



## La Quinta Residents for Responsible Development Say NO to the Wave - [saynotothewave.com](http://saynotothewave.com)

P.O. Box 2004,  
La Quinta, CA  
92247-2004

[lqresidentsstoptothewave@gmail.com](mailto:lqresidentsstoptothewave@gmail.com)

### VIA E - MAIL

September 20, 2022

Honorable Mayor Evans  
Mayor Pro Tem Kathleen Fitzpatrick  
City Council Members John Pena, Robert Radi, Steve Sanchez  
Mr. John McMillen, City Manager  
Ms. Monika Radeva, Town Clerk  
Ms. Nicole Sauviat Criste, Consulting Planner  
City of La Quinta,  
78495 Calle Tampico  
La Quinta, CA 92253

**RE: Statement on the Non-Certifiability of the Coral Mountain FEIR**

Dear Mayor Evans, Council Members, City Staff,

#### Introduction

The City's "Statement of Overriding Considerations" (SOC) aspires to be a conclusive summary of why the City Council should: 1) believe that the Project's benefits outweigh its adverse environmental effects; 2) believe that the Project's harmony with the City's General Plan outweighs the Project's stark conflicts with it; and 3) on the basis of those beliefs, approve the Project. We are providing in this document a large amount of factual evidence and sound argument that both of these beliefs are either false or so far from true that no decision of consequence should rest on them. Showing that these beliefs are untrue will also show why the Project's deeply flawed FEIR is unfit for City Council certification.

The author(s) of the SOC asks the City Council to believe that, to date, *only two* adverse environmental impacts of the Project exist: the obstruction of views of Coral and the Santa Rosa Mountains; and the generation of unmitigable GGH emissions that far exceed the State's threshold of significance. While these are indeed two serious adverse impacts, the SOC is claiming that *there are no others, only these two*. This is glaringly false. By embracing a fatally flawed FEIR, the SOC unjustifiably ignores other equally important adverse impacts that have been proven or remain unrefuted. We now ask the City Council to do its duty by carefully

reviewing, freshly and as if for the first time, our core arguments for the untrustworthiness of the FEIR's conclusions and/or the methods it uses to derive them.

### Traffic

When the EIR's traffic study was first criticized for unrepresentative traffic data, the City's ineffective response was that traffic counts were taken "as they exist at the time the notice of preparation was published."<sup>i</sup> That response ignored sound LQRRD contentions that to be representative, traffic counts: a) should have been taken in an area of *commercial development*, which the Project area, if approved, would in fact be; and b) should have been taken at *particularized times of the year* such as High Season or during Coachella Valley festivals similar to those the Project envisions -- for the simple reason that at these times the Project's numerous STVRs will make for denser occupancy and thus denser traffic. Nor does the FEIR factor in the likelihood of *simultaneous* heavy traffic impacts from the increasing number of special events already scheduled for nearby areas, e.g., Golden Voice's soccer games and multiple multi-day festivals. In sad fact, the FEIR's analysis rests on traffic counts taken in *residential areas* on four days, one each in April, May, August and September.<sup>ii</sup> The FEIR's contention that the Project will generate no significant traffic pollution thus rests on stunningly non-representative data. This is the first of many reasons the Council must refuse to certify the FEIR.

### Light Pollution

According to CEQA, an (F)EIR "serves not only to protect the environment but also to demonstrate to the public that it is being protected."<sup>iii</sup> The Applicant's plan to change the Wavebasin's main lighting from 80-ft. tall poles that are 17 in number to 40-ft. poles that are 54 in number *constitutes a large and fundamental change* to the FEIR's light analysis rendering much of it no longer relevant. According to CEQA, a change of this significance requires the City to revise and recirculate an amended EIR for meaningful public review and comment. *Failure to do so is a clear violation of CEQA.*<sup>iv</sup>

The FEIR is *devoid* of findings on what a 54-pole light array will do to a dark sky as it shines on a turbulent water surface, reflects off of Coral Mountain, and illuminates desert air full of particulates. It is *by no means obvious* that such lighting will decrease visible nighttime light. In fact it is just as likely to *increase* upwardly reflected light, thus adding to light pollution.<sup>v</sup> Absent a new EIR, nothing definitive can be credibly claimed about the significance of the Project's adverse environmental light impacts. To certify an FEIR with this big a hole in it would be grossly unethical.

### Noise Pollution

The FEIR's noise analysis, riddled with problems from the start, *alone* renders the FEIR unfit for certification. In the last 12-18 months, no attempt has been made to mitigate the damning fact that the Applicant used the noise recorded at its Lemoore Surfpark as an adequate stand-in for Coral Mountain Wavepark noise even though the two locations are starkly different contexts for noise propagation and reverberation. The DEIR tried hard to obscure this fact by burying it not only in an Appendix, but in an Appendix (*10-1*) to an Appendix (*K-1*), while using the term "*reference* noise levels" to disguise the fact that they were *Lemoore* noise levels. When

the City tried to defend the use of Lemoore as a Coral Mountain proxy, it provided this inexcusable excuse: “[because] noise levels at wave pools are not generally available the conditions at the Lemoore facility are sufficient when evaluating [Coral Mountain] noise impacts.”<sup>vi</sup>

The Lemoore noise was recorded by a Mr. Lawson during a *53-minute period on a single day*, April 13, 2020. Lawson noted that the noise had three components: the Wave Machine, outdoor pool/spa activity, and commercial land use activity. Please note that Mr. Lawson’s Lemoore noise recordings did not include the following:

1. regular loudspeaker announcements over a 15-hour surfing day;
2. the noise of two or more jet skis making an 800-yard round trip with each of the 50-100 daily waves;
3. the sound of the machinery in the water treatment facility;
4. the crowd noise;
5. the audio that will accompany large-screen video projection of the surfers;
6. noise echoing off Coral Mountain affecting residents and wildlife.

Here again, this time in its noise pollution section, the FEIR betrays a shockingly defective study and thus a profoundly untrustworthy conclusion. On noise grounds alone, our conscientious City Council must refuse to certify the FEIR.

### Water Waste

CVWD evaporation estimates for the Wavepool are inaccurate and unreliable because the agency treated the Wavepool as a “lake” rather than what it actually is: an incessantly churning and moving six-foot wave offering up the pool’s water to an excessively hot, dry and predictably windy environment – an Evaporative Perfect Storm.

According to the World Surf League, water loss on hot days at the Lemoore Surfpark is 250,000 gallons per day. In 2020, Lemoore registered 45 days exceeding 100 degrees. On those 45 days, then, some 10 million gallons of water were lost. In 2020, La Quinta registered 140 days over 100 degrees. Doing the same math for just those 140 days, we’re looking at a water loss of 30-35 *million* gallons due to evaporation alone.

Therefore, on the *far-from-settled* question of water wastage alone, we urge the City Council, in this era of historic drought and proven global climate warming, to refuse to certify the FEIR.<sup>vii</sup>

## Conflict with the General Plan

The SOC gives Council members eight reasons for believing that the Project is in harmony with the City's General Plan. The SOC does not even mention, let alone rebut, the far weightier case that *the Project is in very substantial conflict with the Plan*.

The Project's degree of *conflict* with the General Plan comes into sharp focus when one considers the following:

One of the Plan's **guiding principles** is to reduce light pollution.<sup>viii</sup> Even the Applicant has now abandoned their earlier DEIR and FEIR attempts to assure us the Project would not generate significant light pollution. A new lighting plan has been proposed but no new EIR has been ordered for it. And let the obvious be said: no nighttime tourist commercial amusement park will ever *reduce* light pollution in that little corner of La Quinta known as Coral Mountain.

**General Plan GOAL N-1 (NOISE IV-14)** refers to "a healthful noise environment which complements the City's residential and resort character." The primary source of City noise is traffic.<sup>ix</sup> To understand why the FEIR's traffic study is untrustworthy, see [Traffic](#). Of course, the ambient collective noise of the Wavepark itself is yet another threat to a healthful noise environment. See [Noise Pollution](#). Finally, the FEIR fails to examine the effect of Wavepark noise on local wildlife

**General Plan Policy CIR-2.2** encourages the reduction of Greenhouse Gases, yet the FEIR admits the Project will indeed generate *significant and unmitigable* GHG emissions. The Applicant's claim that the Project area's internal walkability will "reduce Greenhouse Gas emissions" too ridiculous to merit comment.

**General Plan GOAL OS-3 (at II-30)** emphasizes the importance of the preservation of scenic resources as vital contributors to the city's economic health and overall quality of life. Yet the FEIR admits the Project will obstruct views of Coral and the Santa Rosa Mountains.

**General Plan GOAL-WR-1** is about the efficient use of water. What is efficient about driving, 50-100 times per day, a 6-foot waterwave over a distance of 400 yards inside of a 16 million gallon pool situated in an ultrahot, ultradry and windy desert? *How does the Wavepool not violate this General Plan goal to a severe and unacceptable degree?* See [Water Waste](#).

Policies **LU -3.1, LU-4** and **LU-4.1** encourage "the preservation of neighborhood character [and] a consistent and compatible land use pattern," "maintenance and protection of existing neighborhoods," and "compatible development adjacent to existing neighborhoods and infrastructure." Allowing the construction of a tourist-commercial amusement park in an area originally intended to be residential and quiet, and surrounded by same, appears to constitute an shameful departure from these policies.

## Conclusion

For members of the City Council to grant the Applicant's requested radical zoning change without violating their oaths of office, they would at least need a Project that is not in serious conflict with the letter and spirit of the General Plan and, even more importantly, a Project that satisfies a thorough and credible – as opposed to seriously defective – FEIR. This letter has shown that, in reality, the Applicant has provided the Council with neither of these. For the holistic good of our City, please refuse to certify the FEIR and refuse to grant the requested zoning change.

Sincerely,

La Quinta Residents for Responsible Development Members

Brian Levy

Philip Novak

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<sup>i</sup> Comment 83-a, FEIR at 2-371.

<sup>ii</sup> Thursday, 8-5-17; Tuesday, 4-9-19; Tuesday, 5-7-19; and Tuesday, 9-10-19.

<sup>iii</sup> 14 Cal. Code Regs. § 15003(b), citing *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795.

<sup>iv</sup> 14 Cal. Code Regs. § 15088.5.

<sup>v</sup> Applicant counsel Vaughan has publicly stated that lowering light poles will increase glare (3-22-22). J. Gamlin agreed (4-26-22).

<sup>vi</sup> at FEIR 2-378, Id.

<sup>vii</sup> The FEIR says nothing about the Wavepark's golf facility water usage because plans for such a facility have only very recently been disclosed by the Applicant. This is another change that triggers the CEQA requirement binding the City to require a revision of the FEIR and to meaningfully circulate it for public review and comment.

<sup>viii</sup> GP, pp. 1-3.

<sup>ix</sup> GP, p. IV-4.

Presentation 2 - Executive Summary of Noise Study

**From:** Alena Callimanis <acallimanis@gmail.com>  
**Sent:** Wednesday, September 21, 2022 8:08 AM  
**To:** Linda Evans; Kathleen Fitzpatrick; John Pena; Robert Radi; Steve Sanchez  
**Cc:** Monika Radeva; Jon McMillen; City Clerk Mail; Shane  
**Subject:** Final Shane Chambers Acoustic Expert Executive Summary for Coral Mountain Noise Analysis  
**Attachments:** Executive Summary Shane Chambers FINAL Noise Study 210922.pdf; Diagrams Shane Chambers FINAL 210922.pdf

\*\* EXTERNAL: This message originated outside of the City of La Quinta. Please use proper judgement and caution when opening attachments, clicking links or responding to requests for information. \*\*

Good morning. I am pleased to attach the final executive Noise Study summary that will be presented today at the September 21 City Council meeting. I am submitting the full report to Monika for the public record but will provide it to you hardcopy within the 15 copies that Monika has requested we provide to her.

When I spoke to Jon last week he mentioned that you cannot use zoom. Please provide me and Shane your preferred video conferencing or audio conference method. As I mentioned, there is a 15 hour time difference but it will be morning in Australia. Lucky him. If there is the necessity of providing Shane a small token stipend to enable him to speak like you did with the Woodward & Curran water assessment presentation last meeting, I am sure Shane would be fine with that.

Shane has requested if possible to show the three attached charts. But that is not mandatory. He felt it would help with the understanding. These pages are extracted from the total document so it is available there. If possible, since he does have a slight accent, if the summary charts could be displayed, that would be appreciated, but again not mandatory.

Thank you so much for your help with this.

Respectfully,

Alena Callimanis  
81469 Rustic Canyon Dr.  
La Quinta, CA 92253  
919 606-6164  
acallimanis@gmail.com

## Report Scope

This report has been prepared upon request by La Quinta Residents for Responsible Development . The scope of the report is to examine the reference materials attached below for the proposed Coral Mountain Resort for anomalous findings or state deficiencies that would otherwise normally be expected to be included in such a study. The wave basin noise and associated environmental factors has only been examined, and noise produced by expected traffic increases is not considered.

## Executive Summary

- (a) The noise impact study provided for the Coral Mountain Report is deficient in its analysis and assessment of wave basin associated noise.
- (b) The proponent has failed to supply adequate detail of noise measurements taken at the Lemoore wavepark to justify that the proposal at Coral Mountain will have no adverse impact on the La Quinta community. Measurements such as frequency spectrums, maximum and minimum noise levels, and statistical noise descriptors, which are all standard measurements in the assessment for noise compatible land planning use and abatement, have been omitted by the proponent. The proponent has supplied one number ( $L_{eq}$ ) to characterise the complex noise field created by the wave basin, which is inadequate for any decision maker. A request was placed for the provision of more detailed information on the measurements taken at the Lemoore wavepark for examination. In reply, the proponent gave directions to the relevant parts to the Draft EIR which are wholly inadequate and the reason why the request was first raised.
- (c) The proponent has failed to take into account obvious atmospheric factors such as wind speed and temperature which are required to be considered when assessing adverse noise impact on the La Quinta community. These atmospheric factors create a phenomena known as 'acoustic ray bending' where noise transmitted into the air bends back towards earth and lands at a distance that is about the same as the site location to the community. This phenomena has been observed and noted by California Department of Transportation to have a significant adverse effect when assessing noise impacts beyond 100m. It is shown here to reduce the 6dBA loss per doubling of distance to 3dBA, from distances as close as 200m from the wave basin. The discounting of this effect by the proponent significantly underestimates the expected noise field on the La Quinta community.
- (d) The proponent has significantly underestimated the power level of wave basin operations, potentially by a factor of about 20. The proponent has also failed to scale measurements between Lemoore wavepark and the proposal correctly. This has likely occurred due to an inadequate methodology employed for noise measurements at the Lemoore wavepark and

inattention to how the modelling software (CadnaA) treats such measurements when scaling noise power from a moving source over an unusually large area. This error potentially underestimates the noise field from wave basin operations on the La Quinta community by up to 15-20 dBA.

