23, 25 and 26.

Additional regulatory and financial considerations include the need to:

1. Buffer local municipalities and other downstream users from the costs of potential site clean-up, water treatment, and water replacement by requiring the maximum financial warranty permissible under the law to cover the risks of bankruptcy and potential damage to water and the environment.
2. Ensure that GIR has the capacity, including financial resources and adequate staff, to protect water quantity and quality and to address problems derived from past, current, or expanded operations. This is important because GIR is apparently facing both financial and staffing constraints. Their 2024 Fourth Quarter Report states:

Activities planned for Third Quarter of 2024, were not performed by GIR due to staffing and financial constraints; the planned activities for the Fourth Quarter of 2024 remain unchanged from the First Quarter 2024 ...⁸

The risks to the local environment and to downstream communities is too high to greenlight development on a shoestring budget.

3. Assess GIR's fitness to expand and operate as proposed. The Applicant does not appear to fully understand the regulatory environment in which it operates. GIR failed to provide the required Notice of Intent to the U.S. Forest Service.⁹

Additionally, the Mined Land Reclamation Board's 2021 C & D indicates that GIR LLC has more than once failed to copy DRMS when the Colorado Department of Public Health and Environment's Water Quality Control Division issued compliance notices and to inform DRMS of existing water quality issues and exceedances.¹⁰

As a threshold matter, we request that the Division of Reclamation, Mining and Safety require GIR to supplement the existing application before making any determinations and demonstrate that it is able to operate safely and soundly. Further, given the importance of this mining decision to the Coon Track Creek high elevation watershed, the life it supports, including the estimated 109,500 residents of the cities of Nederland and Boulder, and those dependent on well water, we urge DRMS to use independent third-party consultants to address the concerns raised in this letter.

Thank you for the opportunity to comment.
Sincerely,

Boulder County Audubon Society Board of Directors and Conservation Committee

⁸ Fourth Quarter Report, Reclamation Cost Estimate, Page 13.

⁹ Letter to Grand Island Resources LLC from Kevin McLaughlin, District Ranger, United States Department of Agriculture, Forest Service, Boulder Ranger District, February 27, 2025.

¹⁰ Cease and Desist Order, Paragraphs 6, 13, 14, 22, and 27.