4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section contains a discussion of the possible environmental effects of the proposed project that have potential to result in significant impacts.

"Significant effect" is defined by the *State CEQA Guidelines* §15382 as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant."

The assessment of each issue area begins with an introduction that summarizes the environmental effects considered for that issue area. This is followed by the setting and impact analysis. Within the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds", as identified in Appendix G of the CEQA Guidelines. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, with the discussion of the effect and its significance following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact, as follows:

> ***Class I, Unavoidably Significant:*** *An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires issuance of a Statement of Overriding Considerations if the project is approved per §15093 of the State CEQA Guidelines.*
>
> ***Class II, Significant but Mitigable:*** *An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the State CEQA Guidelines.*
>
> ***Class III, Not Significant:*** *An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.*
>
> ***Class IV, No Impact or Beneficial:*** *An effect that would not result in an impact or would reduce existing environmental problems or hazards.*

Following each environmental effect discussion is a list of recommended mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measures. In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other future development in the area.

This page intentionally left blank.

4.1 AESTHETICS

4.1.1 Existing Environmental Setting

a. Visual Character of Malibu and Candidate Sites. The scenic qualities of the Malibu coast and foothills of the Santa Monica Mountains contribute substantially to the desirability and overall appeal of the City of Malibu as a place to live and visit. Views available from Local Coastal Program (LCP) Land Use Plan (LUP) -designated scenic roads, including Pacific Coast Highway (PCH), range from views of tide pools, bluffs, ravines and beaches to inland views of creeks, canyons, hills, mountains and ridges covered with native vegetation. The narrow coastal terraces and lowlands of the City, backed by steeply ascending slopes of the Santa Monica Mountains, create a visual array of private and public properties.

Candidate Sites #1 and #2. Candidate Sites #1 and #2 are located adjacent to each other at 28517 PCH and 28401 PCH, respectively. Candidate Site #1 is comprised of two separate parcels: 28517 PCH and an unaddressed parcel (APN 4467-013-022). Both sites front PCH, which borders the sites to the southeast. Candidate Site #1 is 5.8 acres (3.66 developable acres) and Candidate Site #2 is 3.25 acres (2.59 developable acres) and both are zoned Multi-Family Residential (MF) (6 dwelling units/acre). The overall topography of both sites is relatively flat, with moderate to steep slopes along the northeastern edge of Candidate Site #1 and the northwestern edge of Candidate Site #2. Properties surrounding both sites have similar topography, consisting of moderately sloped hills with a trend of increasing elevation heading north toward the Santa Monica Mountains. The base of the Santa Monica Mountains is approximately one mile north of the two candidate sites.

Candidate Sites #1 and #2 are primarily undeveloped with the exception of one single family residence on each site. Candidate Site #1 contains wetlands (see Section 4.3 Biological Resources) grassland, scrub brush, southern California black walnut woodland, native and ornamental woodland. Candidate Site #2 contains grassland, eucalyptus woodland, and ornamental woodland.

Surrounding land uses are primarily comprised of residential uses, including multi-family and rural residential development. Directly adjacent to the sites to the east and west are existing condominium housing developments. Development to the north and south of the sites consists of lower density rural residential housing units. Across PCH to the southeast resides a mobile home park. According to the Conservation Element of The City of Malibu General Plan (November 1995) and the LUP, there are no scenic resources on or within the vicinity of Candidate Sites #1 and #2.

Candidate Site #7. Candidate Site #7 encompasses approximately 2.3 acres of a larger 15.2 acre site and is located at 23465 Civic Center Way, approximately 6.5 miles east of Candidate Sites #1 and #2. All 2.3 acres of Candidate Site #7 are developable. Candidate Site #7 is located within the Civic Center and is adjacent to Los Angeles Superior Court Malibu Courthouse, Los Angeles District Attorney, and the Malibu Library. PCH is located approximately 0.15 mile to the south of Candidate Site #7. The overall topography of the site is relatively flat, with some moderate slopes near the northern portion of the property. Surrounding topography is similar, with a trend of increasing elevation heading north toward the Santa Monica Mountains.

Candidate Site #7 is currently undeveloped. Several scattered trees are located onsite, while the rest of the site is mostly covered by shrubs and grassland. The remaining 12.9 acres of the Candidate Site #7 are approved for commercial retail and office space development (known as the La Paz Project). Surrounding land uses within the vicinity include Commercial, Institutional, and Rural Residential. Directly adjacent to the site to the west is a parcel zoned Institutional, containing the County buildings described above. The site is surrounding by commercial development to the south, east and west, and residential development to the north. Additionally, properties currently occupied by single family development are located approximately 500 feet north of the site.

b. Views of Candidate Sites from Local Roadways and Public and Private View Points.

Candidate Sites #1 and #2. Views of Candidate Sites #1 and #2 are available from adjacent residential private properties near the northeastern to northwestern boundary of both sites and directly from PCH on the southeastern edge of both sites. The closest major roadway is PCH, from which Candidate Sites #1 and #2 are visible to passing cars. LUP Policy 6.3 designates certain public roads within the City as scenic roads. Those roads designated as scenic include: PCH, Decker Canyon Road, Encinal Canyon Road, Kanan Dume Road, Latigo Canyon Road, Corral Canyon Road, Malibu Canyon Road and Tuna Canyon Road. In addition, the entirety of PCH within the City is designated by the State of California as eligible for Scenic Highway status, but it has not been designated as an official State Scenic Highway to date.

Candidate Site #7. Views of Candidate Site #7 are available from Civic Center Way to the south, institutional development to the east, commercial development to the south, and private residential development to the north. Civic Center Way is not designated as a scenic road by the LUP and the view of the site from PCH is obstructed by existing commercial development along Cross Creek Road.

c. Light and Glare.

Existing nighttime lighting conditions vary substantially throughout Malibu. Nighttime lighting varies from moderately high levels in areas of commercial development along PCH, for example, to areas of low to moderate levels of night lighting in the low-density and rural residential neighborhoods, to an absence of lighting in the open spaces. The different levels result from both variation in levels of development and the light dampening effects of mountainous terrain where it hugs the curvature of the coastline.

Candidate Sites #1 and #2. Sources of light and glare on Candidate Sites #1 and #2 are primarily attributed to surrounding condominium development along with a small number of single-family residences. Sources of light and glare near the candidate sites are similarly attributed to street lights on Zuma View Place and Ramirez Mesa Drive, vehicle lights and surrounding residential land uses. There are no street lights on PCH immediately adjacent to these sites.

Candidate Site #7. Candidate Site #7 is currently vacant and does not have any existing sources of light. Sources of light and glare in the vicinity are attributed to a single street light at

the corner of Cross Creek Road and Civic Center Way, vehicle lights and building and parking lot lighting for nearby commercial and institutional land uses.

d. Regulatory Setting. LCP Land Use Plan Chapter 6 includes Scenic and Visual Resource Protection policies and standards pertaining to new development. LIP Chapter 6 includes development standards which serve to implement the policies of the LUP. The following LCP policies and standards are among those that would be applicable to future development on Candidate Sites #1, #2, and #7:

LUP Policy 6.5 and LIP Section 6.5(A)(1) *New development shall be sited and designed to minimize adverse impacts on scenic areas visible from scenic roads or public viewing areas to the maximum feasible extent. If there is no feasible building site location on the proposed project site where development would not be visible, then the development shall be sited and designed to minimize impacts on scenic areas visible from scenic highways or public viewing areas, through measures including, but not limited to, siting development in the least visible portion of the site, breaking up the mass of new structures, designing structures to blend into the natural hillside setting, restricting the building maximum size, reducing maximum height standards, clustering development, minimizing grading, incorporating landscape elements, and where appropriate, berming.*

LUP Policy 6.7 and LIP Section 6.5(B)(1) *The height of structures shall be limited to minimize impacts to visual resources. The maximum allowable height, except for beachfront lots, shall be 18 feet above existing or finished grade, whichever is lower. On beachfront lots, or where found appropriate through Site Plan Review, the maximum height shall be 24 feet (flat roofs) or 28 feet (pitched roofs) above existing or finished grade, whichever is lower. Chimneys and rooftop antennas may be permitted to extend above the permitted height of the structure.*

LUP Policy 6.8 *Prominent ridgelines and other intervening ridgelines that are visible from a public road, a beach, public viewing areas, or public hiking trails, shall be protected by setting structures below the ridgeline to avoid intrusions into the skyline where feasible. Where there are no feasible alternative building sites below the ridgeline or where the only alternative building site would result in unavoidable adverse impacts to an Environmentally Sensitive Habitat Area (ESHA), structures shall be limited to one-story (18 feet maximum from existing or finished grade, whichever is lower) in height to minimize visual impacts.*

LIP Section 6.5(C)(1) *New development shall be sited and designed to prohibit construction of structures on a primary or secondary ridgeline. Any structures shall be located a minimum of 300 feet (measured horizontally) or 100 feet (measured vertically) from the top of a primary ridgeline, and shall maintain the roof or top of structure below a primary ridgeline when viewed from a public street or highway. Where there are no feasible building site that can conform to the requirements of Section a, or where the only feasible building site would result in unavoidable adverse impacts to environmentally sensitive habitat areas, then a variance may be approved for a building site that does not conform to these*

standards, with design measures that minimize the visual resource impacts. Any structures approved on such a building site shall be limited to one-story in height.

LUP Policy 6.9 *All new development shall be sited and designed to minimize alteration of natural landforms by:*

- *Conforming to the natural topography.*
- *Preventing substantial grading or reconfiguration of the project site.*
- *Eliminating flat building pads on slopes.*
- *Building pads on sloping sites shall utilize split level or stepped-pad designs.*
- *Requiring that man-made contours mimic the natural contours.*
- *Ensuring that graded slopes blend with the existing terrain of the site and surrounding area.*
- *Minimizing grading permitted outside of the building footprint.*
- *Clustering structures to minimize site disturbance and to minimize development area.*
- *Minimizing height and length of cut and fill slopes.*
- *Minimizing the height and length of retaining walls.*
- *Cut and fill operations may be balanced onsite, where the grading does not substantially alter existing topography and blends with the surrounding area.*
- *Export of cut material may be required to preserve the natural topography.*

LUP Policy 6.10 *New development, including a building pad, if provided, shall be sited on the flattest area of the project site, except where there is an alternative location that would be more protective of visual resources or ESHA.*

LUP Policy 6.11 *The length of onsite roads or driveways shall be minimized, except where a longer road or driveway would allow for an alternative building site location that would be more protective of visual resources or ESHA. Driveway slopes shall be designed to follow the natural topography. Driveways that are visible from a scenic road, a beach, a public viewing area, or public hiking trail shall be a neutral color that blends with the surrounding landforms and vegetation.*

LUP Policy 6.12 *All new structures shall be sited and designed to minimize impacts to visual resources by:*

- *Ensuring visual compatibility with the character of surrounding areas.*
- *Avoiding large cantilevers or understories.*
- *Setting back higher elements of the structure toward the center or uphill portion of the building.*

LUP Policy 6.13 and LIP Section 6.5(B)(5) *New development in areas visible from scenic roads or public viewing areas, shall incorporate colors and exterior materials that are compatible*

with the surrounding landscape. The use of highly reflective materials shall be prohibited.

