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For the attention of Mr. Brian Bellew, Tucson Field Manager, and Mr. Daniel Moore, Geologist.

Sent by email to [bbellew@blm.gov](mailto:bbellew@blm.gov), and [d3moore@blm.gov](mailto:d3moore@blm.gov)

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**Tucson Audubon Comments Regarding the Proposed Andrada Quarry Expansion  
DOI-BLM-AZ-G020-2013-0019-EA**

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Dear Mr. Bellew and Mr. Moore,

We write in response to your request for public comments regarding the adequacy of specific analyses in the Andrada Quarry expansion proposal (DOI-BLM-AZ-G020-2013-0019-EA).

Tucson Audubon Society is a 501(c)(3) nonprofit organization established in Tucson in 1949. We represent approximately 5000 households in the region. Our mission is to protect and promote the stewardship of the biodiversity of southeast Arizona by connecting people to their natural world through the study and enjoyment of birds and their habitats.

Tucson Audubon submits comments on behalf of our membership based specifically on the potential adverse impacts to birds and other wildlife, and on broader overall community effects of the mine, as they will affect our quality of life.

**Recommendation:**

Tucson Audubon recommends that the US Bureau of Land Management (BLM) adopt the No Action Alternative, as the National Environmental Policy Act requires the BLM to consider. We believe that the balance of benefits to our community and region do not outweigh the significant long-term negative environmental impacts of developing and operating the proposed Andrada Quarry expansion.

**1.4 Relationship to Statutes, Regulations, or Other Plans:**

The EA states, "The Andrada Quarry does not comply with the Pima County Land Use Plan. The Pima County Comprehensive Land Use Plan – Planned Land Use – Eastern Pima County of 6/15/06 indicates that the land use proposed by the County is for low-to-medium urban development. The proposed operation is strictly industrial in nature and in conflict with the plan set forth by Pima County.

The proposed action occurs within an area designated as a Biological Core within Pima County's Conservation Land System. The Pima County plan calls for protection of lands within the system through low-intensity uses and acquisition by the County. The proposed action also falls within the proposed Santa Rita Mountain Park, a park being planned by Pima County to protect scenic values, provide low-impact recreational opportunities, and assure access to the Coronado National Forest lands. These plans do not allow for mining and, indeed, mining may be incompatible with these plans. However, Pima County does not have jurisdiction on the subject lands and their plans are superseded by federal mining law and laws authorizing use on Arizona State Trust surface."

And further, "It would not be against applicable state and federal statutes and regulations for BLM to require that operations such as the Andrada Quarry be denied on the basis of county planning and zoning requirements."

However, the EA fails to mention that Pima County has developed its Comprehensive Land Use Plan (CLUP aka the Sonoran Desert Conservation Plan or SDCP) in compliance with and as required by Arizona State law. The EA also fails to acknowledge that Pima County has submitted a final proposal for a Multi-species Habitat Conservation Plan (MSHCP) to the US Fish & Wildlife Service (USFWS) under the Endangered Species Act (ESA) after 15 years of study and analysis. Nor does it mention the fact that, over the last few decades, Pima County has invested heavily in purchasing and conserving lands in this area to protect the watershed from development and to protect regional water quantity and quality for the benefit of the residents of the Tucson area. The EA does acknowledge that Desert Tortoise (*Gopherus agassizii*, a candidate species for listing under the ESA) is found within one mile of the site.

This area is also nearly adjacent and contributory to the Santa Rita Mountain Important Bird Area (IBA), Pima County's first officially designated IBA and part of a global system of peer reviewed biologically important areas, where permanent ecological damage to lands and the unknown effects on common, threatened and endangered bird species and other species of concern are worthy of more extensive analysis and special consideration.

The EA fails to adequately address the direct, indirect and cumulative impacts to the watershed and species involved regarding these plans and proposed uses.

### **1.5 Scoping & Issues:**

The EA states that all correspondence received by the BLM argued against this proposal and further that the correspondence mentions concern, if not outright opposition, regarding several other proposals in the area such as the proposed Rosemont Mine, Arizona Portland Cement's proposal in Davidson Canyon, the Geovic leases or the Seel Limestone Quarry.

The EA states, "The area is underlain by the Escabrosa Limestone which has been mined and exposed by numerous pits, drill holes, and exploration trenches including a deep pit dug by Georgia Marble Company. This pit intersects the water table on the private land portion of the property."

The EA identifies issues to include: Blasting related effects including noise and potential damage to neighboring structures; Water use at the quarry which could affect neighboring wells; Direct impacts to water quality in the pit; Hours of operation which could produce noise and light effects; Concern over

potential night operations; Traffic and roadway impacts to Sahuarita and Wentworth Roads; Dust impacts from quarry operations; Impacts to endangered species; Spread of noxious/exotic/invasive weeds and/or bullfrogs; Socio-economic impacts including diminishment of property values on adjacent parcels; Solid and hazardous waste generation and disposal.

