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To: Robert Hingtgen (Robert.Hingtgen@sdcounty.ca.gov)
Planning & Development Services
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CC: Bronwyn Brown (Bronwyn.Brown@sdcounty.ca.gov)

Subject: Cottonwood Sand Mining Project Environmental Impact Report Issued 12/16/21 (PDS2018-MUP-18-023), (PDS2018-RP-18-001); LOG NO. PDS2018-ER-18-19-007; SCH# 2019100513

Dear Mr. Hingtgen,

I am writing to you as to voice my opposition to the Cottonwood Sand Mine Project (Project) Draft Environmental Impact Report issued on December 16, 2021. I am a registered professional engineer in the State of California and hold a PhD degree in Civil and Environmental Engineering with 45 years of engineering experience. I will provide specific comments regarding technical aspect of this Project and for the reasons why it should not be permitted.

As a civil engineer I understand the value of sand and aggregate resources. However, the mere existence of this resource in a location does not justify it exploitation for the sole financial benefit no matter what the risks and environmental impacts are. The location of the project is the issue. The area is sensitive habitat and a watershed for potable water supply. Any unforeseen aspect, minor issues missed during the planning, construction and operation of the project could have sever and significant impact on valuable resources in the area including the groundwater, the Sweetwater reservoir and the habitat for identified endangered species. Additionally, as we know human errors leads to catastrophic environmental damage. The poor planning, inadequacy and incompleteness of this Draft EIR is alarming to say least. If planning is so poor, what would we expect during execution of the project. For example the mere existence of costal oil in Southern California does not justify new drilling along the coast as the risk of spills, contamination and destruction of habitat is too high. Mitigation may be proposed, but the risk is too to relay on mitigations. Similarly, the Cottonwood sand mine project will have ongoing and long term significantly high risk associated with it. These impacts and risks are too high to ignore or set aside. The proposed mitigations are inadequate and incomplete and will not resolve or avert the anticipated risks.

I urge you and the County of San Diego to deny the Cottonwood sand mine project as the risks are too high with no mitigation effort can solve many of them as will discussed below.

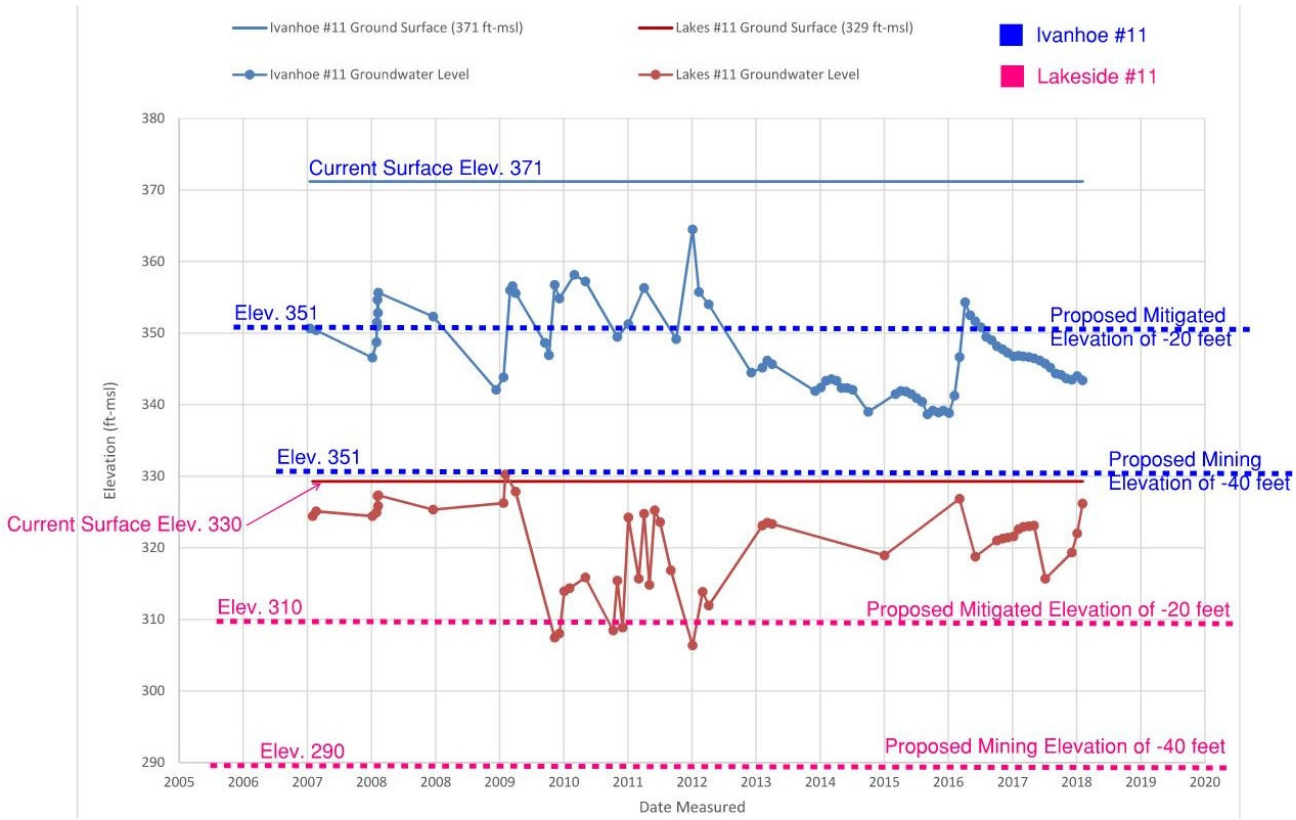
A. The draft EIR is inadequate and provide misleading information and conclusions regarding the impact on groundwater in the area.