LIP Section 6.5(B)(6) *New water tanks in scenic areas visible from scenic roads or public viewing areas shall be designed to be partially below grade, where feasible. Water tanks shall incorporate colors that are compatible with the surrounding landscape and landscape screening to minimize visual impacts.*

LUP Policy 6.14 and LIP Section 3.5.3 *The height of permitted retaining walls shall not exceed six feet. Stepped or terraced retaining walls up to twelve feet in height, with planting in between, may be permitted. Where feasible, long continuous walls shall be broken into sections or shall include undulations to provide visual relief. Where feasible, retaining walls supporting a structure should be incorporated into the foundation system in a stepped or split level design. Retaining walls visible from scenic highways, trails, parks, and beaches should incorporate veneers, texturing and/or colors that blend with the surrounding earth materials or landscape.*

LUP Policy 6.15 *Fences, walls, and landscaping shall not block views of scenic areas from scenic roads, parks, beaches, and other public viewing areas.*

LUP Policy 6.20 and LIP Section 6.5(E)(4) *New development on properties visible from and inland of Pacific Coast Highway shall be sited and designed to protect public views of the ridgelines and natural features of the Santa Monica Mountains through measures including, but not limited to, restricting the building maximum size, reducing maximum height limits, clustering development, incorporating landscape elements, and, where appropriate, berming.*

LUP Policy 6.23 *Exterior lighting (except traffic lights, navigational lights, and other similar safety lighting) shall be minimized, restricted to low intensity fixtures, shielded, and concealed to the maximum feasible extent so that no light source is directly visible from public viewing areas. Night lighting for sports courts or other private recreational facilities in scenic areas designated for residential use shall be prohibited.*

LIP Section 6.5(G) *1. The minimum necessary to light walkways used for entry and exit to the structures, including parking areas, on the site. This lighting shall be limited to fixtures that do not exceed two feet in height, are directed downward, and use bulbs that do not exceed 60 watts, or the equivalent, unless a higher wattage is authorized by the Planning Director.*
2. Security lighting attached to the residence that is controlled by motion detectors and is limited to 60 watts, or the equivalent.
3. The minimum lighting necessary for safe vehicular use of the driveway. The lighting shall be limited to 60 watts, or the equivalent.
4. A light, not to exceed 60 watts or the equivalent, at the entrance to the (identify nonresidential accessory structures).

	5. No lighting around the perimeter of the site, no lighting for sports courts or other private recreational facilities, and no lighting for aesthetic purposes is allowed.
LUP Policy 6.27	*New development shall minimize removal of natural vegetation. Existing native trees and plants shall be preserved on the site, consistent with Policy 3.60.*
LUP Policy 6.33	*The Pacific Coast Highway corridor shall be protected as a scenic highway and significant viewshed.*

Title 17 of the M.M.C. includes development standards that closely mirror those set forth in the LCP. In addition to the standards set forth in the LCP, new development must also comply with M.M.C. standards.

The Malibu General Plan includes land use policies and implementation measures that are intended to maintain the quality of the community's visual resources. Policies are directed toward maintaining the visual appeal of the natural environment, enhancing the aesthetics of the built environment, and preserving public and private views to the maximum extent feasible, balancing the protection of private property rights with the protection of views and avoidance of unwarranted visual impacts.

Policies and Implementation Measures contained in the Land Use Element and Conservation Element implement the goals and objectives of the Malibu General Plan. Applicable General Plan goals, objectives, policies and implementation measures include the following:

LU Goal 1	*The natural and environmental resources of Malibu are protected and enhanced.*
LU Goal 2	*Manage growth to preserve the rural community character.*
LU Objective 1.4	*Development consistent with the preservation of natural topography and viewshed protection.*
LU Policy 1.4.1	*The City shall preserve significant ridgeline and other significant topographic features (such as canyons, knolls, hills and promontories).*
LU Policy 2.1.1	*The City shall promote an aesthetically pleasing and visually stimulating environment whose architecture, common and open spaces inspire and uplift the human spirit.*
LU Policy 2.1.4	*The City shall require development to be landscaped so that the project blends in with the environment and neighborhood.*
LU Policy 2.1.5	*Consistent with the primary objective of protecting Resource Protection Areas (RPAs), the City shall protect and preserve public and private ocean and mountain views, by striking an equitable balance between the right to reasonable use of one's property including the maintenance of privacy and the right to protection against unreasonable loss of views.*
LU Implementation Measure 9	*Require that development not interfere with public and private* ***views*** *and view corridors to the greatest extent feasible.*

LU Implementation Measure 10	*Locate development to minimize vegetation clearance, consequent soil erosion, and adverse impacts on wildlife and visual resources by clustering development near existing roads on areas of relatively gentle slopes, as far as feasible outside of riparian areas in canyons, and outside areas which serve as primary wildlife corridors.*
LU Implementation Measure 28	*Site and design development to protect public views from scenic roadways to and along the shoreline and to scenic coastal areas, including public parklands.*
CON Goal 1	*Natural resources preserved and protected.*
CON Objective 1.4	*Scenic resources preserved and protected.*
CON Policy 1.4.2	*The City shall protect viewsheds of the ocean and surrounding mountains and hillsides.*
CON Policy 1.4.3	*The City shall protect Pacific Coast Highway as a significant viewshed.*

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the existing visual resources against the proposed action, analyzing the nature of the anticipated change from undeveloped land to land the potential for development as set forth by the underlying MF zoning (6 units/acre) for Candidate Sites #1 and #2 and as set forth under the TCO for Candidate Site #7, to the AHO which allows multi-family residential development at a density of 25 units/acre, as proposed by the Housing Element Update. In addition, the proposed programs and policies of the Housing Element Update are analyzed.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact on the environment. Significant impacts may result if a project would:

1. *Have a substantial adverse effect on a scenic vista.*
2. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.*
3. *Substantially degrade the existing visual character or quality of the site or its surroundings.*
4. *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.*

Photo 1 - View from Candidate Site #1 looking southwest towards PCH.

Photo 2 - View of Candidate Site #1 from PCH looking northwest towards Zuma View Place.

Site Photographs

Figure 4.1-1a

Photo 3 - View from Candidate Site #1 looking east from western corner at PCH.

Photo 4 - View of Candidate Site #1 looking north from PCH.

Site Photographs

Figure 4.1-1b

Photo 5 - View from Candidate Site #1 looking northwest.

Photo 6 - View from Candidate Site #2 looking southeast.

Site Photographs

Figure 4.1-1c

Photo 7 - View of Candidate Site #2 from PCH looking north towards Ramirez Mesa Road.

Photo 8 - View from Candidate Site #2 from PCH looking north.

Site Photographs

Figure 4.1-1d

b. Project Impacts and Mitigation Measures.

Impact AES-1 Neither development facilitated by the implementation of an Affordable Housing Overlay District on Candidate Sites #1, #2 and #7, nor any proposed programs or policies of the Housing Element Update, would have an adverse effect on public and private scenic vista. Impacts would be Class III, *less than significant.*

Candidate Sites #1 and #2. As discussed in Section 4.1.1(b) *Setting,* LUP Policy 6.3 designates certain public roads as scenic roads. PCH is one of the identified scenic roads.

Candidate Sites #1 and #2 are located immediately to the north of PCH. However, because both sites are located north of PCH, they would not obstruct views of scenic vistas to the Pacific Ocean from PCH, as views of the ocean from PCH are southward facing. Scenic vistas from PCH over the candidate sites to the north include the ridgelines and natural features of the Santa Monica Mountains. However, the elevation difference between Candidate Sites #1 and #2 and these features, approximately 1,400 feet, would be large enough that potential development would not impact scenic vistas to these visual resources.

In addition, the existing private residences to the north, east and west may be able to see the development that would occur on Candidate Sites #1 and #2. However, future development under the affordable housing overlay would not impact scenic vistas of residences to the east and west because scenic vistas to the Pacific Ocean are located to the south. In addition, future development would not impact scenic vistas of residences to the north, as these residences are located over 100-feet above the candidate sites. As such, the line of sight to the Pacific Ocean would not be blocked. Additionally, several existing requirements set forth in LIP Chapter 6 regulate development with regard to the protection of visual resources. LUP Policies 6.5 through 6.15, listed in subsection 4.1.1(d) *Setting* – Regulatory Setting, as well as the development standards in LIP Chapters 3 and 6, restrict building location, height, setbacks, design, and other relevant building parameters, thereby ensuring that visual resources are protected. LUP Policies 6.20 and 6.33 specifically regulate development along PCH, and LUP Policy 6.27 prohibits removal of native vegetation. In addition, story poles (which provide a visual representation of the height, mass and bulk of a proposed structure) would be installed per City requirements and nearby residence will have the opportunity to comment on the height and massing of the future development. These existing policies would further ensure that scenic vistas as not adversely impacted. Impacts would be less than significant.

Candidate Site #7. As discussed in Section 4.1.1(b) *Setting*, Candidate Site #7 is not located along a scenic road and is visually blocked from passing cars on PCH, a scenic road, by existing commercial development along Cross Creek Road. In addition, the elevation difference between Candidate Site #7 and the Santa Monica Mountains, approximately 1,300 feet, would be large enough that potential development would not obstruct scenic vistas from passing cars on PCH. Similarly, potential development on Candidate Site #7 would not block scenic vistas from the Civic Center area due to the elevation difference from the candidate site to the ridgelines of the Santa Monica Mountains In addition, future development would not impact scenic vistas of adjacent residences, as no ocean views are available to adjacent residences, nor would future development impact residences to the north, as these residences

are located over 100-feet above the candidate sites. Therefore, future development on Candidate Site #7 would not adversely affect scenic vistas. Impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and Multi-Family Beachfront (MFBF). These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on scenic resources, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards.

This program, in addition to the provisions of the Affordable Housing Overlay District (AHO) which would allow a density of 25 units per acre, could have the potential to affect scenic resources within the City if future development pursuant to these policies was located near existing scenic vistas. Similar to the impacts described above, the potential impacts associated with this program could include damage to scenic resources and/or blockage of views of scenic vistas. However, future development would be subject to the development standards set forth in the LCP and/or M.M.C. as discussed above which would minimize aesthetic impacts and impacts to scenic resources. As these policies and programs apply City-wide, the exact locations of specific projects that may be developed in accordance with the policies and analysis resulting in possible visual impacts is unknown at this time. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 different parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact AES-2 **Neither development facilitated by the implementation of an Affordable Housing Overlay District on Candidate Sites #1, #2, and #7, or any proposed programs or policies of the Housing Element Update, would have an adverse effect on designated scenic resources including but not limited to,**

trees, rock outcroppings, and historic buildings. Impacts would be Class III, *less than significant.*

Candidate Sites #1, #2, and #7. Candidate Sites #1, #2, and #7 do not contain any designated scenic resources, as these parcels are either vacant or contain individual single-family residences. Therefore, no designated scenic resources, including trees, rock outcroppings or historic buildings would be impacted.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on scenic resources, as these programs would not result in the development of additional structures.

Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to remove the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. In addition to Candidate Sites #1, #2, and #7, there are currently6.72 acres vacant land on 27 parcels that are zoned MF. If these vacant parcels utilize the AHO, it is possible that an additional 168 affordable housing units could be developed. However, no designated scenic resources are located on these sites. As a result, impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact AES-3 **Development facilitated by the implementation of an Affordable Housing Overlay District on Candidate Sites #1, #2, and #7 and programs or policies of the Housing Element Update would have the potential to alter the visual character of the candidate sites and other sites in the City. However, existing City regulations would minimize aesthetic impacts. Impacts would be Class III, *less than significant*.**

Candidate Sites #1 and #2. As discussed in Section 4.1.1(a), Candidate Sites #1 and #2 are located in areas of existing development near the geographic center of the City. Both sites are bordered to the east and west by existing condominium development and are currently zoned MF. Each site is also currently developed with one single-family residence.