#### **3.1.4 Native American Religious Concerns:**

The EA fails to note whether consultation of any kind occurred with any First Nations nor whether there was any identification of this site as an area of traditional cultural use. How can the EA determine there are no religious concerns without documenting the opinions of the Nations potentially impacted?

### **3.2 General Setting: Description by Resource Element and 4.0 Environmental Effects**

**3.2.1 and 4.1 Air Quality:** The nearby Saguaro National Park air quality could be further degraded by the activities of the proposed expanded quarry project as well as the air quality of nearby (one half mile or further) residents and wildlife. Despite claims that the air quality will not exceed 20% opacity and the area being an air quality attainment area with dust control measures, there is no guarantee that air quality will be maintained or controlled. Historically, there have been issues with this quarry regarding same. The EA states, “2.1.3 Water will be used to control dust as will commercial dust suppressants as needed. Spray bars will be installed at several points on crushing equipment to limit dust generation.” The EA states, “Dust control at the previous operation required one million gallons (3.1 acre-feet) of water per year... Water use will be reduced to approximately 300,000-350,000 gallons (0.9 acre-feet) per year.” Commercial dust suppressants are identified as “...organic suppressants such as lignin sulfonate, latex, soybean extract, or gel stabilization...” The EA does not address how particulate matter will be controlled in the transportation of the material from the mining site through the Tucson valley to Casa Grande.

**3.2.2 and 4.2 Wastes, Hazardous or Solid:** Though at 3.2.2 the EA states, “There will be no hazardous waste treatment, storage, or disposal on site.”, at 4.2.1 the EA states, “Small quantities of hazardous waste will be held on-site until such time as they may be disposed of properly. Hazardous waste that is expected to be generated is limited to approximately twenty pounds per year of cleaning and maintenance chemicals.” Hazardous waste is treated separately from tires and waste oil and the methods used for transportation, treatment, storage, or disposal of hazardous waste are not addressed..

**3.2.3 and 4.3 Water Quality:** The EA states, “Summer monsoonal moisture typically causes short-duration high-intensity storms that, by their nature, produce considerable runoff because the ground cannot absorb the water as fast as it falls.” The EA does not address how these episodes may impact communities downstream of the impacted area other than to state, “A twelve inch or greater berm surrounding the site in the shape of a shallow dish will be constructed.” The EA assumes this will be adequate to address a 500 year storm event such as the region experienced in 1983 and 1993. The EA also states, “The abandoned pit exposes groundwater which could pose a potential contaminant pathway.” The EA says the pit will be reclaimed but does not specify when saying only that it will be filled with inert materials. The EA states, “Of the twenty wells registered in section 21, all are classified for domestic use except the Andrada well which is classified for industrial use.” The EA dismisses

concerns of nearby residents that pumping at the quarry has adversely impacted their residential wells stating, “The fluctuation of wells reported by local residents occurred during a time of drought and increasing residential demands on the subject aquifer, Wahl 2005.” The EA implies those circumstances occurred in the past, fails to address mitigation for those impacts, nor mentions that [PCA 99006](#), a statewide Drought Emergency Declaration, has been in effect for fourteen years, since June of 1999, and that a Drought Declaration for the State of Arizona ([Executive Order 2007-10](#)) was issued in May 2007. The Governor’s Drought Interagency Coordinating Group has recommended, as recently as May 20<sup>th</sup> of this year, continuing both declarations based on projections of warmer temperatures and increased wildfire risk while all counties in Arizona have a disaster designation from the US Department of Agriculture due to the impacts of ongoing drought, high winds and wildfires.

<http://www.azwater.gov/AzDWR/StatewidePlanning/Drought/ICG.htm>

**3.2.4 and 4.4 Invasive and Non Native Weeds:** The EA acknowledges the presence of Lehman’s Love Grass and Buffelgrass, both of which pose severe threats of extreme fires to the communities and natural resources within the region. The EA states, “Some establishment of weeds is expected despite the use of best management practices.” Segregation of equipment may be of some assistance if there are no winds that may spread invasive species seed to disturbed areas and/or areas where any vehicles (cars and trucks) that travel off site are stored, but it is not necessarily a best management practice. We recommend a mechanism that has worked well for other state departments of transportation to control invasive species which is to wash off the tires and undercarriages of any and all vehicles and equipment each time they enter and leave the site.

