

Chapter 8

Construction Effects

Introduction

This chapter presents impacts associated with the construction of the proposed project, which would occur in two phases. The first phase of construction involves relocation of the existing parking lot closer to the park entrance and PCH. During this phase, the existing parking lot, which is located at the northern portion of the project site, would be removed. The northwestern portion of the project site, adjacent to PCH, would be graded and paved for the new parking lot. The first phase of construction is anticipated to occur between November 2006 and January 2007.

The second phase of construction would occur in the western arms of the lagoon and in a small location on the eastern shore adjacent to the Adamson House boat dock. Construction activities in the lagoon primarily involves earthwork. The second phase of construction is expected to begin in late August 2007 and continue through October 2007. There would be no construction in 2008.

As construction activities for the proposed project would last for a few months, the impacts discussed in this section would be temporary and intermittent. Where applicable, mitigation measures are proposed to reduce construction-related impacts.

Please also refer to Chapter 9, Effects Determined Not Significant, for discussions of both construction and long-term effects associated with topic areas that were found to have little or no relation to this project, such as mineral resources, hazardous materials, and utilities.

Air Quality

Impact AQ-1: Pollutant emissions during Phase I and Phase II construction.

Construction activities would temporarily generate pollutant emissions. Pollutant emissions are typically generated from dust, fumes, and equipment exhaust, and vehicle exhaust. The amount of emissions

generated would vary depending on the type of construction activity that is involved.

During the first phase of construction, pollutant emissions would be generated from the following construction activities: (1) demolition of existing parking lot, (2) grading, (3) construction workers traveling to and from the project site, (4) delivery and hauling of construction supplies and debris to and from the project site, and (5) fuel combustion by on-site construction equipment.

During the second phase of construction, pollutant emissions would be generated from the following construction activities: (1) excavation, (2) hauling of excavated soil from the project site, (3) construction workers traveling to and from the project site, (4) delivery and hauling of construction supplies to and from the project site, and (5) fuel combustion by on-site construction equipment.

The South Coast Air Quality Management District (SCAQMD), the local agency that monitors air quality within the project area, has established thresholds for carbon monoxide (CO), reactive organic compounds (ROC), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter less than 10 microns in diameter (PM₁₀) for construction activities. The SCAQMD construction thresholds are shown in Table 8-1. The proposed project would have a significant impact if daily construction emissions were to exceed SCAQMD construction emissions thresholds shown in Table 8-1.

Table 8-1: SCAQMD Daily Construction Emissions Thresholds

Criteria Pollutant	Pounds Per Day
Reactive Organic Compounds (ROC)	75
Nitrogen Oxides (NO _x)	100
Carbon Monoxide (CO)	550
Sulfur Oxides (SO _x)	150
Particulates (PM ₁₀)	150

Source: South Coast Air Quality Management District

The California Air Resources Board (CARB) URBEMIS 2002 model was used to estimate daily construction emissions for the proposed project. Table 8-2 shows the estimated daily emissions during construction of the parking lot and the lagoon. As shown, estimated daily construction emissions are not anticipated to exceed any of the SCAQMD construction thresholds, and a less-than-significant impact is anticipated.

Table 8-2: Estimated Daily Maximum Construction Emissions

Construction Activity	Pounds Per Day				
	ROC	NO _x	CO	SO _x	PM ₁₀ /a/
SCAQMD Threshold	75	100	550	150	150
<u>Phase I- Construction at the Parking Lot</u>					
Demolition	2	21	14	<1	3
Grading	4	22	31	<1	3
Exceed Threshold?	No	No	No	No	No
<u>Phase II- Construction at the Lagoon</u>					
Earthwork	9	57	75	<1	17
Exceed Threshold?	No	No	No	No	No

/a/ Assumes proper implementation of SCAQMD Rule 403.
Source: TAHA, 2005 (see Appendix C for model worksheets)

Daily PM₁₀ emissions during grading for the proposed project assume proper implementation of SCAQMD Rule 403.¹ Rule 403 applies to any activity or man-made condition capable of generating fugitive dust. It requires the use of control measures that would reduce or mitigate fugitive dust emissions. Due to the fact that the soil in and around the lagoon has a high moisture content, fugitive dust emissions will be very low during construction activities. Nevertheless, implementation of mitigation measures AQ-1 through AQ-3 (listed below) would ensure adherence to Rule 403 and minimize fugitive dust emissions to the maximum extent feasible.