The Housing Element Update would change the existing visual character of both Candidate Sites #1 and #2 from largely undeveloped land containing one single-family residence to high density residential development (25 units/acre). High density residential development would encompass greater lot coverage and result in larger structures, potentially with two above-

grade stories plus a basement level, and larger parking areas. However, the development standards contained in LIP Chapters 3 and 6 would minimize aesthetic impacts of future development on the candidate sites. As discussed in Section 4.1.1(d), LIP development standards regulate the aesthetic design of development, including height limitations, color palate, architectural features, location, vegetative screening, lighting and fencing requirements, which ensure that the aesthetic character of future development on the project sites is consistent with surrounding development and minimized to the extent feasible.

Specifically, LIP Section 6.5(A)(1) states that new development shall be sited and designed to minimize adverse impacts on scenic areas from scenic roads or public viewing areas to the maximum feasible extent. If there is no feasible building site location on the proposed project site where development would not be visible, then the development shall be sited and designed to minimize impacts on scenic areas from scenic highways or public viewing areas, through measures including, but not limited to, siting development in the least visible portion of the site, breaking up the mass of new structures, designing structures to blend into the natural hillside setting, restricting the building maximum size, reducing maximum height standards, clustering development, minimizing grading, incorporating landscape elements, and where appropriate, berming. Moreover, Candidate Sites #1 and #2 are currently surrounded by single-family and multi-family residential land uses. Development of the candidate sites with multi-family residential development would be consistent with existing surrounding land uses. As such, development on Candidate Sites #1 and #2, as proposed by the Housing Element Update, would not degrade the visual character of the candidate sites or the area, with the incorporation of the development standards set forth in the LIP Impacts would be less than significant.

Candidate Site #7. As discussed in Section 4.1.1(a), Candidate Site #7 is currently undeveloped. However, the remaining 12.9 acres of Candidate Site #7 are approved for commercial retail and office development (known as the La Paz Project). Surrounding land uses within the vicinity include Commercial, Institutional, and Rural Residential. Directly adjacent to the site to the west is a parcel zoned Institutional, containing the County buildings described above. The development standards contained LIP Chapters 3 and 6 would minimize aesthetic impacts of future development on the candidate site.

Specifically, LIP Section 6.5(A)(1) states that new development shall be sited and designed to minimize adverse impacts on scenic areas from scenic roads or public viewing areas to the maximum feasible extent. If there is no feasible building site location on the proposed project site where development would not be visible, then the development shall be sited and designed to minimize impacts on scenic areas from scenic highways or public viewing areas, through measures including, but not limited to, siting development in the least visible portion of the site, breaking up the mass of new structures, designing structures to blend into the natural hillside setting, restricting the building maximum size, reducing maximum height standards, clustering development, minimizing grading, incorporating landscape elements, and where appropriate, berming. Moreover, Candidate Site #7 is currently surrounded by institutional, commercial and single-family development. The Malibu General Plan discusses the Civic Center as the only location within the City where mixed use (residential and commercial) development is permitted. As such, Candidate Site #7 re-zoned to Planned Development (PD) could provide a site for future mixed use development. Therefore, development of the candidate site with residential land uses would be consistent with developed character of the area. Development on Candidate Site #7, as proposed by the Housing Element Update, would

not degrade the visual character of the candidate site or the area. Impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on visual character, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards.

This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre, could have the potential to affect scenic resources within the City if future development pursuant to these policies was located near existing scenic vistas. Similar to the impacts described above, the potential impacts associated with this program could include a change in visual character. However, future development would be subject to the development standards set forth in the LCP and/or M.M.C. as discussed above which would minimize aesthetic impacts and impacts to visual character. As these policies and programs apply City-wide, the exact locations of specific projects that may be developed in accordance with the policies and analysis resulting in possible visual character impacts is unknown at this time. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact AES-4 Development facilitated by the Housing Element Update has the potential to create additional sources of light and glare. However, existing City regulations would minimize light and glare. Impacts would be Class III, *less than significant.*

Candidate Sites #1 and #2. As discussed in Section 4.1.1(c), Candidate Sites #1 and #2 have existing sources of light attributed to the single-family residence on each site. Additional sources of light and glare in the vicinity are similarly attributed to street lights on Zuma View

Place and Ramirez Mesa Drive, vehicle lights and surrounding condominium and residential land uses. Future development pursuant to the Housing Element Update would increase light and glare on both sites. However, the sites are currently surrounded by similar existing residential land uses and associated sources of light and glare. Residential development on these sites would generally be an extension of the levels of light and glare that occur on residential lots to the east and west. In addition, future development would be required to comply with LIP Section 6.5(G), which regulates lighting associated with new development. The LIP has requirements on wattage of lights, the direction of light, and limits lighting for aesthetic purposes. LIP Section 6.5(G) states:

> *Exterior lighting (except traffic lights, navigational lights, and other similar safety lighting) shall be minimized, restricted to low intensity features, shielded, and concealed to the maximum feasible extent so that no light source is directly visible from public viewing areas. Night lighting for sports courts, sports fields, or other private recreational facilities in scenic areas designated for residential use shall be prohibited. Permitted lighting shall conform to the following standards:*
>
> *1. The minimum necessary to light walkways used for entry and exit to the structures, including parking areas, on the site. This lighting shall be limited to fixtures that do not exceed two feet in height, are directed downward, and use bulbs that do not exceed 60 watts, or the equivalent, unless a higher wattage is authorized by the Planning Director.*
>
> *2. Security lighting attached to the residence that is controlled by motion detectors and is limited to 60 watts, or the equivalent.*
>
> *3. The minimum lighting necessary for safe vehicular use of the driveway. The lighting shall be limited to 60 watts, or the equivalent.*
>
> *4. A light, not to exceed 60 watts or the equivalent, at the entrance to the (identify nonresidential accessory structures).*
>
> *5. No lighting around the perimeter of the site, no lighting for sports courts or other private recreational facilities, and no lighting for aesthetic purposes is allowed.*

As a condition of approval for all new development visible from scenic areas, the property owner would be required to execute and record a deed restriction on the title of the property reflecting the above lighting restrictions.

Finally, LIP Section 6.5(B)(5) includes requirements to prevent glare:

> *b. The use of highly reflective materials shall be prohibited except for solar energy panels or cells which shall be placed to minimize significant adverse impacts to public views to the maximum extent feasible.*
>
> *c. All windows shall be comprised of non-glare glass.*

Future development on Candidate Sites #1 and #2 would be subject to these requirements, which would minimize light and glare impacts. Additionally, existing LCP regulations, as listed in Section 4.1.1(d), regulate the aesthetic design of development, color palate, architectural features, location, vegetative screening, lighting and fencing requirements. These development standards would also minimize light and glare spillover onto adjacent properties and PCH. Therefore, future development on Candidate Sites #1 and #2 would not significantly increase light and glare. Impacts would less than significant.

Candidate Site #7. As discussed in Section 4.1.1(c), Candidate Site #7 is currently vacant and does not have any existing light sources; however, the remaining 12.9 acres of the Candidate Site #7 are approved for commercial retail and office development (known as the La Paz Project). Surrounding sources of light and glare within the vicinity include Commercial, Institutional, and Rural Residential. Residential or mixed use development on this site would generally be an extension of the levels of light and glare that occur in the vicinity. In addition, as described above future development would be required to comply with LIP Section 6.5(G), which regulates lighting associated with new development. The LIP has requirements on wattage of lights, the direction of light, and limits lighting for aesthetic purposes. Therefore, future development on Candidate Site #7 would not adversely affect light or glare conditions. Impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on light and glare, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards.

This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre, could have the potential to result in additional light and glare within the City. However, future development would be subject to the development standards set forth in the LCP and/or M.M.C. as discussed above which would minimize light and glare impacts. As these policies and programs apply City-wide, the exact locations of specific projects that may be developed in accordance with the policies and analysis resulting in possible visual impacts is unknown at this time. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. As shown in Table 3-1 in Section 3.0, *Environmental Setting*, 84 residential units and 748,460 square feet of non-residential development are approved or pending within the City. Of these projects, two are projects are within one mile of Candidate

Sites #1 and #2, which include the Zuma Mesa project and 28811 PCH Subdivision project. Projects within one mile of Candidate Site #7 include the La Paz Shopping Center, Whole Foods Shopping Center, Rancho Malibu Hotel, Santa Monica College Satellite Campus, Serra Retreat, and the Towing Subdivision project.

*Candidate Sites***.** Two of the approved/pending residential projects are located within one mile of Candidate Sites #1 and #2. These project combined with future development on Candidate Sites #1 and #2 could result in cumulative impacts related to scenic vistas, scenic resources, visual character and light and glare. However, as discussed above, development on Candidate Sites #1 and #2 would result in less than significant impacts. As a result, Candidate Sites #1 and #2's contributions to cumulative aesthetic impacts would not be cumulatively considerable. In addition, cumulative projects would similarly be subject to the City's LCP and M.M.C., which would regulate aesthetic impacts. Therefore, cumulative impacts are less than significant.

Eight of the approved/pending residential projects are located within one mile of Candidate Sites #7. The majority of these projects are commercial in nature and located within the Civic Center. These projects, combined with future development on Candidate Sites #7, could result in cumulative impacts related to scenic vistas, scenic resources, visual character and light and glare. However, as discussed above, development on Candidate Site #7 would result in less than significant impacts. As a result, Candidate Site #7's contribution to cumulative aesthetic impacts would not be cumulatively considerable. In addition, cumulative projects would similarly be subject to the City's LCP and M.M.C., which would regulate aesthetic impacts. Therefore, cumulative impacts are less than significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative aesthetic impacts when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. However, cumulative development would be subject to the development standards set forth in the LCP and/or M.M.C. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, cumulative impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

This page intentionally left blank.

4.2 AIR QUALITY

4.2.1 Setting

a. Climate and Meteorology. The semi-permanent high-pressure system west of the Pacific coast strongly influences California's weather. It creates sunny skies throughout the summer and influences the pathway and occurrence of low-pressure weather systems that bring rainfall to the area during October through April. As a result, wintertime temperatures in the City of Malibu are generally mild while summers are warm and dry. During the day, the predominant wind direction is from the west and southwest, and at night, wind direction is from the north.

These predominant wind patterns are occasionally broken during the winter by storms coming from the north and northwest and by episodic Santa Ana winds. Santa Ana winds are strong northerly to northeasterly winds that originate from high-pressure areas centered over the desert of the Great Basin. These winds are usually warm, very dry, and often full of dust. They are particularly strong in the mountain passes and at the mouths of canyons.

Average daytime summer temperatures in the area are usually in the 70s (Fahrenheit). Nighttime low temperatures during the summer are typically in the 60s, while the winter high temperature tends to be in the 60s. Characteristic of Malibu's semi-marine microclimate, the winter low temperatures are in the 50s. Annual average rainfall in Malibu is approximately 16.5 inches.

