

Mr. Paul Murphey

October 7, 2010

Re: Eagle Mountain Pumped Storage Project

State Water Resources Control Board

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**COMMENTS OF THE SAN GORGONIO CHAPTER OF THE SIERRA CLUB
ON THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE
EAGLE MOUNTAIN PUMPED STORAGE PROJECT
AND REQUEST TO BECOME A PARTY TO THE 401 APPLICATION HEARINGS**

I. Introduction

The Sierra Club is a national nonprofit organization of approximately 760,000 members, roughly 195,000 of who live in California. As part of the Sierra Club, the San Gorgonio Chapter is dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and encouraging humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Chapter boundaries include all of San Bernardino and Riverside Counties which means we have within the Chapter 2 currently ongoing Federal Energy Regulatory Commission ["FERC"] pumped storage proceedings. Chapter members use, enjoy and value the lands that will be affected by the project. [FERC docket P-13123, Eagle Mountain Pumped Storage Project ["EMPS"]].

We submit these comments on the Draft Environmental Impact Report ["DEIR"] to State Water Resources Control Board ["SWRCB"] in order to assure EMPS will be permitted only if absolutely necessary and then in a fashion which will ensure the maximum protection to a sensitive, valuable and fragile resource.

We request that we receive any and all filings, notices and public communications associated with the application for a 401 permit required for EMPS. Send these to:

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II. Alternative Analysis

We begin by noting that in these comments we will not be giving lengthy quotes from court cases with citations but rely instead on “Guide to CEQA” by Remy et. al. ; 2007 11th Edition [“Remy”]. We reserve the right to extend these comments with appropriate citations if our concerns are not sufficiently addressed in the Final EIR.

As we pointed out, our Chapter is home to 2 current pumped storage projects both with open applications with FERC for permission to build and operate. In addition to EMPS we are engaged with Lake Elsinore Advanced Pumped Storage [“LEAPS”], FERC docket P-11858. As SWRCB is aware the LEAPS proponents are seeking a 401 permit and in a recent petition for reconsideration have claimed that the Final Environmental Impact Statement [“FEIS”] issued by FERC, accession number 20070130-4000, satisfies CEQA requirements.

Since EMPS and LEAPS are on the same segment of the southern California 500kV grid they will draw pumping power from essentially the same sources and will provide power to essentially the same load. These major pumped storage projects are only about 140 miles apart and we don't see how building both with their combined accumulated impacts can be justified. “The court found it “illogical that an EIR should carefully evaluate the direct impacts of one project which is 'under environmental review', but completely ignore the cumulative impacts of that project's siblings in the same category.’” (Remy p. 478). But the DEIR does completely ignore the LEAPS sibling. This omission is totally unacceptable – and forbidden by CEQA.

Comparing the LEAPS FEIS with this DEIR shows that many of the goals and claimed benefits are the same for both projects. Since the developers are both seeking approval from SWRCB and FERC for the same type of project in the same grid vicinity it is incumbent on the permitting agencies to consider each project as an alternative to the other. If there is any reason for not doing so the reason must be stated and supported. (Remy pp. 577-587, on alternatives).

We could find only one reference to LEAPS in the thousands of pages in the DEIR (its as if the LEAPS project doesn't exist) and that was a recorded statement from a scoping meeting. The DEIR is deficient in that it ignores cumulative impacts and contains a faulty alternative analysis.

III. Critical Energy Infrastructure Information (CEII)

A number of the documents in the FERC elibrary for P-13123 contain the designation "Availability CEII". CEII means Critical Energy Infrastructure Information which has restricted public access. This is a designation used by FERC shortly after the 9/11/2001 attacks on the World Trade Center. After some discussion FERC issued Order No. 630 (102 FERC ¶ 61, 190, February 21, 2003). There has since been a rather constant stream of rule making and discussion about the necessity, utility and effectiveness of restricting information to the public which may be useful in analyzing and evaluating proposed projects.

