



April 13, 2021

Via Email: WR401Program@WaterBoards.ca.gov

Mr. Chase Hildeburn
State Water Resources Control Board
Division of Water Rights – Water Quality Certification Program
P.O. Box 2000
Sacramento, CA 95812-2000

RE: ***Lake Elsinore Advanced Pumped Storage (LEAPS) Project - Comments on Notice of Preparation and Scoping Meetings for an Environmental Impact Report for the Lake Elsinore Advanced Pumped Storage (LEAPS) Project, Federal Energy Regulatory Commission Project No. 14227***

Dear Mr. Hildeburn:

Thank you for this opportunity to provide comments regarding the Notice of Preparation and Scoping Meetings for an Environmental Impact Report issued by the State Water Resources Control Board (“State Water Board”) on February 9, 2021 for Nevada Hydro Company’s (“Nevada Hydro” or “applicant”) Lake Elsinore Advanced Pumped Storage (“LEAPS”) Project, Federal Energy Regulatory Commission (“FERC”) Project No. 14227-003 (the “Project”).

The City of Lake Elsinore (“City”) submits these comments to identify areas of additional environmental studies and analysis which must be conducted as part of the environmental review of the Project in accordance with the requirements of the California Environment Quality Act, California Public Resources Sections 21000 et seq. (“CEQA”).

The City serves as the local agency responsible for overseeing the health, safety and welfare of more than 63,000 residents within our municipal boundaries and is the public agency designated by the State of California to serve as the primary caretaker of Lake Elsinore (the “Lake”), Southern California’s largest natural lake.

The City is also the fee owner of the real property comprising the Lake’s basin and holds the exclusive easement to use the Lake’s surface for recreation purposes. The Lake is central to the Project, serving as the so-called “lower reservoir.”

951.674.3124

130 S. Main Street
Lake Elsinore, CA 92530
www.lake-elsinore.org

The City's scoping comments are divided into three categories. The first category, Part I, contains areas of specific concern where we address the use of the Applicant Prepared EIR, previously raised comments by the regional water board about Project-related water quality concerns that remain outstanding, and issues related to a provision of the Government Code that places legal restrictions on non-recreational use of the Lake.

The second category, Part II, contains general concerns keyed to mandatory elements contained in a properly prepared EIR, such as the concerns related to the Project's impacts on geology, land use, noise and socioeconomic impacts.

The final category of comments, Part III, addresses Project alternatives.

I. AREAS OF SPECIFIC CONCERN

A. The State Water Board should not utilize the Applicant Prepared EIR

At the scoping meeting on March 8, 2021, State Water Board staff requested comments as to whether the State Water Board should utilize the "Applicant Prepared" Environmental Impact Report (the "Applicant Prepared EIR"). The Applicant Prepared EIR is ostensibly dated September 2017 but is loaded with technical studies and data now more than 15 years old that were part and parcel to the Applicant's failed 2010 Project-related application submitted to the California Public Utilities Commission ("CPUC").

In 2010, the applicant filed with the CPUC an Application (A.10-07-001) for a Certificate of Public Convenience and Necessity ("CPCN") for the proposed Talega Escondido/Valley-Serrano 500 kV Interconnect Project, referred to as the "TE/VS Project." As part of its application, the applicant submitted a Proponent's Environmental Assessment ("PEA"). The PEA, which is readily available for viewing online at the CPUC's website,¹ contains the mandatory components of a draft EIR. Those component parts are dated June 2009 and, as shown below, have been reused to form the substantive portions of the Applicant Prepared EIR (now dated September 2017).

Before we delve into facts showing that the Applicant Prepared EIR is substantively the 2009 PEA submitted to the CPUC, we hope that the State Water Board is aware that FERC recently rejected the applicant's pleas to rely on outdated environmental documents for purposes of satisfying the requirements of NEPA. On August 17, 2020, the applicant attempted to persuade FERC to limit the environmental review process under NEPA, requesting that FERC "approach its NEPA responsibilities in P-14227 to create a supplemental EIS to the 2007 FEIS"² FERC rejected the applicant's request for a supplement to the 2007 FEIS, stating in Scoping Document 2 that "Commission staff intends to prepare an Environmental Impact Statement (EIS), which will be used by the Commission to determine whether, and under what conditions, to issue an original license for the project."³

The core question when assessing whether the State Water Board should begin the CEQA process with the now recycled 2009 PEA (rebranded as the Applicant Prepared EIR) is to ask: how old is too old? As it turns out, the applicant's own consultant has provided some insight. In 2017, the applicant retained "TRC Solutions, a highly qualified environmental consulting firm, to assess

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changes that may have occurred since issuance of the Final EIS that might be addressed in an update to the Final EIS.”⁴ On the issue of old data, TRC states that:

“In our experience, most agencies will require new studies when data is more than 5 years old, or at least a refreshed review based on currently available environmental data.”⁵

As shown below, in considering whether or not to use the Applicant Prepared EIR, the State Water Board’s finds itself in a remarkably similar situation as faced by FERC when it considered whether or not to place its reliance on a prior environmental document, also over a decade old.

While the Applicant’s EIR is dated “September 2017,” it is nearly identical in several material respects to the June 2009 environmental analysis presented by way of the PEA as part of the applicant’s CPNC application to the CPUC. How identical? Well, just by way of an initial sample, the signature on the CEQA Checklist directed to the CPUC in 2010⁶ has the same exact signature as the 2017 CEQA Checklist contained in the Applicant Prepared EIR⁷:



Signature	April 12, 2010
David Kates, Project Manager	The Nevada Hydro Company, Inc.
Printed Name	Applicant



Signature	August 31, 2017
David Kates, Project Manager	The Nevada Hydro Company, Inc.
Printed Name	Applicant

The applicant has swapped out the CPUC for the State Water Board as the lead agency along with updating the name of the applicant’s president. And there is a minor deletion in the project description. But other than those minor changes, the 2010 CEQA Checklist and 2017 CEQA Checklist are identical.

Moreover, the substantive chapters, figures and tables in the 2017 Applicant Prepared EIR align again and again with the applicant's PEA submittal dated 2009 to the CPUC. Chapter 3, entitled "Project Description" of the 2009 PEA and the 2017 Applicant Prepared EIR are nearly identical. The table of contents is the same except for the addition of two pages of material regarding "Black Start Capability," "Alternate Routing" and "Response to SONGS Outage."⁸ The List of Tables is the same with the exception of a depiction of two alternative routing segments which in turn garner two paragraphs of discussion.⁹ The List of Figures is the same. Not even the "LEAPS Construction Schedule" in the 2017 Applicant Prepared EIR has been properly updated, listing the "Complete Construction" as "11/2/15".¹⁰

The Environmental Settings portion of the 2017 Applicant Prepared EIR is essentially lifted from the 2009 PEA. Chapter 4 of the Applicant Prepared EIR now stands as embarrassingly out of date. Section 4.3 concerning Aesthetics cites to the City of Lake Elsinore's 2006 General Plan¹¹; the City's General Plan was updated in December 2011.¹² In the Air Quality section, the Applicant Prepared EIR cites to "CARB's 2004 monitoring data"¹³ Table 4.6.1-1 of the Applicant Prepared EIR summarizes the biological resource surveys, quantities and the year performed.¹⁴ The last year of such surveys was 2006. As a result, the "environmental setting" for such critical species Least Bell's Vireo, Spotted Owl, and the Arroyo Toad is derived from surveys now 15 years old.

Of particular interest to the City is Section 4.10 on Hydrology and Water Quality. This section of the Applicant Prepared EIR is infected with outdated data. Local climate data for the City does not consider any data after 2005.¹⁵ Lake elevation data stops at 2002.¹⁶ Dissolved oxygen, and nutrient levels and algae in the Lake are based on surveys from 2002 through 2004.

Section 4.14 on Population and Housing relies on the 2000 census and contains tables that "project" employment beginning in 2005 and includes a separate table for the "1999 Median Income."¹⁷ Table 4.14.1-5 contains "growth projections" for 2010 and 2020.¹⁸ Table 4.14.1-4 showing the area's wildfire history ends in 2006; one of Southern California's largest wildfire, the Holy Fire, occurred in 2018, consuming over 23,000 acres in the Cleveland National Forest and nearby rangelands.

The above-referenced examples are merely a limited sample of the pervasiveness of old data in the "Environmental Setting" chapter of the Applicant Prepared EIR. To the applicant's credit, Chapter 4 is heavily footnoted with citations to reference documents. Yet, in this author's review of those 432 footnotes, not a single source document dated 2010 or after was found.

Because Chapter 4 is so rife with stale information in providing the environmental setting, Chapter 5's "Environmental Impact Assessment Summary," which necessarily uses the settings as its foundation for the impact assessment, is severely undermined. It is simply a situation of "garbage in, garbage out." Chapter 7's "Discussion of Significant Impacts" is likewise rendered inadequate due to the same foundational flaw. Indeed, the applicant is essentially requesting that the State Water Board circulate a draft EIR and somehow ultimately certify that same EIR based on a document prepared over 10 years ago with data from more than 15 year's ago.

The City of Lake Elsinore has a simple request: Can the resource agencies entrusted with assuring that the natural resources agencies of this State are properly preserved and protected stop giving short shrift to the largest natural freshwater lake in Southern California and prepare an environmental document in 2021 that is not the applicant's PEA submitted to the CPUC in 2009?