Two types of temperature inversions (warmer air on top of colder air) are created in the Malibu Coastal area: subsidence and radiational (surface). The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but is most evident during the summer months. The more rapid cooling of air near the ground at night, especially during winter, forms surface inversions. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed. The primary air pollutant of concern during the subsidence inversions is ozone, while carbon monoxide and nitrogen oxides are of greatest concern during winter inversions.

b. Regulatory Jurisdiction. The federal and state governments have been empowered by the federal and state Clean Air Acts (CAA) to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (USEPA) is the federal agency designated to administer air quality regulation, while the Air Resources Board (ARB) is the state equivalent of the California Environmental Protection Agency. Local control in air quality management is provided by the ARB through county-level Air Pollution Control Districts (APCDs) and multi-county Air Quality Management Districts (AQMDs). The ARB has established state air quality standards and is responsible for control of mobile emission sources, while the local APCDs and AQMDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 14 air basins statewide. Malibu is located in the South Coast Air Basin (Basin) and is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

c. Air Quality Standards. Federal and state standards have been established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 microns and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb). California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. Table 4.2-1 lists the current ambient air quality standards.

Table 4.2-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard	Federal Primary Standards
Ozone (O_3)	1-Hour	0.09 ppm	---
	8-Hour	0.070 ppm	0.075 ppm
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	150 µg/m^3
	Annual	20 µg/m^3	---
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	---	35 µg/m^3
	Annual	12 µg/m^3	15 µg/m^3
Carbon Monoxide (CO)	1-Hour	20 ppm	35 ppm
	8-Hour	9.0 ppm	9 ppm
Nitrogen Dioxide (N_2O)	1-Hour	0.18 ppm	100 ppb
	Annual	0.030 ppm	53 ppb
Sulfur Dioxide (SO_2)	1-Hour	0.25 ppm	75 ppb
	24-Hour	0.04 ppm	0.14 ppm
	Annual	---	0.030 ppm
Lead	30-Day Average	1.5 µg/m^3	---
	3-Month Average	---	1.5 µg/m^3

ppm = parts per million
ppb = parts per billion
µg/m^3 = micrograms per cubic meter.
Source: California Air Resources Board Website, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed April 2012.

Air pollution is hazardous to health, diminishes the production and quality of many agricultural crops, reduces visibility, degrades soils materials, and damages native vegetation. Of these effects, human health effects are of the greatest concern and are the key determinant with respect to the establishment of the primary air quality standards listed in Table 4.2-1. The criteria pollutants and their potential health effects are described below.

Carbon Monoxide. Carbon monoxide is a local pollutant that in high concentrations is found only near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases (ROG).[1] Nitrogen oxides are formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of May and October. Ozone is a pungent, colorless toxic gas that can cause detrimental health effects including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. Nitrogen dioxide is an acute irritant, but at typical atmospheric concentrations, it is only potentially irritating. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulates. PM_{10} is small particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates, and sulfates. Suspended particulates are a by-product of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an adsorbed toxic substance.

The major sources for PM_{10} are road dust, construction, mobile sources, and farm operations. Locally, Santa Ana winds are responsible for entraining dust and occasionally causing elevated PM_{10} levels.

d. Current Ambient Air Quality. The SCAQMD is required to monitor air pollutant levels to ensure that the above air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "non-attainment." The Basin, in which the project area is located, is a non-attainment area for both the federal and state standards for ozone

[1] *Reactive organic gases are also sometimes referred to as reactive organic compounds (ROC).*

and PM_{10}. The Basin is in attainment for the state and federal standards for nitrogen dioxide, and for carbon monoxide.

To identify ambient concentrations of criteria pollutants, the SCAQMD operates 36 air quality monitoring stations throughout the Basin. In addition, the Ventura County Air Pollution Control District (VCAPCD) operates 7 air quality monitoring stations throughout the adjacent South Central Coast Air Basin. The monitoring station located closest to Malibu is the Los Angeles-Veterans Affairs Hospital (LA-VA) monitoring station, located approximately 21 miles east of Candidate Sites #1 and #2, and 15 miles east of Candidate Site #7 in West Los Angeles. The next closest monitoring station and most representative of air quality in Malibu is located in the City of Oxnard at the El Rio station (approximately 25 miles northwest of Candidate Sites #1 and #2, and 30 miles northwest of Candidate Site #7). The LA-VA monitoring station currently monitors ambient concentrations levels of ozone, CO, and NO_2. However, this station does not monitor PM_{10} or $PM_{2.5}$. The El Rio station currently monitors the ambient concentration levels of ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. Ambient air quality data obtained from these stations characterize the air quality representative of the ambient air quality in Malibu.

Table 4.2-2 and Table 4.2-3 indicate the number of days that each of the standards has been exceeded at each monitoring station for the period between 2009 and 2011.

Table 4.2-2
Ambient Air Quality at the El Rio Monitoring Station

Pollutant	**2009**	**2010**	**2011**
Ozone, ppm - Worst Hour	0.099	0.083	0.081
Number of days of State exceedances (>0.09 ppm)	1	0	0
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Carbon Monoxide, ppm - Worst 8 Hours	ND	ND	ND
Number of days of State/Federal exceedances (>9.0 ppm)	ND	ND	ND
Nitrogen Dioxide, ppm - Worst Hour	0.051	0.060	0.090
Number of days of State exceedances (>0.25 ppm)	0	0	0
Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours	99.9	61.5	51.7
Number of samples of State exceedances (>50 $\mu g/m^3$)	2	1	1
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours	24.5	27.7	28.7
Number of samples of Federal exceedances (>35 $\mu g/m^3$)	0	0	0

El Rio Monitoring Station
ND = No Data
Source: CARB, 2009, 2010, 2011 Annual Air Quality Data Summaries available at http://www.arb.ca.gov/adam/topfour/topfour1.php

Table 4.2-3
Ambient Air Quality at the West Los Angeles – VA Hospital Monitoring Station

Pollutant	2009	2010	2011
Ozone, ppm - Worst Hour	0.131	0.099	0.090
Number of days of State exceedances (>0.09 ppm)	6	2	2
Number of days of Federal exceedances (>0.12 ppm)	1	0	0
Carbon Monoxide, ppm - Worst 8 Hours	1.51	1.44	1.28
Number of days of State/Federal exceedances (>9.0 ppm)	0	0	0
Nitrogen Dioxide, ppm - Worst Hour	0.077	0.071	0.081
Number of days of State exceedances (>0.25 ppm)	0	0	0

West Los Angeles-VA Hospital Monitoring Station
Source: CARB, 2009, 2010, 2011 Annual Air Quality Data Summaries available at
http://www.arb.ca.gov/adam/topfour/topfour1.php

As shown in Table 4.2-2 and Table 4.2-3, the ozone concentration at the El Rio Monitoring Station in Oxnard exceeded state standards one time in 2009. The ozone concentration at the LA-VA station exceeded federal standards one time in 2009, and exceeded state standards six times in 2009, two times in 2010 and two times in 2011. The PM_{10} concentration at the El Rio station exceeded the state standards two times in 2009, one time in 2010, and one time in 2011, but did not exceed the federal standards in 2009, 2010 or 2011. PM_{10} is not monitored at the LA-VA station. No exceedances of either the state or federal standards for NO_2 or $PM_{2.5}$ have occurred at the El Rio Monitoring Station in the last three years. Concentrations of carbon monoxide at the LA-VA Monitoring Station were below federal and state thresholds during the past three years.

e. Air Quality Management. Under state law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each iteration of SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. SCAQMD staff is currently developing the 2012 AQMP, which is an update to the 2007 AQMP. The SCAQMD adopted the 2007 AQMP on June 1, 2007. It was updated March 4, 2011 to include revisions to $PM_{2.5}$ and Ozone State Implementation Plan for the Basin. The 2007 AQMP incorporates the revisions made in 2011.

The 2007 AQMP was prepared to ensure continued progress towards clean air and comply with state and federal requirements. This AQMP builds upon the approaches taken in the 2003 AQMP for the South Coast Air Basin for the attainment of the federal ozone air quality standard. This AQMP highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the Clean Air Act. New standards allow for a longer compliance schedule for federal fine particulates ($PM_{2.5}$) and 8-hour ozone, but with more stringent PM_{10} and 1-hour ozone standards. The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused

control of sulfur oxides (SO_X), directly-emitted $PM_{2.5}$, and NO_X supplemented with ROG by 2015. The 8-hour ozone control strategy builds upon the $PM_{2.5}$ strategy, augmented with additional NO_X and ROG reductions to meet the standard by 2024 assuming a bump-up is obtained. Further, the 2007 AQMP aims to reduce mobile source emissions by discussing measures that would address the remaining air quality standard exceedances in the region. The 2007 AQMP is incorporated by reference and available to download at http://www.aqmd.gov/aqmp/07aqmp/index.html.

f. Sensitive Receptors. SCAQMD defines sensitive receptor locations as residential, commercial and industrial areas, and other locations where sensitive populations may be located. Other sensitive receptor locations include long-term health care facilities; rehabilitation centers; convalescent centers; retirement homes; residences; schools; playgrounds; child care centers; and athletic facilities. . Sensitive receptors (residential land uses) are located on Candidate Sites #1 and #2. In addition, sensitive receptors within proximity to Candidate Sites #1 and #2 include residential land uses, the closest being within 50 feet. Sensitive receptors within proximity to Candidate Site #7 include residential land uses approximately 150 feet to the north.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. The analysis of air quality impacts conforms to the methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993), which includes thresholds for emissions associated with both construction and operation of proposed projects.

Construction activities facilitated by the Housing Element Update would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. Some of this equipment would be used during grading activities as well as when structures are constructed. It is assumed that all construction equipment used would be diesel-powered. The regional construction emissions associated with development of the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) computer program developed for the SCAQMD by estimating the types and number of pieces of equipment that would be used onsite during each of the construction phases. Construction emissions are analyzed using the regional thresholds established by the SCAQMD and published in the *CEQA Air Quality Handbook*.

Operational emissions associated with development facilitated by the Housing Element Update were also estimated using the CalEEMod computer program. Operational emissions include mobile source emissions, energy emissions, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of onsite development. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coating. To determine whether a significant regional air quality impact would occur, the increase in emissions was compared with the SCAQMD's recommended regional thresholds for operational emissions.

Regional Thresholds. To determine whether a proposed project would have a significant impact to air quality, Appendix G of the *CEQA Guidelines* questions whether a project would:

1. *Conflict with or obstruct implementation of the applicable air quality plan;*
2. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
3. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);*
4. *Expose sensitive receptors to substantial pollutant concentrations; or*
5. *Create objectionable odors affecting a substantial number of people.*

The SCAQMD has developed specific numeric thresholds that apply to projects within the Basin. The SCAQMD has established the significance thresholds for both construction activities and project operations. These thresholds are shown in Table 4.2-4.

Table 4.2-4
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Operation Thresholds**	**Construction Thresholds**
NO_X	55 lbs/day	100 lbs/day
ROC	55 lbs/day	75 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: SCAQMD, http://www.aqmd.gov/ceqa/handbook/signthres.pdf, March 2009.

Localized Significance Thresholds. In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook*. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, etc. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_X, CO, PM_{10} and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (SCAQMD, June 2003). As such, LSTs for operational emissions do not apply to onsite development, as the majority of emissions would be generated by cars on the roadways.

LSTs have been developed for emissions within construction areas up to five acres in size. The SCAQMD provides lookup tables for project sites that measure one, two, or five acres. The candidate sites are located in Source Receptor Area 2 (SRA-2). Candidate Site #1 has a developable lot size of 3.66 acres, Candidate Site #2 has a developable lot size of 2.59 acres, and Candidate Site #7 encompasses 2.3 acres, all of which is developable. This analysis assumes that there would be no more than two acres under active construction at one time, and relies on the two-acre LSTs for significance determinations, as these are more conservative than the five-acre LSTs. According to the SCAQMD's publication Final Localized Significant Thresholds Methodology, the use of LSTs is voluntary, to be implemented at the discretion of local agencies. LSTs for construction are shown in Table 4.2-5.