**3.2.5 and 4.5 Noise:** The EA states, “The nearest residence outside of the control of Andrada is 2900 ft from the proposed quarry.” Further, “Even when blast vibration levels are far below the legal limit, perceptible vibration can be experienced inside nearby residences. These effects can be generated by ground vibration and air blast acting separately or together, and can last from one to three seconds or more depending upon the distance from the blast, geologic influences and other factors. Despite the sometimes startling effects of a blast, up to a point, there is no correlation between how a blast “feels” and it’s potential for causing structural damage to a home.” It does not address the nuisance factor of such ongoing activity to the surrounding residents or recreational users of the area, stating only that other stresses “**should** (emphasis added) place far greater stresses on a home than the blasting proposed in the plan of operations.” Yet the EA does not refer to sound studies or other quantifiable methodology used to justify its assumptions. It does suggest development of a “blasting plan” or schedule with willing neighbors within ¼ mile of the site yet fails to provide any mitigation for impacts to effected residences such as increased residential insulation, windows or other mechanisms. The EA fails to mention the impacts of noise, especially blasting, on wildlife.

**3.2.6 and 4.6 Socioeconomic Impact:** The EA does not refute the concerns of nearby residents that property values may be adversely impacted and diminished by the proposed expansion and in fact states that, “The factors most likely to have a negative impact on property values are visibility, air quality, safety, noise and traffic.” “Air quality values **will** (emphasis added) decrease but only to permitted levels. Nearby residents may notice increased levels of dust in their homes during active

mining..." "The effects of blasting, such as noise, shock vibration and flyrock, could impact home values and sudden blast noise could discourage potential buyers. Home values could be affected by the unwanted effects of blasting for the duration of the mining operations but should disappear when these operations end. Structural damage due to blasting could also impact home prices. Potential buyers who come to believe that the property has been or could be damaged by blasting operations could be expected to heavily discount the price they would pay for such property. Structural damage due to blasting could also impact home prices... the mere fact that such actions are necessary could stigmatize the property and reduce its value... Apart from the effect on home prices there are serious concerns about health and safety... Traffic in the area will increase due to the mine and the number of large trucks in the area will rise. Often such trucks are seen as undesirable by potential home buyers. Students attending the Sycamore Elementary School and the Corona Foothills Middle School will face exposure to this traffic." Despite these considerable potential adverse impacts, there is no mention of mitigation measures such as the creation of berms to protect the nearby residences from flyrock, noise disturbance or to visually screen the mine nor to schedule offsite traffic to avoid school children traveling to and from schools in the area. Why not?

**3.2.7 and 4.8 Visual Resources:** The EA acknowledges that, "...much of it is visible from certain stretches of Sahuarita Road, Wentworth Road and State Highway 83." Thus it is also currently visible from much of the Tucson basin and surrounding mountain ranges and those impacts will only increase, further impacting the view shed of Saguaro National Park and other amenities that contribute to the region's long-term sustainable economy based on ecotourism. "Removing the hill would change the view from short sections of Sahuarita Road as well from view points to the immediate west of the quarry." We understand this to mean that the mining operation will be even more visible thus further adversely impacting the view shed.

**4.7 Access and Transportation:** Traffic will increase "by approximately 16 to 32 trucks per day making 32 to 64 back and forth trips." The trucks "will be a noticeable addition" to local traffic, and this does not even account for mine workers increased traffic. This increase presents a potential health and safety concern for local residents, especially children.

**4.11 Wildlife:** Regarding the Sonoran Desert Tortoise, the "BLM does not have authority to impose mitigation measures under this circumstance." Therefore, no mitigation is currently proposed as a part of the Mining Plan of Operation even though *Gopherus agassizii* is a candidate species under the ESA and the "area surrounding the Andrada quarry contains suitable habitat for the tortoise and a tortoise was found within a mile of the quarry." "Twenty three acres of habitat have been disturbed by the existing quarry. Under the Proposed Action, fourteen more acres of habitat disturbance would occur than under the No Action Alternative." This is certainly another glaring shortcoming of this proposal. Tucson Audubon established and continues to implement the Arizona component of the global Important Bird Areas program, initiated in 1982 by BirdLife International. The Audubon network within Arizona has thus far established 42 Important Bird Areas in our state. Each is established using standard and strict scientific data that are reviewed by an independent panel of scientists in our state. The

Important Bird Areas Program helps birds by setting science-based priorities for habitat conservation and promoting positive action to safeguard vital bird habitats.

The proposed project is very close to the Santa Rita Mountains IBA, which contains a number Species of Conservation Status of the Sierra Madre bird community that extends far south into central Mexico. These species include Montezuma Quail, Northern Goshawk, Gray Hawk, Whiskered Screech-owl, Elf Owl, Elegant Trogon, Arizona Woodpecker, Lucy's Warbler, Black-throated Gray Warbler, Red-faced Warbler, and Virginia's Warbler.

The IBA designation is relevant to protecting critical habitats used by birds during some part of their life cycle (for breeding, migratory stopover, and over-wintering) and for conserving general biodiversity.