Mitigation Measure AQ-1: Dust sweeping.

The construction area and vicinity (driveways, access roads, and staging areas) shall be swept with water sweepers on a daily basis or as necessary to ensure there is no visible dust.

Mitigation Measure AQ-2: Covering or watering of stockpiles.

On-site stockpiles of debris, dirt or rusty material shall be covered or watered at least twice daily to prevent fugitive dust.

¹ Implementation of Rule 403 is estimated to reduce dust and PM₁₀ emissions by up to 59 percent during the grading phase. The resulting daily PM₁₀ emissions, shown in Table 8-2, would not exceed the SCAQMD significance threshold of 150 pounds per day.

Mitigation Measure AQ-3: Covering of haul trucks.

All haul trucks hauling soil, sand, and other loose materials shall either be covered or maintain two feet of freeboard.

As shown in Table 8-2, the estimated daily emissions during construction of the proposed project would not exceed any of the SCAQMD thresholds. Thus, less-than-significant impacts on air quality are anticipated to occur during project construction.

Consistency with Local and Regional Plans

No changes to existing land uses would occur during construction of the project and no impacts would result. Please refer to Chapter 4 for a detailed discussion of the project's consistency with local and regional planning documents.

Construction activities are inherently incompatible with sensitive land uses such as residences, due to unavoidable issues of noise, dust, and the potential for temporary traffic delays. These issues and others are described in other sections of this chapter. All construction activities would be mitigated to reduce the level of impact and all impacts described would be of a temporary and intermittent nature.

Hydrology and Water Quality

Impact HYDRO-8: Release of construction-related sediment from access roads, staging areas, ground-disturbing activities and stockpiles during Phase I and Phase II construction.

Phase I of the project construction includes removal of the existing pavement at the parking area and visitor kiosk and construction of a new parking area within the same general area of the project site. Both the existing and new parking areas would cover approximately the same amount of land - a little more than one acre. These activities would occur outside of the direct influence of the lagoon.

Phase II project construction would require ground-disturbing activities within channels of the lagoon itself. Deposition of sediment to the lagoon would exacerbate the existing nutrient impairment in the lagoon. Due to the size of the construction area and the potential for water quality degradation, release of construction-related sediment would create a potentially significant impact on water quality in the lagoon. However, implementation of mitigation measure HYDRO-2 would reduce this impact to a less-than-significant level.

Mitigation Measure HYDRO-2: Implement Best Management Practices to Control Discharge of Construction-Related Pollutants to Surface Waters.

Because project construction would cover an area greater than one acre, a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the Lead Agency or its contractor as required by the RWQCB under the NPDES General Construction Permit. The SWPPP shall meet the requirements of the RWQCB as well as any City and County requirements.

The SWPPP shall identify Best Management Practices (BMPs) to maintain water quality. The final selection and design of erosion and sediment controls shall be subject to approval by the Lead Agency. BMPs in the SWPPP may include, but are not limited to, the following elements:

- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed for disturbed areas.
- Earth dikes, drainage swales, and ditches shall be provided to intercept, divert, and convey surface runoff and sheet flow, prevent erosion, and reduce pollutant loading. Specific areas that may need such measures shall be identified on the construction drawings.
- Roads used during construction shall be swept and cleaned of accumulated earth and debris in the construction zone during project construction, particularly before predicted rainfall events.
- Excavated materials deposited or stored onsite temporarily shall not be placed in or adjacent to open water channels and shall be wetted and covered as necessary to prevent runoff and erosion.
- Oils, fuels, and other toxicants spilled or deposited near the project site shall be removed and disposed of according to applicable laws and regulations.
- Fueling areas will be designated to afford separation from surface waters during fueling activity to prevent accidental spills from reaching the lagoon.
- Establish native grass or other vegetative cover over areas that have been disturbed by construction as soon as possible after disturbance to establish vegetative cover. This will reduce erosion by slowing runoff velocities, enhancing infiltration and transpiration, trapping sediment and other particulates, and protecting soil from raindrop impact.