B. The EIR should review and address the Project's impacts to Lake Water Quality raised by the Regional Water Board

Despite the City's modest population (approximately 63,000), the City Council (and, in turn, the City's taxpayers) invests more than \$1 million annually in maintaining and improving water quality in the Lake. We regularly work with the Santa Ana Regional Water Quality Control Board ("Regional Water Board") and its dedicated staff. The Regional Water Board's commitment to the Lake was clearly evidenced in 2017 when, with little warning, the City, the Regional Water Board, and other state and federal resource agencies were given just over 45 days to evaluate the applicant's license application submittal to FERC and apprise FERC as to "additional studies" that were necessary to evaluate the Project's impacts.¹⁹

By letter dated December 1, 2017²⁰, Mark Smythe, Senior Environmental Scientist for the Regional Water Board, cogently identified eight areas of concern that necessitated additional environmental analysis that are summarized below:

1. That a water supply for the Project be identified;
2. A study to determine Project impacts on total nitrogen, total phosphorous, and cyanotoxins in the Lake;
3. A study to determine how the Project will be incorporated in the Lake's TMDL;
4. A study to assess the Project's potential impacts on the lakebed sediment;
5. A study of the Project's impacts to water contact recreation;
6. A study of the impacts of the Project's impingement and entrapment of the Lake's aquatic resources;
7. A study to determine the minimum Lake elevation at which LEAPS can operate and the effects on the Lake at that level; and
8. A study to assess the impacts if chemical are used to control algae concentrations.

(The Regional Water Board's December 1, 2017 letter is attached as Exhibit 1 to this letter.)

FERC categorized these eight concerns into five "study requests" to which FERC acknowledged the need for two additional studies, albeit that the two studies should be combined into one study.²¹ The State Water Board (and the EIR) needs to revisit the critical issues cavalierly dismissed by FERC. FERC's analysis of the study requests is discussed below along with a discussion of why

the State Water Board's EIR should remedy the paucity of data about the Project's impacts to water quality and recreation at the Lake.

FERC Study No. 4 – Total Nitrogen and Phosphorus, and Cyanotoxin:

This appears to be a combination of the Regional Water Board's concern #2 and #3 above. In agreeing that an additional study was necessary, FERC concluded that:

“we find that we do not have enough information to define at what levels the proposed LEAPS Project facilities would be capable of operating or the environmental effects of operating the project when the Lake Elsinore elevation cannot be maintained at or above 1,240 feet. *Therefore, when implementing the detailed water quality study plan discussed below in Study 7*, Nevada Hydro should assess operating capabilities of the project and Nevada Hydro's proposed operation of the project under normal and adverse water conditions and the potential for, and effect of, algae entrainment into project intakes, and the subsequent effect project operation may have on TN, TP, and cyanotoxins in project waters.” (Emphasis added.)²²

As discussed in detail below, Study 7 is much less of a mandate to the applicant than FERC kicking the water quality “can” to the State and Regional Water Boards to require the studies be properly performed.

FERC Study 5 – Resuspension of Sediment and Nutrients, Shoreline Erosion, and Turbidity:

This lines up with the Regional Water Board's #4 on the list. FERC determined that additional study was not needed.

FERC Study 6 – Impingement and Entrainment:

FERC Study 6 would address #6 of the Regional Water Board's list. FERC determined that additional study was not needed.

FERC Study 7--Operation Effects on Water Quality:

Study 7 appears to address #1 indirectly and #7 directly from the Regional Water Board's list. FERC agrees that “Study 7” (which also should include “Study 4”) should be performed but appears to shift the burden to the Regional Water Board to determine the contours of that study:

“Therefore, Nevada Hydro must coordinate with the Regional Water Board, to develop a detailed water quality study plan that defines both the proposed project operating capabilities and Nevada Hydro's proposed operation of the project under normal and low water conditions. Specifically, the study plan should assess operating capabilities for the full operational range of Lake Elsinore's water surface elevation, and the potential for, and effect of, algae entrainment into project intakes, and the subsequent effect project operation may have on TN, TP, and cyanotoxins

in project waters. If Nevada Hydro does not adopt any of the Regional Water Board's recommendations, then it should provide its reasons for doing so using specific, detailed information. If Nevada Hydro and the commenting entities disagree on the details of the study plan, then Commission staff will resolve any disagreements in its study plan approval."²³

The City is not aware of any "coordination" between the applicant and the Regional Water Board but urges the State Water Board to ensure that the EIR "assess[es] operating capabilities for the full operational range of Lake Elsinore's water surface elevation, and the potential for, and effect of, algae entrainment into project intakes, and the subsequent effect project operation may have on TN, TP, and cyanotoxins in project waters."

FERC Study 29 – Assessment on Recreation:

Study 29 addresses #5 of the Regional Water Board's list concerning Project impact to recreation on the Lake. FERC determined that additional study to recreation impacts was not needed when it comes to the Lake.²⁴ We urge the State Board to ensure that the draft EIR for the Project analyzes project related recreation impacts, fully disclose those impacts, and provide for appropriate mitigation (if that is even possible). Additional concerns to Project impacts on Lake recreation are discussed in Part II below.

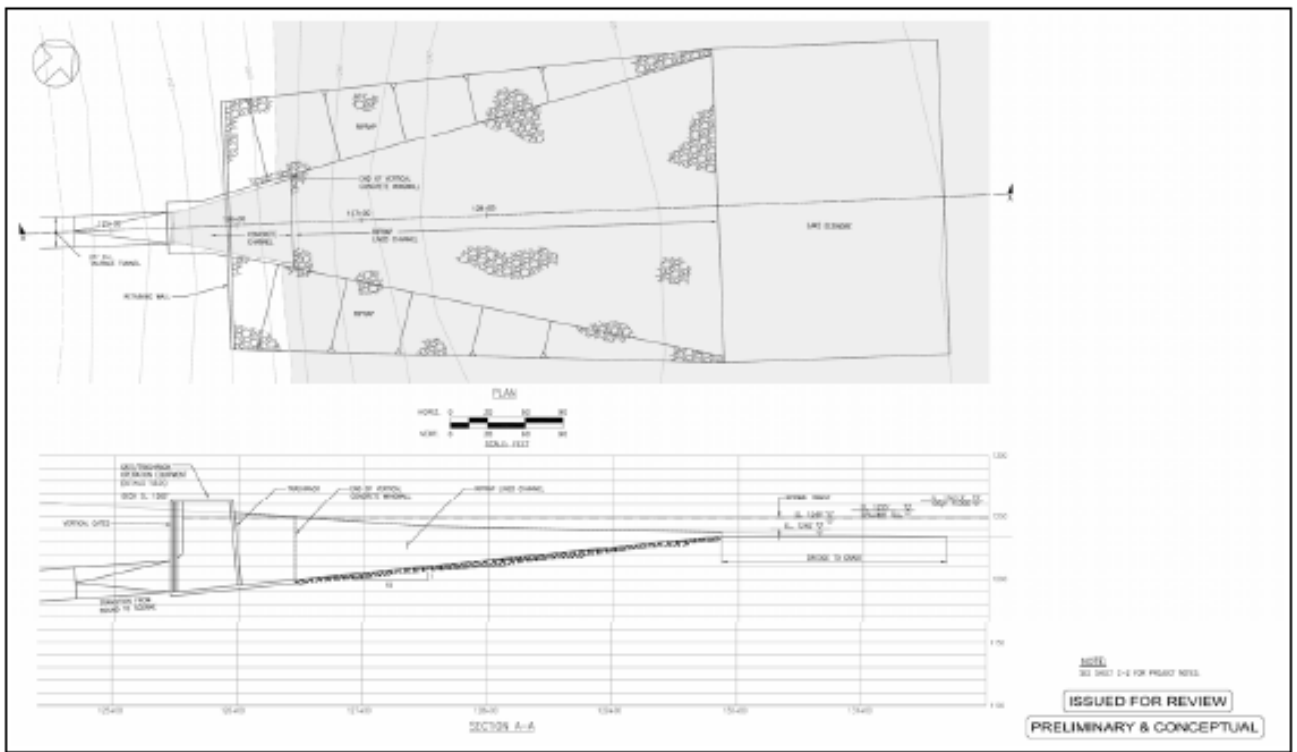
In summary, we urge the State Board to carefully review the Regional Water Board's eight concerns set out in the 2017 letter and require that those concerns be assessed (and mitigated to the extent necessary) in connection with the Project's EIR.