- (e) The proponent has critically omitted the obvious effect of reflections off Coral Mountain from the noise created by the wave basin and other operations; this alone would be a source of significant nuisance to the community. The effect is likely to be so pronounced in the evening that the only way to mitigate it would be to cease operations entirely in the evening.
- (f) The proponent has not chosen correct receiver locations to identify impact from noise from the wave basin and other operations. They have chosen receiver locations where the current ambient noise is expected to be high due to the proximity to a busy road. The correct receiver locations should have been placed in quieter parts of the La Quinta neighbourhood where majority of the population resides.
- (g) The proponent has failed to adequately assess the impact of the loudspeaker array, nor characterise it correctly by assuming it does not transmit sound in the vertical direction. This failure has underestimated the impact of the noise created by the speakers. The loudspeaker array will behave in a way that will produce amplified directional components to the noise field that will be heard over 1km away and alone will be a source of nuisance.
- (h) The proponent has failed to model the ground absorption factor correctly and has consequentially underestimated the noise impact on the community. The proponent has assumed an absorption factor that is normally used for long grass and vegetation. This is not representative of the surface between the proposal site location and the community.
- (i) The proponent has failed address the omission of up to 20 dBA in CNEL correction factors for assessment of noise impact. Such correction factors are required to be applied and are based on community experience with the type of noise and its characteristics. Noise expected would be best described as similar to noise emissions from heavy freight/rail, a large roller coaster, emissions from a water park, a PA announcement system at an unenclosed stadium and very large waves crashing on concrete, all which the community have no experience with.
- (j) As a consequence of (a) to (i) the reported noise (CNEL) levels at the nominated receivers do not adequately represent the impact of noise on the La Quinta community. Application of the CNEL correction factor, and underestimations with the wave basin power, ground reflections, ray bending, effect by the mountain, and speakers puts the existing levels at the



chosen receivers into a range where the proposal is expected to invite vigorous community legal action based on studies by the EPA.

- (k) The site location for the wave basin has been poorly chosen and is far from sub optimal when considering noise impact. This is due to the proximity of Coral Mountain, and the magnitude of the noise source which has been calculated from the proponents figures to be equivalent to a jumbo jet at 300m height. Should the proposal be sanctioned it will very likely be the subject of nuisance to the community which will require further investigation to assess damage.

## Material Reviewed

The following material was considered when compiling this report:

Request for Information, Underwater Winch Rope Configuration– World Surf League, September 2022

The Wave at Coral Mountain Noise Impact Analysis Response to Comments, Correspondence to Simon Garret, September 2022

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- ii. John John travels to Kelly's Wave Pool | WINTER 2020  
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- iv. Surf Ranch Innovator And 11x World Champ Kelly Slater Shows You Around His Creation, 14 June, 2021  
<https://www.youtube.com/watch?v=uTy5HazGIWg>
- v. Austin Keen Skimboarding The Surf Ranch AKA The Ultimate Surfer Wave Pool September 29, 2021  
<https://www.youtube.com/watch?v=u65HfmRF12M>
- vi. I SURFED BLINDFOLD AT KELLY SLATERS WAVE POOL! 16 November, 2021  
<https://www.youtube.com/watch?v=x0jbfMadR8>

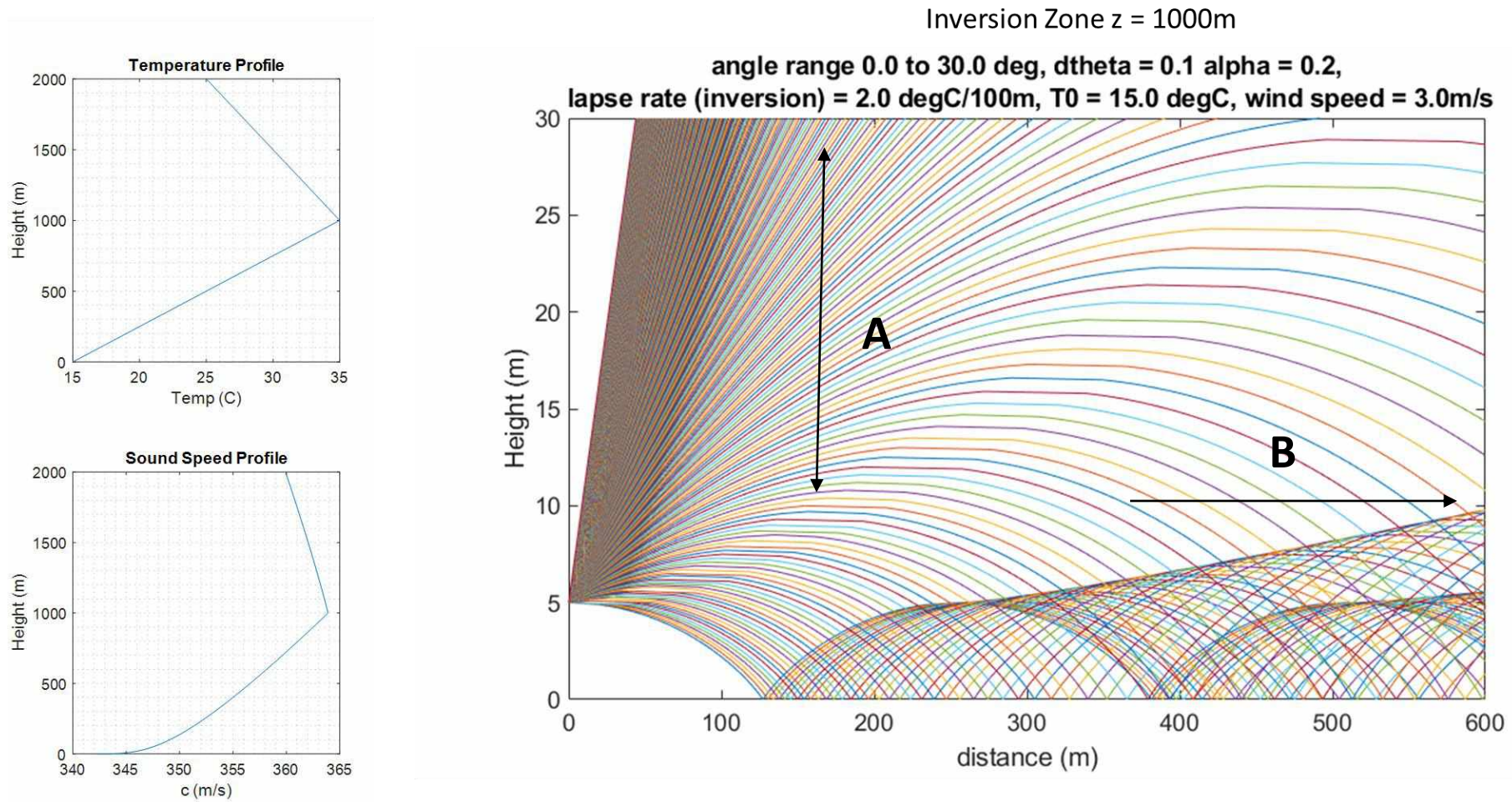


Figure 3 Acoustic ray tracing propagation model for a source at 5 m height within inversion layer at 1000 m with a 0.2 windshear factor produces a convergence zone occurring approximately around 400-600 m from the site location (Region B). Where Region A is the noise energy unaccounted for in the model for the proposal that lands on the La Quinta community

Inversion Zone  $z = 1000\text{m}$

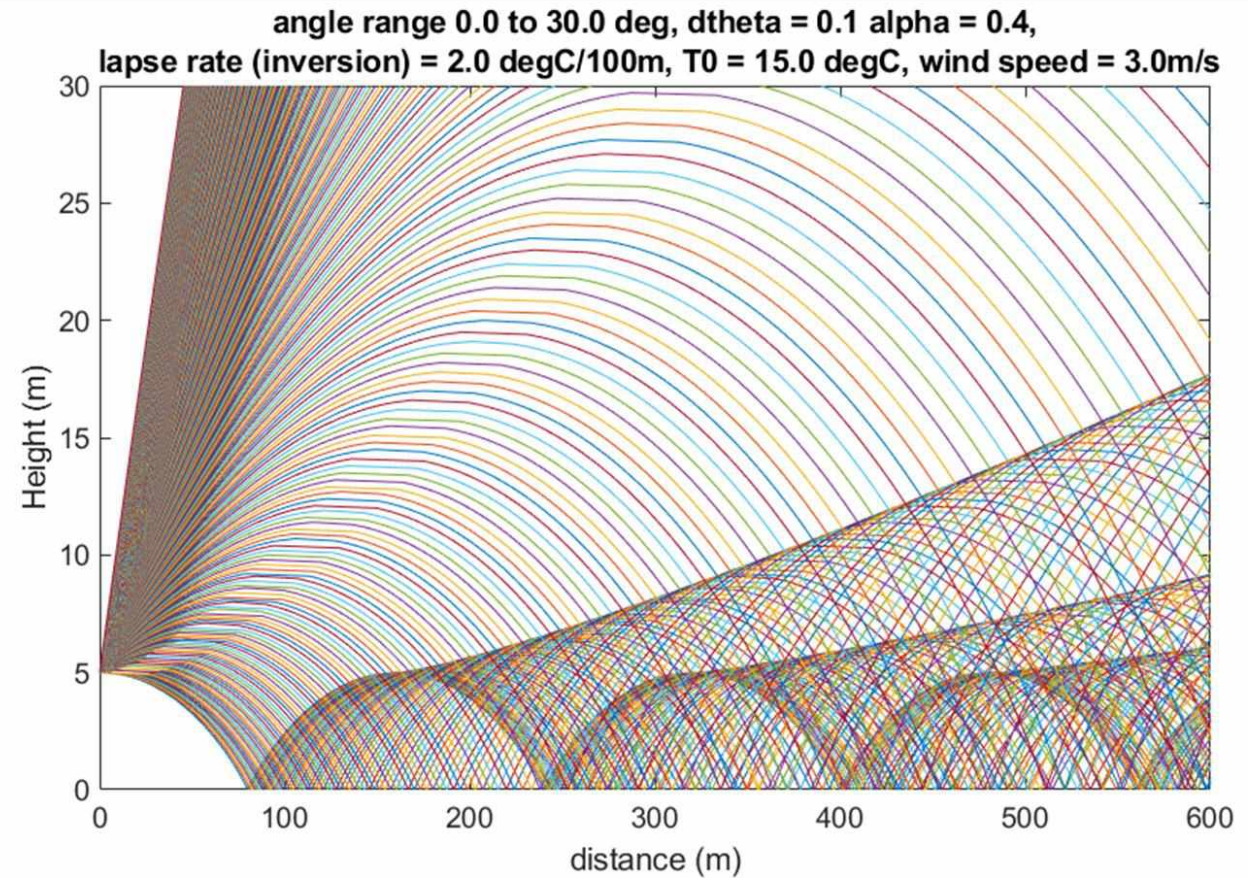
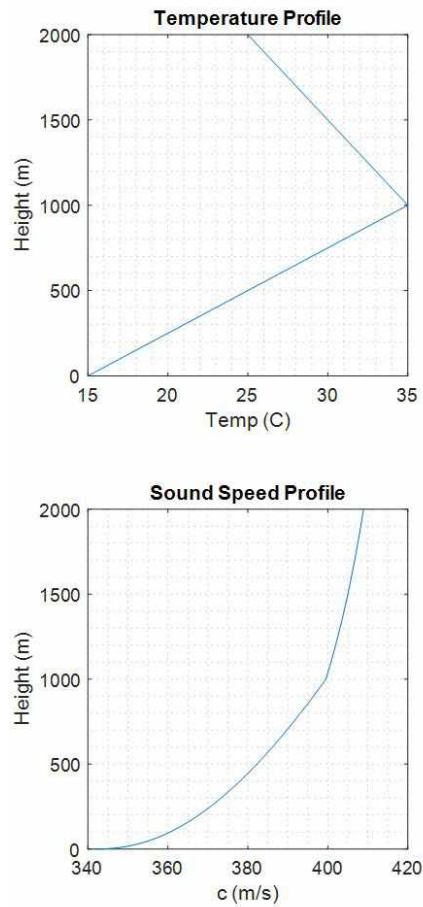


Figure 4 Acoustic ray tracing propagation model for a source at 5 m height within inversion layer at 1000 m with a 0.4 windshear factor produces a convergence zone occurring approximately around 300-600 m from the site location.

