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Sent via email

Re: Clean Water Act Section 401 Water Quality Certification Application for the Ivanpah Underground Waterline and 69kV Overhead Powerline Rights-of-Way Project for Castle Mountain Mine

Dear Ms. Tavakoli,

Basin and Range Watch, CalWild, the Center for Biological Diversity, Conservation Lands Foundation, Desert Tortoise Council, Earthworks, National Parks Conservation Association, the Sierra Club California / Nevada Desert Committee, and Western Watersheds Project respectfully provide these comments regarding the application for Clean Water Act Section 401 Water Quality Certification for the Castle Mountain Mine's proposed Ivanpah Underground Waterline and 69kV Overhead Powerline. We are concerned that the application includes only a portion of the Castle Mountain Mine Phase II Expansion Project and is seeking authorization for some, but not all, of the dredge and fill of waters of the state that will occur from the project as a whole, and thus the SWRCB's consideration may unlawfully segment review of these important issues.

1. The state water resources control board must select the “no action” alternative.

The application materials state “no other alternative may be permitted if there is a Least Environmentally Damaging Practicable Alternative (LEDPA).” (Application Package, Attachment B at 26) However, in the alternative analysis, the “no action” alternative (not building the proposed water and powerline) is ruled out as not practicable:

The No Action Alternative would not satisfy the fundamental project purpose and need. The Castle Mountain Mine Phase II Expansion Project requires additional water supply infrastructure to support expanded mining and ore-processing operations. Without construction of the proposed waterline, the project would be unable to provide the water conveyance capacity necessary to support planned operations. Because the alternative fails to achieve the basic project objectives, it is not considered practicable under the Section 404(b)(1) Guidelines. (Application Package, Attachment B at 28).

This is factually incorrect. As submitted in our comments to the Bureau of Land Management and San Bernardino County on the draft EIR/EIS for the Castle Mountain Mine Expansion (see

Attachments A and B), not constructing the utilities must be analyzed as a feasible alternative for the project under both NEPA and CEQA, and selected as the preferred / environmentally superior alternative.

This alternative is discussed in the draft EIR/EIS as “Reduce Mining Throughput Rates Enough to Avoid New Off-Site Utilities,” but was inappropriately dismissed from detailed analysis. Here is the full discussion of this alternative in the DEIS/DEIR:

Under this alternative, mining throughput would be reduced to a level intended to eliminate the need for new offsite utilities, including the underground water pipeline and 69kV overhead power line, thereby avoiding associated ROW disturbance and related visual and biological impacts. To evaluate feasibility, a representative reduced mining rate was analyzed based on a 30% reduction from the proposed 2022 Plan mining rate of approximately 52,000 tons per day to approximately 35,000 tons per day. Even at this substantially reduced rate, the project would still require extended operations to mine the same total ore volume, resulting in an estimated mine life increase of approximately 7 years. Financial analysis indicates that this reduced throughput would lower the project Internal Rate of Return (IRR) to approximately 13.8%, below the minimum industry financing threshold of 17%, and reduce Net Present Value (NPV) by more than 4%, materially affecting the viability of the project as an investable operation (CMV 2025b).

Further reductions in mining rate sufficient to fully eliminate offsite utilities, requiring near exclusive reliance on onsite power generation and pit dewatering for water supply, were not advanced for detailed analysis because such reductions would further degrade project economics beyond levels already demonstrated to be infeasible. Although lower annual production could reduce short-term demands for power, water, and emissions, and eliminate the need for the utilities, extending the mine life would likely increase long-term water losses through evaporation and dust control, as well as cumulative energy use and emissions over the life of the project. In addition, designing a mine plan around persistently low throughput would reduce operational flexibility and increase the likelihood of future plan amendments as economic conditions change. Given the demonstrated economic infeasibility at reduced mining rates, the extended mine life and associated long-term environmental tradeoffs, and the uncertainty that further reductions would reasonably sustain a viable mining operation, this alternative does not meet the standard of a reasonable or feasible alternative and was dismissed from further consideration. (DEIS Appendix L at L-5; DEIR at 5-8).