Table 4.2-5
SCAQMD LSTs for Construction

Pollutant	Allowable emissions as a function of receptor distance in meters from a two-acre site (lbs/day)				
	25 Meters	50 Meters	100 Meters	200 Meters	500 Meters
Gradual conversion of NO_x to NO_2	147	143	156	186	262
CO	827	1,213	1,695	2,961	8,446
PM_{10}	6	19	34	64	154
$PM_{2.5}$	2	5	9	16	37

Source: SCAQMD, October 2009, http://www.aqmd.gov/CEQA/handbook/LST/appC.pdf, accessed online March 2012.

In addition, SCAQMD recommends that a local CO hotspot analysis be conducted if an intersection meets one of the following criteria: 1) the intersection is at Levels of Service (LOS) D or worse and where the project increases the volume to capacity ratio by 2 percent; or 2) the project decreases LOS at an intersection to D or worse. A CO hotspot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized CO "hotspots" can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal AAQS of 35.0 parts per million (ppm) or the state AAQS of 20.0 ppm.

b. Project Impacts and Mitigation Measures.

Impact AQ-1 Future construction activities facilitated by the Housing Element Update would generate temporary increases in emissions of ozone precursors ROG and NO_X, as well as fugitive dust (PM). However, with mitigation, construction emissions would not exceed SCAQMD construction thresholds. Impacts would be Class II, *significant but mitigable*.

Candidate Sites #1, #2, and #7. Construction activities associated with future development on Candidate Sites #1, #2, and #7 would emit ozone precursors NO_x and ROG, as well as CO and PM_{10} and $PM_{2.5}$. The majority of construction-related emissions would result from site preparation and grading due to use of heavy duty construction equipment. Other emissions would result from building construction and emissions associated with the evaporation of ROGs from architectural coatings (paint). Estimated maximum daily emissions are shown in Table 4.2-6. Reported emissions assume that construction of all three candidate sites would occur simultaneously as a worst case scenario.

Table 4.2-6
Estimated Maximum Unmitigated Construction Emissions (lbs/day)

	Unmitigated Emissions (lbs/day)[1]				
	ROG	**NOx**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition	N/A	N/A	N/A	N/A	N/A
Site Preparation	10.3	80.13	46.68	22.29	13.88
Grading	6.47	48.93	32.11	9.35	6.60
Building	6.68	39.92	37.58	5.07	2.61
Paving	5.3	32.2	21.72	2.98	2.76
Architectural Coating	40.11	2.99	4.03	0.73	0.27
Total Maximum lbs/day For Any Construction Activity	**40.11**	**48.93**	**32.1**	**22.29**	**13.88**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**

1. Maximum daily emissions based on highest in either construction year. Construction of project Sites #1, #2 and #7 assumed to occur simultaneously to provide a worst case scenario.
Source: CalEEMod calculations, see Appendix B.

As indicated in Table 4.2-6, maximum daily emissions from construction activities on Candidate Sites #1, #2, and #7 would not exceed SCAQMD construction thresholds.

A comparison of estimated construction emissions using the SCAQMD's LSTs is shown in Table 4.2-7 and Table 4.2-8. Because LSTs are for localized emissions within the immediate project vicinity, Candidate Sites #1 and #2 were combined as a single localized area, as they are adjacent to each other. Candidate Site #7 was analyzed as a separate localized area since it is located over 6 miles from Candidate Sites #1 and #2. A comparison of estimated construction emissions for Candidate Sites #1 and #2 to the SCAQMD's LSTs is shown in Table 4.2-7. The estimated daily construction emissions on Candidate Sites #1 and #2 exceed the LSTs for PM_{10} and $PM_{2.5}$. The exceedances are associated with grading and paving activities.

Table 4.2-7
Total Onsite Construction Criteria Pollutant Emissions for Localized Significance Thresholds for Candidate Sites #1 and #2 Combined

	CO	NOx	PM10	PM2.5
Demolition	N/A	N/A	N/A	N/A
Site Preparation	45.35	79.9	22.0	13.86
Grading	31.0	48.81	9.28	6.04
Building	23.45	34.66	2.28	2.28
Paving	20.7	32.09	2.74	2.74
Architectural Coating	1.92	2.77	0.24	0.24
Localized Significance Threshold*	**827**	**147**	**6**	**2**
Threshold Exceeded?	**No**	**No**	**Yes**	**Yes**

Source: SCAQMD's Sample Construction Scenarios spreadsheet for LST analysis.
**This scenario is for CandidateSites #1 and #2, which are located adjacent to each other. This represents an isolated geographic project area relative to Candidate Site #7 and localized thresholds, as Candidate Site #7 is located over 6 miles from Candidate Sites #1 and #2. It is assumed as a worst case scenario that both Candidate Sites #1 and #2 would be constructed simultaneously.*
Please consult http://www.aqmd.gov/cega/handbook/LST/LST.html for the Methodology Paper for applicable LSTs.

A comparison of estimated construction emissions for Candidate Site #7 to the SCAQMD's LSTs is shown in Table 4.2-8. The estimated daily construction emissions on Candidate Site #7 exceed the LSTs for PM_{10} and $PM_{2.5}$. The exceedances are associated with grading and paving activities.

Table 4.2-8
Total Onsite Construction Criteria Pollutant Emissions for Localized Significance Thresholds for Candidate Site #7

	CO	NOx	PM10	PM2.5
Demolition	N/A	N/A	N/A	N/A
Site Preparation	18.0	34.71	3.24	1.65
Grading	22.15	37.12	8.49	5.25
Building	19.52	28.63	1.88	1.88
Paving	16.81	25.92	2.21	2.21
Architectural Coating	1.94	2.96	0.27	0.27
Localized Significance Threshold*	**827**	**147**	**6**	**2**
Threshold Exceeded?	**No**	**No**	**Yes**	**Yes**

Source: SCAQMD's Sample Construction Scenarios spreadsheet for LST analysis.
**This scenario is for Candidate Sites #1 and #2, which are located adjacent to each other. This represents an isolated geographic project area relative to Candidate Site #7 and localized thresholds, as Candidate Site #7 is located over 6 miles from Candidate Sites #1 and #2. It is assumed as a worst case scenario that both Candidate Sites #1 and #2 would be constructed simultaneously.*
Please consult http://www.aqmd.gov/cega/handbook/LST/LST.html for the Methodology Paper for applicable LSTs.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to

parcels throughout the City that are zoned Multi-Family (MF) and Multi-Family Beachfront (MFBF). Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Person with Special Needs Program, would have no direct impact on air quality, as these would not result in the development of new structures. However, certain policies would have the potential to affect air quality. Amendments to the Local Coastal Program (LCP) and Malibu Municipal Code (M.M.C.) to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, the total maximum impermeable coverage allowance of 25,000 square feet, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would allow for additional ground disturbance beyond that currently permitted, which could increase emissions of criteria pollutants, particularly PM_{10} and $PM_{2.5}$. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, determining the full extent of such impacts would speculative because the timing, size and location of such projects is not known at this time. Moreover, as multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Nonetheless, future multi-family residential projects within the City could result in similar levels of construction related emissions. Therefore, impacts related to proposed programs and policies would be significant but mitigable.

Mitigation Measures. The following mitigation measures are required to reduce emissions of PM_{10} and $PM_{2.5}$ during construction on Candidate Sites #1, #2, and #7 and all future MF residential projects facilitated by the AHO of the Housing Element Update.

AQ-1(a) **Dust Control Measures.** The following shall be implemented during grading and construction to control dust.

1. *All exposed, disturbed, and graded areas onsite shall be watered three (3x) daily until completion of the project construction to minimize the entrainment of exposed soil.*
2. *The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.*
3. *Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavating activities. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.*
4. *Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:*
    a. *All trucks shall be required to cover their loads as required by California Vehicle Code Section 23114.*
    b. *All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved onsite roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall*

be done as often as necessary and reclaimed water shall be used whenever possible.

5. *Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, it shall be seeded and watered until vegetation growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.*
6. *Signs shall be posted onsite limiting construction traffic to 15 miles per hour or less.*
7. *During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to affect adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust from being an annoyance or hazard, either off-site or onsite.*
8. *Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.*
9. *Personnel involved in grading operations, including contractors and subcontractors, shall wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.*
10. *Shaker plates shall be installed at all truck exits from the site.*
11. *Dust control requirements shall be shown on all grading plans.*

AQ-1(b) **Construction Equipment Controls.** The following shall be implemented during construction to minimize emissions of $PM_{2.5}$ associated with diesel construction equipment.

1. *All diesel construction equipment shall meet Tier 4 EPA emission standards.*
2. *Construction contractors shall minimize equipment idling time throughout construction. Engines shall be turned off if idling would be for more than five minutes.*
3. *Equipment engines shall be maintained in good condition and in proper tune as per manufacturers' specifications.*
4. *The number of pieces of equipment operating simultaneously shall be minimized.*
5. *Construction contractors shall use alternatively fueled construction equipment (such as compressed natural gas, liquefied natural gas, or electric) when feasible.*
6. *The engine size of construction equipment shall be the minimum practical size.*
7. *Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated clean diesel engines) shall be utilized wherever feasible.*

8. *During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time.*

Significance After Mitigation. Implementation of the above mitigation measures would reduce construction-related air emissions to below SCAQMD LSTs, as demonstrated by Table 4.2-9 and Table 4.2-10.

Table 4.2-9
Mitigated Construction Particulate Matter Emissions Candidate Sites #1 and #2

	PM_{10}	$PM_{2.5}$
Grading (Mitigated)	1.29	0.72
Paving (Mitigated)	0.08	0.08
SCAQMD Localized Threshold	**6**	**2**
Threshold Exceeded after Mitigation?	**No**	**No**

See Appendix B for CalEEMod emissions calculations.

Table 4.2-10
Mitigated Construction Particulate Matter Emissions Candidate Site #7

	PM_{10}	$PM_{2.5}$
Grading (Mitigated)	1.25	0.68
Paving (Mitigated)	0.06	0.06
SCAQMD Localized Threshold	**6**	**2**
Threshold Exceeded after Mitigation?	**No**	**No**

See Appendix B for CalEEMod emissions calculations.

Impact AQ-2 Operation of future residential development facilitated by the Housing Element Update would generate criteria air pollutant emissions. However, emissions would not exceed SCAQMD operational significance thresholds. Therefore, operational impacts to regional air quality would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Long-term operational emissions associated with the development of Candidate Sites #1, #2, and #7 are those attributed vehicle trips (mobile emissions), the use of natural gas and electricity (energy emissions), and consumer products, area architectural coatings, and landscaping equipment (area emissions). CalEEMod was used to calculate emissions based on the proposed land uses for the three candidate sites, which would result in 212 high density residential units, and the number of vehicle trips generated by potential development on these sites, which is 6.65 trips per weekday and 6.39 trips on weekend days (refer to Section 4.11, *Traffic and Circulation* for trip generation discussion). As shown in Table 4.2-11,

overall emissions would not exceed SCAQMD thresholds. Therefore, operational impacts of Candidate Sites #1, #2, and #7 would be less than significant.