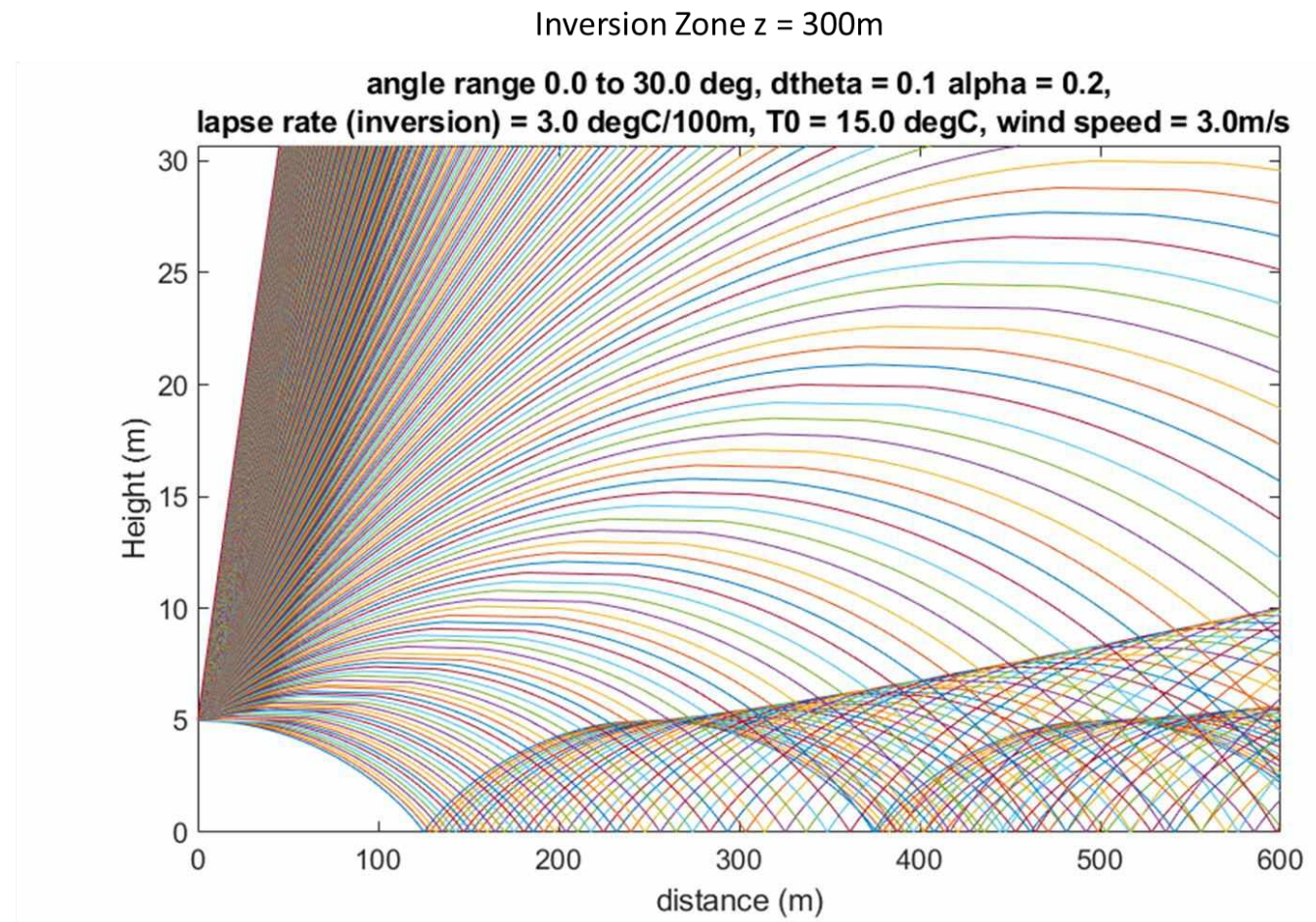
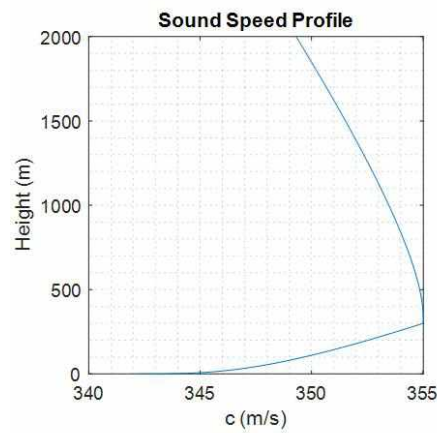
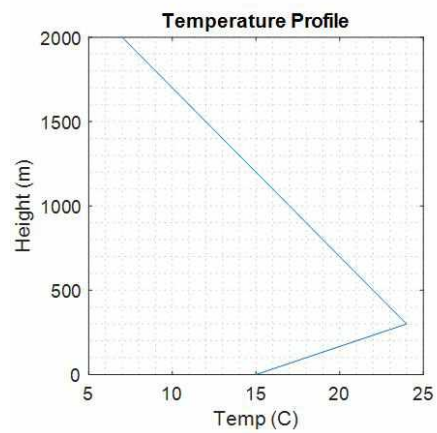


Figure 5 Acoustic ray tracing propagation model for a source at 5 m height within inversion layer at 300 m with a 0.2 windshear factor produces a convergence zone occurring approximately around 400-600 m from the site location

**From:** Alena Callimanis <acallimanis@gmail.com>  
**Sent:** Wednesday, September 21, 2022 10:04 AM  
**To:** Monika Radeva  
**Cc:** City Clerk Mail  
**Subject:** Full Shane Chambers Noise Report for Public Record  
**Attachments:** Shane Chambers Advice Coral Mountain FINAL 210922.pdf

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Hi, Monika. Here is the full Shane Chambers Noise Study for today's City Council Meeting.

Thank you very much. We are making 15 hard copies of this for you and for all the presentations.

Thanks!

Alena Callimanis  
919 606-6164

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<https://www.youtube.com/watch?v=xEOjbfMadR8>

## General Noise Impact from the Coral Mountain Resort

The impact by the proposal, with respect to noise, is a combination of two noise mechanisms, operational and traffic. As an analysis of noise created by traffic is beyond the scope of the request it does not form part of this report. Any traffic related noise deficiencies in the study will stem from errors that arise when underestimating the projection of traffic densities in the City of La Quinta over a particular period. Such errors are contributory to the immediate noise field by the roadside and can be calculated by the following equation for the error in the equivalent noise level:

$$\Delta L_{eq(T)} = 10 \log \left( 1 + \frac{\varepsilon}{100} \right)$$

Where,  $\Delta L_{eq(T)}$  is the change in the equivalent noise level over a period T (see page 6); and  $\varepsilon$  is the percentage error in the underestimation of any projected traffic flow. It must be also noted that over estimation of projected traffic densities will subsequently overestimate the impact of traffic noise on the community.

## Summary of the proposed wave basin activities

The wave basin at the Coral Mountain Resort and its associated operational activities when considering noise is best summarised by the proponent<sup>1</sup>:

*“The central portion of the basin serves as the primary surfing lane. It is paired with a metal rail that provides a running track for a sheave that pushes the surface of water to create the wave. The shallower end bays on either side of the basin allow for the wave energy to dissipate, creating smaller waves for beginning surfers.*

*Beyond the end bays, small utility buildings house the winches and other mechanical equipment that drive the sheave from one end of the basin to the other along the surfing corridor.*

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<sup>1</sup> Coral Mountain Resort: Wave Basin (Site Development Plan) 19/08/2021

*The front of the basin faces the resort hotel so that guests can view surfers riding the waves throughout the day. The back of the basin faces unimproved open space and “back of house” areas. A maintenance building, water treatment building and water tank needed to operate the Wave are sited at the back of the basin behind the rail structure.*

*Surfing waves on the basin are created by a mechanical system that pushes water the length of the basin with a submerged winglike foil until it curls. This mechanical system operates using six components: a track, a vehicle, a foil, a winch, a safety barrier and a control system. These are briefly described as follows:*

- (i) The Track extends the length of the surfing corridor to guide and support the vehicle and foil during wave generation.*
- (ii) The Vehicle is a mobile piece of equipment that is propelled along the track by two winches attached with synthetic ropes.*
- (iii) The Foil is a submerged, wing-like structure that attaches to the vehicle. When pulled through the basin, it creates a surfable wave.*
- (iv) The Winches are located in mechanical buildings at opposite ends of the track in line with the vehicle. For each direction of travel, the lead winch pulls the vehicle to make the wave. The trailing winch provides a retarding (braking) force at the end of the track. After the completion of the wave making cycle, the direction of travel is reversed, and the sequence is repeated in the opposite direction.*
- (v) The Safety Barrier protects the surfer from the Wave mechanical equipment using a high strength netting material that extends from the basin floor to the side of the track structure.*
- (vi) The Control System allows for monitoring and controlling the wave basin.*
- (vii) Directional lighting on slender metal poles illuminate the water surface after dark. Shielding”*

Additionally a PA announcement system is outlined by the proponent<sup>2</sup>:

*“However, to better control the wave event announcements, the planned speaker system for The Wave at Coral Mountain will include 38 Sonance LS6T SAT directional outdoor speakers mounted above the water surface facing the lagoon.”*

*“It is expected that the each of the 38 speakers will generate a noise source level of 70 dBA Leq at 12 feet. “*

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<sup>2</sup> The Wave at Coral Mountain Speaker Noise Assessment 16/08/2022

## Relevant Noise Descriptors

dB – how sound pressure, energy, power and intensity is usually expressed. It is expressed this way as it is always referenced to a standard unit by a ratio (i.e. Sound Pressure reference = 20  $\mu$ Pa, Sound Power reference = 1 pW), and the logarithm helps to reduce the range of this ratio since it encompasses an exponential magnitude of range. It is helpful for visualisation such as graphing as it ‘linearises’ an exponential range.

dBA – an A weighted decibel, that increases mid range frequencies and decreases, high and low frequencies to match the auditory response of our ear in determining relative loudness between noise sources.

dBc – a C weighted decibel to enhance high and low frequencies to assist with comparison between noise sources, and matches the auditory response like our ear for loud noise sources over 100 phons.

$L_{eq}$  – is the 24 hour equivalent continuous acoustic energy level (mean square pressure) at a receiver. This is calculated by measuring the acoustic energy from a noise event, within an arbitrary time period (like a snapshot), at a particular distance, and is then time averaged by ‘spreading’ the total acoustic energy, observed from that event, evenly over 24 hours. The sum of the energy spread over 24 hours is then equal to the sum of acoustic energy emitted from that event within that snapshot. It represents the average 24 hour time exposure from a noise event at that distance (or several noise events), even though the period of the noise event may not be 24 hours.

$L_{eq(T)}$  – is the equivalent continuous acoustic energy level of the measured event (or events) spread evenly over a discrete interval of time T, which is usually in minutes or hours. The sum of energy spread over this interval equals the sum of acoustic energy emitted from the event.

$L_{eq}$  (CNEL)– this is the Community Noise Equivalent Level (CNEL). This is a scheme of measurement and modelling practice required by California Legislative Code Section 65320(f) and is applicable to this proposal. The CNEL is the average of all  $L_{eq(1h)}$  measurements over 24 hours of the noise event at a particular receiver location. A penalty of 4.77 dBA is applied each hour between 7 PM and 10 PM and a penalty of 10dBA is applied each hour between 10 PM and 7 AM. These penalties have the effect of adjusting the residual  $L_{eq}$  upwards by 3.5 dBA and deters unmitigated noise with night time operations past 7pm. This level is not a representation of the real residual equivalent levels, but is a figure that is weighted for community acceptance.

$L_{X(T)}$  – this is the level where X% of the acoustic energy, emitted by an event, is permitted to be above within a particular time period T. It is a statistical descriptor that has the effect constraining the period of a permitted loud noise. For example in determining an  $L_{50(1hr)}$  threshold at 65 dBA for

an hourly measurement would mean that 50% of the acoustic energy emitted is permitted to be above 65dBA for an aggregate of 30 minutes. Similarly,  $L_{8(1hr)}$  is the amount of the acoustic energy emitted that is permitted to be above 75 dBA in an hour, which is an aggregate of approximately 5 minutes for every hour, which is the period representing 8% of one hour. This type of metric provides a better gauge of intrusiveness and nuisance of a noise than the noise descriptor  $L_{eq}$ .

## Regulatory environment relative to this report

CEQA guidelines 15350-15387<sup>3</sup> provide the required obligations from a proponent and state and/or government agencies in demonstrating that any proposal of land use does not have a significant adverse effect on the environment, where ambient noise is expressly stated as criterion to examine.

The proponent must provide enough relevant evidence and information and reasonable inferences from such information that a fair argument is made to support the conclusion that a proposal would or would not have a significant impact on the environment.

Table 1 states the relevant thresholds pertaining to this proposal.

*Table 1 – Relevant noise emission thresholds for the proposed Coral Mountain Resort*

Leq (DN)	< 55 dBA	EPA <sup>4</sup>
Leq (CNEL) Acceptable Range	< 50-60 dBA	OPR Guidelines <sup>5</sup> La Quinta Municipal Code <sup>6</sup>
Leq (CNEL) Conditionally Acceptable Range	< 55-70 dBA	OPR Guidelines <sup>5</sup> La Quinta Municipal Code <sup>6</sup>
Leq (CNEL) Land Use Threshold	< 65 dBA	La Quinta General Plan
Leq (Daytime Exterior Noise Standard 7AM – 10PM)	< 65 dBA	La Quinta Municipal Code <sup>6</sup> Project threshold
$L_{50(30\text{ min})}$ (day)	< Ext. Noise Standard	La Quinta Municipal Code <sup>6</sup>
$L_{25(15\text{ min})}$ (day)	< Ext. Noise Standard + 5 dBA	La Quinta Municipal Code <sup>6</sup>
$L_{8(5\text{ min})}$ (day)	< Ext. Noise Standard + 10 dBA	La Quinta Municipal Code <sup>6</sup>
$L_{2(1\text{ min})}$ (day)	< Ext. Noise Standard + 15 dBA	La Quinta Municipal Code <sup>6</sup>
$L_{\text{max}(< 1\text{min})}$ (day)	< Ext. Noise Standard + 20 dBA	La Quinta Municipal Code <sup>6</sup>

<sup>3</sup> CEQA Guidelines - California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387

<sup>4</sup> Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare With an Adequate Margin of Safety - Office of Noise Abatement and Control – EPA 1974

<sup>5</sup> Appendix D - Noise Element Guidelines (Guidelines for the Preparation and Content of the Noise Element of the General Plan) - Office of Planning and Research

<sup>6</sup> La Quinta Municipal Code 9.100.210 Noise Control

[https://library.municode.com/ca/la\\_quinta/codes/municipal\\_code?nodeId=TIT9ZO\\_CH9.100SUNORE\\_9.100.210NOCO](https://library.municode.com/ca/la_quinta/codes/municipal_code?nodeId=TIT9ZO_CH9.100SUNORE_9.100.210NOCO)

The City of Laquinta General Plan (2013) has adopted 65 dBA (CNEL) threshold for planning and land use. The City must also comply with OPR Guidelines and as such has adopted the Land Use Compatibility for Community Noise Environments matrix. The matrix defines a threshold range to trigger noise analysis and mitigation of any new proposal. When the expected noise of the proposal is above the 55 dBA (CNEL) threshold a noise impact study is required and the proponent must show how it will be mitigated (at source or receiver) so the  $L_{eq}$  at any receiver is under 65 dBA (CNEL) to satisfy CEQA guidelines.

The City of Laquinta General Plan (2013) has also adopted an exterior (residual) noise standard of 65 dBA for noise abatement<sup>7</sup>. The presence of impulsive or tonal elements in any noise source lowers this standard to 60 dBA. This residual noise figure is not to be confused with a weighted CNEL figure used for planning purposes.

### $L_{eq}$ (CNEL) correction factors

Corrections factors for noise types under the CNEL scheme have been defined by the EPA<sup>8</sup> and form part of the OPR guidelines. These correction factors are a normalisation procedure to previously observed community reactions to problematic residual noise levels within the community (Figure 1). Table 1 of the OPR Guidelines defining corrections to be applied is depicted in Figure 2.

