

Arkansas Valley Conservation Coalition • Center for Biological Diversity • Citizens for Clean Air and Water in Pueblo/Southern Colorado • Colorado Citizens Against ToxicWaste Inc. • Colorado Native Plant Society • Colorado Sierra Club • Conservation Colorado • Conservatives for Responsible Stewardship • Dawson Ranch Homeowners Association • Earthworks • Fremont Adventure Recreation • Great Old Broads for Wilderness • High Country Conservation Advocates • INFORM • PSR Colorado • Quiet Use Coalition • Royal Gorge Preservation Project • Sheep Mountain Alliance • Wild Connections

September 1, 2021

Tim Cazier
Environmental Protection Specialist
Colorado Division of Reclamation, Mining & Safety
1313 Sherman Street, Room 215
Denver, Colorado 80203

Cc: Minerals Program Director Russ Means
Division Director Ginny Brannon
Governor Jared Polis

Re: Dawson Gold Mine, M-2021-046

Dear Mr. Cazier,

We are writing on behalf of the undersigned organizations to object to the permit application filed by Zephyr Gold USA Ltd. ("Zephyr")(M-2021-046) to develop the Dawson Gold Mine just outside Cañon City, Colorado. Our organizations collectively represent over 100,000 Coloradans across the state who are steadfastly opposed to the Dawson Gold Mine because of its location, the threat it poses to the local community, environmental impacts, and threats to wilderness, recreation and cultural resources, among others. Thank you for the opportunity to comment on the application and we appreciate your consideration of this objection.

We have the following comments:

The Dawson Gold Mine is located adjacent to and overlaps with numerous protected public lands that will be detrimentally and permanently degraded by mining and the associated haulage, water consumption, noise, dust and other intense disturbances associated with extractive industry that will occur if gold mining is authorized. By limiting its permit application strictly to its privately held inholdings, the true extent of future expansion and the scale to which the plans to develop adjacent public lands is obscured. Among those adjacent lands are a proposed wilderness area, an already-designated Wilderness Study Area, a BLM Area of Critical Environmental

Concern, a Colorado State Stewardship Trust Parcel, a Colorado Natural Heritage Program Potential Conservation Area, a city-owned conservation park, an important recreation and trails area, and a cherished brown trout fishery in an important tributary to the Arkansas River.

Zephyr currently owns or has claimstaked approximately 3,564 acres that cross over an area approximately eight square miles, despite having submitted the current permit application for an area of just 312 acres, while claiming only 82 acres will be disturbed. This claim is likely a gross understatement. Zephyr has staked approximately 27 unpatented mining claims on public lands that cover the Lower Grape Creek Wilderness Study Area as well as leased from the Colorado State Land Board the 640-acre Grape Creek-Horseshoe Mountain Stewardship Trust parcel. Zephyr has additionally staked 51 claims on public lands adjacent to the proposed permit area that partly cover the lands known as Ecology Park and the South Canyon Trails system. Further west, in the Green Mountain area, Zephyr has staked 62 claims that could be designated wilderness as approved by the U.S. House of Representatives in 2020 under Rep. Diana DeGette's Colorado Wilderness Act legislation.¹ Although these areas are excluded from Zephyr's permit application, the company continues to actively promote their future development to investors and has specific exploration plans for these public lands, as reported in corporate securities filings, with additional exploration plans and identified drill targets in the areas known as Windy Gulch, Windy Point, Sentinel and the El Plomo section.² The development of a metal mine on these public lands would irreparably degrade their quality and render any wilderness designation impossible, to the great detriment of Coloradans in particular and all Americans in general. A great opportunity for future conservation is put at risk from the Dawson Gold Mine, despite decades of planning and cooperation among regional and national stakeholders working to preserve the entire neighborhood of public lands for future generations.