FERC has classified some of the information in this project as CEII. That should be sufficient authority to include a section of the draft EIR for an analysis and risk assessment used to evaluate alternative means for accomplishing the same outcome and alternative sites based on risk. FERC said so, it can't be ignored.

When FERC issued their new rule on Critical Energy Infrastructure Information (CEII) 3 years ago they explained that despite the fact that the rule would hamper stakeholders in their ability to participate fully in FERC proceedings, it was necessary for security reasons. CEII places new restrictions on the types of information about energy infrastructure that will be freely available to the public and by extension to terrorists.

In their response to comments on this rulemaking FERC said; "The Commission remains convinced that the responsible course is for it to protect CEII. The arguments that such protection is unnecessary are speculative and unconvincing. For instance, one commenter points to an estimate that seventy percent of infrastructure attacks come from insiders as evidence that CEII is unlikely to aid an attack, while another states that "the possibility that terrorists will study government records and take advantage of perceived weaknesses is speculative." The Commission is not prepared to stake the public's safety on this reasoning. According to the National Infrastructure Protection Center, the energy sector is considered one of the most attractive terrorist targets."

It should be made clear that in all discussions FERC consistently maintains that by taking steps to restrict information in an open society (frequently used to characterize less democratic governments) they are mitigating and reducing significant terrorist risks to public safety both locally and nationally by using a CEII designation. This being the case FERC has lent sufficient authority to include a section in the DEIR for an analysis and risk assessment and at least give some estimate of their nature and severity of the risk. These risks will offset benefits and that they can be mitigated by emphasizing electricity conservation and power reduction.

It is obvious that the best way to achieve security is also one of the best means for achieving reliability. This is to use distributed generation and distributed storage whenever possible. This may have some difficulties with technology (but where in the world is technological

development best?) but it also has the problem that it is basically a competitor with large generation and transmission owners, and so is not a likely source of profit for these owners.

The National Infrastructure Protection Center is a good candidate along with the Department of Homeland Security for making these assessments and they should be called in to participate in obtaining maximum security for what FERC has told us is an important and vulnerable part of our society. We do not have to wait for a major attack to begin taking precautions, we have a whole new federal agency put in business for that purpose, let's start using them.

Just as in the case of threatened species, clean water and clean air the appropriate agencies should be considered responsible agencies. We assert that because FERC has constrained information in this project because of the risk of terrorist attacks, Homeland Security should be a responsible agency.

Urbanization and sprawl are the underlying causes of the need for new energy corridors which makes for a reasonable argument that urban areas should be the place where meeting these needs are located. Another perhaps more serious reason is that there are a lot more watchful eyes in urban areas than there are in the public lands.

An even better solution to this electric power problem is to use distributed generation (eg solar roof tops) and distributed storage (Batteries in electric vehicles and local flywheels). These alternatives have distinct advantages and should be thoroughly discussed in the EIR.

IV. Light Pollution and Scenic considerations

In section 3.7.1 we find the statement that... "No State or local regulatory settings pertaining to aesthetics or visual resources apply to the proposed Project". We point out that Riverside County has an Ordinance 655 pertaining to light pollution and we would like this to be addressed in the EIR

In general scenic values are among the most highly valued by the public, but they are much more difficult to quantify than other environmental resources, such as wildlife or fish resources. That is because an evaluation of scenic values involves not only a visual response, but also a non-quantifiable esthetic and at times an emotional response that relates to an individual's background, mood, place, time, and expectations.

It does not matter that aesthetic values are difficult to quantify they are an integral part of the evaluation process which must take place to put proposals in proper context. This is one of the non-cash values that we as a society prize most and we must extend our capabilities so that our bottom line business culture does not creep into everything we do in such a way as to reduce us to crass one dimensional financial cogs in an investment machine. We need at

least one more bottom line that takes into account sustainability of what we inherited so that we can pass it on for the benefit of future generations

A big question in any CEQA document is level of significance of an impact. It is common to see statements to the effect that a small incremental impact is insignificant. We have found over a period of years that these types of analysis are difficult to dispute. Nevertheless we see examples all around us which belie this approach. For instance in housing approvals the statement is common that a particular development will contribute an insignificant amount of commuter traffic. Nevertheless, the 91 freeway is rated as one of the worst commutes in the country precisely because of all of these insignificant additions.