As we noted in our comments on the DEIR/DEIS, not enough evidence is given to justify dismissing this alternative as economically infeasible. There are many factors in addition to mine life that may influence the Internal Rate of Return and the mine’s overall economic feasibility, which have not been analyzed in detail. The financial analysis referenced to support this finding has not been made available for public review. Appendix A to the Mine Plan of Operations states

that economic analysis for the project was based on forecasted gold prices of \$2,479 per ounce in 2027, and \$2,169 per ounce for an estimated 2029-2049 project life.¹ Yet, as of May 16, 2026 the spot price of gold had reached a near-record high of \$4,555 per ounce,² with analysts forecasting continued growth to more than \$5,000 per ounce in 2027, and possibly to \$6,000 per ounce long term.³ The high price of gold likely means that mining at 30% reduced throughput would be economically feasible for Castle Mountain, and so this alternative must be analyzed with an updated economic analysis.

Furthermore, no attempt has been made to analyze the impact of extending the mine life by seven years on water loss and energy use, and so the statement of “long-term environmental tradeoffs” used to justify its dismissal from detailed analysis is purely speculative. The Castle Mountain Mine has already stopped, re-started, expanded, and revised its plans many times over the course of more than 35 years since the first mine plan was authorized in 1990. There is nothing in the current mine plan to guarantee that mine life would not be extended regardless of throughput rate, and seven years of additional operation at lower throughput would likely have minimal cumulative environmental impact compared to the proposed action which requires constructing new groundwater pumping, constructing new utility infrastructure, and new surface and visual disturbance within two national monuments.

As such, this reduced throughput alternative, equivalent to the “no action” alternative being considered by the Water Board, is entirely practicable. It simply requires a slower mining rate, and extending the mine life by seven years, at possible increased cost to the applicant but likely still economically feasible. *Section 404(b)(1) Guidelines* state: “An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” Expanded ore mining and processing operations are technologically and logistically practicable without construction of the proposed water and power line. The applicant has not shown any evidence that cost would be prohibitive for this alternative.

2. The application fails to address harmful effects to fully protected species associated with the proposed utilities.

The application does not adequately address the effects of the proposed water and power lines on all special-status species that may use the utility corridor. The application identifies the Mojave desert tortoise (*Gopherus agassizii*) as the only listed species confirmed to be present and states that no other state- or federally-listed species were documented within the corridor. However, the application does not explain why several other species that are identified as present or potentially present in the Project’s biological surveys are not included. Impacts including those of construction, operation, maintenance, habitat loss, and habitat fragmentation need to be addressed for the following fully protected species, at a minimum: desert bighorn sheep (*Ovis*

¹ Applied Analysis. (2025). p.3 Castle Mountain Mine Phase 2 Project: Analysis of Economic, Fiscal, and Social Effects. Appendix A to the Mine Plan of Operations.

² *Gold Price Today*. (2026, May 15). APMEX. <https://www.apmex.com/gold-price>

³ JP Morgan. (2025). A new high? Gold price predictions from J.P. Morgan Global Research. <https://www.jpmorgan.com/insights/global-research/commodities/gold-prices>

canadensis nelsoni), a species of special concern; Bendire's thrasher (*Toxostoma bendirei*), LeConte's thrasher (*Toxostoma lecontei*), and burrowing owl (*Athene cunicularia*) candidates for listing under the California ESA, and golden eagle (*Aquila chrysaetos*), a species protected under the Bald And Golden Eagle Protection Act (16 U.S. Code § 668). Further, given the disproportionate impacts of habitat loss and fragmentation from linear infrastructure, mitigation measures for desert tortoise should be considered.