Table 4.2-11
Operational Emissions Associated with Candidate Sites #1, #2, and #7 (lbs/day)

Emission Source	**ROG**	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Area	5.23	0.21	18.03	0.10	0.10
Energy	0.12	1.01	0.43	0.08	0.08
Mobile	8.38	21.01	76.84	16.46	1.45
Total Emissions	**13.73**	**22.23**	**95.30**	**16.64**	**1.63**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*55*
Exceeds Threshold?	***No***	***No***	***No***	***No***	***No***

See Appendix B for CalEEMod emissions calculations.

As noted previously, SCAQMD's local significance thresholds, discussed in Impact AQ-1, do not apply to long term operational emissions. Local significance thresholds apply to emissions directly sourced from the candidate sites, which largely apply to construction phase activities. Operational emissions, as reported in Table 4.2-11, include area source emissions, mobile emissions and energy emissions that are not directly sourced from the candidate sites.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no direct impact on air quality, as these would not result in direct development of new structures. Residential development facilitated by the Housing Element update would primarily be limited to Candidate Sites #1, #2, and #7, as these are the only sites that would apply the AHO. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. As such, operational emissions of any other multi-family projects pursuant to the Housing Element would not be expected to result in emissions beyond those reported above. Therefore, impacts related to programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Operational emissions would not exceed SCAQMD thresholds. No mitigation measures are necessary.

Impact AQ-3 Development facilitated by the Housing Element Update would not result in objectionable odors that would affect a

substantial number of people. Impacts would be Class III, *less than significant*.

According to Figure 5-5, Land Uses Associated with Odor Complaints, of the 1993 SCAQMD *CEQA Air Quality Handbook*, objectionable odors are typically associated with industrial uses such as agricultural facilities (e.g., farms and dairies), refineries, wastewater treatment facilities, and landfills. The Housing Element Update would support the development of high density residential land uses on Candidate Sites #1, #2, and #7. In addition, the proposed policies and programs under the Housing Element Update are intended to support the development of residential land uses. Residential land use types would not be expected to generate objectionable odors that would affect a substantial number of people. Therefore, impacts associated with objectionable odors would be less than significant.

Mitigation Measures. Impacts would be less than significant and no mitigation measures would be required.

Impact AQ-4 Development facilitated by the Housing Element Update would be consistent with the AQMP. Impacts would be Class III, *less than significant*.

Criteria for determining consistency with the SCAQMD's AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's *CEQA Air Quality Handbook*, and include the following:

- *The project will not result in an increase in the frequency or severity existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.*
- *The proposed project will not exceed the assumptions in the AQMP based on the year of project buildout.*

The SCAQMD has identified CO as the best indicator pollutant for determining whether air quality violations would occur since it is most directly related to automobile traffic. As discussed under Impact AQ-2, long-term emissions associated with development facilitated by the Housing Element Update would not exceed significance thresholds for CO or any other criteria pollutant. As such, neither development on Candidate Sites #1, #2, and #7 nor any of the proposed policies and programs would exacerbate existing violations. Therefore, the Housing Element Update would not conflict with the first threshold.

The growth assumptions used by the AQMP are based on the Southern California Association of Governments (SCAG) growth forecasts. As such, if the Housing Element Update would not facilitate growth exceeding SCAG forecasts, then the Housing Element update would be consistent with the assumptions in the AQMP. The Housing Element Update would facilitate the construction of up to 212 new affordable housing units in Malibu through 2014. Based on 2.38 persons per household (Table 4.11-1), the Housing Element Update would increase the population of Malibu by approximately 505 persons (2.38 persons per household multiplied by 212 proposed dwelling units equals 505). Added to the existing population of 12,699 (California Department of Finance, May 2012), Malibu's population would increase to 13,204. This is approximately 1,787 persons lower than the SCAG population forecast 14,991 for 2014

(SCAG RTP Growth Forecast by City, 2008). It should be noted that the current (2007) AQMP uses SCAG growth forecasts developed in 2007. Although SCAG recently developed revised growth forecasts for the region, the Housing Element Update is consistent with the growth assumptions used in the AQMP, and therefore is consistent with the AQMP. The revised SCAG growth forecasts (2012) for the year 2014 has reduced the projected population for Malibu to 13,251. The revised AQMP, expected to be released in 2013, will likely use 13,251 as the growth forecast for the Malibu in 2014. The Housing Element Update would be consistent with this growth forecast as well. Therefore, the Housing Element Update would not be inconsistent with the assumptions of the AQMP. Impact would be less than significant.

Mitigation Measures. Impacts would be less than significant and no mitigation measures would be required.

Impact AQ-5 Vehicle traffic associated with development facilitated by the Housing Element Update could incrementally increase localized carbon monoxide (CO) levels. However, CO levels would not exceed federal or state ambient air quality standards. Impacts would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. A CO hotspot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized CO "hotspots" can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal AAQS of 35.0 parts per million (ppm) or the state AAQS of 20.0 ppm.

The SCAQMD recommends that a local CO hotspot analysis be conducted if an intersection meets one of the following criteria: 1) the intersection is at Level of Service (LOS) D or worse and where the project increases the volume to capacity ratio by 2%, or 2) the project decreases LOS at an intersection to D or worse. According to the traffic study (Appendix E) prepared for the Housing Element Update, these criteria would be met at four study area intersections. Development on Candidate Sites #1, #2, and #7 under existing (year 2012) plus project conditions would cause the intersection of Kanan Dume Road and Pacific Coast Highway (PCH) to degrade from LOS C to LOS D during Saturday peak hour. In addition, development on Candidate Sites #1, #2, and #7 under opening year (2014) plus project conditions would cause the intersection at Webb Way and PCH to degrade from a LOS C to a LOS D during the Saturday peak hour and would increase the volume to capacity ratio at PCH and Cross Creek Road by 2.2% in the PM peak hour. Under cumulative (year 2030) conditions, development of the candidate sites would cause the intersection of PCH and Malibu Canyon Road to degrade from LOS C to LOS D during the PM peak hour and would increase the volume to capacity ratio at PCH & Cross Creek Road by 2.2% during the PM peak hour.

Table 4.2-12 shows the peak hour CO concentrations at these intersections. As shown therein, CO levels at these intersections in the existing plus project, opening plus project, and cumulative plus project scenarios would not exceed federal or state AAQS for CO. Therefore, impacts would be less than significant.

Table 4.2-12
Intersection LOS and CO Concentration

Intersection	Peak Hour	LOS		Increase in Volume to Capacity	Peak Hour CO Levels With Project	Ambient Air Quality Standards Federal/ State	Exceeds State or Federal AAQS?
		Baseline	With Project				
Kanan Dume Road & PCH (existing + project)	AM	A	A	0.006	1.9	35.0 ppm/ 20.0 ppm	No
	PM	B	B	0.005			
	SAT	C	D	0.003			
PCH & Cross Creek Road (existing +project)	AM	B	B	0.021	2.1	35.0 ppm/ 20.0 ppm	No
	PM	D	D	0.022			
	SAT	D	D	0.017			
PCH & Webb Way (opening year + project)	AM	A	A	0.009	1.9	35.0 ppm/ 20.0 ppm	No
	PM	C	C	0.014			
	SAT	C	D	0.010			
PCH & Cross Creek Road (opening year +project)	AM	B	B	0.022	2.2	35.0 ppm/ 20.0 ppm	No
	PM	F	F	0.022			
	SAT	F	F	0.017			
PCH & Malibu Canyon Road (cumulative year + project)	AM	C	C	0.013	2.0	35.0 ppm/ 20.0 ppm	No
	PM	C	D	0.015			
	SAT	E	E	0.012			
PCH & Cross Creek Road (cumulative + project)	AM	C	C	0.022	2.3	35.0 ppm/ 20.0 ppm	No
	PM	F	F	0.022			
	SAT	F	F	0.016			

Source: LOS data from Fehr & Peers Transportation Consultants, CO concentration data from CalTrans CO Protocol screening model.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, may slightly increase density which could generate additional traffic. However, new residential development facilitated by the Housing Element Update would primarily be limited to Candidate Sites #1, #2 and #7, as these are the only sites that would be subject to the AHO. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Further, CO levels in Malibu are generally low. As such, CO hotspots are not expected to occur as a result of any other multi-family projects pursuant to the Housing Element. Therefore, impacts related to programs and policies of the Housing Element update would be less than significant.

Mitigation Measures. Impacts would be less than significant and no mitigation measures would be required.

c. Cumulative Impacts. The Basin is a non-attainment area for the federal and state standards for ozone and PM_{10}. Any growth within the Los Angeles metropolitan area would contribute to existing exceedances of ambient air quality standards when taken as a whole with existing development. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and SCAQMD.

Previously, consistency with the AQMP was used to determine whether a project would substantially contribute to cumulative air quality impacts. However, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. Instead, SCAQMD's approach to determining cumulative air quality impacts for criteria air pollutants is to first determine whether or not a proposed project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If the project exceeds SCAQMD thresholds, then the lead agency needs to consider the additive effects of related projects only if the proposed project is part of an ongoing regulatory program or is contemplated in a Program EIR, and the related projects are located within approximately one mile of the candidate sites. If there are related projects within the vicinity (one-mile radius) of the candidate sites that are part of an ongoing regulatory program or are contemplated in a Program EIR, then additive effects of the related projects should be considered.

The potential development of 212 units facilitated by the Housing Element Update along with 84 residential dwelling units and 748,460 square feet of non-residential development either approved or pending approval (see Table 3-1 in Section 3.0, *Environmental Setting*) account for the anticipated cumulative development for the City of Malibu. However, as demonstrated in Table 4.2-11, the Housing Element Update, including development of Candidate Sites #1, #2, and #7, and the proposed policies and programs, would not generate emissions exceeding SCAQMD thresholds. Therefore, in accordance with SCAQMD guidance on determining cumulative impacts, the Housing Element Update would not result in a cumulatively considerable contribution to air quality impacts.

4.3 BIOLOGICAL RESOURCES

4.3.1 Setting

a. Regional Setting. The City of Malibu is a 27-mile long beach community located on the coastal slopes of the Santa Monica Mountains. The City is located on the edge of the Santa Monica Mountains Natural Recreation Area, an extensive chaparral wilderness area subject to frequent wildfires. Because of its unique location, a number of sensitive natural resources are present within the City limits and sphere of influence, including terrestrial, freshwater and marine habitats, and special status plant and animal species. The City's climate is heavily influenced by its proximity to the Pacific Ocean and is classified as dry summer subtropic or Mediterranean, experiencing hot, dry summers and cool, wet winters. Average annual precipitation is approximately 16.5 inches, occurring mostly as rainfall from November to April (Western Regional Climate Center, 2012). Malibu contains seven major categories of terrestrial vegetation communities, including: chaparrals; coastal sage Scrub; oak woodland and forest; riparian scrubs, woodlands, and forest; coastal dune scrub; freshwater marsh; and coastal brackish marsh. These major vegetation types have been further classified as discrete plant communities that generally share characteristic species and have similar physiographic site characteristics. Marine resources along the Malibu coast include kelp beds, tide pools, marine fisheries, offshore reefs, sandy beaches, rocky headlands, sea lion haul outs, coastal dunes and isolated wetlands (Malibu General Plan Conservation Element, 1995).

b. Existing Candidate Site Conditions. Candidate Sites #1 and #2 are located north of Pacific Coast Highway (PCH) and are surrounded primarily by residential developments. Candidate Site #7 is also located north of PCH, but is surrounded by residential, commercial and institutional development. Five general habitat types are mapped across the three candidate sites (Table 4.3-1 and Figures 4.3-1 and 4.3-2). Habitat classifications are generalized due to the highly disturbed nature of the sites.