The BLM Grape Creek Area of Critical Environmental Concern provides high quality piñon-juniper habitat overall, as well as especially valuable occurrences of mixed narrowleaf cottonwood and Douglas fir woodlands. The Bureau of Land Management has identified this area as worthy of protection for its unique high desert riparian resources, scenic and visual qualities, riparian species, and the habitat it provides for Arkansas Canyon stickleaf, golden columbine and gold blazingstar. The ACEC and surrounding lands provide critical habitat for bighorn, mule deer, pronghorn, elk, lion, black bear, ringtail, bobcat, coyote, Merriam's turkey, Brazilian free-tailed bat, Townsend's big-eared bat, Aberts squirrel, Mexican spotted owl, scaled quail, great blue heron, golden eagle and waterfowl, and is a documented nesting area for peregrine falcon. Mining activities on these lands will impact the habitat connectivity and migration corridors these species rely on and threaten the overall value of these prized public lands. The operator must be held to the strict standard of minimizing all harm to wildlife during and after mining operations.³

¹ Colorado Wilderness Act of 2020: <https://www.congress.gov/bill/116th-congress/house-bill/2546>

² See disclosures and discussion, pp 3-4, in Zephyr Minerals, Management's Discussion & Analysis For the Period Ended June 30, 2021. (enclosed)

³ Mineral Rules and Regulations for Hard Rock, Metal, and Designated Mining Operations: Rule 6.4.21(18)

Temple Canyon Park is a conservation park providing primitive recreation opportunities that is owned by the City of Cañon City and is adjacent to the state stewardship trust parcel. Haul traffic from the mine will create conflicts with users of Temple Canyon Park (as well as the South Canyon Trails), in addition to degrading the scenic quality and soundscape. Temple Canyon Park is so named because of the presence of a unique natural amphitheater that is a significant historic site for Ute Tribes and Indigenous Peoples and was likely used for traditional ceremonies, despite its lack of formal protections or recognition of its cultural importance. The Grape Creek canyon provides rich archeological resources⁴ that should be preserved and are put at risk by any mining in the area. These potential impacts should be carefully documented and considered so that degradation of these cultural and historic values does not occur and traditional uses are protected.

The Dawson Gold Mine requires an approved BLM Plan of Operations, despite the fact that the Bureau of Land Management has thus far failed to require one. The application currently before the Division does not address the need for permitted areas to accommodate future powerline development and access road easements, which will require rights-of-way over public lands. The necessity of improving existing roadways and constructing new roads to allow for ore trucks and other mine-related transit requires cooperation and consultation with BLM and initiates the need for a formal plan of operations for the mine.⁵ Previously, BLM's Cañon City authorized exploratory drilling by Zephyr inside the Lower Grape Creek Wilderness Study Area and unlawfully decided not to require a plan of operations. However, the future expansion plans of Zephyr as continuously and repeatedly publicly stated to investors will clearly cause significant and cumulative impacts to public lands that must be analyzed under the National Environmental Policy Act.⁶ By failing to include these public lands in the initial permit application, Zephyr appears to be attempting to evade these important legal requirements. These reviews should not be left to some undetermined point in the future waiting for such an application to come forth in order to avoid public disclosure and involvement now. The Division should require that a comprehensive mining plan and permit application be considered now, work cooperatively with BLM to ensure that a plan of operations be submitted for public review so that all impacts are analyzed and addressed, and should expressly forbid the initiation of any mining activities on private lands without federal engagement from the outset.

As admitted in the permit application, the development of the Dawson Gold Mine, even at the size currently proposed, will impact the hydrology of the area and reduce surface flows in Grape Creek.⁷ Grape Creek is a significant tributary to the Arkansas River Basin and is a source of drinking water to residents of Cañon City and other communities downstream of its confluence, including communities that are low-income

⁴ Fremont County Historical Society newsletter, November 2014, available online at https://www.fremontheritage.com/wp-content/uploads/2015/02/FHS_Newsletter-Nov2014.pdf

⁵ Section I, Memorandum of Understanding Between The Bureau Of Land Management And The Division of Minerals And Geology, Dec. 18, 2002; available online at <https://drive.google.com/file/d/13fqyJxyQMHeFfTITMyG7IDMJ8O7x2X9N/view>.