Desert bighorn sheep. Linear infrastructure can affect wildlife beyond the acreage occupied by the infrastructure itself. Water and power lines can create a barrier to wildlife movement, fragmenting populations, decreasing genetic diversity, and threatening long-term population viability. These effects are particularly relevant to desert bighorn sheep that use broad areas and require connectivity among habitat areas. The proposed utility route is specifically important to the species, intersecting a known bighorn sheep movement corridor (DEIS at 66). While the proposed water and power lines are largely located along existing roads, their presence can increase the impermeability of the transportation corridor. Further, for ungulates, transmission lines "can deter habitat use and displace movement due to noise, alterations in the immediate electromagnetic field, visual distractions, changes in vegetation or canopy cover, creation of habitat edges, or an increase in predation risk, each of which may influence social behaviors and have demographic consequences."⁴

Mojave desert tortoise. The application addresses several potential effects to desert tortoise, but it does not analyze how the utility corridor would affect connectivity and habitat function for the species. Much of the project is located in the Ivanpah and Piute-Eldorado Critical Habitat Units for the tortoise (USFWS 1994). Transmission infrastructure artificially subsidizes raven populations by providing perching and nesting opportunities, increasing predation pressure on tortoises. Juvenile desert tortoises' soft shells make them vulnerable to predation by ravens, which are known to actively prey on tortoises (not solely scavenge on already dead individuals).⁵

⁴ Jakes, A. F., Ung-Kono, V., & Juno, E. (2024). *Wires and Wildlife: Transmission Development and Western Migratory Species*. National Wildlife Federation.

⁵ See the following references regarding transmission infrastructure and predation pressure on tortoises:

Boarman, W. 2003. Managing a Subsidized Predator Population: Reducing Common Raven Predation on Desert Tortoises. *Environmental Management* 32, 205–217 (2003). <https://doi.org/10.1007/s00267-003-2982-x>

Boarman, W.I., M.A. Patten, R.J. Camp, and S.J. Collis. 2006. Ecology of a population of subsidized predators: Common ravens in the central Mojave Desert, California. *Journal of Arid Environments* 67 (2006) 248–261. <https://www.sciencedirect.com/science/article/abs/pii/S0140196306003016>

Kristan, III, W.B. 2001. Effects of habitat selection on avian population ecology in urbanizing landscapes. Ph.D Dissertation, University of California, Riverside, September 2001. <https://www.proquest.com/openview/642ff3fd741af80de1054e882feacbf/1?pq-origsite=gscholar&cbl=18750&diss=y>

Kristan III, W.B, and W.I. Boarman. 2007. Effects of Anthropogenic Developments on Common Raven Nesting Biology in the West Mojave Desert. *Ecological Applications* 17(6), 1703–1713. https://www.researchgate.net/profile/William-Boarman/publication/5932132_Effects_of_anthropogenic_developments_on_Common_Raven_nesting_bi

In the absence of a predation event, predator presence could also deter desert tortoise from using the surrounding habitat, risking further habitat fragmentation. Thus, the utility routes are likely to cause effects extending beyond the disturbance footprint, and the mitigation based on a 1:1 replacement ratio would not adequately compensate for functional loss of habitat.

Golden eagle. Golden eagles are particularly sensitive to power line development. In addition to contributing to habitat loss and fragmentation, electrocution and collisions associated with power lines are significant forms of mortality for the species. Given the known presence of golden eagles in the utility route, there should be species-specific avoidance and minimization measures for the species, including, at a minimum, adherence with Avian Powerline Interaction Committee (APLIC) guidelines in power line construction.

LeConte's and Bendire's thrasher. LeConte's and Bendire's thrashers are among North America's fastest declining bird species, with population declines of 70% and 90% over the past 50 years, respectively. Their recent candidacy for listing on the California ESA in Spring 2026 may be why they were not originally included in the application, but now as species with interim protections, impacts need to be fully evaluated. Both species require large patches of flat land with desert scrub habitats that would be lost through the proposed development, and both species are vulnerable to the potential of collisions with power lines.

Burrowing owl: Burrowing owl (*Athene cunicularia*) is a small ground-nesting bird of prairie and grassland habitats, forced to adapt to human-altered habitat as development has spread. In 2024, population declines led to burrowing owl advancing to a candidate for endangered status under CESA, providing the species with interim protections. Construction is among the primary factors threatening burrowing owls in California, as construction activities directly kill owls and have been found to reduce reproductive success on construction sites. Further, loss of nesting and foraging habitat results in direct mortality and population decline as available habitat decreases. The DEIS acknowledges that burrowing owl has potential to occur within the utilities route, and analysis of harmful effects to the species is needed.