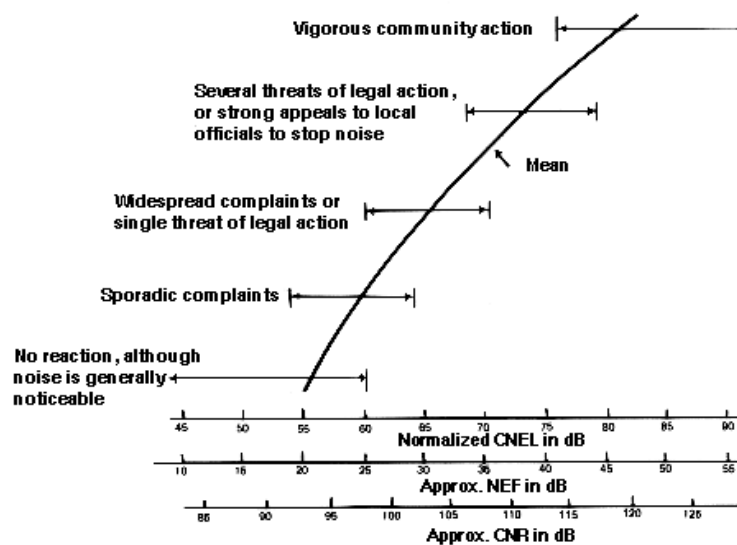


Figure 1 Normalised CNEL values that adjust residual noise measurements to the expected community adaptation to new or increased noise sources. Threats of legal action were noticed for CNEL values above 60dba. This

<sup>7</sup> La Quinta General Plan EIR S.III Existing Environmental Concerns

<sup>8</sup> Community Noise 1971 NTID300.2 US Environmental Protection Agency

<b>Table 1</b>		
<i>Type of Correction</i>	<i>Description</i>	<i>Amount of Correction to be Added to Measured CNEL in dB</i>
<b>Seasonal Correction</b>	Summer (or year-round operation)	<b>0</b>
	Winter only (or windows always closed)	<b>- 5</b>
<b>Correction for Outdoor Residual Noise Level</b>	Quiet suburban or rural community (remote from large cities and from industrial activity and trucking).	<b>+ 10</b>
	Quiet suburban or rural community (not located near industrial activity).	<b>+ 5</b>
	Urban residential community (not immediately adjacent to heavily traveled roads and industrial areas).	<b>0</b>
	Noisy urban residential community (near relatively busy roads or industrial areas).	<b>- 5</b>
	Very noisy urban residential community.	<b>- 10</b>
<b>Correction for Previous Exposure and Community Attitudes</b>	No prior experience with the intruding noise.	<b>+ 5</b>
	Community has had some previous exposure to intruding but little effort is being made to control the noise. This correction may also be applied in a situation where the community has not been exposed to the noise previously, but the people are aware that bona fide efforts are being made to control the noise.	<b>0</b>
	Community has had considerable previous exposure to the intruding noise and the noise maker's relations with the community are good.	<b>- 5</b>
	Community aware that operation causing noise is very necessary and it will not continue indefinitely. This correction can be applied for an operation of limited duration and under emergency circumstances.	<b>- 10</b>
<b>Pure Tone or Impulse</b>	No pure tone or impulsive character.	<b>0</b>
	Pure Tone or impulsive character present.	<b>+ 5</b>

Figure 2 CNEL corrections to be applied at residual receiver levels.

OPR Guidelines state the criteria to use when assessing noise compatible land use:

*“Beyond the basic CNEL or Ldn quantification of noise exposure, one can apply correction factors to the measured or calculated values of these metrics in order to account for some of the factors that may cause the noise to be more or less acceptable than the mean response. Significant among these factors are seasonal variations in noise source levels, existing outdoor ambient levels (i.e., relative intrusiveness of the source), general societal attitudes towards the noise source, prior history of the source, and tonal characteristics of the source. When it is possible to evaluate some or all of these factors, the measured or computed noise exposure values may be adjusted by means of the correction factors listed in Table 1 in order to more accurately assess local sentiments towards acceptable noise exposure.”*

The OPR guidelines are clear in their instruction for assessment of noise compatible land use. Given that it is almost always possible to characterise noise emissions in order to obtain tonal, impulsive, spectral and uniqueness qualities, when deriving a residual  $L_{eq}$  for a noise sensitive receiver; a CNEL

weighting plus a correction is to occur to the residual noise level at a receiver depending on the noise type and the expected community attitude towards the noise source.

## Problems identified with the Coral Mountain Noise Study

(1) Non provision of detailed measurements of the noise source measurements at Lemoore wave park

There appears to be no detailed information provided for observations L1 to L5 at the Lemoore wave park shown in Table 1 of Appendix K.3 (Noise Memo January 2022). The  $L_{eq}$  values provide relatively little information regarding the time and spatial varying nature of the noise source and maximum source levels expected to be encountered, nor the duration that they will be encountered for. The author has chosen to state the  $L_{eq}$  value for a 57 minute observation of 15 wave events. I assume the  $L_{eq}$  value here is the  $L_{eq(1\text{ hr})}$  value, as a 24 hour value within such an observation period would significantly underestimate the noise level. I also note that the default recording value for the sound meter used is  $L_{eq(1\text{ hr})}$ <sup>9</sup>. It is perplexing why the proponent has not chosen to provide more information, as the chosen sound meter permits. It is common practice to state parameters such as  $L_{MAX}$ ,  $L_{MIN}$  or any statistical noise descriptors over the full recording period and there is no inhibition to this on the choice of sound meter. Since the noise generated by the wave base and is an unusual noise source provision of as much data as possible is warranted in this circumstance.

If one assumes that a wave event is every 4 minutes, of a maximum level duration of 10 seconds when considering the time the wave spends at a particular recording location, a figure of 75.7 dBA  $L_{eq(1\text{ hr})}$  is 101 dbA  $L_{MAX}$  at 12 ft, and ~112 dBA  $L_{MAX}$  at 1 m, which is the correct way to present the (almost) instantaneous sound pressure of the moving noise source. This equates to the noise level created by a jet flyover at 300m, or a rock band<sup>10</sup>. This figure will be far higher if the reported  $L_{eq}$  level is one that has been averaged for a 24 hour period. The reporting of this figure requires clarification as one must wonder why it has been presented in such a manner.

The chosen methodology is also of concern as the type of method chosen by the author for noise mapping is usually employed for a stationary noise source and is not the correct method for studying a large non stationary noise source, especially one that moves over such a large distance at a high rate. This presents problems when determining the power density of the area source which will be discussed in part (4)

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<sup>9</sup> Piccolo SLM User Guide 4.5

<sup>10</sup> Exhibit 2-A Typical Noise Levels, Coral Mountain Noise Study Appendix K1 to Draft EIR p3.



(2) Non provision of the spectral measurements of the noise source

In order to identify (or discount) tonal or impulsive components of the noise source it is common practice to provide spectral representations of the noise source (i.e. amplitude v frequency).

There appears to be no provision of spectral content of the noise source even though the chosen sound meter permits such a measurement. The absence of this type of data does not provide adequate characterisation of the noise source from the wave basin. The operational noise of the wave basin is comprised of 4 components when assessing significance of impact:

- (a) The noise generated from movement of the sled vehicle, which is essentially a rail noise source.
- (b) The noise generated from the cable assembly, be it machinery or tension related noise.
- (c) The noise generated from movement of water such as creation and crashing of waves which is pink in nature with impulsive and tonal components.<sup>11,12</sup>
- (d) The noise generated by the public address system, which is broad band in the mid frequency range if it only to be used for announcements.

Breaking waves, rail and machinery and cable noise all have tonal components. Furthermore breaking waves are known to exhibit impulsive moments and contain a large amount of low-frequency noise.<sup>13</sup> The provision of spectral data assists the determination of whether such tonal or impulsive components are additive to the noise field and should be penalised according to the CNEL scheme or to comply with noise abatement policies. Furthermore provision of spectra assists a decision maker in determining whether it is appropriate to assess the noise source using an additional dBC (low frequency) criteria, similar to aircraft, which may be the case given the noise source level at 1m is over 100 dBA and is a proposal that is expected to generate low-frequency noise.

(3) Non provision of analysis of atmospheric effects on the noise source

Atmospheric effects such as the presence of an atmospheric temperature inversion and wind significantly effect the propagation of sound when considering the effects on a receiver. This appears to have been acknowledged in Part 2.3.3 of Appendix K to the Draft EIR but has not been accounted for in any of its analysis. It is the responsibility of the proponent to demonstrate a 'worst-case scenario' when analysing potential significant impact and demonstration of such meteorological effects is practicable. The author has justified its omission by arguing that it is

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<sup>11</sup> Dallas, C A, and C D S Tollefsen. 2016. "Physical Mechanisms Underlying the Acoustic Signatures of Breaking Waves." DRDC-RDDC-2016-R150

<sup>12</sup> Chambers, S and James, R N 2018 "Surf Wave Parks-Assessing the Sound of Fun" 2018, Australian Acoustical Society Annual Conference, Hear to Listen, Adelaide

<sup>13</sup> Bolin, Karl, and Mats Åbom. 2010. "Air-Borne Sound Generated by Sea Waves." The Journal of the Acoustical Society of America 127 (5): 2771–79

consistent with guidance from a technical note provided by CALTRANS.<sup>14</sup> The technical note is not a policy, standard or regulation, it is a supplement to the protocol provided by the CALTRANS- *Traffic Noise Analysis Protocol for New Highway Construction, reconstruction, and Retrofit Barrier Projects*. The protocol is silent when considering meteorological effects on noise, but it must be also be noted that the protocol is narrow in its scope in the assessment of only noise created by traffic, not noise created by developments other than traffic that have an effect beyond 100 m, and are noise sources that are not comparable to traffic noise. The technical note states at part 2.1.4.3:

*“Research by Caltrans and others has shown that atmospheric conditions can have a profound effect on noise levels within 200 feet of a highway. Wind has shown to be the most important meteorological factor within approximately 500 feet, while vertical air temperature gradients are more important over longer distances. Other factors such as air temperature, humidity, and turbulence also have significant effects.”*

The technical note goes on to explain the magnitude of impact expected on traffic noise with respect to wind and temperature inversions.

Wind conditions for the site are generally from West/North-West (down wind) to East/North-East (up wind). Furthermore the presence of a strong temperature inversion for periods of the year is likely to be observed given this is a well-known meteorological effect in any desert environment. The combination of down wind and inversion effects causes a physical phenomena known as downwards refraction which is the bending of sound, that was initially emitted upwards into the atmosphere, back towards the earth. Where the rays converge after bending back towards the earth is known as the ‘convergence zone’. This phenomena is additive to the noise field at receiver locations. The inversion layer and ground contribute to a departure from spherical to cylindrical spreading from this region onwards, especially at lower frequencies where attenuation caused by the ground is almost non existent. The loss due to atmospheric attenuation from this region onwards reduces from 6dB to 3dB per doubling of distance.

Figure 3, Figure 4 and Figure 5 illustrates 3 different inversion scenarios for a source at 5m height with inversion layers at 300m and 1000m with a moderate downwind speed of 3m/s and different wind shear constants. The plots have been generated with custom ray tracing code written in MATLAB. The inversion layer at 300 m represent the worst case scenario, and inversion layer at 1000m represents a likely scenario.

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<sup>14</sup> Technical Noise Supplement to the Traffic Noise Analysis Protocol, 2013 - California Department Of Transportation

It also must be noted that the vertical temperature profile changes throughout the day and the inversion layer seasonally varies. For the most accurate estimation of the effect of temperature on acoustic propagation the collection of profiles for every season would need to occur at the proposed site location.

The modelling results suggest that the transition zones between spherical and cylindrical spreading occur between 300m and 600m from the site location. Furthermore the convergence zones where the acoustic field is adversely affected by this meteorological effect is onwards from 400m for the proposal location.

The modelling by the proponent employs a CadnaA model when analysing the noise impact. This model is based on the acoustic propagation algorithm ISO 9613-2 and relies on line of sight propagation modelling. This algorithm is not considered very accurate for distances greater than 100m from the noise source without correction, but is simple to employ so it is commonly used in traffic noise analysis where the impact within this distance is required to be known. The algorithm assumes moderate down wind conditions which creates a refractive arc of radius 5 km. Such an arc would place convergence zones approximately 2-10km from the site for all projection angles below approximately 75 degrees to the horizontal. The employment of this algorithm critically omits the effect of acoustic refraction on the noise field at the chosen receiver locations. Such omission is the reason why more sophisticated algorithms are used in environmental noise analysis to achieve accuracy in noise field prediction.

(4) Scaling error for calculation of the source power level of the wave pool  
There appears to be a significant underestimation of the source power level for the proposed wave basin when translating source power level from Lemoore wave park. The author appears to have potentially underestimated the source power level of the proposed wave pool by a factor of at least 20 times. This is notwithstanding that the methodology employed to derive the  $L_{eq(1hr)}$  noise descriptor is likely to be incorrect as discussed in part (1). The author has chosen to not provide a worksheet or justification of the calculation of sound power per unit area for the Lemoore wavepark, or how it is scaled to this proposal.

The source power level at the Lemoore wavepark has been calculated by assuming a reference source energy level at 75.7 dBA at 12 feet. The noise impact study infers that the energy level received at 12 feet is from an acoustic field generated by an area source with a sound power at 112 dbA.

The figure of 112 dBA is then scaled to a sound power of 63.3 dBA per unit area when modelled as an area source employing CadnaA model in the proposal<sup>15</sup>. There are a quite a few problems with this chosen method:

- (i) As discussed before in part (1) the wave basin presents a noise source that spatially and temporally varies over a large distance. One can imagine an area of approximately 30m x 150 m producing noise of high intensity (SEL > 125 dBA) that oscillates back and forth along the length of the wave basin. For the other areas that are not within this high-intensity noise area there would still be sound being generated from secondary waves and second order rail noise effects. If one were to average the total noise source power at Lemoore over the proposed wave basin area at Coral Mountain, to represent an equivalent power source, as the author has done so, there would have to be equivalent wave basin areas; similar activity in all the areas; similar wave characteristics for this type of scaling to be correct so as to ascertain the noise field at a receptor. This is because CadnaA uses a grid of point sources to represent an area source. The sum of the assigned sound power levels for each point source must equal the total sound power level of the area source. Since CadnaA uses a line of sight methodology, each receiver at the proposal location only sees a fraction of point sources within the grid that is representing the wave basin area source, which means every receiver in this study sees an overly diluted power source as it has been not only been scaled incorrectly, as the study assumes that it is a stationary power source that is equal at all grid points, at all times.