The Lead Agency and/or its contractors shall implement a monitoring program to verify BMP effectiveness. The monitoring program shall begin at the outset of construction and terminate upon completion of the

project. Implementation of the mitigation measure above will reduce impacts to less-than-significant levels.

Impact HYDRO-9: Release of construction-related hazardous materials during Phase I and Phase II construction.

Fuels, oils, lubricants, and other hazardous materials with the potential to degrade water quality may be released from equipment during construction. Excavation equipment, generators, and other construction equipment would use these hazardous materials on a regular basis during construction. If a fuel tank or an oil line were ruptured, the surrounding environment would be at risk. Impacts are considered to be less than significant with implementation of mitigation measure HYDRO-3.

Mitigation Measure HYDRO-3: Implement a Hazardous Material Spill Prevention Control and Countermeasure Plan.

A Hazardous Material Spill Prevention Control and Countermeasure Plan shall be prepared as part of the NPDES General Construction Permit to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction of the project. This plan shall describe storage procedures and construction site housekeeping practices and identify the parties responsible for monitoring and spill response. Routine inspections and monitoring of best management practices shall ensure minimal impacts to the environment occur.

Commonly practiced best management practices include use of containment devices for hazardous materials, training of construction staff regarding safety practices to reduce the chance for spills or accidents, and use of nontoxic substances where feasible. The plan also shall describe actions required if a reportable spill occurs, such as which authorities to notify and the proper clean-up procedures. The Hazardous Material Spill Control and Countermeasure Plan shall contain standards considered sufficiently protective such that significant adverse impacts on surface and groundwater quality would be avoided. The plan shall be completed before any construction activities begin. Implementation of the mitigation measure above will reduce impacts to less-than-significant levels.

Impact HYDRO-10: Temporary alteration of drainage patterns during Phase II construction.

Construction activities in Phase II could require large amounts of dewatering and discharge to adjacent surface waters, thus coverage would need to be obtained under an individual NPDES dewatering

permit. The LARWQCB will be consulted by the project proponent to obtain the permit.

In accordance with the permit, the dewatering collection and disposal methods would be identified for all project components. Receiving waters would be maintained through appropriate treatment measures identified in the permit. These may include utilization of settling ponds or screens to reduce suspended sediment loads, if necessary due to contaminated groundwater, use of onsite treatment systems for contaminant removal prior to discharge, and water quality monitoring.

In either case, these general permits contain standards considered sufficiently protective such that significant adverse impacts on surface water quality would be avoided. Potential impacts are expected to be less than significant. No mitigation measures are necessary.

Biological Resources

Potential impacts to sensitive biological resources during project construction are thoroughly detailed in Chapter 6 of this EIR, Biological Resources.

In summary, construction impacts to biological resources could include: (1) the removal or disturbance of southern willow scrub vegetation, atriplex scrub vegetation, baccharis scrub, mule fat scrub, Venturan coastal sage scrub, mixed scrub, southern coastal salt marsh, brackish marsh, coastal and valley freshwater marsh; (2) potential impacts to mud flat, sand beach/sand bar, open water, common wildlife species found to occur within the project area, California black walnut, wandering skipper, and southern steelhead trout; and (3) potentially significant direct impacts to tidewater goby, California brown pelican, western snowy plover, Heermann's Gull, elegant tern, and California least tern.

Mitigation measures are identified in Chapter 6 that would avoid the impact or reduce the significance of impacts to less-than-significant levels.

Cultural Resources

Potential impacts to sensitive cultural resources during project construction are identified in Chapter 7 of this EIR, Cultural Resources.

The project has potential to unearth as yet unknown significant resources during earthwork in specified areas adjacent to the Adamson House. However, mitigation measures are identified in Chapter 7 that would reduce potential project impacts to less-than-significant levels.

Noise

Impact N-1: Temporary increases in noise levels during project construction.

Construction of the proposed project would result in temporary increases in ambient noise levels on the project site and its vicinity on an intermittent basis. The project site is located within the City of Malibu, which does not have noise standards for construction. Rather, the City prohibits construction activities to occur between the hours of 7:00 p.m. and 7:00 a.m. during the weekdays and any time on Sundays or holidays (Noise Control Ordinance of the City of Malibu, Section 8.24.050G). Cities, such as Los Angeles and Beverly Hills, typically use a five-decibel increase over existing ambient noise level as the significance criteria for construction.