Table 4.3-1
Approximate Habitat Acreages for Each Candidate Site

Habitat	Candidate Site #1	Candidate Site #2	Candidate Site #7
Mixed Woodland	0.32	0.12	--
Mixed Scrub	1.14	0.07	0.39
Mixed Ruderal	2.62	0.78	1.72
Ornamental	1.43	1.77	--
Disturbed/Developed	0.32	0.51	0.19
Total	**5.83**	**3.25**	**2.3**

Source: Based on observations recorded during the biological reconnaissance level surveys performed by Rincon Consultants, Inc. See Appendix C for details.

The mixed woodland and mixed scrub habitats include both native and non-native plant species, while the mixed ruderal and ornamental habitats were dominated by non-native plant

Imagery provided by ESRI and its licensors © 2012.

Candidate Sites #1 and #2
Habitat Map

Figure 4.3-1

Imagery provided by ESRI and its licensors © 2013.

Candidate Site #7
Habitat Map

Figure 4.3-2

species. The disturbed/developed habitat includes areas that are occupied by buildings and other structures as well as roads and other areas that were largely devoid of vegetation.

Candidate Site #1**.** This candidate site contains a single-family residence and associated landscaping. All five of the general habitats are present on this site, including mixed woodland, mixed scrub, mixed ruderal, ornamental, and disturbed/ developed. Dominant mixed woodland species include western sycamore (*Platanus racemosa*), southern California black walnut (*Juglans californica* var. *californica*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), arroyo willow (*Salix lasiolepis*), and toyon (*Heteromeles arbutifolia*) with occurrences of ornamental trees such as eucalyptus (*Eucalyptus* sp.). Dominant mixed scrub species include coyote brush (*Baccharis pilularis*) and California bush sunflower (*Encelia californica*). Dominant mixed ruderal species include slender wild oats (*Avena barbata*), bromes (*Bromus madritensis* ssp. *rubens*, *B. diandrus*), scarlet pimpernel (*Anagallis arvensis*), spurge (*Euphorbia* sp.), and red-stemmed filaree (*Erodium cicutarium*). Ornamental habitat mapped onsite consists primarily of a eucalyptus grove in the center of the site and palm trees (*Washingtonia robusta*) at the southwest corner. A ravine that appears to have been graded and/or filled traverses the site in a general north-south direction through the mixed woodland and mixed scrub habitats. Wildlife species detected included common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), California towhee (*Melozone crissalis*), western fence lizard (*Sceloporus occidentalis*), California ground squirrel (*Otospermophilus beecheyi*), and big-eared woodrat (*Neotoma macrotis*) nests (see Appendix C).

Candidate Site #2**.** This candidate site contains a single-family residence and associated landscaping. Habitats mapped onsite included ornamental, mixed ruderal, and mixed woodland. Dominant ornamental species include eucalyptus and others. Dominant mixed woodland species include southern California black walnut and lollypop tree (*Myoporum laetum*). Dominant mixed ruderal species include those listed for Candidate Site #1. No wildlife was observed during the site visit on March 22, 2011 (see Appendix C).

Candidate Site #7**.** This candidate site is not developed. Three habitats are mapped onsite including mixed scrub, mixed ruderal, and disturbed/developed. A dirt road traverses the site in a north-south direction and is substantially disturbed and vegetated with non-native plant species. In the northern portion of the site, heavily disturbed areas are juxtaposed against largely intact native mixed scrub habitat. The native habitat is restricted to the northwestern portion of the site where slopes are steep and sandstone outcrops are present (Figure 4.3-2). The mixed scrub habitat is dominated by California bush sunflower, coast prickly pear (*Opuntia littoralis*), lemonade berry (*Rhus integrifolia*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and coyote brush. The remainder of the site is vegetated with mixed ruderal grassland dominated by non-native species including various bromes, slender oat, tocalote (*Centaurea melitensis*), black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), and castor bean (*Ricinus communis*). Wildlife detected during the site visit included house finch (*Carpodacus mexicanus*), common raven, red-tailed hawk, Anna's hummingbird (*Calypte anna*), wrentit (*Chamaea fasciata*), black phoebe (*Sayomis nigricans*), mourning dove (*Zenaida macroura*), red-winged blackbird (*Agelaius phoeniceus*), California towhee, western meadowlark (*Sturnella neglecta*), western scrub jay (*Aphelocoma californica*), Botta's pocket gopher (*Thomomys bottae*) burrows, California ground squirrel, and coyote (*Canis latrans*) (see Appendix C).

c. Special-Status Resources. Special-status resources include plant communities designated as sensitive by the California Department of Fish and Wildlife (CDFW) and those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern" by the CDFW; and plant species with a California Rare Plant Rank of 1A, 1B, or 2 (CRPR; California Department of Fish and Game, 2012b).

A target list of special-status resources that occur or could potentially occur onsite was developed, based on review of the CDFW California Natural Diversity Database (CNDDB) for the *Point Dume, California*, and *Malibu Beach, California*, United States Geological Survey (USGS) 7.5-minute quadrangles (California Department of Fish and Game, 2003). A search of the California Native Plant Society (CNPS) online *Inventory of Rare, Threatened, and Endangered Plants* (California Native Plant Society, 2012) was also conducted for the same USGS quadrangles. The CDFW Biogeographic Information and Observation System (California Department of Fish and Game, 2012b), USFWS Critical Habitat Portal (United States Fish and Wildlife Service, 2012a), Information, Planning and Conservation System (IPAC) (U.S. Fish and Wildlife Service, 2012b), and National Wetlands Inventory (U.S. Fish and Wildlife Service, 2012c) were also queried for special-status resources occurring in the region of the project. The Malibu General Plan and Local Coastal Program (LCP) Land Use Plan (LUP) and Local Implementation Plan (LIP) (City of Malibu, 2002) were reviewed for information regarding environmentally sensitive habitat areas (ESHA). LIP Chapter 2 defines ESHA as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."

Tables 4.3-2 and 4.3-3 list special-status plant and animal species known to occur in the region and presents an evaluation of their potential to be affected by the proposed programs and policies of the Housing Element Update for each of the candidate sites based on the existing conditions at each site. Figure 4.3-3 illustrates the locations of special-status resources within five miles of Candidate Sites #1 and #2, while Figure 4.3-4 illustrates special status resources within five miles of Candidate Site #7.

<u>Special-Status Plant Communities and Critical Habitat</u>**.** The CNDDB identified five special-status plant communities occurring within five miles of the candidate sites: Southern California Coastal Lagoon, Southern California Steelhead Stream, Southern Coastal Salt Marsh, Southern Sycamore Alder Riparian Woodland, and Valley Oak Woodland. In addition, federally designated critical habitat for Braunton's milk-vetch (*Astragalus brauntonii*), western snowy plover (*Charadrius nivosus nivosus*), and tidewater goby (*Eucyclogobius newberryi*) are mapped within five miles of the candidate sites. No special-status plant communities or critical habitat are mapped within any of the candidate site boundaries. However, there are several special status plant communities and critical habitats throughout the City, as indicated on Figures 4.3-3 and 4.3-4. Several areas within the City are also mapped as ESHA, as depicted on the LCP ESHA and Marine Resources Map. None of the candidate sites contain mapped ESHA.

Table 4.3-2
Special Status Plant species in the Vicinity of the Candidate Sites

Scientific Name Common Name	Status[a] FED/STATE/CRPR	Habitat Requirements	Potential to Occur
Astragalus brauntonii Braunton's milk-vetch	FE/--/1B.1	Perennial herb; blooms January to August; chaparral, coastal scrub, valley and foothill grassland; recent burns or disturbed areas, usually sandstone with carbonate layers; in saline, somewhat alkaline soils.	**Moderate**. May occur in mixed scrub on Candidate Site #7.
Astragalus pycnostachyus var. *lanosissimus* Ventura marsh milk-vetch	FE/SE/1B.1	Perennial herb, blooms June to October; coastal dunes, coastal scrub, marshes and swamps (edges, coastal salt or brackish).	**None**. Suitable sandy or moist habitats absent.
Astragalus tener var. *titi* coastal dunes milk-vetch	FE/SE/1B.1	Annual herb; blooms March to May; coastal bluff scrub (sandy), coastal dunes, coastal prairie (mesic); often vernally mesic areas.	**None**. Suitable habitat absent.
Atriplex coulteri Coulter's saltbush	--/--/1B.2	Perennial herb; blooms March to October; coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay soils; ocean bluffs, ridgetops, as well as alkaline low places.	**Low**. May occur in mixed scrub on Candidate Site #7.
Baccharis malibuensis Malibu baccharis	--/--/1B.1	Perennial deciduous shrub; blooms August; chaparral, cismontane woodland, coastal scrub, riparian woodland; on Conejo volcanic substrates, often on exposed road cuts; sometimes occupies oak woodland habitat.	**None.** Suitable soils absent.
California (=Erodium) macrophylla round-leaved filaree	--/--/1B.1	Annual herb; blooms March to May; cismontane woodland, valley and foothill grassland; clay soils.	**Low to Moderate**. May occur in mixed ruderal on Candidate Site #7.
Calochortus clavatus var. *gracilis* slender mariposa-lily	--/--/1B.2	Perennial bulbiferous herb; blooms March to June; chaparral, coastal scrub, valley and foothill grassland; shaded foothill canyons; often on grassy slopes within open habitat.	**Low**. May occur in mixed scrub and/or mixed ruderal on Candidate Site #7.
Centromadia parryi ssp. *australis* southern tarplant	--/--/1B.1	Annual herb; blooms May to November; marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools.	**None**. Suitable moist habitats absent.
Chaenactis glarbiuscula var. *orcuttiana* Orcutt's pincushion	--/--/1B.1	Annual herb; blooms January to August; coastal bluff scrub (sandy), coastal dunes.	**None**. Suitable habitat absent.
Chloropyron maritimum ssp. *maritimum* salt marsh bird's beak	FE/FE/1B.2	Annual herb; hemiparasitic; blooms May to October; coastal dunes, marshes and swamps (coastal salt).	**None**. Suitable habitat absent.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	FC/SE/1B.1	Annual herb; blooms April to July; coastal scrub (sandy), valley and foothill grassland.	**Low**. May occur in mixed scrub and/or mixed ruderal on Candidate Site #7, possibly Candidate Site #1.