Page 28 of the Reclamation Plan for the Project state the following "Resource extraction will lower the existing elevation of the golf course area by approximately 15 to 20 feet." During the mining operation the ground surface will be lowered even further up to 40 feet below the surface. Page 8 of the Reclamation Plan under Ground Water state the following "During a geologic investigation of the property, groundwater levels were encountered from 5 to 18 feet below ground surface (bgs)." Accordingly, the mitigated ground level will be lowered below the ground water fluctuation or at least 15 feet. Appendix R-Groundwater-Investigation on page 2-third bullet claims the following "Results of the model indicate a maximum drawdown of less than four feet at the nearest off-site well, 1,375 feet from the Ivanhoe #8 well after five years of pumping."

The Project will lower the ground surface by 15-20 feet. Where will be the surface of the ground water?

Ground water will follow the free surface, i.e. the excavated elevation. Consequently, the ground water level will potentially be lowered by 40 feet during the excavation phases not as claimed in Draft EIR of less than 4 feet. By removing the aquifer (the soil) which is the reservoir that hold the water, you practically removed the ground water.

Figure 9 of Appendix R - shows the ground water level at two locations Ivanhoe #11 and Lakeside #11 with no elevation reference to either the mitigated ground elevation or the lowest ground level during mining operation. Adding the proposed mitigated and mining ground elevations to Figure 9 shows the significant impact on the ground water elevations in the area, as depicted below.



The difference between the highest surface elevation of 371 and lowest excavation level of 290 is 81 feet. The impact of this proposed mining Project on lowering the ground water is significant and devastating. It will be impossible to mitigation by any mean. This severe lowering of the ground water elevation in the area will have severe and devastating impact on the hundreds of privet residential groundwater wells located immediately to the south of the project boundary as shown in Figures 5 of Appendix R-Groundwater-Investigation. All these private wells will run dry. Consequently, either abandoned or new deeper wells will need to be drilled. If these wells are abandoned, this will have significant impact on water supply as demand for potable water will increase and new resources to supply the sudden demand due to loss of the groundwater supply. If newer deeper wells are drilled, significant financial burden will be imposed on the well owners. Who will pay the construction of these new wells? Lawsuits will follow. The County will be part to these lawsuits for permitting the project knowingly it will have significant impact on the ground water. Even if the issue of who will pay for the new deeper wells is settled, the impact of utilizing deeper wells need to be addressed in the Draft EIR for the following:

1. Additional energy use to pump the water from deeper wells.
2. Cost of electricity to rum the pumps from deeper wells, who will pay or compensate the resident for extra cost to many years to come. This impact will be everlasting but for calculation purposes 45 years shall be considered the minimum. 15 years for the project including mitigation and 30 years beyond.
3. Impact on greenhouse gas emission.

4. Environmental impacts, greenhouse gas emission due to additional resources to manufacture and construct hundreds of deeper wells and pumps.
5. This impact also need to be considered in term of the Project claim to reduce energy and greenhouse gas emissions in term of vehicle mile traveled (VMT) as benefit of the project.

Additionally, the proximity of the ground water to the current ground surface as shown in the diagram above demonstrate its importance to provide water to the trees, plants and natural habitat in the area surrounding the Project boundaries. . The consequence of lowering the ground water is death to all the plants, trees and natural habitat surrounding the site as the roots will be at least 20 feet above the water level, i.e. deprived of water. What mitigation will resolve this potentially devastating impact to the habitat surrounding the Project area?

Simply, you remove the aquifer (the reservoir), the water will be gone. Short of putting the soil back (i.e. the aquifer) what mitigation effort will restore the ground water?

B. Topsoil removal and reuse.

Page 14 of the Reclamation Plan under Section 2.3 state the following "Topsoil material will be stored in the berm like stockpiles and may be mixed with wash fines that will be used as a final cover on areas that have reached final grade.