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C. The Applicant has recently proposed a massive change to the Intake/Outlet Structure located in the Lake

The City is concerned that the applicant is proposing an extensive revision to the intake/outlet structure to be constructed in the Lake. Prior submittals by the applicant show the intake/outlet structure protruding roughly 500 feet from the Lake's typical shoreline along with proposing dredging farther out to reach a level elevation of 1,232 msl. Here is a typical depiction of the intake/outlet structure from an early submittal by the applicant²⁵:

**Talega-Escondido/Valley-Serrano 500-kV Interconnect Project
Lake Elsinore Advanced Pumped Storage Project**



**Figure 3-32 (10 of 10)
LAKE ELSINORE ADVANCED PUMPED STORAGE PROJECT - CONCEPTUAL DRAWINGS
CONCEPTUAL STUDY – LOWER RESERVOIR OUTLET PLAN AND PROFILE**
Source: The Nevada Hydro Company

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This same general design of the intake/outlet structure is also reflected in the Exhibit A of the Final License Application:

EXHIBIT A – PROJECT DESCRIPTION
 FERC Project No. 14227

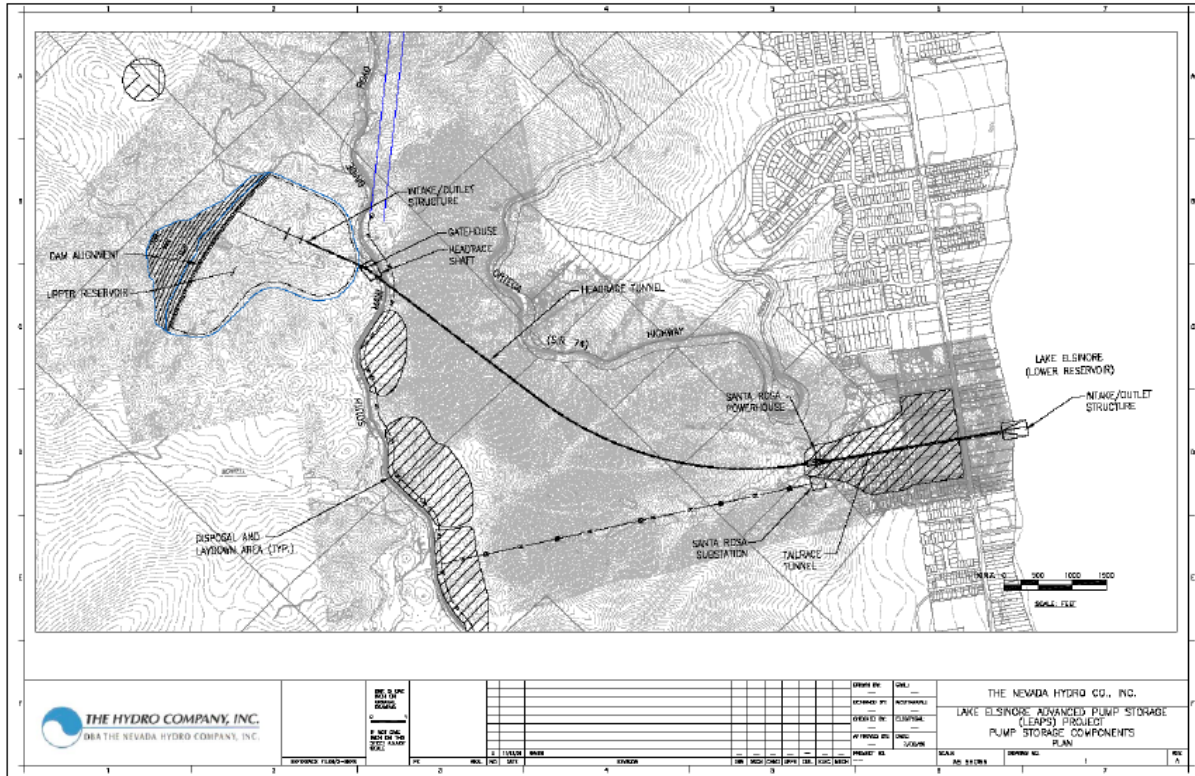
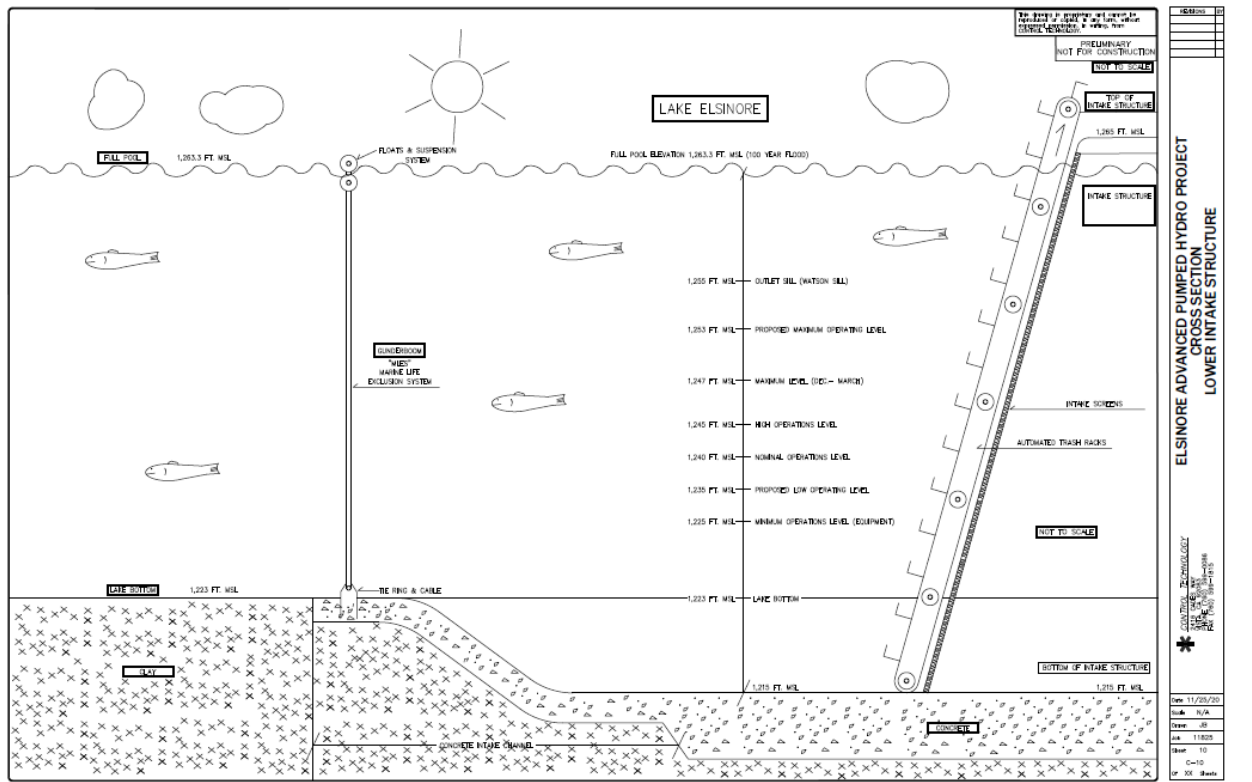


Figure A- 4: Project Plan View
 Source: The Nevada Hydro Company

As show above, the intrusion of the structure into the Lake is less than 500 feet.

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Late last year, the applicant submitted a drawing to FERC, labeled “Cross Section Lower Intake Structure” showing a hugely expansive intake/outlet structure design²⁶:



This new design shows a concrete structure extending to the Lake’s bottom at 1,223 msl along with a removal of the lakebed to create a holding area down to elevation 1,215 msl. Put bluntly, this extends the intake/outlet structure to the middle of the Lake.

The diagram also shows a “Gunderboom ‘Miles’ Marine Life Exclusion System” with a float and suspension system. The float system, if located far from the shoreline as contemplated in the diagram, will create a rather clear boating hazard which could presumably extend into the City’s high speed boating zone.

There is no additional information on the size of the cofferdam necessary to install a concrete channel to the center of the Lake and excavate that concrete channel to 1,215 msl but we are certain it would be much greater than the handful of acres impacted on the Lake based on the previous design submitted to the CPUC in 2008 and FERC in 2017. Extension of a cofferdam far into the Lake would have an unmitigable impact on boating recreation, not to mention adding to the sizable excavation the Project already contemplates.

We request that the State Board seek clarification from the applicant on what appears to constitute a staggering increase to the adverse environmental metrics already posed by the Project. We further note that the Project Description chapter in the Applicant Prepared EIR nonetheless makes no mention of the massive new intrusion now apparently planned for the Lake.

D. The State Water Board should analyze the LEAPS Project’s inconsistency with the Lake’s dedicated use as a recreation resource mandated by the State

We recognize the State Water Board’s primary role in evaluating whether to issue a water quality certification for the Project under Section 401 of the federal Clean Water Act. Our issue, however, is that we believe the State Water Board should not, and cannot, issue a permit for an activity that on its face violates State law. As explained in greater detail below, the governance and use of the Lake is directed by a provision of the Government Code specifically addressing Lake Elsinore and related restrictive covenants, also in favor of the State of California.

Government Code section 14670.67(a) specifically provides that the Lake Elsinore Recreation Area, which includes the Lake, be used for public park and recreation purposes:

“Notwithstanding any other provision of law, the Director of General Services, with the approval of the Director of Parks and Recreation and the State Public Works Board, may convey at no financial consideration to the City of Lake Elsinore, subject to an easement for flood and water storage together with any water rights the state may have in the property, and an easement to the Elsinore Valley Municipal Water District for flood and water storage together with any water rights the state may have in the property, upon those terms, conditions, and with the reservations and exceptions that the Director of General Services determines are in the best interests of the state, all the right, title, and interest of the state in that property known as the Lake Elsinore State Recreation Area *upon the condition that the property be used for public park and recreation purposes in perpetuity* and that park and recreation improvements conform to the Lake Elsinore State Recreation Area General Plan adopted pursuant to Section 5002.2 of the Public Resources Code and current at the time it is conveyed, except that the plan may be amended” (Emphasis added.)