More telling is the case of water runoff from new developments which in the past were rated as insignificant. Eventual pollution of waterways and water bodies has lead to the conclusion that an impacted body of water can take no more. Which is to say that if the situation is already intolerable any addition to the problem is significant. We now are moving to the regulation of no net runoff.

So it is with the desert night sky. There is already too much light. Rather than add net lighting the proponents should be required to negotiate with local lighting decision makers to turn off lights that aren't really necessary. This may be a small effect but if taken as a policy it would eventually darken skies that should be dark. This would also have the effect of lessening our already profligate use of energy.

The DEIR contains this statement: "Hikers on surrounding ridge tops within the JTNP and Wilderness Area may view some of the Project features (mainly reservoirs and dams) which would be within middle ground distance zones (see Figure 3.10-8 in Section 3.10 Recreation). Access to these ridge tops is very difficult and viewer numbers are low."

Some of our members are hikers who intentionally go into the back country in order to get some idea of what our country once looked like. We take umbrage with the idea that we can be readily dismissed.

V. Greenhouse Gas

This project is being discussed as if we are to assume that it will in fact be a source of renewable energy which will have the overall effect of reducing the generation of CO₂. We choose just one of a large collection of "green" statements. On page 2-29 "Greenhouse Gas (GHG) Emissions – Construction may affect GHG levels, however, operational activities would displace energy demand for single cycle natural gas power plants and if effectively used would reduce GHG emissions necessary for meeting the energy demands in California and assist meeting future targets for a larger portfolio of renewable power generation sources."

There are many other statements about what this project “can” do to reduce GHG emissions. In the above quote we note the phrase “if effectively used” , we prefer the phrase “this project is contractually obligated to.....” and in other places we prefer “will...” rather than “can...”.

We have the general idea that this project will pay off its debt and produce profit by purchasing inexpensive (mostly night time) power and selling it at a higher price (mostly at peak day time demand). However, given no constraints the owners will buy the cheapest power available. This could well turn out to be coal fired power.

Coal power is rated as the most GHG producing power. The national effort to reduce GHG therefore translates into an effort to reduce coal fired power. In a normal economic situation this means that coal baseline generators will sell night time power at a deep discount. This project could well buy all of its pumping power from coal generators and sell it in competition with peak renewable sources. It could just as well be a GHG disaster as otherwise.

The DEIR states that there is 359 MW of wind generation in the local area. How much of that is already committed to long term contracts? We assume that even with that full capability there will be the need to purchase nearly 1000MW of carbon based pumping power. When coupled with pumping inefficiencies as well as double transmission losses (pumping/generation) this project has a carbon multiplying effect (higher carbon production for power used at the load).

Given the operational generality we just mentioned, any discussion of solar energy as a source of pumping power is misleading. Solar is inherently a peak generator which will be sold at a premium, it is hardly a low cost source of pumping power and till proven otherwise we assume that discussions of solar pumping power is a “greenwashing” red herring.

We want to know how power from this project will be counted. Given the possibility of a pumping power mix it might end up attempting to sell all of its generation as renewable power.

Before we are willing to consider this as a project which will help us to reach renewable, low carbon goals we need to see a more detailed analysis of the market and some contractually binding or permit binding conditions on the minimum amount of renewable pumping power and maximum amount of carbon generation taking into account efficiency and transmission losses. Until then we will consider this a profit making carbon generator.