Additionally, studies have shown that a change of at least five decibels would be noticeable and would likely evoke a community reaction. Thus, a five-decibel or more increase over the current ambient exterior noise level at the affected noise sensitive receptor is used as the significance criterion to evaluate construction noise impacts for the proposed project.²

The nearest sensitive receptor to the project site is Malibu Colony, a residential community that adjoins the project site to the southwest. The increase in noise levels during construction on the project site could result in temporary annoyance to those residents of Malibu Colony immediately adjacent to the lagoon.

To establish a baseline from which to evaluate construction noise impacts, noise measurements were taken at the southern perimeter of the project site, near Malibu Colony, using a Quest Q-400 Noise Dosimeter during the hours between 10:15 a.m. -11:15 a.m. on September 13, 2005. The sound measurements indicate that the existing ambient sound level is approximately 58 decibels (dBA) (L_{eq}) at the southwestern portion of the project site and approximately 59 dBA (L_{eq}) at the southern portion of the project site near the eastern end of Malibu Colony.³

Construction activities will likely require the use of numerous noise-generating equipment, such as pavers, backhoes, and loaders. During construction, it is likely that more than one piece of construction equipment would be operating at the same time. Additionally, noise levels would fluctuate depending on the construction phase, equipment

² Land uses that are considered sensitive to noise impacts are referred to as “sensitive receptors.” Noise sensitive receptors consist of, but are not limited to, schools, residences, libraries, hospitals, and other care facilities.

³ L_{eq} is the average noise level on an energy basis for any specific time period. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as a “noise average” or the level of a continuous noise that has the same energy content as the fluctuating noise level.

type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers.

Based on surveys conducted by the United States Environmental Protection Agency (USEPA), the typical overall exterior noise level that would be expected during ground clearing is 84 dBA. The typical overall noise level that would be expected during grading and excavation is approximately 89 dBA. It should be noted that these noise levels are based on surveys conducted by the USEPA in the early 1970's. Since 1970, regulations have been enforced to improve noise generated by certain types of construction equipment to meet worker noise exposure standards. However, many older pieces of equipment are still in use. Thus, the construction noise levels that were collected by the USEPA represent worst-case conditions. Actual noise levels generated by construction activities are expected to be markedly lower.

To ascertain worst-case noise impacts at Malibu Colony residences that adjoin the project site to the south, construction noise was modeled by introducing the noise level associated with the grading/excavation phase of construction. The noise source is assumed to be active for 40 percent of the eight-hour work day (consistent with the USEPA studies of construction noise), generating a noise level of 89 dBA at a reference distance of 50 feet.

Sound levels during the construction period at Malibu Colony residences to the south of the project site were calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise level. The estimated outdoor construction noise levels at sensitive receptors are shown in Table 8-3.

Table 8-3: Outdoor Construction Noise Impacts

Noise Receptor	Distance (feet) /a/	Maximum Outdoor Construction Noise Level (dBA) /b/	Existing Ambient (dBA, Leq) /c/	New Ambient (dBA, Leq) /d/	Increase
<u>Phase I - Construction at the Parking Lot</u>					
Malibu Colony Residences adjacent to the southwestern portion of the project site	170	78	58	71	13
Residences at the eastern end of Malibu Colony adjacent to the project site	230	76	59	68	9
<u>Phase II - Construction at the Lagoon</u>					
Malibu Colony Residences adjacent to the southwestern portion of the project site	50	89	58	81	23
Residences at the eastern end of Malibu Colony adjacent to the project site	20	93	59	85	26
/a/ Distance of receptor to construction noise source.					
/b/ Construction noise source's sound level at receptor location, with distance adjustment.					
/c/ Pre-construction activity ambient sound level at receptor location.					
/d/ New sound level at receptor location during construction, including noise from construction activity.					
Source: TAHA, 2005 (See Appendix C for modeling worksheets)					

Currently, vegetation and fencing are located along the southern perimeter of the project site. Barriers, such as walls, dense trees, and berms, that break the line-of-sight between the noise source and the receiver would reduce noise levels from the source since sound waves can only reach the receiver by bending over the top of the barrier (diffraction). The vegetation and fencing along the southern perimeter of the project site do not completely break the line of sight between the residences at Malibu Colony and the project site.⁴ As such, construction noise levels shown in Table 8-3 do not take into account noise attenuation that could occur due to the existing vegetation and fencing along the western perimeter of the project site.