⁶ 43 CFR § 3809.11 and 40 CFR § 1500.1

⁷ Dawson Gold Mine application, Section 2.7, Exhibit G, p 35; available in permit file at https://dnrweblink.state.co.us/drms/0/edoc/1336840/2021-07-02_PERMIT%20FILE%20-%20M2021046.pdf?searchid=fd7c5e2a-36f0-4bdf-9e7d-0b4354dbeb39.

or disproportionately non-white and which raise significant questions about fairness and equity under Environmental Justice doctrines. Grape Creek also provides excellent habitat for spawning brown and rainbow trout, which are put at risk by any increase in sedimentation that is the expected result of any new road development and surface disturbances at the mine site. This will result in the long-term degradation of the health of the fishery. That in turn degrades the backcountry and quiet-use experiences currently enjoyed by anglers and visitors to Grape Creek and the long-term economic resiliency of Cañon City. Visitation to the area will likely be reduced as surface disturbance, visual impacts, dust and noise increase.

The Dawson Gold Mine permit application does not comply with the statutory requirements of HB19-1113.⁸ These amendments, signed into law by Gov. Polis on April 4, 2019, require that the operator demonstrate through substantial evidence a reasonably foreseeable end date for water quality treatment. Zephyr proposes a mine design that will require active pumping and dewatering of the mine during operations, yet there is no analysis or discussion of how water will be managed once operations and dewatering of the mine have ceased.⁹ The creation of a permanent mine pool underground is likely to result in a long-term decline in ground water quality and the formation of new seeps that create water discharges offsite as the mine pool reaches equilibrium at an undetermined point in the future. Despite claiming that the mine will not produce acid-generating material, the application does not contain a sufficient demonstration of a lack of impacts. Impacts to the surface and ground water hydrology of the site must be minimized both during and after the mining operation.¹⁰

The limited water quality analysis conducted by Zephyr for the permit application shows that manganese will increase in ground water as a result of mining operations; however, state and federal requirements forbid any degradation of existing ground water quality and there is no discussion of how this contamination will be addressed. The application also reveals that nickel and selenium in the discharge water will exceed surface water quality standards for Grape Creek, yet the treatment of these constituents is not envisioned, as the application simply states that a sediment pond will be constructed.¹¹ The Division must require a more robust analysis on these points and HB19-1113 requires that an end date to the treatment plan be demonstrated. Another faulty assumption is made when Zephyr states that the development rock will be non-acid-generating without recognizing that the downward development of the mine will pass through unknown zones containing sulfide minerals; there appears to be no analysis of this material at all, and, as the mine pool develops, a degradation of water quality is likely to occur that is unacceptable.¹²

⁸ CRS § 34-32-116 (7)(g)(ii)

⁹ Dawson Gold Mine application, discussion in Exhibit G, pp 34-36; Section 2.13, Exhibit M, p 53: "This application will likely be amended as the mine develops." Available in the permit file online at https://dnrweblink.state.co.us/drms/0/edoc/1336840/2021-07-02_PERMIT%20FILE%20-%20M2021046.pdf?searchid=fd7c5e2a-36f0-4bdf-9e7d-0b4354dbeb39.

¹⁰ Mineral Rules and Regulations for Hard Rock, Metal, and Designated Mining Operations: Rule 3.1.6 and Rule 6.3.3(1)(h)(i).

¹¹ Ibid, Exhibit G, Section 2.7.3.1, p 38.