In general we find too many assumptions about how the plant will operate with no real analysis that we can count on. What are the actual sources of pumping power in the real world of the southern California grid and what types of power will this plant compete with – we expect data not speculation! Until we get real world data rather than hypothetical scenarios we will object to this project's potential to worsen rather than correct carbon generation. With

this assumption (rather than self serving speculation) we insist that the No Project Alternative is the preferred alternative. In this regard any statement of over-riding considerations necessary to address irreversible significant effects must be based on fact.

VI. Dam Failure Hazard

On June 9, 2008, Kaiser Eagle Mountain, LLC and Mine Reclamation, LLC ("Kaiser") submitted comments to FERC in response to Eagle Crest Energy Company's ("ECEC") Pre-Application Document for the Project ("PAD"). [FERC accession number 20080619-0045 in P-12509 the docket preceding P-13123]

Kaiser points out thatbeginning on page 3-5 of the PAD, ECEC states that "No spillway will be needed because the dams, which will be RCC, could withstand overtopping during an over pumping event, without serious consequences". Kaiser requested documentary proof of that statement. We have been unable to find anything in the DEIR that supports the claim that over pumping is not a problem. ECEC merely continues with the unsupported claim that a roller compacted concrete ("RCC") dam can withstand over pumping.

ECEC should undertake the studies necessary to provide an assessment of the impacts of an over pumping event and a reservoir breach event for the upper and of the lower reservoirs including, at a minimum, the impacts to the Landfill Project and the town of Eagle Mountain upon the occurrence of such events. Additionally, please provide information on whether these flooding events are insurable risks.

We are given assurances concerning the safety of the dam based on an RCC dam. It is disconcerting to find the following statement in the DEIR. "The foundation conditions at the upper reservoir are judged to be suitable for either a concretfaced, rockfill dam or a roller-compacted concrete (RCC) gravity dam. Selection of the type of dam will be made during final design and following intensive subsurface explorations and materials testing. The layouts presented in this application are based on constructing an RCC dam, using on-site mine tailings that would be processed and/or using materials generated from tunnel and underground structure excavations." Why are we given assurances based on one type of construction when that may not be the construction used?

In addition the studies necessary to make the determination have not yet been made so we actually have no idea nor a method to even estimate what the actual design may be. This postponement of information which will be very difficult for the public or even SWRCB to obtain and evaluate is forbidden by CEQA.

It may be objected that the dam engineering capability of civil engineer designers in the United States makes dam failure unlikely. We disagree.

On December 14, 2005, there was a breach of the upper reservoir of the Taum Sauk Project. The breach caused personal injury and significant environmental and property damage. A house downstream from the Taum Sauk project was destroyed as a result of the breach, injuring the residents, including three children. Water from the reservoir toppled trees and left a path of mud and debris on the land and in a river downstream, including the Johnson's Shut-Ins State Park.

This is a stipulation by the owner. Others have said that had the breach happened on a summer day there would have been significant loss of life. This dam was a pumped storage facility licensed by FERC and we can be assured that preliminary licensing proceedings made the same sort of safety statements now being made in this DEIR. There were mitigations provided for which included regular inspections by FERC staff.

The Federal Energy Regulatory Commission licenses this facility under docket P-2277. According to the docket, available online in FERC's eLibrary, FERC inspected the project's safety within three months prior to the breach and certified that the project was satisfactorily compliant.

There aren't so many pumped storage dams licensed by FERC that we can't count this event as highly unlikely. FERC has taken precautions against terrorist attacks on electric infrastructure (so far much less likely than a dam breach) so more robust precautions must be accorded dam safety.

These should include: 1) discussion of dam design differences and similarities with Taum Sauk, 2) professional evaluation of the engineering relevance of these factors, 3) an estimation of the effects of a dam breach, 4) provisions for emergency response, e.g. a disaster plan, 5) insurance, 6) a clean up plan.

VII. Mitigation Assurances

Mitigation is an important part of an acceptable EIR. According to Remy page 392 – “The overall thrust of Public Resources Code section 20181, subdivision (a)(1), and CEQA Guidelines section 15091, subdivision (d), is that mitigation measures should be implemented.”.... other code sections, according to Remy, are meant to insure that “..the mitigation measures to be monitored or the subject of reporting must be “fully enforceable through permit conditions, agreements, or other measures.”