The Santa Rita Mountains IBA was designated in 2003 because of the significant populations of conservation status species identified in this region as the result of extensive bird surveys. The IBA contains a number of species of "conservation status" in Arizona and of the binational Sierra Madre bird community. These species include: Northern Goshawk (Apache Goshawk), Gray Hawk, Mexican Spotted Owl, Whiskered Screech-Owl, Bell's Vireo, Montezuma Quail, Elegant Trogon, Arizona Woodpecker, Violet-crowned Hummingbird, Lucifer Hummingbird, Costa's Hummingbird, Buff-breasted Flycatcher, and Varied Bunting.

Other "species of concern" that occur within the IBA include: Golden Eagle, Peregrine Falcon, Band-tailed Pigeon, Elf Owl, Eastern Bluebird (Azure Bluebird), Northern Beardless-Tyrannulet, Greater Pewee, Gray Flycatcher, Cordilleran Flycatcher, Bell's Vireo, Virginia's Warbler, MacGillivray's Warbler, Lucy's Warbler, Black-throated Gray Warbler, Grace's Warbler, Red-faced Warbler, Rufous-winged Sparrow, Arizona Grasshopper Sparrow, Cassin's Sparrow, and Botteri's Sparrow. Buff-collared Nightjar, a rare species in Arizona, is also present. Winter brings Red-naped Sapsucker, Black-chinned Sparrow, and Lawrence's Goldfinch to the IBA. We would be happy to provide the complete table of the status and organization that lists these species in Arizona.

Recent studies by scientists at the University of Arizona reveal the importance of the Sky Islands to migrating birds in the western US. This is especially true in the fall and for species that have interrupted molt. The Santa Rita Mountains are one of the key Sky Islands these birds depend upon to migrate successfully.

Our Sky Island habitats are vital to those western fall migrants that have an interrupted molt strategy. More eastern species tend to complete their molt on their breeding grounds before heading south. Some western species, however, leave their breeding grounds, head south, and then interrupt their migration to stop in favorable habitat to molt their feathers. Our Sky Islands, including the Santa Rita Mountains IBA, are important molting areas. This pattern of interrupted molt and migration is more prevalent in birds of the west—with approximately 50% of species and subspecies using this strategy—than the east where only about 10% exhibit this behavior. It is thought that this difference is due to arid conditions found throughout the west in early summer, which diminishes available food when birds are undergoing this physiologically demanding process. The abundance of food found in the Sky Islands during the late summer and fall fill the gap in available resources and the birds travel to these areas to take advantage of these resources. These birds are following a chain of stopover sites and we need to

preserve the integrity of this chain to ensure their survival. Some of the species that show interrupted molt and migration are Lazuli Bunting, Painted Bunting, Western Kingbird, Lucy's Warbler, Western Tanager, Lesser Goldfinch, and Bullock's Oriole.

Migration and molt are very taxing on birds, and for some species migration is the time of greatest mortality. However, the benefits of superabundant resources and decreased competition at distant breeding locations outweigh the high costs of migration from winter quarters. The success of this gamble, however, depends on suitable migratory stopover sites along the way.

Noise and light disturbance should be addressed as related to wildlife avoidance. Avian species sensitive to noise and light include Golden Eagle, Montezuma Quail, and Gould's Turkey.

Certainly, these issues are in part what Pima County's decade long, national award winning conservation planning process has been designed to address. Pima County's Section 10 Incidental Take Permit (ITP) and proposed 30 year MSHCP is close to being finished and the SDCP and Conservation Land System (CLS) is designed to protect the county's biodiversity and balance development while mitigating for any disturbances to the integrity of our most valuable resources, such as designated biological core areas and the Santa Rita Mountain IBA.

**4.12 Cumulative Impacts:** The EA states, "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR 1508.7)." "The proposed Rosemont Copper mine and the Imerys Santa Rita marble quarry, while outside of this {Cumulative Impact Assessment Area} area, will be considered in this analysis." Other Pertinent Actions within the Cumulative Impact Assessment Area include Arizona Portland Cement (APC) proposal to reopen a limestone quarry approximately five miles east of the Andrada project in the Davidson Canyon area, the Geovic leases and the Seel Limestone Quarry. Amazingly, the only cumulative impact mentioned in the EA is increased traffic along Sahuarita Road and SR 83! No mention is made of fragmentation of habitat or impacts to potentially impacted species. We find this section woefully incomplete.

In short, we find the analysis reflected in the Andrada Quarry EA somewhat simplistic and incomplete and we respectfully recommend the No Action Alternative as the most reasonable alternative. We appreciate the opportunity to comment and are available to answer any questions you may have regarding our submittal.

Sincerely,



Dr Paul Green  
Executive Director | Tucson Audubon



Christina McVie  
Conservation Chair | Tucson Audubon