The State-imposed recreational use restriction is further documented as part of the grant of the Lake jointly to the City and the Elsinore Valley Municipal Water District (“EVMWD”). This obligation is set forth in the 1993 Quitclaim Deed in which the State of California granted the Lake Elsinore Recreation Area (which encompasses the Lake and designated park properties) to the City:

“the State of California ... hereby quitclaims to the City of Lake Elsinore ... all of its right, title and interest in and to the [Lake Elsinore Recreation Area.]”²⁷

The grant was made “subject to the express condition that the real property herein conveyed shall be *used, maintained and improved by the City for public park and recreation purposes in perpetuity*” (Emphasis added.)²⁸

EVMWD’s relationship to the Lake is significantly different but nonetheless consistent with its mission to provide our community with potable water. To that end, the State granted EVMWD an “Easement Deed for Flood and Water Storage and Related Appurtenances” to “receive, store,

withdraw and sell any and all waters above the water level elevation 1240 feet above sea level ...” along with a quitclaim deed for water rights.²⁹

These instruments are tempered with a specific prohibition:

“This deed is made subject to the express condition that the real property and rights herein conveyed *shall be used in a manner consistent with the use, maintenance and improvement of said real property for park and recreation purposes* as described in the [City’s Quitclaim Deed].”³⁰ (Emphasis added.)

The EIR should address the impact of the Project on the State’s land use imposition applicable to Lake Elsinore, that is, that the Lake be used in a manner consistent with the use, maintenance and improvement of the Lake Elsinore Recreation Area for park and recreation purposes. Additionally, the EIR should address the LEAPS Project’s consistency with the 1984 Lake Elsinore State Recreation Area General Plan, also referenced in Government Code section 14670.67(a).

Finally, the City requests that the State Water Board give consideration of its legal duties in the face of a permit application that attempts to utilize the Lake for a project that has yet to demonstrate that it will not interfere with and, indeed, will substantially harm the recreation purpose to which the Lake has been legally dedicated by the State.

III. GENERAL SCOPING COMMENTS TO ADDRESS RESOURCE ISSUES POSED BY THE PROJECT

A. Recreation Impacts

We noted above the Regional Water Board’s concerns, detailed in its 2017 letter to FERC, about Project-related impact to water contact recreation. We share those concerns but also believe the scope of potential impacts goes beyond water contact recreation. The City requests that the EIR evaluate the effect of daily Lake elevation fluctuations on existing recreation facilities. Notably, operations of the LEAPS will result in daily fluctuation of the Lake’s surface by 1-foot and weekly fluctuations of up to 1.7-feet.³¹ Due to the shallow topography of the Lake, the edge of the Lake will regularly move between eight (8) linear feet and over 100 linear feet, creating a new multi-acre “mud zone” along the entire perimeter of the Lake.³²

While Nevada Hydro’s consultants considered these mud zones in 2005 and 2006 when the proposed LEAPS operations were between Lake level 1,240 mean sea level (“msl”) and 1,247 msl,³³ no analysis of these inundations areas was performed by Dr. Anderson in connection with his updated water quality study submitted to FERC in February 2019 in support of the new 1,235 msl minimum operating range (discussed in greater detail below).³⁴

In 2006, Dr. Anderson estimates that the mud zone to be as large as 134 acres with the Lake elevation between 1,240 msl and 1,247 msl.³⁵ Despite the fact that last year FERC instructed the applicant to lower the minimum Project operating level to 1,235 msl, the applicant was not required to further study and determine the size of the resulting mud zone at Lake level 1,235 msl. Because the Lake flattens so dramatically at lower elevations, proper delineation of the mud zones will

likely vastly exceed the 134 acres in the 2006 analysis. Given the significant expansion of the Project's operating range in the Lake, further analysis of the size (and, in turn, impacts) of the mud zones when LEAPS is operating at elevation 1,235 msl is warranted.

Specifically, the City requests that the EIR assess the effects of the Project on the following recreational opportunities at the Lake:

- Boating and related watersports (motorized and non-motorized)
- Fishing
- Wading
- Swimming
- Camping
- On-shore beach recreation (sunbathing, picnics, group gatherings)

Finally, the City urges that the State Water Board to prepare an EIR that definitively takes on the impacts of the Project to the Lake's shoreline private property owners. As a starting point, the City recommends detailed (mapping simulations of the mud zones at elevation 1,235 msl, 1,240 msl and 1,247 msl).

Commenters in the federal licensing process have noted that these mud zones will be unusable for recreation and, perhaps more troubling, may serve as a large and heretofore unknown expansive breeding grounds for insects.³⁶ Accordingly, in addition to mapping these mud zones and analyzing the impact to recreational uses, the EIR should contain an assessment of the potential health impact of these mud zones. We discuss potential health impacts in Section C below.

B. Water Quality

The EIR must rigorously evaluate the Project's impact to the Lake's water quality. Last year, Nevada Hydro submitted its "Impacts of the Lake Elsinore Advanced Pumped-Storage (LEAPS) Project on Water Quality in Lake Elsinore Final Report" (hereinafter the "Final Report") to FERC.³⁷

Following the City's initial review of the Final Report, the City retained Stillwater Sciences, Inc. to conduct a peer review of the Final Report. The Stillwater Sciences Technical Memorandum, (the "Stillwater Technical Memorandum") submitted to FERC on August 2, 2019, found material deficiencies throughout the Final Report.³⁸ Stillwater noted the following deficiencies with respect to the Final Report:

"The following information is necessary to determine AEM3D model performance for estimating water quality conditions under LEAPS operations scenarios, to evaluate the potential impacts of LEAPS operations scenarios on water quality in Lake Elsinore, and to identify lake elevations when significant negative impacts would occur:

- A summary of the spatial variability in observed Lake Elsinore water quality data.

- A table summarizing the available observed water quality data, including location(s) it was measured, typical frequency of measurement, period of record, and the number of measurements within the period of record.
- A map specifying the locations where Lake Elsinore observed water quality data was measured and the location(s) where model results are shown (e.g., TMDL Site E2).
- Comparison of observed and predicted water quality calibration results at multiple locations within Lake Elsinore to evaluate the range of model performance at different locations within the lake, if sufficient spatial data is available during the modeling period (i.e., February 8, 2016 to August 31, 2018).
- Model calibration results for NH₄-N and PO₄-P concentrations along with the model performance statistics for these water quality parameters.
- Calculation of the model performance statistics percent bias and Nash-Sutcliffe Efficiency for each water quality parameter in addition to the RMSE.
- Model validation analysis for each water quality parameter predicted using data not included in the calibration process.
- Discussion of the spatial variability in each water quality parameter, including plots showing the range of spatial variability across Lake Elsinore.
- Discussion of the model uncertainty during the presentation of model results, especially when making conclusions about the impacts of LEAPS operations on Lake Elsinore water quality.
- Quantification of the change in frequency Lake Elsinore water quality parameters exceed the relevant water quality thresholds (e.g., Basin Plan objectives) between native conditions and the various LEAPS operations scenarios.
- A more detailed analysis of the potential for a curtain to reduce transport of *Microcystis aeruginosa* and microcystin between the Upper Reservoir and Lake Elsinore, if a curtain is being considered for use to mitigate potential impacts under LEAPS operations scenarios.
- Quantification of the water quality of the initial SWP supplementation into Lake Elsinore after it has been routed through Canyon Lake and the San Jacinto River or a more detailed explanation of why it is reasonable to assume the water quality of the SWP supplementation does not change during transport from Canyon Lake to Lake Elsinore.
- Simulations of water quality that separate SWP supplementation from LEAPS operations. This could be accomplished by modeling Lake Elsinore without LEAPS but considering SWP supplementation, by modeling LEAPS with water quality of the supplemented water matching existing conditions, or through a longer-term reservoir simulation with results examined after an equilibration period (e.g., 10 years) using hydraulic residence time or estimates of the characteristic times of other water quality determinants.”³⁹

The Lake will also be used to store Nevada Hydro's purchased water which will be purchased from a third party and conveyed to the Lake. This is contemplated in both the "Consent Judgment" entered into between Nevada Hydro and the Elsinore Valley Municipal Water District ("EVMWD" or "District") and the related settlement agreement. The Consent Judgment provides:

"The Water Management Services to be provided by the District shall include facilitating, at Hydro's cost ..., the purchase, importation, and storage of fifteen thousand acre feet (15,000 AF) of water to be introduced into Lake Elsinore"⁴⁰

That intent to use the Lake to store Nevada Hydro's water is also evidenced in the Settlement Agreement. "Exhibit 2" to the Settlement Agreement includes the "term sheet" for Nevada Hydro's storage of its water in the Lake. The term sheet provides for a:

"proposed Water Supply and Storage Agreement which would allow Hydro to purchase, import, and store 15,000 AF of water in Lake Elsinore"⁴¹

Nevada Hydro's stated plan is to purchase State Water Project water.⁴² While we assume this water will be of potable quality at its release point above Canyon Lake reservoir, it will be far from that quality upon reaching the Lake. Water will flow through two impaired water resources, the first being Canyon Lake reservoir which will in turn release water at the dam to flow through the San Jacinto River channel. Historically, this sort of "first-flush" water through the river channel has proved to be highly polluted and can carry invasive fish species into the Lake.