In reality each part of the wave pool (i.e. a section 30m x 150m) is responsible for most of the noise field observed at Lemoore for a wave every 4-5 minutes. As such it is more appropriate to assign each 30m x 150m section of the wave pool an equivalent power level to represent a noise source of  $L_{eq(1hr)} 75.7$  dBA at 12 feet for this area, and then work out power per unit area for a much smaller area. Given that the sound power is directly proportional to area for an area source the method chosen by the author to represent the wave basin power level significantly underestimates the power source per unit area of the wave basin by a factor of 20, if one is to assume that the noise creation at Lemoore oscillates over a 600m x 150m area. This is also not withstanding that direct line of sight modelling is inherently flawed due to propagation effects discussed in part (3) as most of the acoustic energy from the wave basin is propagated into the

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<sup>15</sup> Appendix K.1 to the Coral Mountain Resort Draft EIR, p227

atmosphere and then gets refracted back down to the earth within the vicinity of the surrounding communities that is not accounted for in the noise impact study.

It is also unknown why the author has not addressed as to why a SEL noise descriptor or similar was also not employed as this too would allow scaling for differing wave creation periods between both parks. The current method employed for noise impact of the wave basin, unless further clarified to allay the above-mentioned serious concerns, critically underestimates the source power per unit area at the proposal site to the point it makes any further assessment of noise impact void for this proposal as the error could be as large as 20+ dBA for each receiver.

- (ii) The noise level created from a breaking wave is dependent on the height and length of the wave.<sup>11</sup> Put simply the larger the length, breadth and height of the breaking wave, the greater the noise level it creates whilst crashing. There is no evidence of whether the height and length of the waves are expected to be replicated in size between Lemoore and the proposal. This is a different type of scaling than an area source and is a volumetric scaling that considers the amount of inertial water mass being moved. The method that the author has chosen to employ assumes that the amount of water mass being moved at Lemoore is equal to what will be moved at the proposal location. Given that the proposal is to deliver a better 'Wave Bundle'<sup>16</sup> it will be likely the volume of water moved in breaking wave will also be considerably larger, thereby louder.
- (iii) The noise from the new rail assembly has not been adequately dealt with. Rolling noise, and its extreme version, impact noise, from the rail system is proportional to irregularities in the track/wheel interface, speed of the vehicle, and inertial weight that it is pulling. It is difficult to comment further on this without these necessary details. A longer track with a vehicle pulling greater weight, and at a higher speed would imply higher rolling noise. The specifications of the rail system when scaled have not been supplied. I also note that the proponent has installed nylon wheels in January 2021. I also note the proponent has claimed that the nylon wheels reduce noise to an almost silent operation in a presentation to council. Furthermore, the measurements provided in Table 1 of the Noise Memo (January 2022) suggest that the installation of the underwater cable system and nylon wheel reduces the  $L_{eq}$  at Lemoore only 2 dBA (measurements were taken post installation of the nylon wheels<sup>17</sup>).
- (iv) There is sparse information on the scaling of duty cycles of operation between the Lemoore wave park to justify the proposed source power level. The author claims that

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<sup>16</sup> Community Meeting, May 27, 2021

<sup>17</sup> Request For Information September 9, 2022, World Surf League WaveCo

over a period of 53 minutes 10 wave events were measured Lemoore, without specifying exactly how long a wave event takes at each park. I assume the Lemoore wave park is bidirectional, and this directionality is being replicated so one would need to account for the period of the wave creation, and the period for the hydrofoil to roll to a location to prepare another wave. This affects the overall noise level when trying to scale the differences between wave parks. If the Lemoore wavepark was not recorded in bidirectional mode then that too represents an underestimation of the noise source.

(5) The effect of reflections off the mountain

A major source of error in the assessment of noise impact is the non-inclusion of the effect of acoustic reflections off Coral Mountain. In response to this when questioned, the author states an extract from a FHWA policy guidance manual<sup>18</sup>:

*“If all the noise striking a structure was reflected back to a given receiving point, the increase would be theoretically limited to 3 dBA. Further, not all the acoustical energy is reflected back to same point. Some of the energy would go over the structure, some is reflected to points other than the given receiving point, some is scattered by ground coverings (e.g., grass and other plants), and some is blocked by intervening structures and/or obstacles (e.g., the noise source itself).”*

This is a misleading statement. This statement assumes that a receiver is in a direct unobstructed path of all noise created by a source. The algorithm ISO 9613-2 employs a direct line of sight propagation path. If a receiver cannot ‘see’ the noise creating mechanism, it is effectively shielded from the noise. The noise field at the shielded receiver location would then be equal to the ambient noise field without addition of the noise source. However if the reflection is accounted for off the mountain, the mountain is now a very large area source, and given the mountain’s proximity, it would mean that this new area source is in the line of sight of all receivers. Subsequently, the noise field at a receiver would increase far more than 3dBA, given that most receivers only have line of sight to a fraction of the area source presented by the wave basin. Furthermore atmospheric effects such as refraction on propagation paths, after reflection from the mountains, as discussed previously in part (3), would be further additive to the noise field.

The effect of reflection off mountains has been previously studied and is noted to be significant when considering noise impacts from proposed rail developments in Switzerland.<sup>19</sup> Furthermore

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<sup>18</sup> Noise Memorandum June 2021 Appendix K.2 to the Draft EIR

<sup>19</sup> Pieren, R and Wunderli, J, M 2011 “Sound Reflections from Cliffs and Reverberation in an Alpine Valley” European Acoustics Association, Forum Acusticum 2011, Aalborg Denmark

the assertion by the author that Coral Mountain is considered a soft surface and therefore 'would absorb the energy' is scientifically incorrect<sup>18</sup>. Coral Mountain is an acoustically hard surface (quartz-granite). The magnitude of energy of for any reflection is a function of the squared difference of densities at the reflection interface, which in this case would be air and rock, implying most energy is reflected back.

The reflections a receiver would encounter off the mountain are an aggregate of all diffuse and specular reflections. The mountain would also be considered an acoustic mirror at low frequencies. The topography and curved shape of the mountain would also present properties similar to a parabolic reflector. The placement of the proposal in proximity to the mountain is at a location that has maximised the reflection properties from the mountain and its choice of placement is far from ideal. The omission of the effect of the mountain is perplexing given its obviousness in contributing to noise impact and a part of the mountain lies within the proposal development envelope.

Additionally the effect of the mountain would be most significant in the evening and would potentially alone present a source of major nuisance and due to abatement requirements, it could not be mitigated other than the wave park ceasing all operations during the evening.

#### (6) Choice of position of receiver locations

The position of receivers R1 to R5 appear to be placed primarily to examine the impact of any increase in traffic noise. The choice of locations is not suitable to assess the impact of operational noise due to their proximity to the road. The existing ambient noise in these locations would be elevated due to current traffic noise, and thereby would represent a higher baseline of ambient noise than what would be expected in streets located off the road, both now and in the future. This masks the impact of operational noise. As a receiver is positioned further away from the road, operational noise will start to dominate over traffic noise.

It is also not clear why the author has chosen receiver locations in future development areas to the north and north east of the proposal, and the residential neighbourhood south-west of the proposal. The absence of modelling in these locations presents a deficiency when considering assessment of impact.

#### (7) The effect of the loud speaker announcements

The project proposes to place a line array of 38 Sonance LS6T SAT directional outdoor speakers along the wave pool at a height of 8 feet and asserts that there is no significant impact. The author fails to take into account second-order reflections off buildings, or the mountain. The rail mechanism is also not a complete barrier, and noise created is very likely to back propagate towards the mountain. The speakers also have been modelled to have no vertical directivity,

when in reality this will be a primary component in how sound will be carried to the receivers via propagation effects from refraction and reflections.

Furthermore a 38 element speaker array spaced at intervals of approximately 13-14m has the effect of acting like a line array of coherent noise sources and will produce amplified noise artefacts due to this coherence. Due to the spacing being above the Nyquist distance, random grating lobes will be produced for all frequencies above 14 Hz that will have the effect that noise will be emitted in random directions like sonic canons. Modelling of this effect can be produced on request.

The type of speaker that has been chosen for the proposal is also of concern. On face value, a 6 ½" satellite speaker of impedance 8 ohm, does not appear to be intrinsically powerful enough to be of any use, especially in an emergency situation. A rule of thumb is that if you have to raise your voice considerably to be heard, the ambient noise field is above 85 dBA at 1m.

It would be conservative to assume the speakers will be operational for approximately 5-10 minutes per hour from 7 AM to 10 PM The proposed speaker power level at a figure of  $L_{eq}$  86 dBA in the CadnaA model at this duty cycle represents an instantaneous noise source (energy) level in the vicinity 95-100 dBA. This would be heard over a kilometre away and presents a source of major nuisance, notwithstanding the interaction of this noise with the mountain as previously noted and potentially runs risk of contravening the L8 City noise ordinance statistical thresholds described in Table 1. Furthermore from a noise compatible planning perspective weightings and correction factors would also have to be applied. Such a speaker array is a new type of noise source that the community is unfamiliar with.

#### (8) Ground reflection factor estimates

There appears to be non uniformity in the approximation of reflection loss from ground interaction. It is stated that for operational noise:

*“Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. A default ground attenuation factor of 1.0 was used in the CadnaA noise analysis to account for hard site conditions.”*

It appears that a ground of attenuation factor of 0, not 1.0, was used in the CadnaA model. This represents a 100% soft ground, which is usually reserved for surfaces such as long grass and vegetation. Inspection of the site suggests that a conservative approach would be to apply a ground attenuation factor of 0.5. This would account for the mixing of soft and hard surfaces.



The understatement of the hardness of the reflection has an effect of underestimating the noise field at each receiver.

(9) Non application of CNEL correction factors:

The threshold of 65 dBA is a CNEL figure. Accordingly correction factors should be applied to operational noise for every receiver as noted in Figure 2 they would be:

- (i) +10 dBA to outdoor residual noise produced from operations. I note that the community is classed as rural, remote when considering traffic analysis in Appendix L1 to the Draft EIR, the site and community is remote from major cities and there appears to be no current significant industrial activity within the vicinity of the community when referencing the La Quinta General Plan that would qualify only a +5dBA correction .
- (ii) + 5 dBA due to the outdoor residual noise produced from operations due to the community having no prior experience with this noise. This is especially so if reflections are to be heard off the mountain. The wave basin operations are a very unique noise and are not the same as living by the sea, which I note the proponent has also suggested in community forums. The type of noise to expect would be best described as similar to noise emissions from heavy freight/rail noise, a roller coaster, emissions from a water park, a PA announcement system at an unenclosed stadium and very large waves crashing on concrete, all which the community have no experience with.
- (iii) +5 dBA due the outdoor residual noise produced from operations as it contains impulsive or tonal noise. As discussed previously breaking waves have tonal and impulsive components.

The author appears to have not justified as to why the correction factors in have not been considered nor applied. It is also noted that such correction factors are included in other Noise Elements from other counties within California.

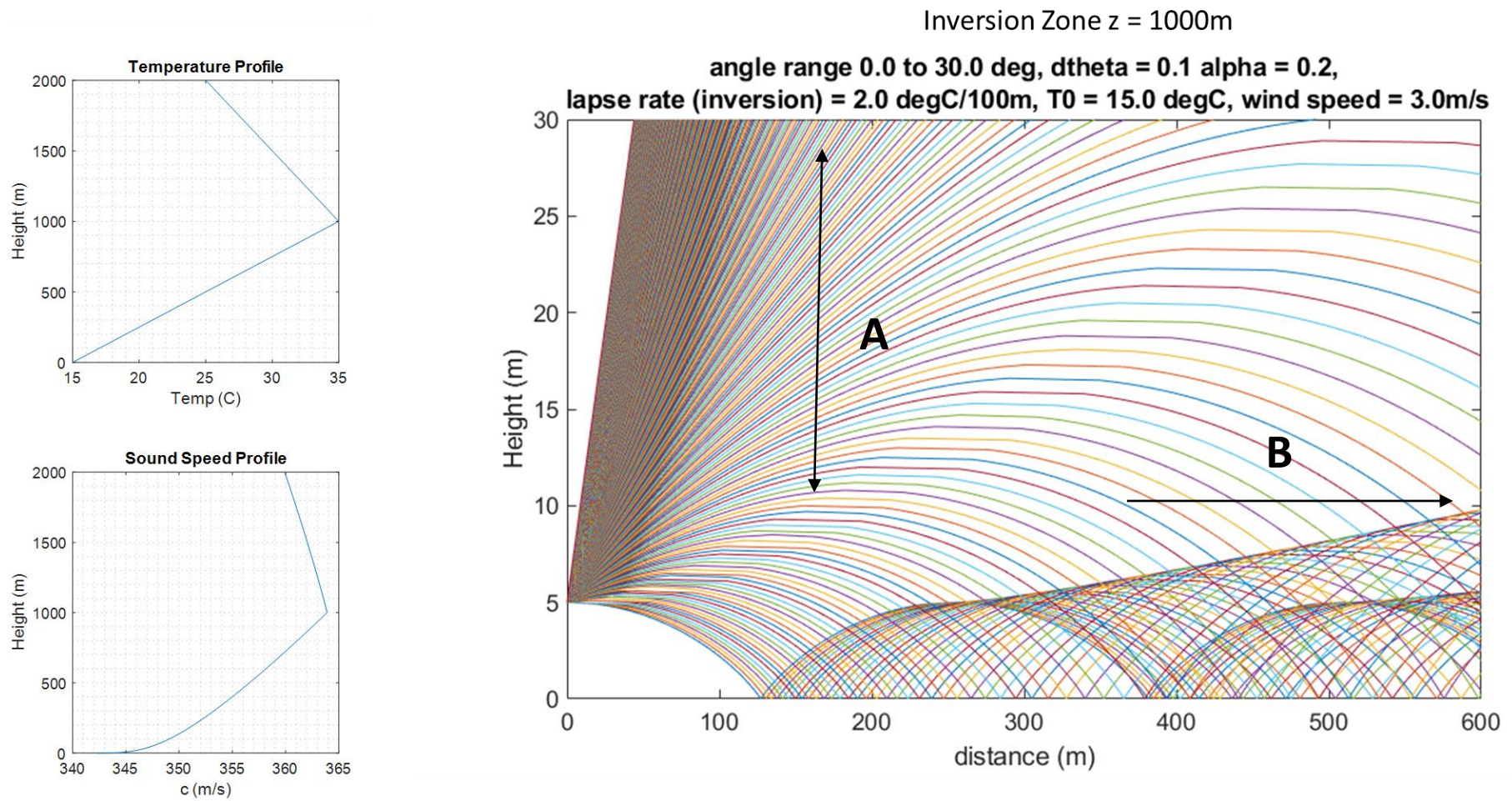


Figure 3 Acoustic ray tracing propagation model for a source at 5 m height within inversion layer at 1000 m with a 0.2 windshear factor produces a convergence zone occurring approximately around 400-600 m from the site location (Region B). Where Region A is the noise energy unaccounted for in the model for the proposal that lands on the La Quinta community