As far as we are aware the only permitting authority that SWRCB has is for the 401 permit. We have not been told that the 401 permit will be conditioned by a binding and enforceable agreement with ECEC to the effect that all mitigations listed in the EIR will be implemented in a timely and effective manner. Until that is done we will insist that the mitigations listed do not comply with CEQA requirements. In addition any referral of mitigation implementation to FERC is of no substance until we see a document that FERC agrees. FERC will issue the EIS

but that is no guarantee that they will agree with all mitigations listed in the EIR.

It seems that recently those agencies responsible for the protection of the public safety, health and welfare have had lapses with sometimes devastating consequences. There have been indications that these may well be due to private influence on the operations of public agencies charged with matters of regulation or public protection or to politically driven adverse decisions on emphasis regarding bureaucratic attention. We refer to the recent operation of the largest "Ponzi" scheme ever (SEC), the recent meltdown of the entire financial system, a massive egg recall, the largest ever oil spill in continental waters and the World Trade Center attacks. In most cases there are suggestions that alertness to warnings would have prevented or minimized these events, but that those charged with front line action are too comfortably assured of job security guaranteed by those who need watching.

This is actually surprising because advances in the science of human psychology have shown that for the most part job security is the upper most consideration of virtually all people. So for the most part if the watch dog is controlled by the fox the chickens are never safe. At first we were impressed that many hundreds of the mitigation measures were the responsibility of the Environmental Coordinator, including the important task of monitoring.

We then discovered that the person who will do this will be employed by ECEC. We could find no mention of the qualifications of this person or how they would be assured that honest and timely reporting would be rewarded rather than discouraged. Does anyone doubt that under the circumstances if ECEC finds monitoring or implementation a disadvantage of any sort that failure to comply with ECEC wishes will put the Environmental Coordinator's job in jeopardy? A much better arrangement must be in place before we are ready to concede that CEQA mitigation requirements are met.

In the case of the Taum Sauk dam failure just discussed, the FERC docket P-2277 discloses that FERC inspected the project's safety just three months before the massive failure and certified that the project was satisfactorily compliant. FERC has attempted to downplay its role but the fact remains that a recent FERC safety inspection was inadequate protection against total dam failure. This project must do better.

We point out that the failure to implement mitigations in a timely and effective manner is itself a significant impact on the environment. As a consequence discussion of the financial, political, bureaucratic, social and physiological factors involved is called for (we are able to provide instances known to us). In the discussion we want a mitigation of the impacts due to a failure to mitigate in a timely and effective manner. We know that we can seek a writ of mandamus, but this is slow, cumbersome and expensive. We suggest a prepaid ombudsman with the power to issue an enforceable writ on proof of mitigation failure.

VIII Groundwater supply

The Project proposes to pump tens of thousands of acre feet of water from a relatively small groundwater basin for initial filling, and to lose significant amounts of water yearly during operations. Groundwater impacts are perhaps the most significant problem posed by the project, yet the DEIR's analysis of the project's individual and cumulative impacts to groundwater supply does not provide adequate foundation for its conclusions. For example, the analysis limits consideration of cumulative impacts assessment to Eagle Mountain Landfill and only those solar projects currently undergoing environmental review.

However, both the California Renewable Energy Transmission Initiative and the Bureau of Land Management have identified the east Riverside County area as a key solar energy development zone, and there are no less than 17 applications for solar projects on tens of thousands of acres in this zone, with backup applications behind the primary ones in many cases. (See attached "Solar Energy Applications Palm Springs - South Coast Field Office") Cumulative impacts from additional solar projects are not speculative; even if only a subset of these 17 applications come to fruition, they will add substantially to the expected groundwater drawdown both for construction and operation. Moreover, the expected life of these other projects will extend beyond the 30 years calculated in the DEIR groundwater analysis. Additionally, the DEIR fails to adequately consider the local growth inducing effects of the Project in combination with other reasonably foreseeable projects, and the consequent increase in groundwater use.