The impacts of importing 15,000 acre feet ("AF") of polluted water into the Lake has yet to be analyzed because the Final Report on water quality imagines the purchased water will magically arrive at the Lake in the same quality as it left the State Water Project spigot above Canyon Lake.⁴³

The Lake is not a sump for which others should be allowed to add to an already impaired water body. The EIR must address this planned importation of 15,000 AF of water into the Lake and provide concrete mitigation measures to ensure water added to the Lake is of high quality. Additionally, annual "make-up" water to offset the Project's annual evaporative losses must be addressed in terms of potential water quality impairment to the Lake.

There are other questions that also need to be addressed when it comes to the import of project water into the Lake. The applicant has failed to commit to replacing the initial 15,000 AF of water for LEAPS operations if (and when) the Lake floods. While the Project has been analyzed as a "closed system," that is not entirely accurate. When the Lake floods, heavy flows move through the Temescal Wash. This last happened over 30 years ago. After the initial 15,000 AF makes its way through the Lake's outflow during a flood event, the water will travel north and empty into the Santa Ana River (and from there, the Pacific Ocean).

Does the applicant have any obligation to restore that 15,000 AF baseline contribution once the Lake recedes to the more typical 1,240 msl elevation (less any waters held back in the upper reservoir during the flood)? Or, having made a one-time 15,000 AF commitment, is the applicant then free to use natural Lake water for its project? At the behest of the City, FERC asked the applicant that question last year.⁴⁴ In a supplemental response to FERC, the applicant expended more than 400 words ducking a direct response to the question (which answer was, as an aside, "no" to additional water). In keeping with the applicant's inimical history, it pointed to its

settlement agreement with EVMWD that provides only for a single 15,000 AF contribution. How the applicant is able to determine its own mitigation requirements for the Lake by way of entering into a third party contract remains a mystery.

We urge the State Water Board, as part of preparing the EIR, to commission an independent assessment of Project impacts to water quality in the Lake as part of that EIR process rather than relying on the flawed analysis that have been submitted by the applicant to FERC. As noted above, the City's water quality concerns have been echoed by the Regional Water Board's own experts.⁴⁵ It is time that decision-makers and stakeholders alike have a water quality report that takes a hard look at the Project's impacts to Lake water quality from both daily operations and from the proposed additions of supplemental water.

C. Health Impacts

1. Sensitive receptors

The proposed Santa Rosa powerhouse will be located on or at least near land currently housing the Santa Rosa Villas Apartments, thereby necessitating that the applicant purchase that property and displace those residents. However, other adjacent nearby users will not be bought out. The powerhouse is near the Copper Canyon Villas neighborhood and the multi-use Lakeland Village Community Center. Traditional suburban neighborhoods lie within easy walking distance to the northwest and the southeast. Lakefront homes are situated just across the street on Grand Avenue.

We know that the State Water Board is aware that the Project will involve a massive level of excavation. Indeed, powerhouse construction will involve the excavation of an underground cavern the size of a football field (375 feet long, 85 feet wide, 175 feet high), 330 feet below the existing surface.⁴⁶

Sensitive receptors can include children, the elderly, the sick, and the athletic-activity participants. (See, e.g., *Cleveland Nat'l Forest Found. v. San Diego Ass'n of Gov'ts* (2017) 17 Cal. App. 5th 413, 434.) Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. (See, e.g., *Citizens for Responsible & Open Gov't v. City of Grand Terrace*, 160 Cal. App. 4th 1323, 1338.) The surrounding residents are easily viewed on Google Earth and meet the criteria for sensitive receptors. Additionally, the Project's proximity to the Lakeland Village Community Center deserves additional consideration.

The Lakeland Village Community Center (lying just beyond the City's municipal boundaries but regularly utilized by City residents) is home to the Boys & Girls Club of Southwest Riverside County, provides a community gathering place for local clubs, provides adult recreation and learning classes, and includes a multipurpose room which serves a rental venue and community theater. A playground with multiple outdoor basketball courts is located on the north side of the complex. Iglesia Del Lago offers religious services on-site on Sunday mornings; Calvary Chapel Casa de Pan offers religious services on-site on Sunday afternoons.

This rather long list of users at the community center share a common characteristic: they are also sensitive receptors.

Sensitive receptors like the Lakeland Village Community Center, Copper Canyon Villas and nearby neighborhoods will bear the impact of multiple sources of pollution from the construction of the powerhouse.

CEQA provides a strong legal basis for the inclusion of information in an EIR concerning the health effects of a project. The California Supreme Court has observed that “CEQA requires that the EIR have made a reasonable effort to discuss relevant specifics regarding the connection between two segments of information already contained in the EIR, the general health effects associated with a particular pollutant and the estimated amount of that pollutant the project will likely produce.” (*Sierra Club v. City of Fresno* (2018) 6 Cal.5th 502, 525.)

Areas of particular concerns included diesel emissions from heavy equipment and truck traffic, particle generation from massive blasting and other excavation activities, and the potential for traffic injuries from the trucking traffic. Additional potentially significant health effects may result from the Project’s noise impacts, access to community services, access to community recreation facilities and construction conditions that may deprive community members for access to social networks provided through the Community Center.

2. Creation of habitat for vectors and others pests

Above, the City requested a study detailing the effect of daily Lake elevation fluctuations on existing recreation facilities. In addition, individual community commenters have raised concerns that new, large mud zones will be breeding grounds for insects.⁴⁷

Nevada Hydro’s consultant “crudely approximated” the mud zone in 2006 at elevation 1,242, showing some rather large mud zones in the southern reaches of the Lake along with the “T” peninsula that appear to be potentially suitable for mosquito breeding, especially considering that the 1.7 foot drop in Lake elevation will typically only occur once per week while most other days will see a recurring oscillation in the Lake level of about 1-foot.⁴⁸ The potential for standing water remaining undisturbed in the mud zones for a week or more poses a potential vector threat.

The Project will result in a vast expansion of mud zones around the Lake and, in turn, potentially become a vast breeding ground for pests and potential vectors far exceeding existing conditions. Accordingly, significant health effects may result from the Project’s operations by creating a condition suitable for pests and potential vectors which directly impact the health of the community. These potential impacts should be analyzed by an entomologist and other competent professionals and, to the extent potentially significant impacts exist, mitigation measures must be imposed.

D. Aquatic Resources

The EIS should fully address impacts of the Project on the Lake's aquatic resources and propose mitigation measures such as development and funding of a fishery, zooplankton and an aquatic vegetation assessment program consistent with maintaining a high-quality fishery.

The City also notes that a long-time Lake stakeholder has reported encountering turtles along the Lake shore.⁴⁹ Such sightings have been rare in the past although turtle populations may enjoy a level of resurgence due to the general stabilization of the Lake level during the past 30 years. Given the environmental protections accorded the Western Pond Turtle and its potential range of habitat in Southern California, the City requests the EIR include a focused survey to determine if the Lake is currently home to Western Pond Turtles.

E. Avian Resources

Lake Elsinore is the permanent and seasonal home to more than 200 species of birds and serves an important role as a way-station on the Pacific Flyway for hordes of migrating waterfowl traveling from Alaska to South America. A short list of resident and often nesting birds includes Great Blue Herons, Great Egrets, Night Herons, Osprey, White-tailed Kites, Western Grebes, Terns, Gulls, Black-necked Stilts, Avocets, Killdeer and Plovers.

The fluctuating water level and shoreline, along with the mud zone caused by the Project may have a substantial negative effect on shoreline birds. Black-necked Stilts, Avocets, Western Snowy Plovers and Killdeer are known to breed on undisturbed shorelines of Lake Elsinore. The EIR should address impacts of the Project on the Lake's avian resources.

F. Fire Hazards

The Project's transmission lines that will weave through the Cleveland National Forest are located in an area that has historically been impacted by wildfires, where wind patterns can potentially exacerbate wildfires, and where recent residential development has occurred along the border of the national forest. As exemplified by the Holy Fire, which occurred in 2018, there is significant fire risk associated with the Project.

While the City is gratified that the U.S. Forest Service has required the applicant prepare an updated Fire Study, the EIR should also address the Project's impacts on regional fire management operations.

G. Traffic

The latest traffic study submitted in as part of the applicant's federal license application acknowledges that the sheer magnitude of the Project will lead to significant traffic impacts.⁵⁰ The primary access roads to and from the Project's construction sites are along busy, two lane roadways. The EIR must address and develop appropriate mitigations measures to reduce the impacts of Project traffic.

H. Noise and Vibration

With the inevitable impacts from noise and vibration associated with the extensive excavation necessary for the construction of the powerhouse and tunnels near the Lake, the EIR must address avoidance and minimization measures.

I. Geological and Seismic Hazards

The proposed upper reservoir to be located in the Cleveland National Forest constitutes a “high hazard dam” placing a significant population center at the foot of the Lake at risk. It remains a critical task for the applicant to address the concerns of the U.S. Forest Service with respect to the upper reservoir dam.

The proposed powerhouse and intake/outlet structure also lie in areas with known faults. The City remains concerned that the necessary studies have been postponed so far by FERC and that these structures lying outside of the Cleveland National Forest nonetheless pose significant geological and seismic risk to nearby population centers.