Inversion Zone  $z = 1000\text{m}$

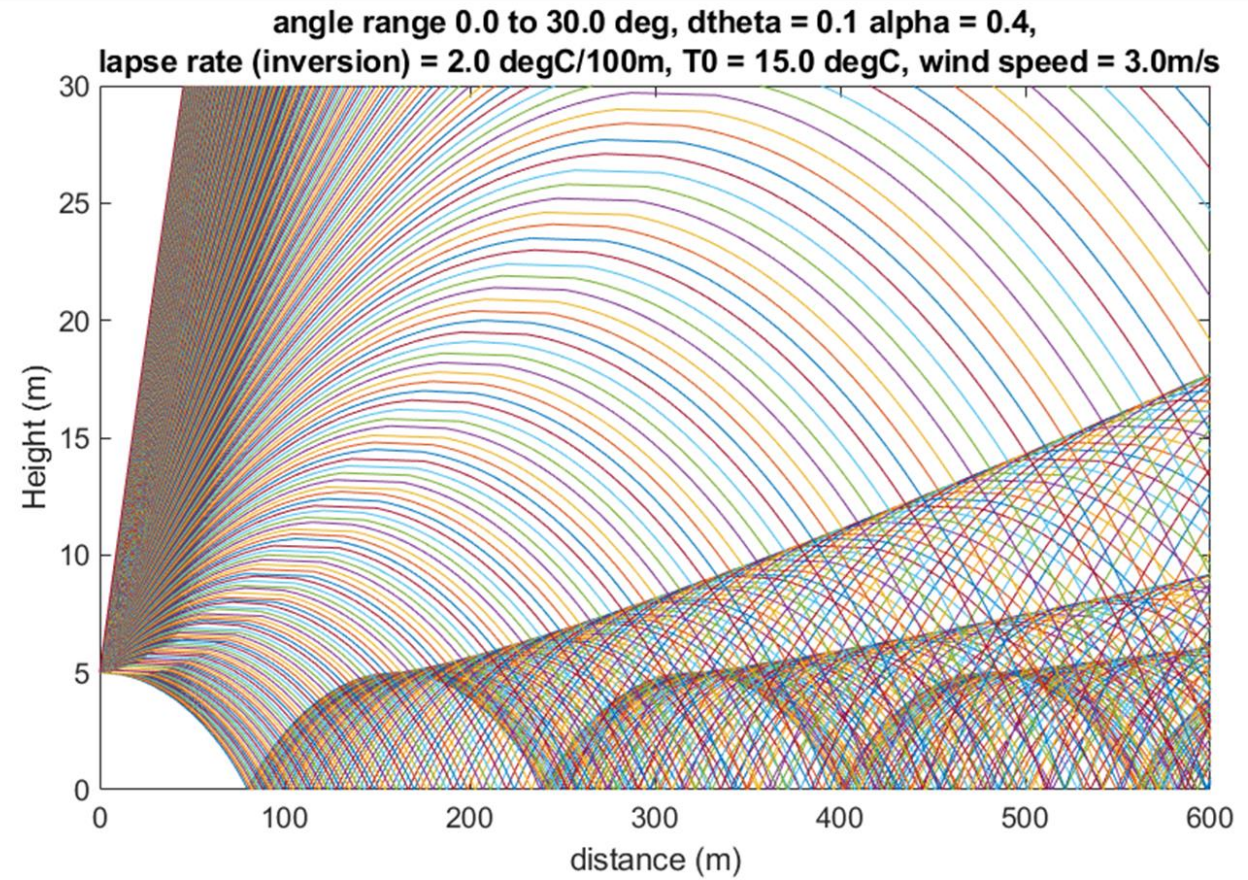
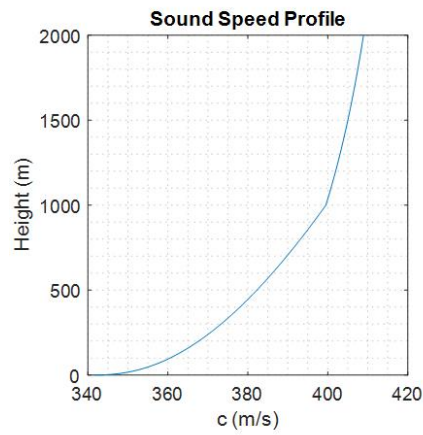
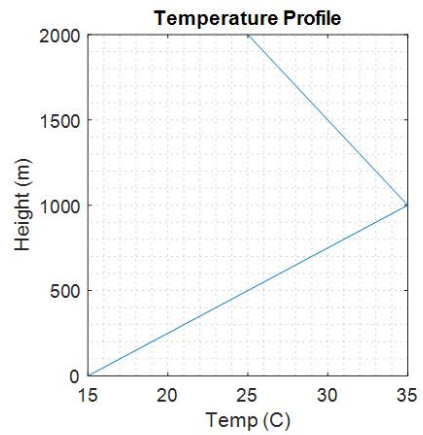


Figure 4 Acoustic ray tracing propagation model for a source at 5 m height within inversion layer at 1000 m with a 0.4 windshear factor produces a convergence zone occurring approximately around 300-600 m from the site location.

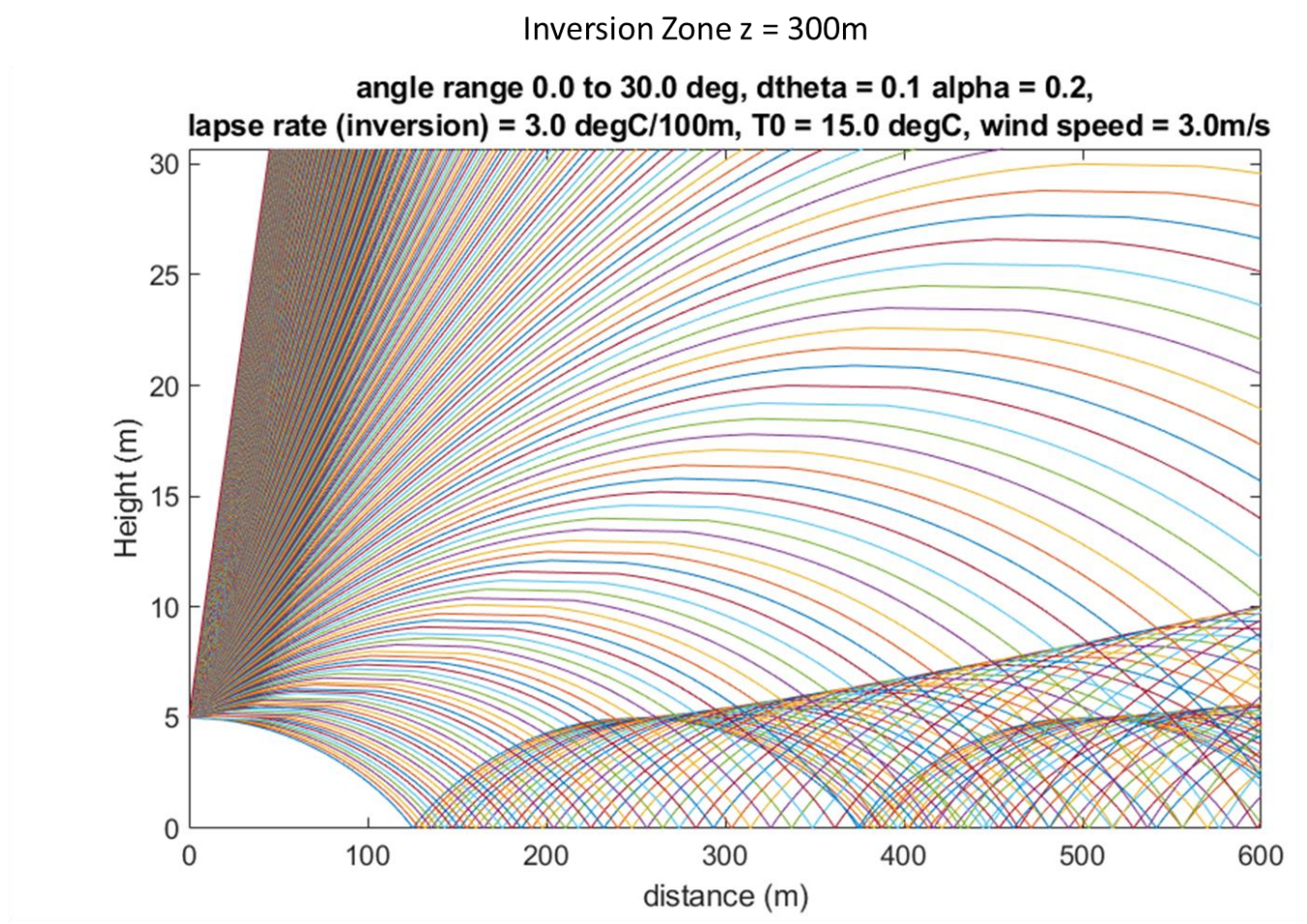
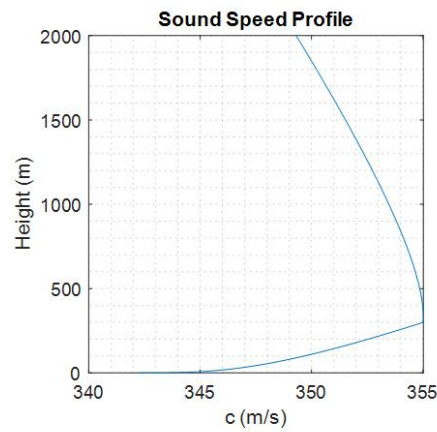
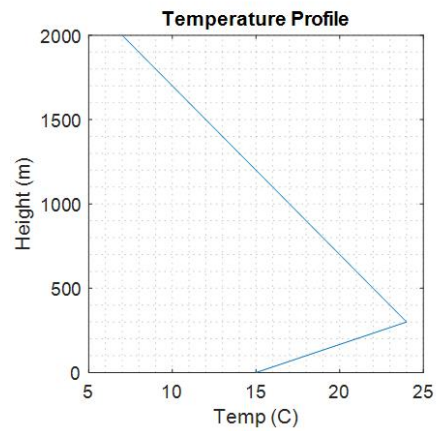


Figure 5 Acoustic ray tracing propagation model for a source at 5 m height within inversion layer at 300 m with a 0.2 windshear factor produces a convergence zone occurring approximately around 400-600 m from the site location

## Curriculum Vitae – Shane Chambers

**Occupation** – Physicist

**Nationality** – Australian

**Educational Courses** BSc (Physics Hons)/BEng (Electrical)\*1992-1997 University of Western Australia;  
PhD (Physics) 2008-2, University of Western Australia

### Relevant Experience

1998-1999 Radiation Physicist, Bioacoustics Researcher, University of Western Australia

1999-2004 – Nautronix Ltd, Acoustic Physicist, R&D

2005 – 2014 – School of Physics, University of Western Australia, Biophysics Teaching & Coordinator

2008- 2017 – Consultant, Provision of Expert Advice in complex acoustical issues of high public interest in Western Australia. Assistance with provision of expert evidence for major crime.

2015 – 2020 - Research Associate, University of Western Australia/ Commercial R&D

2012 – 2020 - Bioacoustics Laboratory Supervisor, School of Physics, University of Western Australia

2020 – Present – Solushans, development, protection and commercialisation of IP owned for a confidential novel underwater acoustic sensing system; consultant in acoustics and complex systems.

**Relevant Skills/Interests** - Expert level in bespoke complex acoustic modelling, including propagation, reflectometry and noise field prediction for both underwater and atmospheric applications; acoustic spread spectrum communication; acoustic multisensor array and transducer design; precision acoustic measurement; acoustic transducer calibration techniques; advanced signal processing and multisensor beamforming algorithms; machine learning and optimisation; analogue and RF electronics and associated power systems; bioacoustical systems.

**Languages** - C++, Python, MATLAB, Igor Pro, LABView

**Awards Received**- Australian Acoustical Society Education Award 2005, 2006, 2008, 2010, 2012, 2013, 2014; State Government of Western Australia Applied Research Program (2014-2020)

**Volunteer/Chair Positions** Vice President, Australian Acoustical Society (WA)

**Reference** – Iain Parnum – President, Australian Acoustical Society ([I.Parnum@curtin.edu.au](mailto:I.Parnum@curtin.edu.au))

Good evening Mayor Evans, Council Members and Staff

I would like to present my conclusions about the light impact of the 40 foot light towers in the Coral Mountain Project.

Fact:

“Light pollution, or artificial light at night, is the excessive or poor use of artificial outdoor light. It disrupts the natural pattern of wildlife, contributes to the increase of carbon dioxide in the atmosphere, and disrupts human sleep, and obscures the stars in the night sky”

- National Geographic Society

This project is counter to the **Dark Sky Initiative** that most of the desert cities have embraced, to control excessive lighting on the city streets, and gated communities.

Artificial light can wreak havoc on the natural body rhythms, in both animals and humans. This happens by upsetting the circadian rhythm.

There are three types of **light pollution**:

- 1) Glare – which is the excessive brightness that can cause visual discomfort
- 2) Clutter – this is bright, confusing, and excessive groupings of light sources
- 3) Light Trespass – this is when light extends past an area where it's not wanted. This could be into the sky, against mountains, into peoples windows, or bouncing off of a cloud layer.

This project will embrace all three types of light pollution.

**Light Refraction:**

When light travels from air into water (mist or dust), it slows down, causing a change of direction, this is referred to as refraction. When light enters a more dense substance, (higher refractive index), it bends.

Therefore, the angle of reflection is equal to the angles of incidence. Meaning that as the light pushes through mist, dust, or clouds, depending on the material the light will refract and project out in a manner inconsistent with the fixture design, computer models or estimates.

You can calculate the optics of the fixtures, their placement, and the coverage as a computer model. But unless you use the real-life environment of the installation, and provide the potential for dust, or the mist being given off by the waves, you are not accurately estimating the potential for light trespass.