C. Mining Phase – Phase 1, Settling Pond Sludge

Page 1-5 of Project Description state the following "A loading area, truck scale, office/scale house, two storage containers, and three connected settling ponds would be installed in the processing area." Page 14 of the Reclamation Plan under Section 2.3 state the following "Topsoil material will be stored in the berm like stockpiles **and may be mixed with wash fines** that will be used as a final cover on areas that have reached final grade."

Project is planning on using the settling pond "sludge" which they called "wash fine" to be mixed with the final mitigation cover.

Washing the mined sand and aggregate will produce fines which will be settled in ponds while the water is recycled for rewashing purpose to reduce water usage. However, washing the mined sand and aggregates will also wash away salts and heavy metals including lead, selenium, barium and many other. Overtime, the concentration of these metals become very high rendering the recycled water and the "sludge" to be considered toxic or even hazardous material depending on the heavy metal and other pollutants concentration. The developer wants to burry this toxic material with topsoil to be used in the mitigation phase. He wants the site to be used as a playground for children and residents.

The settling pond **"sludge"** should never be allowed to be buried in the site.

D. Mining Phase – Phase 1, Settling Pond

As indicated in item C above, settling ponds will be used to hold the washing water which will recycled to wash the mining sand and aggregates. The concentration of salts, heavy metals and other pollutants will be increased in the recycled water. Table 4 in Appendix T indicate elevated levels of Cadmium, Chromium, Vanadium, Barium, Selenium, Mercury, Zinc and Chloride. As water is exposed to atmosphere, water will evaporate and concentrations of salt, metals, chlorides and pollutants will increase to very high levels.

The Draft EIR is inadequate and incomplete in addressing the disposal of this toxic and hazardous water

The project is inadequate and incomplete in addressing this issue including:

1. No plan was presented on where and how this contaminated water will disposal off.
2. No information or plan on periodic water analysis for the settling ponds water.
3. No information on who will do the sampling and independent testing (State Certified Laboratory).
4. No information on who will receive the water analysis results and on reporting requirements.

E. Mining Phase – Phase 1, Settling Pond Construction

As indicated in item C above, settling ponds will be used to hold the washing water which will be recycled to wash the mining sand and aggregates.

The Draft EIR is inadequate and incomplete on how these ponds will be constructed.

The proximity of the Project site to potable water sources significantly increase the risk of contamination of these valuable resources. The Draft EIR is inadequate and incomplete in addressing the following:

1. What material will be used for construction of the settling ponds.
2. Will lining be used?
3. What and who will permit these ponds?
4. Is double containment to be provided? Any leakage will end up contaminating the Sweetwater reservoir which a potable water source?
5. What monitoring will be used to detect any leakage due to cracks or liner failure. Such failure will cause contamination of the ground water.
6. What type of pumps will be used?
7. What type of piping will be used?
8. Layout of the piping and pumps.

F. Project Alternative – Alternative 1

The Draft EIR under Chapter 4 Project Alternatives Section 4.2 claims a reduction in VMT by the project compared to Alternative 1 and accordingly rejects the No Project Alternative. The Draft EIR is inadequate and incomplete in presenting sound analysis and calculation on how this VMT is calculated. The project assumes the followings listed in footnote of page 4-4

1. 95% of the sand is imported to San Diego and only 5% is locally produce.
2. The hauling distances used in the VMT calculation are the average distance from the sand sources to the midpoint of existing concrete ready-mix batch plants in the county.

These assumptions are invalid and not verified as no sources for these assumptions are provided, i.e. these are mere assumptions (exaggerated) by the EIR to justify rejecting Alternative 1. Since there are no basis to reject Alternative 1.

The Draft EIR in adequate and incomplete in presenting calculation and analysis on how the VMT is calculated. The bases for and a tabulated calculations need to be presented to validate the rejection of Alternative 1, otherwise Alternative 1 is considered valid. These tabulated calculations shall include:

1. Listing of all the sources of sand and quantities imported to San Diego County.
2. Listing of all the local sources of sand within San Diego County.
3. Listing of the Ready mix plants in San Diego County.
4. Listing for the VMT traveled from the North Sources to North County Ready Mix Plants, from the East Sources to East County plants and from the South to south County plants.
5. Listing of all distances traveled from the proposed Project, the distances from the site to each plant need to be listed.
6. The VMT calculations shall consider all the increases caused by Project on energy consumption including the increase in ground water pumping for at least 45 years as discussed in item A above.

G. Mining Operation – Topsoil uses for mitigation

The Draft EIR is inadequate and incomplete as it did not provide construction sequencing plan. The EIR under Reclamation Plan Section 2.3 proposes stripping the topsoil and stockpiling it for use during mitigation phase.