Previously prepared “technical memorandums” contained in the Final License Application (“FLA”) submitted to FERC often indicate that the consultant’s opinions are “preliminary.”⁵¹ Despite this, the Project has proceeded without detailed fault studies that are clearly necessary.

Fundamentally, the EIR should accord municipal territories the same treatment as federal lands when it comes to assessing these hazards. Accordingly, the EIR should address the Project’s geological and seismic hazards outside of the National Forest which remain largely unknown.

J. Property Values

The Project is distinguished by the powerhouse location in an urbanized and largely residential area when compared to *all* of the advanced storage projects previously approved by FERC, as demonstrated in detail by at least one community commenter.⁵² Those previously approved projects are located in non-urban settings, and, in most instances, remote area with little or no nearby housing.

That is not, however, the setting of the LEAPS Project. The proposal to locate a massive underground powerhouse next to an existing neighborhood and large community center, and within a short walking distance of traditional suburban neighborhoods, is unprecedented. Homeowners and businesses within the Project’s impact areas will endure a multi-year construction period with a host of construction related negative impacts. Above, we discussed long-term impacts to private riparian rights. Because so many private property owners will be directly impacted by this Project, the EIR should also provide a meaningful and detailed economic analysis to properly inform citizens of the economic impacts to property values posed by the LEAPS Project.

K. Developmental Resource Impacts

The EIR must include a critical examination of the need for the Project and its impacts on existing energy infrastructure and resources, with particular emphasis on market effect and the benefits of the Project as compared to the No Action Alternative.

As it turns out, an extensive evidentiary record shows the Project's staggering expense compared to its marginal benefits. On June 17, 2019, Nevada Hydro filed a complaint with FERC (Docket No. EL19-81-000) alleging that the California Independent System Operator Corporation ("CAISO") failed to follow its tariff in studying the LEAPS Project as a transmission facility in the CAISO's 2018-2019 transmission planning process.⁵³ This heated battle played out over five months with CAISO ultimately carrying the day.

CAISO filings with FERC presented both compelling facts and persuasive arguments. Accordingly, what CAISO has to say about the LEAPS Project should inform the State Water Board as it considers whether the environment should suffer the Project's significant impacts in the face of a mountain of evidence that the Project is too expensive and, equally important, unnecessary.

CAISO analyzed LEAPS as a potential reliability, public policy, and economic project as part of its 2018-2019 and concluded that "LEAPS was not a needed transmission solution during this planning cycle..."⁵⁴ In justifying this conclusion, CAISO explained that "CAISO's comprehensive reliability analysis did not identify a need for any new transmission projects to address reliability issues because the CAISO determined that they would be mitigated by existing solutions, such as previously approved demand response and battery storage (either already in-service or under-development) and operational measures."⁵⁵

LEAPS fared no better in terms of cost effectiveness. CAISO found that:

"LEAPS would not produce economic benefits that would justify its construction. Among other factors, the CAISO analyzed whether LEAPS would produce benefits including 'reduction in production costs, congestion costs, transmission losses, capacity, or other electric supply costs resulting from improved access to cost-efficient resources,' and compared LEAPS' cost/benefit ratio to other proposed projects and initially identified solutions. LEAPS' benefit-to-cost ratio in all three configurations the CAISO studied was far below 1:1...."⁵⁶

Moreover, "CAISO has not identified a transmission need for LEAPS." CAISO concludes that:

"most of the benefits LEAPS would provide stem from the pumped storage unit's ability to earn market revenues by providing services such as load following, ancillary services, flexible ramping, and energy arbitrage. Even though these are benefits common to generation facilities, the CAISO's cost/benefits analysis gave LEAPS the full benefit of *all* the services it would provide and functions it could perform, including those associated with market services. *LEAPS still did not have*

a benefit-to-cost ratio anywhere near 1:1 even when assessed in the most favorable light possible.”⁵⁷ (Emphasis added.)

In its October 17, 2019 order, FERC denied Nevada Hydro’s complaint.⁵⁸

III. ALTERNATIVES

A. Project With Minimum Operating Lake Level of 1,240 MSL

Last year, FERC inexplicably instructed Nevada Hydro to revise its project description to allow for the Project to operate when the Lake is below elevation 1,240 msl. FERC’s January 22, 2019 Request for Additional Information states, in part:

“In response to item 6, you [Nevada Hydro] state that the proposed LEAPS Project would be capable of operating when extended drought conditions result in water levels in Lake Elsinore to fall below 1,240 mean sea level (msl), because the project’s intake/outlet facilities would be able to intake water at a range of water levels below 1,235. This response appears to change the proposed project operation ...”⁵⁹

FERC then instructed Nevada Hydro to “amend your FLA by filing a revised Exhibit A that reflects your new minimum operating level and a revised Exhibit B that states your new proposal to operate during both normal and drought conditions.”⁶⁰ Nevada Hydro dutifully submitted revised Exhibits A and B on February 19, 2019.⁶¹

The EIR should include as an alternative project imposing a minimum operating level of 1,240 msl. As shown below, operation of the Project below Lake elevation 1,240 msl is not legally feasible for this applicant. In addition, it is well documented that the Lake’s water quality quickly declines when the level drops below 1,240 msl.

As noted above, the City’s ownership of the real estate comprising the Lake was granted by the State of California in 1993:

“the State of California ... hereby quitclaims to the City of Lake Elsinore ... all of its right, title and interest in and to the [Lake Elsinore Recreation Area.]”⁶²

The vast real estate interest granted the City is burdened with a water storage easement granted by the State to EVMWD. To EVMWD, the State reserved an “Easement Deed for Flood and Water Storage and Related Appurtenances” (hereinafter the “Water Storage Easement”) to use:

“the Lake Elsinore State Recreation Area ... as a water storage facility to receive, use, store withdraw and sell any and all waters above water level elevation 1240 feet above sea level ...”⁶³

Nevada Hydro’s derives its rights to utilize the Lake for the “lower reservoir” from the Water Storage Easement and, as noted above, intends to store 15,000 AF of water which will be purchased from a third party and transported to the Lake.

The decision to use the Lake to store Nevada Hydro's purchased water has a significant consequence: EVMWD's Water Storage Easement does not allow for *withdrawal* of that stored water when the Lake is below elevation 1,240 msl.⁶⁴

The right to withdraw stored water from the Lake *below elevation 1,240 feet* is a right held by the City of Lake Elsinore as the repository of all rights in the Lake granted under the Quitclaim Deed, excepted only by those limited rights specifically granted to EVMWD. In recasting the LEAPS Project's "lower reservoir" operating level from a minimum of 1,240 feet to a minimum of 1,235 feet, the license application for the first time went beyond the water withdrawal rights held by EVMWD under its Water Storage Easement.

It is worth noting that in the prior iteration of the LEAPS Project, the "Final Application for License of Major Unconstructed Project (Project No. 11858) Lake Elsinore Advanced Pumped Storage Project," the LEAPS Project hemmed tightly to EVMWD's rights under its Water Storage Easement. Then, the proposed lowest operating level of the Project was preserved at Lake elevations 1,240 msl far into the licensing process,⁶⁵ thereby not exceeding EVMWD's Water Storage Easement to "receive, use, store withdraw and sell and any and all waters above the water level elevation 1240 feet"

The City cannot put it more directly: neither Nevada Hydro nor EVMWD possess the legal right to withdraw stored water from the Lake below elevation 1,240 feet msl. For that reason, the City requests that the EIR consider a project alternative or otherwise condition the Project with a narrower operating range consistent with EVMWD's legal rights and, further, condition the applicant to provide supplemental water to the Lake to maintain elevation 1,240 msl.

B. Project with Water Treatment Enhancements

With the exception of the initial importation of 15,000 AF of potentially polluted, nutrient rich water into the Lake necessary to prime the Project, the Project applicant had steadfastly avoided proposing proactive measures to improve the Lake's water quality. The Lake suffers from regular algae blooms, high nutrient levels, low dissolved oxygen and regular fish die offs. The applicant seeks to use a public resource – the Lake – free of ongoing water quality costs and has supported that position with a Final Report on water quality that fundamentally defaults to a conclusion that LEAPS will not make the Lake any worse than it already is. The City submits that is not good enough.

Modern *advanced* pumped storage projects regularly include *advanced* water quality treatment methods. The State Water Board need look no further than the Eagle Mountain Pumped Storage Project, FERC Project No. P-13123. This remote project is conditions to require a newly constructed 15.5-mile pipeline assuring that clean ground water used to prime that system remains in pristine conditions traveling to the reservoir. But the Eagle Mountain project did not stop there. The project license requires a reverse osmosis system as part of a robust water treatment system.⁶⁶ This process applies pressure to contaminated water to force it through a semipermeable membrane, which in turn "filters" out contaminants allowing only uncontaminated water (permeate) to pass.

Characteristic of the history of this Project, even modest water quality enhancements have failed to make their way into the applicant's various project descriptions.

Nevada Hydro's water quality consultant poses that injection of "liquid oxygen" into the flows returning to the Lake from Project operations could achieve material gains in dissolved oxygen levels and, in turn, the Lake's water quality.⁶⁷ However, basic improvement methods such as 24/7 water circulation to actually preserve the heightened dissolved oxygen levels that may be achieved during releases from the upper reservoir have not been integrated into the Project even while the Lake suffers under an existing circulation system that no longer works. The State Water Board could require the applicant to participate financially in the heavy cost currently shouldered by the City and EVMWD to establish a larger pool of funds for water quality improvements. But no such enhancements, either by way of physical infrastructure and systems integrated into the Project, separate funding to support current water treatment efforts, or preferably both, has been proffered by the applicant. The applicant is, indeed, content for the City and EVMWD to pay for the cost of operating the Lake.