Christopher Thompson  
1241 Adams Street, Suite 1140  
St Helena, CA 94574  
[Cthompson@studiolux.com](mailto:Cthompson@studiolux.com)  
206-730-9188

- Christopher is self-employed and is the principal of Studio Lux, LLC lighting designers.
- Studio Lux has projects throughout the world, with offices in Seattle, the Bay Area, and LA. He holds a BFA, and a BS in Electrical Engineering. He is an honorary member of the British Society of Interior Designers, and a member of the Illuminating Engineering Society of North America, and the International Association of Lighting Designers.
- Studio Lux is an internationally recognized architectural lighting design firm. In our portfolio of world-class hospitality, civic, museum and artwork, retail, residential and commercial spaces, Studio Lux balances the artistry and technology of illumination to deliver exceptional design. We believe the practice of effective lighting design is not just for large iconic projects. It is as important for a favorite room of a residence as it is for a luxury office tower or educational facility. We never lose sight of the human condition and how lighting impacts mood, feeling and perception.
- Christopher is also a retired member of the Board of Directors of the Frank Lloyd Wright Foundation, in Scottsdale AZ, and sat as the chair for the committees of Licensing, and Preservation.
- Christopher is also a Firefighter with Napa County Fire Department, Deer Park Station, 21, graduating from the Fire Academy in 2017. He was named Firefighting of the year in 2017. He's also the Co-Director of Deer Park Fire Safe Council.

Relevant awards:

## IESNA INTERNATIONAL ILLUMINATION DESIGN AWARD PROGRAM

- Gloria Koch Leonidas Memorial Section Award for Outdoor Lighting  
Project: [Taliesin West Campus Site](#)
  - Westmont College

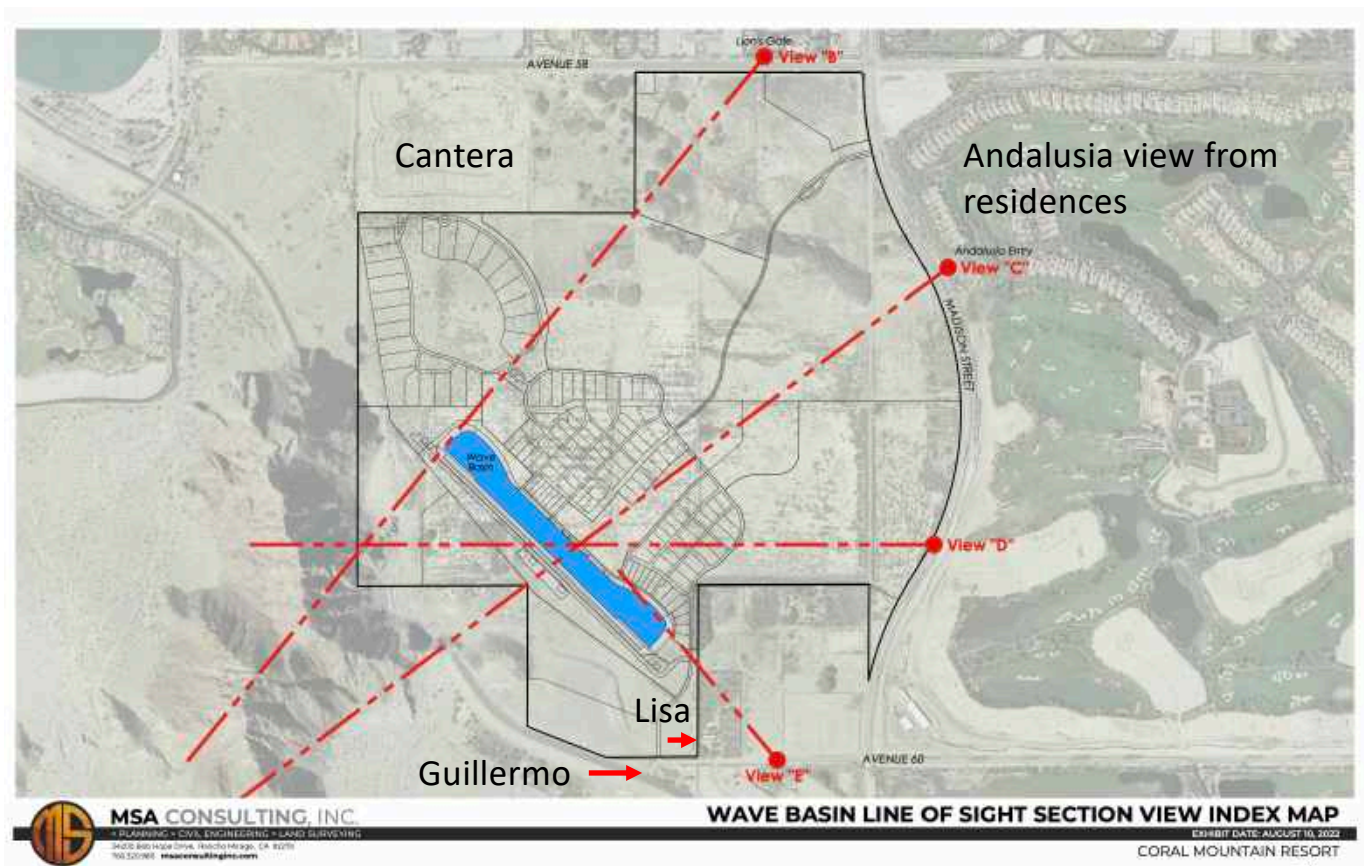
# Line of Sight Study is Flawed

Alena Callimanis

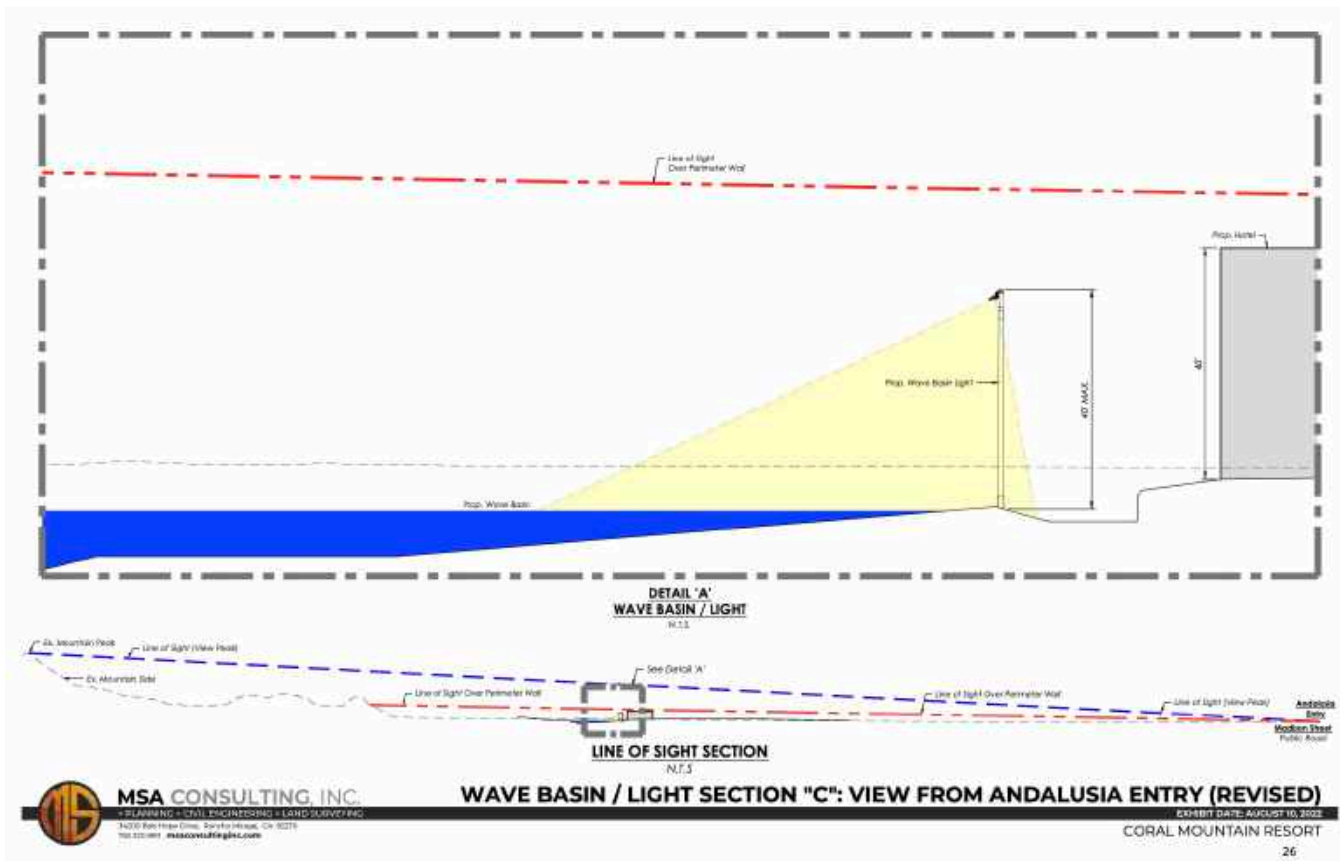
La Quinta



The Red Dots show the origination points of the Line of Sight study. I have additionally annotated on this picture Lisa Castro's and Guillermo Casillas' houses, Cantera & the view site from residences at Andalusia.



Here is the Line of Sight View from the Andalusia Entry, which is on the right side of this picture, and illustrates that there will be no light visible from the entry.



Here is the view of Coral Mountain from residences at Andalusia, 365 days of the year, from dusk until 10pm or later. The arrows show balloons which represent lights, only on the north side of basin



From Lisa's house – the red balloon shows the wave mechanism location. Closest yellow balloon is end cap of wave basin. (Yellow balloons represent light locations)



From Guillermo's house:



View from Cantera from Lisa Castro on the left to Coral Mountain on the right - this is a third of the lights on the north side of the wave basin; The back fence of the Cantera development is 6 feet high.



Why was the line of sight study done that bypassed communities and people that will be affected?

- Why is the developer only doing line of sight studies from the street?
- You should care about what is happening to people **WHO DID NOT EXPECT THAT OUR CITY COUNCIL MIGHT CHANGE THE ZONING THAT WOULD CAUSE THIS TO HAPPEN!**

**This is one example of the Developer misrepresenting the facts to make the outcome look favorable to them**

**If you approve this project, you are telling everyone you believe everything the developer says and don't believe any of the facts researched and presented by concerned La Quinta residents**



## New Information on Wave Pool Evaporation Rate Factors and Why the EIR for the Coral Mountain Wave Pool Project is invalid

Good Evening City Leaders, my name is Robert Lasser and I live in La Quinta. Today, I will present new information regarding evaporation rate factors specific to Wave Pools, which will invalidate the WSA and EIR findings for this project.

A recent Wave Pool Mag article describes the complex concept of wave pool evaporation factors. It explains how maintaining water levels of a wave park, requires fine science, because the pool water that forms manufactured waves, fights a constant, losing battle, against the elements, and thus requires constant replenishment.

The Kelly Slater Surf Ranch pool in Lemoore requires a massive 15 million gallons of water to fill the pool, and can lose 250,000 gallons of water a day on hot days in Lemoore, which are a lot cooler than hot days in La Quinta.

We have had 104 days over 100 degrees so far. That makes for 26 million gallons in evaporation just for 104 days if our pool was in Lemoore.

The la Quinta wave pool weather and water will be a lot hotter, and our weather is a lot windier, so it is reasonable to expect higher evaporation rates in La Quinta.

But it turns out, size and volume don't make for a straightforward evaporation calculation. There are a variety of additional factors that contribute to evaporation rates.

According to **industry expert**, Allen Clawson, of Cloward H2O, the primary concerns for recreational water loss are evaporation, wind, splash out, and mechanical systems.

In addition, there are factors that determine how fast water will evaporate from a pool. Humidity, sun exposure, water temperature, air temperature, and surface area, all play a role.

## **Evaporation**

Some conditions that will make water evaporate at greater rates are low humidity, direct sunlight, high daytime, and high evening air temperature, and a high-water temperature. With summer daytime temperatures up to 120 degrees and overnight lows in the 90's, and no plans to cool the basin water, all of these factors will apply to the Coral Mountain wave pool.

While evaporation is a key component in the overall water use story, it typically only accounts for about 50% of the total water losses that we need to account for, according to Clawson.

## **Wind**

The stronger the wind blows, the more water that evaporates. As the wind blows over a surface and carries the water molecules away, it leaves a void of drier air that can then continue to pull water out of the pool.

“Add in wave action, and we expect the evaporation rate to increase by about 30-70% [more than] still water,” said Clawson. This accounts for both additional evaporation due to wave action, and spray and mist, that is carried away by wind.

## **Splash-Out**

With so much water sloshing around a wave pool, some amount will inevitably splash out of the basin and evaporate on the surrounding surfaces.

## **Mechanical Systems**

Lastly, the mechanical systems installed in the pool are responsible for discharging water too and must be properly analyzed.

## **What About the Desert?**

When this latest information is considered, It is reasonable to expect the Coral Mountain Wave Pool will waste more than 62 million gallons of water per year, not the 24 Million gallons that CVWD calculated. CVWD **did not** analyze the impact of the wave action, water temperature, high nighttime and daytime temperatures, mechanical systems, wind, and splash out. Instead, CVWD **only** considered Coral Mountain as a moving lake.

The EIR for the Coral Mountain Surf Park project did not fully evaluate **all** of the causes and effects of water evaporation, and therefore is incorrect in its assumptions. The EIR must be rejected as it does not accurately reflect the amount of potential water use, and therefore will affect the overall MAWA water calculations.

The Developer claims their 17-acre wave pool uses less water than a golf course. That may be true. But according to a CVWD representative, about 25% of irrigation water is eventually returned to the aquifer as it seeps down into the soil. With a wave pool, 100% of the water vanishes into thin air, and is wasted.

In conclusion, only you can ensure the effective use of water in the City of La Quinta moving forward, by denying frivolous uses of this precious resource.

Please deny this project because it is a complete and total waste of water.

Thank you.

Good evening Mayor Evans, Council Members and Staff — I'm Karen Tomcala from Trilogy here in La Quinta.

You're being given a pile of dense facts from different perspectives, and you're probably not sure what to think. I'm not going to give you more (or not many), but I am going to tell you a story.

I was Chief of Staff for the Chairman of FERC when the commission was re-regulating the electric industry in the 90's. We were being told by the economists that competition would drive down the price of electricity to its variable cost, benefitting consumers. I had been doing project development work for several years, and I remember wondering how the fixed costs of generation plants would be covered. But I thought the economists would certainly have figured this out. We all know how that turned out — Enron manipulated the market, the lights went out, and the largest utility in the country was driven into bankruptcy. I learned the hard way never to suspend your common sense, no matter how good the story sounds.