¹² Appendix to Dawson Gold Mine application, Section 2.1, p. 3: "Development rock did not undergo long term leach testing due to the absence of sulfides and its associated potential for accelerated metal release due to oxidation." Available in the permit file online at

Zephyr has proposed construction of a filtered tailings storage facility that relies on a design prepared by Amec Foster Wheeler, the same engineering firm that designed the failed tailing impoundment behind the Mount Polley disaster of 2016.¹³ The Dawson Gold Mine impoundment relies on an upstream construction design, broadly considered to be the most unstable form of construction for tailing impoundments. Even though Zephyr proposes to filter the tailings so that the moisture content of the waste impoundment is reduced, it still has a chance of failure and, should it fail, may cause significant devastation, potentially sending one million tons of tailing waste downhill into Cañon City and into the Arkansas River.¹⁴ The proposed buttress design of the impoundment is not sufficient to guarantee that it will be stable nor to prevent failure. Furthermore, Zephyr makes the unsupported claim that the material is benign, and the exclusion from the impoundment design of an underlying liner and leak detection system make it likely that contaminated material will eventually leach into groundwater supplies, despite the lack of analysis on this point. Zephyr's conclusions appear to be based on the removal of 100 percent of the sulfide minerals offsite, but this is simply unrealistic in actuality when the economic realities of gold mining mean that lower-grade material is often left behind and not fully processed to completely remove acid-generating sulfides. These issues are a significant flaw in the proposed design of the mine and its workings and are grounds for denying the permit for failing to meet minimum standards to protect the environment.

Last but not least are this mine's serious and significant impacts to the residents of the Dawson Ranch, Wolf Park and Eagle Heights neighborhoods and other homes located between 1.4 to 4 miles downwind of the mine's main portal area. This area includes approximately 600 homes that are inside Cañon City's municipal limits, and these residents will suffer from the extreme changes to their quality of life if a gold mine is constructed next door to them, as well as residents of the broader Cañon City region. The permit application contains no serious analysis of the air quality degradation that will result from the mining activities within an airshed with frequent and regular high winds, nor the water quality and hydrological impacts that could affect their drinking water supply. The development of Dawson Gold Mine is an intolerable loss in the quality of life for these residents that simply should not be allowed.

We appreciate your consideration of these comments and respectfully request that the Dawson Gold Mine permit application M-2021-046 be denied and a hearing be

[https://dnrweblink.state.co.us/drms/0/edoc/1336841/2021-07-02_PERMIT%20FILE%20-%20M2021046%20\(2\).pdf?searchid=fd7c5e2a-36f0-4bdf-9e7d-0b4354dbeb39](https://dnrweblink.state.co.us/drms/0/edoc/1336841/2021-07-02_PERMIT%20FILE%20-%20M2021046%20(2).pdf?searchid=fd7c5e2a-36f0-4bdf-9e7d-0b4354dbeb39).

¹³ Engineers face discipline over Mount Polley disaster, Alaska Highway News, June 3, 2020: <https://www.alaskahighwaynews.ca/bc-news/engineers-face-discipline-over-mount-polley-disaster-3508189> (enclosed)

¹⁴ Dawson Gold Mine permit application, p. 29 (p 46 of packet PDF), reporting TSF design capacity of 1 million tons. Available in permit file: https://dnrweblink.state.co.us/drms/0/edoc/1336840/2021-07-02_PERMIT%20FILE%20-%20M2021046.pdf?searchid=fd7c5e2a-36f0-4bdf-9e7d-0b4354dbeb39

Steven H. Emerman, "Potential Groundwater and Surface Water Impacts from the Proposed Dawson Gold Mine, Fremont County, Colorado, USA," Aug. 25, 2021. See discussion p. 33. Available in permit file: [https://dnrweblink.state.co.us/drms/0/edoc/1341820/2021-08-31_PERMIT%20FILE%20-%20M2021046%20\(3\).pdf?searchid=8f8e08a3-9ec4-4bdb-bf3c-f53141cef988](https://dnrweblink.state.co.us/drms/0/edoc/1341820/2021-08-31_PERMIT%20FILE%20-%20M2021046%20(3).pdf?searchid=8f8e08a3-9ec4-4bdb-bf3c-f53141cef988)

scheduled before the Colorado Mined Land Reclamation Board. Thank you again for the opportunity to submit these comments.

Sincerely,

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