In addition, the application acknowledges that formal consultation under Section 7 of the Federal ESA remains ongoing and that a California Incidental Take Permit is still being pursued for impacts to the Mojave desert tortoise and may be required for other CESA species as well. The SWRCB should ensure that the results of those processes are incorporated into its review before making any final determination regarding the application.

3. The application improperly segments the water and power lines from other reasonably foreseeable actions.

This application improperly treats the proposed water and power lines as an independent project, even though it identifies their purpose as providing "water and electrical infrastructure necessary to support the Castle Mountain Mine Phase II Expansion Project." (Application Attachment B at 27). The applicant relies on the larger mine expansion to establish the purpose and need for the

[ology in the west Mojave Desert/links/5deca56a4585159aa470f2ad/Effects-of-anthropogenic-developments-on-Common-Raven-nesting-biology-in-the-west-Mojave-Desert.pdf](https://www.fws.gov/landmanagement/links/5deca56a4585159aa470f2ad/Effects-of-anthropogenic-developments-on-Common-Raven-nesting-biology-in-the-west-Mojave-Desert.pdf)

utilities, but then analyzes the water and power lines in isolation from the larger project. The application completely ignores other activities associated with the mine expansion will require dredge and fill authorization for waters of the state and should have been included in this application, including mine operations, roads, and other infrastructure. Further, the mine expansion will require Waste Discharge Requirements (WDR) which will likely be considered by the Colorado River Basin RWQCB but has not yet been made public. Water use by the projected mine expansion will also affect other important water resources including Piute Springs. All of these issues should be considered by the SWRCB before any decision is made on the application.

4. The application fails to demonstrate that temporary impacts to waters of the State will be fully restored and that compensatory mitigation is unnecessary.

The application seeks authorization to temporarily impact approximately 1.3 acres (11,105 linear feet) of waters of the State through trenching, pipe installation, backfilling, equipment operation, and other construction activities associated with the proposed utility corridor. Yet the applicant concludes that no compensatory mitigation is warranted because all impacts are characterized as temporary and affected drainages will be restored to pre-construction conditions.

Although the application and restoration plan describe general reclamation measures such as topsoil replacement, erosion control, revegetation, contour restoration, and monitoring, they do not appear to establish project-specific performance standards or measurable success criteria demonstrating how restoration of affected washes will be evaluated and verified over time. This omission is significant since the project would disturb more than 11,000 linear feet of ephemeral waters that provide important hydraulic and ecological functions. Accordingly, the SWRCB should require additional information regarding restoration performance standards, monitoring requirements, and corrective actions before concluding that the project will result in no lasting loss of aquatic resource functions and that compensatory mitigation is unnecessary.

In order for the SWRCB to meaningfully evaluate the application and alternatives, the application must be amended to include all of the activities that may dredge and fill waters of the state or waters of the U.S. Otherwise, segmentation could undermine consideration of the project as a whole and meaningful alternatives that could avoid some of the impacts, including an alternative that would eliminate the utility routes altogether. We urge the SWRCB not to consider this partial application which ignores many of the impacts to waters of the state from the project as a whole. However, if the SWRCB does address only the portion of the project in the application, the “no action” alternative for the powerline and pipeline still accomplishes the stated purpose and need for mine expansion, it just extends the timeline and makes use of existing water and electrical infrastructure. If selected, this alternative would avoid the need for constructing new power and water lines entirely, effectively avoiding the adverse impacts to waters of the state now being considered in the 401 water quality application and to wildlife, including fully protected species. As such, it must be analyzed and selected as the Least Environmentally Damaging Practicable Alternative.

Thank you,



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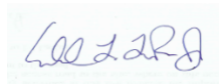
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Attachments:

Attachment A: NGO comments on Castle Mountain Mine Expansion

Attachment B: Desert Tortoise Council Comments on Castle Mountain Mine Expansion