Here we are tonight considering a wave pool in the middle of the desert during an unprecedented and frightening 1200-year drought. Lake Mead is at 26% of capacity, and Lake Powell at 27%. We are told the reservoirs could be empty in 3-4 years. This year, DWR reduced State Water Project allocations to 5% of requested amounts, and the Bureau of Reclamation asked the western basin states to conserve an additional 2-4 million acre/feet of water — the amount of water the entire state of Colorado uses in a year, and more than 6 times the amount Nevada uses. The Colorado River Compact allocates 16 million acre/feet per year. The drought has reduced that 12 million, and scientists tell us to plan for 9 million in the future. We can't suspend our common sense.

This is La Quinta, the Gem of the Desert. Surely there is a development project that could fulfill the Gem standard on this very special piece of property — one that would bring funds to the city without draining the precious water resources on which our very existence depends. You have a chance tonight to use your common sense and lead us toward a responsible vision for the city's growth, or to make a short term decision that will be seen to have ignored the water crisis we face, placing in peril the people you are elected to serve.

Carolyn Winnor  
La Quinta Resident  
Sept. 19, 2022

## Coral Mountain Turf Reduction Program

The Coral Mountain Developer has proposed to match CVWD's rebate for the LQ Residents for Turf or Grass Removal which would now equal \$6.00 per sq. ft.

The Developer's Plan, Residents remove your Turf, receive \$6.00 per sq. ft. and the water saved will be used in the "WAVE".

A quote from Mr. Vaughn's letter, the developer's attorney dated August 22, 2022 to the City.

"The initial payments by Applicant plus the transfer fee on Phase 1 closings will generate more than enough funds to completely **offset the Wave Basin's water use** through the turf removal program."

Another quote from Mr. Vaughn's letter

"At \$3 per sq. foot, the \$1.5 million payments plus the transfer fee will fund the replacement of a total of nearly 2 million sq. feet of existing grass turf, saving more than 200 acre-feet of water per year".

2 million sq. feet of existing turf sounds huge..... It's not. It is really only 46 acres

To get an idea of 46 acres, The Wave Pool per the developer is 16.6 acres.

So the grass removed is less than 3 times the surface of the Wave Pool. Or La Quinta's largest city park at Adams & Blackhawk is 18 acres which is approximately 2.5 times the surface of the Wave Pool.

The transfer fee is expected to generate a total of 4.5 million dollars at full build-out.

Who will receive the 4.5 million generated for the Turf Removal program?

## **Developers Agreement states**

Developer shall make the following payments to the City or its designee.

In the event that CVWD discontinues the turf reduction program in place as of the Vesting Date of this Agreement, the City shall still have the right to receive the payments for purposes consistent with turf reduction goal and objectives, as the City deems appropriate in its discretion.

Fact:

Residents that participate in the Turf Removal program are required to complete a W-9 form and pay Federal Taxes on the Turf Rebate they receive.

Fact:

Residents may end up paying additional monies out of their pocket to complete their landscape project as \$6.00 per sq. foot may not be adequate.

Do the Residents of La Quinta want to help **fund the water for** the CM Wave Project?

The La Quinta Residents who want to conserve water by removing their Turf, do not want the water to be siphoned off to be used in a WAVE Pool.

Fact:

The new information that was presented to you this evening by Bob Lasser from experts in Wave Pool evaporation clearly shows that the CVWD evaporation calculations which treat the wave as a lake with moving water, significantly underestimates the actual evaporation of the wave park. Therefore, the calculations done by Mr. Levy used to calculate the amount of grass that needs to be removed is significantly undercalculated.

Recap:

Homeowners may be required to pay additional Federal taxes for receiving a Turf Rebate.

Homeowners may need to layout additional funds to complete their Landscape Project.

Some Homeowners financially cannot participate now, due to the economy.

Is this how the Developer can justify their water usage to the City?

**The end result the Developer's plan does nothing to conserve the Colorado River water or help replenish the aquifer during this MEGA DROUGHT!**

**Please listen to your constituents and vote NO on Re-Zoning this Property.**

Thank You.

What 600 STVRs and 150 hotel  
rooms in One location will do to  
the residents around Coral  
Mountain

**Lisa Jeffrey**

**Citrus**



# What's happening around the Desert

- Desert Sun, Oct. 27, 2021: Goldenvoice has signed a long-term agreement with the Empire Polo Club through 2050 for full operational control of the venue, opening the door for music events year round.
- Acrisure Arena: Around 40 home hockey games, more than 40 concerts and 150 other events, from professional and college sports to family shows, are expected to fill the approximately 11,500-seat venue year-round.

# It doesn't matter whether Measure A passes or not

- The Developer has committed to managing the STVRs, and through the Zoning Change and the Development Agreement this area will now be 100% STVRs – up to 150 hotel rooms and 600 STVRs
- With the current controversy of residents living next to STVRs, and the issues that have been raised about living next to STVRs, since there is no stay limit, people will not buy a permanent residence at Coral Mountain
- This area will get a reputation that partying is acceptable 24 by 7 since there is no “neighbor” living next to you to complain

# The Developer says they need 100% STVRs for their Business Model

- There are only 130 surfers allowed per day so it is obvious that there are not enough surfing slots for the number of hotel rooms and STVRs
- So that means that they are counting on the novelty of watching surfers and a non-stop, non-regulated party atmosphere as the way to fill the hotel and STVRs
- Please don't let the Developer say this is not true. How else do they plan on filling the STVRs if not by people staying at the hotel and STVRs and people coming to town for venues at Goldenvoice, Coachella, Stagecoach, the Acrisure Arena, Events at Casinos, Indian Wells Tennis, Golf Events, Horse Shows, Polo...

# So what does that mean to the surrounding residential communities?

- Significant traffic volumes day and night with cars coming from and going to events
- Noise pollution as proven by the acoustic experts – this is a quiet area after 5pm; that peace is going to be shattered
- Line of sight studies that were erroneous and in fact there will be light pollution in the surrounding developments

# How many developments surround Coral Mountain on 58th, Madison and 60th?

Coral Mountain by Alta Verde	Coral Mountain at PGA West
Santa Rosa Trails	Palo Verde
Desert – Sotheby’s International Realty	Toll Brothers Stone Creek
Cantera at Coral Mountain	The Quarry
Andalusia	Trilogy
Santerra	Lions Gate
Lisa Castro – private residence	Guillermo Cassilas – private residence
Puerta Azul	PGA West Legends Residential

# Coral Mountain is not compatible with the surrounding neighborhoods

- You cannot approve the Zoning Change
- As a Private Resort, with only 130 surfers per day, the Surf Park is not the amenity they are claiming it to be to attract large numbers of surfers
- It is to attract investors to STVRs and fractional ownership with the promise of a constant STVR revenue stream
- It's to provide an unfettered party environment for STVR renters

**PLEASE VOTE NO TO CORAL  
MOUNTAIN SURF RESORT**

Before I start, I would like to say thank you to the Mayor and all the City Council members for being here. With what you are paid, you must sometimes wonder why you took this on. But here you are. There is an election coming with three seats to be filled but you are the Council that has been privy to two years of facts and information from both the residents and the developer. Please don't postpone this rezoning decision again and leave it to, perhaps, others?

Once a Council member remarked that the information he was given by the developer was so different from what he heard from the speakers, how could he know what was correct? So here are a few things I know to be from factual sources:

IID, CVWD and others began negotiations in August 2022 for the water rights for the Colorado River, with a plan being discussed to potentially take water from the farmers and instead give them money. The developer says the Coral Mountain project uses less water than the approved golf course. Maybe so, but a golf course can be allowed to brown up and only be partially watered. What do you do with the Wave without water?

40 foot light poles are the same height as standard utility pole. And how many stories of a building are there in 40 feet? – 3.7 stories. It is hard to find a 4 story building in La Quinta. I only found the Marriott Residence Inn on Hwy 111. Take a look at those lights at night, on a commercial corridor. Mr. Gamlin states the lights would be on in the early evening hours. What kind of nebulous time is that?

There is a jet ski traversing back and forth all day. Surfers in the ocean paddle back out.

Per WavepoolMagazine.com in April 2022, just 5 months ago, the Surf Ranch in Lemoore is reserved for training, video clips (Oh, Need I repeat myself about videos with loud music overlays?), WSL contests (Well, there was one scheduled but it was cancelled) and a few friends of the King. I assume that means Kelly Slater. Private parties can rent out the ranch for the day at between \$50K and \$70K. A friend from Bakersfield near Lemoore said it seemed like the wave operates very few days and last I knew it does not operate at night. That hardly sounds to me like the successful entertainment park that it describes itself.

The discussion on Greenhouse gases between staff and Council was exasperating. The Staff claimed that the original proposal with low density residential and golf would generate more Greenhouse gases than the Coral Mountain proposal because private residences generate more trips outside the walls. That's ridiculous because people will want to leave the development to explore our wonderful City and other entertainment venues. STVRs will have more cars. The Greenhouse gas emissions will be significant because Kelly Slater Wave technology requires more electricity than any other wave-producing mechanism. And cement production in general, is 8% of all world-wide emissions. This project for the wave basin alone, will use in excess of 17 acres of cement, over 14 football fields. And digging up the desert floor, which is a carbon sink, will release all that carbon dioxide. The Green House gas emissions can't be mitigated on this project.

By the way, our petition to stop the wave has over 2500 signatures, 2000 of which are La Quinta residents. That is an increase of over 200 La Quinta Residents since the start of the Developer's Marketing Campaign. Please compare that to the 150 signatures the developer submitted.

On the Musco lighting study, keep in mind Musco lighting wrote in the EIR light study that lowering the lights to 40 feet would produce more glare because of the light angle. So it is interesting that has not be raised as an issue now that they lowered the lights. And Musco lighting also stated that they do not have any information on light reflecting off turbulent water.



In Mr. Gamlin issued responses to Frequently Asked Questions where he stated that the noise of the wave basin would be the movement of water similar to the ocean. He said that a sound engineer had recorded the sound of Lemoore and the information was incorporated in his noise study. I stood up here twice before asking to hear the Wave. If he has it and it's so quiet why has he not played it here for all of us. I lived a block from the ocean in Solana Beach and know sound it makes. But the ocean is not pulled by a "train on a track" like the wave.

In the postcard on noise - why did the developer single out Trilogy, Andalusia and Quarry, the three furthest developments? What about the closer 7 communities along 58th that are impacted.

And how on earth would you buffer the sound from the hotel? Should you approve another high end hotel resort? You already have two coming at Talus. And do the demographics support that?

La Quinta is and always has been a quiet "destination" in its own right, known for the skies and continuously changing shadowed mountains. The City does not need a gimmick like the Wave. I watched Mr. Gamlin on NBC TV this morning for about 3 minutes. I give him credit for making *The Wave sound more palatable*. You, however, are hearing *scientific* opposition. But should you vote to approve surely you will bifurcate the approval into two parts, the Hotel, yes, and the Wave, no. Because...No matter what you do to shrink the elephant in the room, it's still an elephant.

**City of La Quinta September 21, 2022, City Council Meeting**

Good evening, City Leaders, my name is Sylvia Lasser. I live in La Quinta.

I am here to speak **against** the Coral Mountain Wave Park project.

The Applicant is asking for multiple and significant amendments to the City's General Plan, to accommodate their **request**, to build the surf basin project. Specifically, the developer is asking for a zone change from the current, Low Density residential/golf, to Tourist/ Commercial.

Changing the current zoning to "tourist-commercial" would allow a project to be built that will violate **every** single goal and objective of the La Quinta 2035 General Plan.

The zone change would allow a high density, transient oriented, entertainment, water wasting resort venue, with 600 short term vacation rentals to a residential area.

It will bring 54 light towers, 40 feet tall, that will reflect light off of a nearly 17 acre, 18-million-gallon wave pool, that will ruin the dark sky, star filled nights.

The project will bring crowds, traffic, and noise on a 7 a.m. to 10 p.m. or later schedule, 365 days per year, to an area that is now exclusively, a quiet residential area, with no noise, no traffic, no crowds, no commercialism, and no light pollution.

The 2035 La Quinta General Plan is designed specifically to **prevent this very situation from happening!**

The general Plan is the constitution of the City of La Quinta. It is a document that is devised and formed by the public, and residents of the City. It is a very important document and must not be amended at whim.

The General Plan **is designed to preserve and protect the quality of life for La Quinta residents.** It's goals, policies and programs are those of the people of La Quinta, and **...are not intended to facilitate the agenda of any outside group, entity, or developer!**

The proposed Coral Mountain Surf Park is **NOT:**

1. Consistent with the General Plan
2. It Does not uphold rights and needs of surrounding property owners
3. Is Not consistent with neighboring developments
4. Will create excessive noise, traffic, and gas emissions
5. Will create an unnecessary, wasteful use of water in the midst of an unprecedented drought
6. Is Detrimental to public health and general welfare of surrounding communities
7. Is not compatible with General Plan land use goals
8. The surf park has a high probability of failure, and leaves the City with a tremendous business risk should the project be abandoned due to lack of future water resources, changing preferences, or other reasons

Yet, considering all of this, the developer insists, that this proposed development fits right in with the surrounding communities.

So, I must ask, how many of the surrounding neighborhood communities have:

- 17 acre 18-million-gallon wave pools, illuminated every night until 10 p.m. or later with 54 40-foot-high light towers?
- How many of the surrounding neighborhoods have loudspeaker emergency systems every few minutes from 7 a.m. to 10 p.m., every single day of the year!

- How many have a tourist and commercial zone with the potential for amplified nightly entertainment and concerts 365 days per year to entertain guests?
- How many of the surrounding neighborhoods are comprised of 100% short-term overnight stay vacation rentals that will bring transient occupants through the neighborhood on a nightly basis?

I ask you City Leaders, should this type of development be placed in the middle of quiet residential neighborhoods?

As City leaders, if you can not adhere to the City of La Quinta General plan, a plan designed to protect La Quinta residents from inappropriate development adjacent to their homes, **then who will?**

City leaders, if you do not have the ability to understand that water is a limited resource, and **how we use it** matters, **then who will?**

City leaders, if you cannot recognize that this project does **NOT** resemble the surrounding neighborhoods in any way, and does not belong in this location, **then who will?**

The developers bought this land knowing full well it is **not zoned** for their desired use... You owe them nothing!

Deny the zone change and deny the project. It is the wrong project, at the wrong time, and in the wrong place!

The benefits of the project do not outweigh the significant and numerous environmental and neighborhood impacts.

In conclusion,

Listen to, and respect the will of your constituents, who elected you to serve their needs, and protect their interests.

Just tell the developers NO! Thank you.