The current use of the area as golf course with grass area is heavily dependent on weed control. Pesticides and herbicides such as "Roundup" are most probably used to control weeds on the grass areas.

The Draft EIR is inadequate and incomplete in addressing the handling of herbicides contaminated soils. Chlorinated pesticides being detected in soils samples from the site including 4,4'-DDD, 4-4'-DDE and 4,4'-DDT. Undisturbed soil containing herbicide present minimal risk. However, once disturbed the herbicide will become air born and travel to

receptors. These herbicides are volatile and can travel significant distances. The Draft EIR is inadequate and incomplete in addressing the following:

1. No testing for pesticides, herbicides and other volatile chemical is presented.
2. Stockpiling the topsoil and exposure will accelerate the release of theses toxic chemical to the atmosphere.
3. Transport of these toxic volatile chemicals to adjacent schools, children, residential areas and sensitive receptors.
4. No modeling was provided.
5. No plan on how the topsoil will be handled to prevent volatilization such as encapsulation and covering.
6. No air sampling and testing plan during the stripping phase and long term stockpiling phase.

H. Mining Operation – Comingling of Sweetwater River Water with Open Mining Operation

The Draft EIR is inadequate and incomplete in addressing how the Sweetwater River water is protected from overflowing into an open mining operation. The Sweetwater River flows into the Sweetwater Reservoir which a potable water reservoir. Once mining operation excavation is started the riverbank will be removed from the adjacent side of the river for example the east side of subphases 1b. Consequently, nothing will prevent the river water from flow in the mining pit which is a disturbed excavation with loose soil, sand and aggregates. Water will curry the loose sediment. During high flow conditions, flash flooding and extreme weather conditions, which we are experiencing more due to climate change, fast flowing water entering the pits will wash away significant amount of the sand, silt and aggregates which consequently be settle downstream in the Sweetwater Reservoir.

Within the 10 years for the proposed sand mine operation, significant amount of sediments could be transported and settle behand the dam in the reservoir. Hence, the reservoir capacity to store water will be reduced and dredging may be required. Additionally, dam safety may be in jeopardy. Reduction in reservoir capacity can lead to more often overflow and breach of the dam. The impact is extremely high and risk to dam safety is high.

The Draft EIR is inadequate and incomplete in addressing the following:

1. How the Sweetwater River water is protected from comingling with the mining operation.
2. No detailed plan how to prevent transport of sediment into the Sweetwater Reservoir.

I. Mining Operation – Construction Sequencing

The Draft EIR is inadequate and incomplete in providing construction sequencing for the mining operation. Topsoil will be removed and stockpiled then excavation will start. Where will the topsoil be stockpiled? No plan is provided. How is topsoil transported to the stockpile and back? Will trucks be used? What routs the truck will use? Will this transport use surface roads?

The Draft EIR is inadequate and incomplete and need to provide detailed construction sequencing plan for the movement of soil and material, method of transport, routes and durations.

J. Draft EIR failed to account for Cumulative Impact and Effects

The Draft EIR is inadequate and incomplete in accounting for cumulative impacts for the following facilities:

1. The Robertson's Ready Mix Plant
   Located 1.8 mile from the proposed sand mine on 2094 Willow Glen Dr., El Cajon, CA 92019. Robertson's Ready Mix is a mining operation coupled with ready mix production. This plant also uses heavy trucks and ready mix truck in transporting concrete and aggregate from and to the plant during the same operating hours window. Hence, an added impact on road, noise, air pollution, traffic and fire respond time.

2. P2K Range
   Located 2 mile from the proposed sand mine on 2082 Willow Glen Dr., El Cajon, CA 92019. Noise impact and traffic to and from the facility during daytime.

3. Superior Ready Mix Plant
   Located 2.3 mile from the proposed sand mine on Jamacha Rd., El Cajon, CA 92019. Superior's Ready Mix is a mining operation coupled with ready mix production. This plant also uses heavy trucks and ready mix truck in transporting concrete and aggregate from and to the plant during the same operating hours window. Hence, an added impact on road, traffic, noise, air pollution and fire respond time.

4. Sycuan Casino Resort
   Located 8 mile from the proposed sand mine on 5469 Sycuan Way, El Cajon, CA 92019. Sycuan Casino traffic is through Willow Glen using large buses and lot of private cars. Operation is 24 hours which overlaps with the proposed sand mine operation. Hence, an added impact on road, air pollution, traffic and fire respond time.

5. Jamul Casino
   Located 8 mile from the proposed sand mine on 14145 Campo Rd, Jamul, CA 91935. Jamul Casino traffic is through Jamacha Rd. and SR-94 using large buses and lot of private cars. Operation is 24 hours which overlaps with the proposed sand mine operation. Hence, an added impact on road, air pollution, noise, traffic and fire respond time.