As shown in Table 8-3, construction activities at the project site would incrementally increase exterior ambient noise levels by 9 to 26 dBA, which would exceed the significance threshold of a 5 dBA or more increase. Thus, a significant, albeit temporary and intermittent, impact could result.

⁴ Line-of-sight is an unobstructed visual path between the noise source and the noise receptor.

Mitigation Measure N-1: Use of mufflers.

Construction contracts shall specify that all construction equipment shall be equipped with mufflers and other suitable noise attenuation devices.

Mitigation Measure N-2: Notice of construction schedule and noise “hotline.”

All residential units located within 500 feet of the construction site shall be sent a notice regarding the construction schedule of the proposed project. A clearly legible sign shall also be posted at the construction site. All notices and the signs shall indicate the expected dates and duration of construction activities, as well as provide a telephone number that residents can call to resolve any concerns about construction noise.

The Lead Agency shall be responsible for responding to any local complaints about construction noise. The Lead Agency (or designee) would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would be required to implement reasonable measures such that the complaint is resolved.

Mitigation Measure N-3: Limits of hours of construction.

Pursuant to the Noise Control Ordinance of the City of Malibu, Section 8.24.050G, construction activities shall be prohibited during the hours between 7:00 p.m. and 7:00 a.m. during the weekdays and any time on Sundays or holidays. All construction related to the proposed project would take place between the hours defined by the Ordinance. Additionally, construction activities shall be coordinated with Adamson House staff to ensure that potentially disturbing construction activities do not occur during planned events at the Adamson House, such as Saturday weddings.

As previously indicated, machines equipped with mufflers have reduced noise levels. The sound level reduction can range from five to ten decibels. With muffler utilization, less-than-significant impacts are expected at homes greater than 50 feet from construction activities. Homes within 50 feet of active construction may still experience noise level increases that exceed 5 dBA and thus a significant, albeit temporary and intermittent, impact would remain.

As noted earlier, this noise analysis assumes worst-case conditions and does not account for likely attenuation due to existing noise barriers such as the landscaped fencing and other homes. It is possible that no significant noise impacts would occur during construction. However, due to the lack of detailed construction scenario data available at this time and the complex topographical nature of the project site and surroundings, less-than-significant noise levels during construction can neither be quantitatively demonstrated, nor guaranteed. Thus, this

analysis concludes that significant unavoidable construction noise impacts could occur.

Traffic and Circulation

Construction of the proposed project would not generate a substantial number of construction-related truck trips or construction worker trips. The air quality analysis assumed that Phase I of the project (parking lot relocation) would generate approximately 8.3 truck trips (round trips) per day for export of construction debris and that Phase II of the project (lagoon improvements) would generate approximately 8.2 truck trips (round trips) per day for export of excavated materials. Similarly, construction worker trips are anticipated to be minimal and are not anticipated to affect the levels of service at local intersections and roadway segments.

All heavy truck traffic will follow designated truck routes, to be coordinated with the City of Malibu and Caltrans, as required. Construction equipment staging areas and access will also be developed in consultation with the City of Malibu. As such, there would be no changes to traffic movement and circulation on PCH and local streets (particularly on the residential streets immediately west and south of the project site).

Additionally, construction of the proposed project would not affect beach access. The emergency access road on the east side of the lagoon would be maintained at all times to provide beach access. There is additional beach access east of the Adamson House within a short walk of the existing lagoon parking lot that will not be affected by construction either.

Construction of the new parking lot would result in temporary loss of on-site parking, however, construction of the parking lot is to take place during the winter months when demand for parking is lowest. Furthermore, ample parking is available in a surface parking lot adjacent to the Adamson House immediately adjacent to the east of the lagoon and adjacent on-street parking is available to serve beach visitors as well. Therefore, no significant traffic, circulation, access, or parking impacts associated with project construction are anticipated.