In particular, the water supply analysis gives short shrift to the National Park's concerns about lowering of the Pinto groundwater basin (GWB). The DEIR's conclusions related to Pinto GWB are based on inadequate baseline information and unfounded assumption. The analysis fails to provide up-to-date groundwater level data for Pinto Basin, and the modeling upon which it relies makes various assumptions without providing adequate foundation. For instance, without basis, the modeling assumes that the groundwater gradient is parallel to the ground surface. Additionally, it measures groundwater connectivity between the Pinto GWB and the Chuckwalla GWB based upon the notion that the basalt ridge underlying the gap between Pinto GWB and Chuckwalla GWB is 100% impermeable. Where is the data to support these assumptions?

Even the DEIR's flawed analysis acknowledges that the drawdown in the Pinto GWB may be nine feet, yet it fails to assess the potential impacts to biota reliant on this groundwater. What seeps, springs, lakebeds and biological resources are dependent on Pinto GWB and the Chuckwalla basin and in and adjacent to the Park? How may these resources be affected by lowering of the groundwater level? The DEIR fails to adequately address this critical issue.

In addition to the above, the mitigation for excessive drawdown does not provide adequate assurance. If monitoring shows that groundwater pumping exceeds the "Maximum Allowable Changes" the proposal is: "The initial fill period would therefore be extended *to a maximum of* 4.5 to 6 years." (Summary, Mitigation p. 3, emphasis added) How does stretching the pumping just a few years offer protection for groundwater resources? Would it be feasible to extend the initial fill period longer?

IX Biological resources

As discussed more fully below, in its assessment for many if not most biological resources the DEIR acknowledges lack of current data. Because the DEIR fails to include critical studies and information necessary to fully understand the impacts that the Project will have, it violates CEQA. The biological assessment relies almost exclusively on the work done in 1992 and 1996 for the Eagle Mountain Landfill project. Although the area of the Kaiser Mine is heavily disturbed, even prior EIRs found it provided resources for bighorn sheep, sensitive bat species and potentially desert tortoise.

Yet the instant DEIR relies on 14 year old data, and impermissibly defers biological data gathering as well as mitigation for the majority of potential biological impacts. For a few examples:

- With regard to sensitive bat species the DEIR proposes: “the pumped storage project intends to conduct pre-construction surveys for bats, and develop a mitigation plan to avoid roosting and foraging impacts (see MM BIO-15) if needed.” (3.9-23)
- The DEIR’s treatment of Couch’s spadefoot toad is much the same.
- There is no baseline plant survey information, nor is there a Revegetation Plan, just good intentions: “a detailed Revegetation Plan shall address the following measures and include - Quantitative identification of the baseline community, both annual, herbaceous perennial and woody perennial species.” (Summary, Mitigation Program, p. 23)

The DEIR fails to provide the CEQA-mandated Mitigation and Monitoring Plan for biological resources. The project’s evaporation ponds with contaminants are insufficiently described, and the measures to ensure that they do not become a deadly nuisance to wildlife are scant. Worse, the current DEIR actually deletes some evaporation pond measures, such as monitoring and adaptive management, that were proposed in the earlier Project application. (Summary, Mitigation Program, pp. 29 and 30)

In sum, the DEIR fails to comply with CEQA in several distinct ways. First, it omits essential information and, as a result, fails as an informational document. Second, the DEIR unlawfully defers the formulation of various studies and mitigation measures. Third, the assessment of the project’s environmental impacts is inadequate. Significant impacts are deemed insignificant and impacts that can be mitigated are mistakenly found to be unavoidable. Fourth, significant new information is planned to be added at a future date, so the DEIR must be re-circulated and an additional public comment period provided.

Respectively Submitted

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San Geronio Chapter – Sierra Club