Accordingly, the City requests that the EIR consider a project with integrated water quality treatment components benefitting the Lake and the many stakeholders within the San Jacinto watershed that are mandated to follow strict TMDL requirements imposed within the watershed.

C. Alternate Project Site at Eagle Mountain

Earlier this month, Arthur F. Coon of the firm Miller Starr Regalia submitted scoping comments on behalf of clients Fernandez Parties. While the City believes that all of the comments in Mr. Coon's letter are well taken, Mr. Coon's discussion of a Project alternative at Eagle Mountain was particularly insightful and deserves close attention by the State Water Board as part of developing an honest list of true alternatives to the Project:

"The Eagle Mountain pumped storage hydroelectric project (FERC #13123, proposed near the town of Eagle Mountain, just north of the unincorporated town of Desert Center, located within eastern Riverside County, California) is a particularly interesting alternative given that: it is further along in the entitlement/environmental review process; will store/generate up to 3 times more electricity; is environmentally superior due to the fact that it is proposed on a previously disturbed industrial site (mining pits) as opposed to pristine National Forest lands; will not utilize/impact a crucial natural waterway; and proposes far less transmission (13.5 miles of lines)."⁶⁸

CONCLUSION

This letter includes a list of endnotes leading to documents that are readily available for viewing on the internet. Recognizing that you are already aware of these internet sites, for other readers of this letter, FERC's eLibrary can be found at <https://elibrary.ferc.gov/>. The several volumes comprising the Final License Application or "FLA" can be found on the applicant's website at <https://leapshydro.com/final-licensing-application/>. The 2009 PEA is on the CPUC's website at www.cpuc.ca.gov - /Environment/info/aspen/nevadahydro/pea5/.

Mr. Chase Hildeburn
April 13, 2021
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If requested, the City will provide PDF versions of cited documents to the State Water Board. Questions regarding the City's comments can be directed to me at david@ceqa.com.

Thank you for considering the City's position on these important issues facing the Lake and the Lake Elsinore community.

Sincerely,

David H. Mann

David H. Mann
Assistant City Attorney

cc: Mayor Magee and Members of the City Council
Jason Simpson, City Manager
Rexford Wait, Nevada Hydro Company, Inc.

¹ www.cpuc.ca.gov/Environment/info/aspen/nevadahydro/pea5/

² Applicant's letter to FERC dated August 17, 2020, FERC Accession No. 20200817-5158.

³ FERC's Scoping Document 2 dated December 11, 2020, FERC Accession No. 20201211-3015.

⁴ Applicant's letter to FERC dated June 27, 2017; p. 1, FERC Accession No. 20170627-5119.

⁵ *Id.*, at p. 4.

⁶ https://www.cpuc.ca.gov/Environment/info/aspen/nevadahydro/pea5/att7_ceqa_checklist.pdf

⁷ Applicant Prepared EIR, Attachment 7 entitled "CEQA Environmental Checklist."

⁸ Applicant Prepared EIR, pp. 3-i to 3-ii (3.6.2.7, 3.12 and 3.13).

⁹ Applicant Prepared EIR, p. 3-139.

¹⁰ Applicant Prepared EIR, Table 3.8.7-1 at p. 3-219.

¹¹ Applicant Prepared EIR, 4-22, fn. 23.

¹² The 2001 City of Lake Elsinore General Plan can be accessed on the City's website, <http://www.lake-elsinore.org/city-hall/city-departments/community-development/planning/lake-elsinore-general-plan>

¹³ Applicant Prepared EIR, p. 4-46.

¹⁴ Applicant Prepared EIR, p. 4-48.

¹⁵ Applicant Prepared EIR, p. 4-202.

¹⁶ Applicant Prepared EIR, p. 4-205, Table 4.10.1-2.

¹⁷ Applicant Prepared EIR, p. 4-274, Table 4.14.1-4.

¹⁸ Applicant Prepared EIR, p. 4-274, Table 4.14.1-5.

¹⁹ On October 11, 2017, FERC Commission staff issued a tendering notice on the license application for the Lake Elsinore Advanced Pumped Storage Project No. 14227 (LEAPS), which solicited additional study requests, 82 FR 48223.

²⁰ Regional Water Board letter to FERC dated December 1, 2017, attached to this Letter as Exhibit 1.

²¹ FERC's Response to Additional Study Requests dated June 15, 2018, FERC eLibrary Accession No. 20180615-3002.

²² *Id.*, at p. 6.

²³ *Id.*, at pp. 9-10.

²⁴ *Id.*, at pp. 36-37.

²⁵ https://www.cpuc.ca.gov/Environment/info/aspen/nevadahydro/pea/03_PD_part7of8.pdf, p. 3-100; see also, p. 3-92. The Applicant Prepare EIR states that the intake/outlet structure is "is illustrated in Figure 3.1.1-5" (p. 3-156). However, Figure 3.1.1-5 is not listed in the Applicant Prepared List of Figures for Chapter 3, Project Description.

²⁶ Applicant's November 27, 2020 Response to October 29, 2020 Letter from the FERC, Attachment 2, Intake Structure Design Drawing, FERC eLibrary Accession No. 20201127-5032

²⁷ City Comment Letter, Attachment A, p. 1, FERC eLibrary Accession No. 20190726-5002.

²⁸ *Id.*, Attachment A, p. 1.

²⁹ *Id.*, Attachment A, pp. 10-11, 20-21.

³⁰ *Id.*, Attachment A, p. 11.

³¹ FLA, Vol. 1, Ex. E, Section E-2, p. 23.

³² Technical Analysis of the Potential Water Quality Impacts of the Leaps Project on Lake Elsinore, Michael Anderson, January 1, 2006, pp. 2-4 [FLA V11, Ch. 5].

³³ *Id.*

³⁴ See FERC eLibrary Accession No. 20190221-4001[FLA V18 E1 1-Study 4 & 7]

³⁵ *Id.*

³⁶ See, e.g., Scoping Comments of John Pecora, FERC eLibrary Accession No. 20200731-5315.

³⁷ See FERC eLibrary Accession No. 20190221-4001[FLA V18 E1 1-Study 4 & 7]

³⁸ Stillwater Sciences' report, entitled Technical Memorandum, is attached as Attachment A to City's August 2, 2019 comments letter, FERC eLibrary Accession No. 20190805-5007.

³⁹ *Id.*, at p. 8.

⁴⁰ City Comment Letter, Attachment B, p. 5, ¶ 2, FERC eLibrary Accession No. 20190726-5002.

⁴¹ *Id.*, Attachment C, p. 37, ¶ 1.

⁴² FERC eLibrary Accession No. 20190221-4001[FLA V18 E1 1-Study 4 & 7].

⁴³ FERC eLibrary Accession No. 20190221-4001[FLA V18 E1 1-Study 4 & 7].

⁴⁴ Applicant's November 27, 2020 Response to October 29, 2020 Letter from the FERC, response 1.2.2, FERC eLibrary Accession No. 20201127-5032.

⁴⁵ City Comment Letter, FERC eLibrary Accession No. 20171204-5007.

⁴⁶ FERC eLibrary Accession No. 20190221-4001 [FLA V18 SA 1 – Revised FLA Exhibit A, p. A-5 and A-12].

⁴⁷ FERC eLibrary Accession No. 20190221-4001[FLA V18 E1 1-Study 4 & 7].

⁴⁸ See Technical Analysis of the Potential Water Quality Impacts of the Leaps Project on Lake Elsinore, Michael Anderson, January 1, 2016, p. 4 [V11, Ch. 5].

⁴⁹ Email from Pete Dawson to author, dated July 31, 2020.

⁵⁰ See FERC eLibrary Accession No. 20190221-4001 [FLA V18 E1 3 – Study 31 – Traffic Report].

⁵¹ See City Request for Additional Studies, pp. 1-3, FERC eLibrary Accession No. 20171201-5362.

⁵² Scoping Comments of John Pecora, FERC eLibrary Accession Nos. 20200629-5213 & 20200811-5072.

⁵³ Complaint of the Nevada Hydro Company, Inc. [etc.], Docket No. EL19-81-000, FERC eLibrary Accession No. 20190617-5229.

⁵⁴ Answer of [CAISO] to Complaint, Docket No. 19-81-000, p. 2, FERC eLibrary Accession No. 20190722-5139.

⁵⁵ *Id.*, at pp. 2-3.

⁵⁶ *Id.*, at p. 3.

⁵⁷ *Id.*, at p. 112, italics added.

⁵⁸ Commission Order Denying Complaint, Docket No. EL19-81-000, FERC eLibrary Accession No. 20191017-3044.

⁵⁹ FERC eLibrary Accession No. 20190122-3014, Schedule A at A-1.

⁶⁰ *Id.*

⁶¹ FERC eLibrary Accession No. 20190221-4001 [V18 SA 1 – Revised FLA Exhibit A; V18 SA 1 – Revised FLA Exhibit B].)

⁶² City Comment Letter, Attachment A, p. 1, FERC eLibrary Accession No. 20190726-5002.

⁶³ *Id.*, Attachment A, pp. 10-11.

⁶⁴ *Id.*, Attachment A, p. 11, providing an easement to “receive, use, store withdraw and sell any and all waters above water level elevation 1240 feet above sea level”

The City acknowledges that the State of California separately quitclaimed to EVMWD the “water rights” in the Lake. (See Attachment A, pp. 20-21, “Quitclaim Deed for Water Rights.”) That water right encompasses the naturally occurring water within the Lake and does *not* include a specific lake level restriction. However, the LEAPS Project does not propose to use *that* water; Nevada Hydro and EVMWD have agreed that Nevada Hydro will purchase water from a third party and store *Nevada Hydro's* water in the Lake which squarely falls under the Water Storage Easement. (See Attachment A, pp. 10-11.)

⁶⁵ The Final Environmental Impact Statement for Project No. 11858 stated that “the co-applicants propose to operate the lower reservoir (Lake Elsinore) between 1,240 and 1,247 feet msl.” (FERC eLibrary Accession No. 20070130-4000 [08 LEAPS Section 3 Environmental Analysis, p. 3-39].)

⁶⁶ Order Issuing Original License, Project No. 13123-002, pp. 6-7, FERC eLibrary Accession No. 20140619-3017.

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⁶⁷ Technical Analysis of the Potential Water Quality Impacts of the LEAPS Project on Lake Elsinore, Michael Anderson, January 1, 2016, pp. 65-66 [FLA V11, Ch. 5].

⁶⁸ Letter from Arthur F. Coon to Chase Hildeburn dated April 7, 2021, p. 10, fn. 1.

EXHIBIT 1

Santa Ana Regional Water Quality Control Board Letter to
James Fargo (FERC) dated December 1, 2017



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Santa Ana Regional Water Quality Control Board

December 1, 2017

Mr. James Fargo
United States of America
Federal Energy Regulatory Commission (FERC)

james.fargo@ferc.gov

NOTICE OF APPLICATION TENDERED FOR FILING WITH THE COMMISSION AND SOLICITING ADDITIONAL STUDY: REQUESTS FOR THE LAKE ELSINORE ADVANCED PUMPED STORAGE PROJECT (LEAPS) (PROJECT NO. P-14227-003)

Dear Mr. Fargo:

Lake Elsinore (proposed to be the lower reservoir for LEAPS) is an impaired water body and listed on the Clean Water Act Section 303(d) list. Beneficial uses are not being attained because the lake is impaired by nutrients, organic enrichment/low dissolved oxygen, polychlorinated biphenyls, sediment toxicity, and unknown toxicity. As a result, Total Maximum Daily Loads (TMDLs) were developed and approved in 2004 by the Santa Ana Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), and U.S. Environmental Protection Agency to address the excessive nutrients in the lake. Currently, the nutrient TMDLs for Lake Elsinore are being revised based on a better understanding of lake dynamics that have evolved during the past 13 years of implementation of nutrient reduction plans, monitoring, and study of the lake.

Regional Water Board staff reviewed the *Notice of Application Tendered for Filing with the Commission and Soliciting Additional Study* (Notice). We agree with **line m** of the Notice that "the application is not ready for environmental analysis at this time." New knowledge of lake dynamics and conditions that affect water quality in the lake has been acquired since the last environmental documents (including the Environmental Impact Report/Environmental Impact Statement [EIR/EIR]) were created for LEAPS several years ago when the LEAPS application was first submitted to FERC and, therefore, new analyses should be completed.

At this time, LEAPS lacks a definitive water supply and may not be able to comply with the water quality standards set forth in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) and the approved TMDLs for nutrients in Lake Elsinore. Therefore, Regional Water Board staff requests that the following studies be conducted and findings reported to our staff. The study findings will allow staff to assess impacts from LEAPS and allow the Regional Water Board, FERC, State Water Board,

WILLIAM RUH, CHAIR | HOPE A. SMYTHE, EXECUTIVE OFFICER

3737 Main St., Suite 500, Riverside, CA 92501 | www.waterboards.ca.gov/santaana

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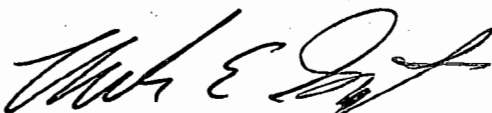
and other agencies with jurisdictional authority to develop proper permitting, project conditions, and appropriate mitigation for LEAPS.

1. First, and foremost, a water supply for the project needs to be identified before any evaluation of environmental impacts is conducted. It is our understanding that LEAPS proposes to use water from Lake Elsinore, though it is not owned by the LEAPS proponents. Currently, evaporative losses in the lake are being partially offset by the addition of 5.5 – 6.0 million gallons per day of reclaimed water discharged by Elsinore Valley Municipal Water District (EVMWD). This reclaimed water is owned by EVMWD and the City of Lake Elsinore and is discharged to the lake as a TMDL compliance project. Once a confirmed water supply is identified for LEAPS, then a study will need to be done, preferably a joint EIR/EIS that evaluates the LEAPS impacts.
2. Regional Water Board staff will need a study to determine how much of an increase in total nitrogen (TN), total phosphorus (TP), and cyanotoxins will occur in the water being returned to the lake. LEAPS potentially will change the concentrations of TN, TP and various cyanotoxins in the water that is transported to the upper reservoir and returned to the lake. Evaporation of the lake water in the upper reservoir potentially will increase TN, TP, and cyanotoxins as the water is returned to the lake. Further, residual water left in the upper reservoir could drastically increase algae concentrations in that residual water, which in turn could cause decreases in dissolved oxygen in the lake when that water is returned. Finally, shearing effects due to water intake, turbine action, transport, and return through diffusers could result in the lysing of cyanobacteria cells, thereby causing a discharge of additional cyanotoxins to the lake.
3. Federal law prohibits the Regional Water Board from issuing a permit for a new discharge to an impaired surface water body, except as allowed by an approved TMDL with waste load allocations for the discharge. We will need a study to determine how LEAPS will be incorporated into the lake's TMDLs. The LEAPS proponents will have to propose amending the TMDLs to obtain waste load allocations for TN, TP and cyanotoxins. The LEAPS proponents will have to complete a study to revise the TMDLs. The study should include how TMDL numeric targets for the project can be met and propose waste load allocations for TN, TP, and cyanotoxins for LEAPS. A TMDL Compliance Monitoring Program that will monitor LEAPS' compliance with the TMDLs should be included with the study.
4. One of the largest sources of nutrients in the lake is the uptake from lakebed sediments. Regional Water Board staff anticipates that the removal and return of lake water will result in the resuspension of additional sediment and nutrients into the water column, thereby making those nutrients available for uptake by algae. A study will need to be completed to assess the potential increase in nutrients in the water column from LEAPS in its final system design and how that increase will be addressed in the nutrient TMDLs.

5. A study on the impacts to Water Contact Recreation should be completed. Water Contact Recreation is identified in the Basin Plan as a designated beneficial use of the lake. LEAPS may require fencing of the intake and discharge areas (or other appropriate measures) to keep people from being injured by in-lake structures. The pumping of lake water will also draw down the shoreline. These two impacts will result in the loss of areas where Water Contact Recreation exists and this beneficial use should be maintained, or mitigation should be proposed to offset these impacts.
6. A study on the impacts of impingement and entrainment on the lake's aquatic organisms should be conducted. The intake and discharge impacts of LEAPS are almost identical to a once-through cooling system used by power plants. Regional Water Board staff will need an evaluation of the impingement and entrainment impacts of the proposed intake and discharge structures/processes, as well as the turbine system. Mitigation for these impacts will be expected.
7. The amount of water in Lake Elsinore at any time is an important factor on resulting nutrient, cyanotoxin, and salt concentrations in the lake and the resulting effects on the lake's bio-systems. A study needs to be conducted to determine the minimum lake level or lake elevation at which LEAPS will be operated and the effects on the lake at that lowest operational level when the volume of water equivalent to the upper reservoir is removed (even temporarily) from the lake.
8. If chemicals were to be added to the water to control algae concentrations that would otherwise damage the pumps or other facilities, a study will need to be conducted to assess the chemical concentrations in the resulting discharge. Numeric effluent limits on those chemicals will need to be established. Because the lake is already impaired for toxicity, it is anticipated that no mixing zone could be approved without the preparation and adoption of a TMDL for toxicity in the lake.

If you have any questions, feel free to contact Ken Theisen at 951 320-2028 or Ken.Theisen@waterboards.ca.gov, Dave Woelfel at 951 782-7960 or David.Woelfel@waterboards.ca.gov, or me at 951 782-4998 or Mark.Smythe@waterboards.ca.gov.

Sincerely,



Mark E. Smythe
Senior Environmental Scientist
Supervisor, Inland Basin Planning Section
Santa Ana Regional Water Quality Control Board

cc:

State Water Board, Division of Water Rights - Oscar Biondi -
Oscar.Biondi@waterboards.ca.gov

California Department of Fish and Wildlife - Joanna Gibson -
Joanna.Gibson@wildlife.ca.gov

Santa Ana Watershed Project Authority - Rick Whetsel - rwhetsel@sawpa.org

The Kahlen Group - Greg Kahlen - greg@kahlengroup.com