Table 4.3-2
Special Status Plant species in the Vicinity of the Candidate Sites

Scientific Name Common Name	Status[a] FED/STATE/CRPR	Habitat Requirements	Potential to Occur
Chorizanthe parryi var. *parryi* Parry's spineflower	--/--/1B.1	Annual herb; blooms April to June; chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; sandy or rocky soils; openings; dry slopes and flats; sometimes at interface of two veg types.	**Low**. Most likely to occur along edges of mixed scrub on Candidate Site #7, possible Candidate Site #1.
Deinandra (=Hemizonia) minthornii Santa Susana tarplant	--/SR/1B.2	Perennial deciduous shrub; blooms July to November; chaparral, coastal scrub; rocky soils; on sandstone outcrops and crevices.	**Low**. May occur in mixed scrub on Candidate Site #7.
Delphinium parryi ssp. *blochmaniae* dune larkspur	--/--/1B.2	Perennial herb; blooms April to May; chaparral (maritime), coastal dunes.	**None**. Suitable habitat absent.
Didymodon norrisii Norris' beard moss	--/--/2.2	Moss; cismontane woodland, lower montane conifer forest; intermittently mesic sites; rock; seasonally wet sheet drainages on exposed rock slabs or terraces that completely dry in summer.	**None**. Suitable habitat absent.
Dithyrea maritima beach spectaclepod	--/ST/1B.1	Perennial rhizomatous herb; blooms March to May; coastal dunes, coastal scrub (sandy).	**None**. Suitable habitat absent.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	--/--/1B.1	Perennial herb; blooms April to June; coastal bluff scrub; chaparral, coastal scrub, valley and foothill grassland; rocky, often clay or serpentinite.	**None**. Suitable soils absent.
Dudleya cymosa ssp. *agourensis* Agoura Hills dudleya	FT/--/1B.2	Perennial herb; blooms May to June; chaparral, cismontane woodland; rocky, volcanic sites.	**None**. Suitable soils absent.
Dudleya cymosa ssp. *marcescens* marcascent dudleya	FT/SR/1B.2	Perennial herb; blooms April to July; chaparral; volcanic, rocky sites; on sheer rock surfaces and rocky volcanic cliffs.	**None**. Suitable soils absent.
Dudleya cymosa ssp. *ovatifolia* Santa Monica Mountains dudleya	FT/--/1B.2	Perennial herb; blooms March to June; chaparral, coastal scrub; volcanic or sedimentary, rocky sites; in canyons on sedimentary conglomerates; primarily north facing slopes.	**Low**. May occur in mixed scrub on Candidate Site #7.
Dudleya multicaulis many-stemmed dudleya	--/--/1B.2	Perennial herb; blooms April to July; chaparral, coastal scrub, valley and foothill grassland; often clay soils.	**Low**. May occur in mixed scrub on Candidate Site #7.
Dudleya parva Conejo dudleya	FT/--/1B.2	Perennial herb; blooms May to June; coastal scrub, valley and foothill grassland; rocky or gravelly sites; clay or volcanic soils.	**None**. Suitable soils absent.

Table 4.3-2
Special Status Plant species in the Vicinity of the Candidate Sites

Scientific Name Common Name	Status[a] FED/STATE/CRPR	Habitat Requirements	Potential to Occur
Dudleya verityi Verity's dudleya	FT/--/1B.2	Perennial herb; blooms May to June; chaparral, cismontane woodland, coastal scrub; volcanic, rocky sites.	**None**. Suitable soils absent.
Eriogonum crocatum Conejo buckwheat	--/SR/1B.2	Perennial herb; blooms April to July; chaparral, coastal scrub, valley and foothill grassland; Conejo volcanic outcrops, rocky sites.	**None.** Suitable habitat present, but suitable soils absent.
Lasthenia glabrata ssp. *couteri* Coulter's goldfields	--/--/1B.1	Annual herb; blooms February to June; marshes and swamps (coastal salt), playas, vernal pools; usually found on alkaline soils.	**None**. Suitable moist habitats absent.
Navarretia ojaiensis Ojai navarretia	--/--/1B.1	Annual herb; blooms May to July; chaparral (openings), coastal scrub (openings), valley and foothill grassland.	**Low**. May occur in mixed scrub on Candidate Site #7.
Nolina cismontana chaparral nolina	--/--/1B.2	Perennial evergreen shrub; blooms May to July; chaparral, coastal scrub; sandstone or gabbro soils.	**Low**. May occur in mixed scrub on Candidate Site #7.
Orcuttia californica California Orcutt grass	FE/FE/1B.1	Annual herb; blooms April to August; vernal pools.	**None**. No vernal pools present.
Pentachaeta lyonii Lyon's pentachaeta	FE/SE/1B.1	Annual herb; blooms March to August; chaparral (openings), coastal scrub, valley and foothill grassland; rocky, clay soils; edges of clearings; usually in ecotone between grassland and chaparral or edges of firebreaks.	**Low to Moderate**. May occur along edges of mixed scrub on Candidate Site #7, possibly Candidate Site #1.
Pseudognaphalium leucocephalum white rabbit-tobacco	--/--/2.2	Perennial herb; blooms July to December; chaparral, cismontane woodland, coastal scrub, riparian woodland; sandy, gravelly sites.	**Low**. May occur in mixed scrub on Candidate Site #7, possibly Candidate Site #1.
Senecio aphanactis chaparral ragwort	--/--/2.2	Annual herb; blooms January to April; chaparral, cismontane woodland, coastal scrub; sometimes alkaline.	**Low**. May occur in mixed scrub on Candidate Site #7, possibly Candidate Site #1.

Table 4.3-2
Special Status Plant species in the Vicinity of the Candidate Sites

Scientific Name Common Name	Status[a] FED/STATE/CRPR	Habitat Requirements	Potential to Occur
Thelypteris puberula var. *sonorensis* Sonoran maiden fern	--/--/2.2	Perennial rhizomatous herb; blooms January to September; meadows and seeps (seeps and streams).	**None**. Suitable habitat absent.

Source: California Department of Fish and Game, 2003; California Department of Fish and Wildlife, 2012b; California Native Plant Society, 2012.
[a]Status Codes:
FE = Federally Endangered FT = Federally Threatened CT = Candidate Threatened
SE = State Endangered ST = State Threatened SR = State Rare
CRPR (California Rare Plant Rank):
1A=Presumed Extinct in California
1B=Rare, Threatened, or Endangered in California and elsewhere
2=Rare, Threatened, or Endangered in California, but more common elsewhere
3=Need more information (a Review List)
4=Plants of Limited Distribution (a Watch List)
CRPR Threat Code Extension:
.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2=Fairly endangered in California (20-80% occurrences threatened)
.3=Not very endangered in California (<20% of occurrences threatened)

Table 4.3-3
Special Status Wildlife Species in the Vicinity of the Candidate Sites

Species	Statusa Federal/State	Habitat Requirements	Potential to Occur
Reptiles			
Aspidoscelis tigris stejnegeri coastal whiptail	--/SA	Found in deserts and semiarid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	**Low to Moderate**. May occur in woodland and mixed scrub habitats on Candidate Site #1 and in mixed scrub habitats on Candidate Site #7.
Diadophis punctatus modestus San Bernardino ringneck snake	--/SA	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg.	**Low**. May occur in woodland and mixed scrub habitats on Candidate Site #1 and in mixed scrub habitats on Candidate Site #7.
Emys marmorata western pond turtle	--/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**None**. No suitable aquatic features onsite. Candidate Site #7 located less than 0.5 km from Malibu Creek, but commercial developments create a barrier to movement to and from the site.
Lampropeltis zonata (pulchra) California mountain kingsnake (San Diego Population)	--/SSC	Restricted to the San Gabriel and San Jacinto Mtns. of southern California. Inhabits a variety of habitats, including valley-foothill hardwood, coniferous, chaparral, riparian, and wet meadows.	**None**. Project lacks suitable habitat.

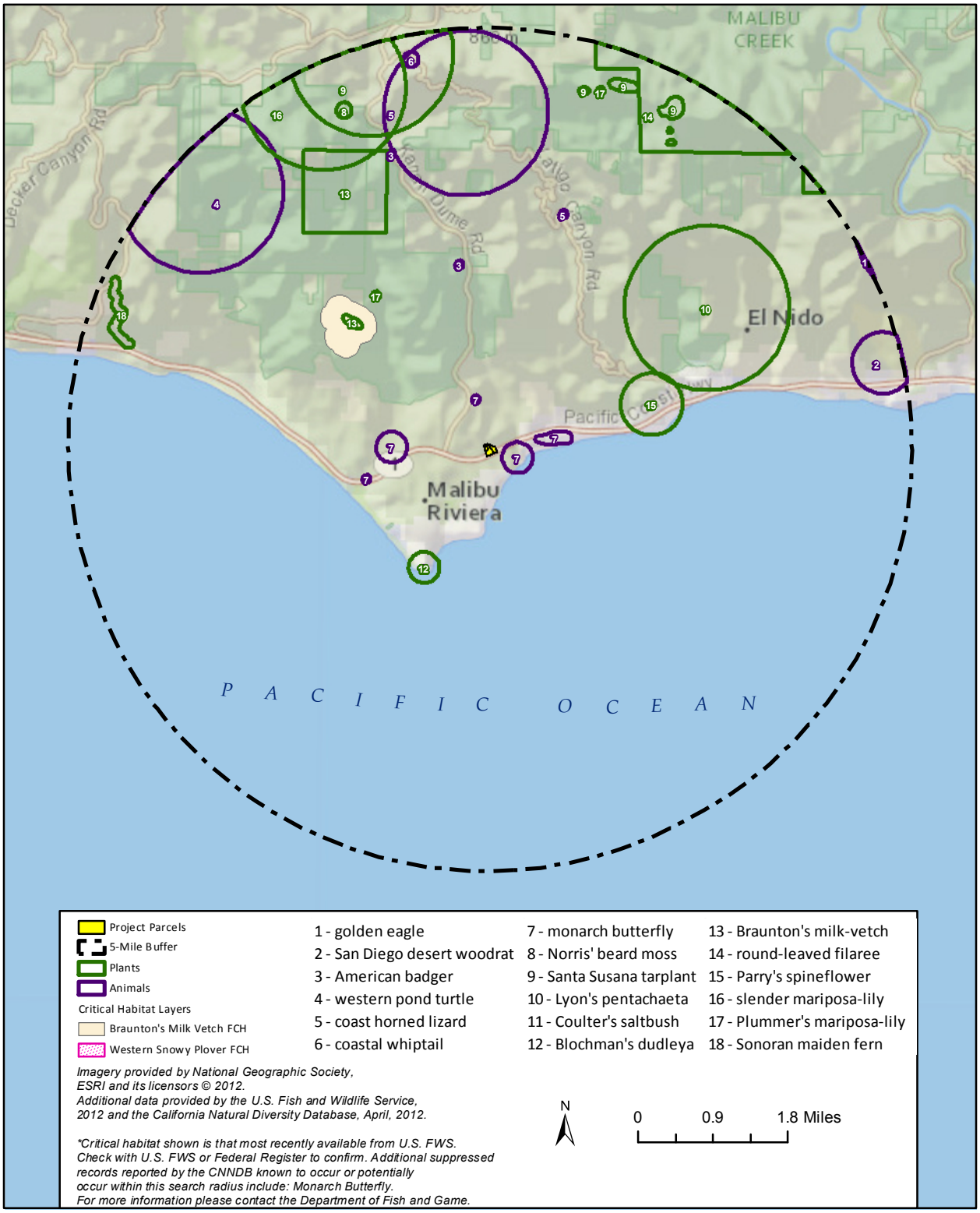
Table 4.3-3
Special Status Wildlife Species in the Vicinity of the Candidate Sites

Species	Statusa Federal/State	Habitat Requirements	Potential to Occur
Phrynosoma blainvilli coast horned lizard	--/SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	**Low**. May occur in mixed scrub habitat on Candidate Sites #1 and #7.
Thamnophis hammondii two-striped garter snake	--/SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 foot elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	**None**. No suitable aquatic habitat onsite.
Birds			
Accipiter cooperii Cooper's hawk	--/WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	**Low**. May occur in mixed woodlands and ornamental trees on Candidate Site #1, and in ornamental trees on Candidate Site #2.
Aquila chrysaetos golden eagle	--/WL,FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. Open areas for foraging.	**None**. May forage in open areas, but not expected to nest onsite.
Riparia riparia bank swallow	--/ST	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**None**. No suitable nesting habitat onsite.
Invertebrates			
Aglaothorax longipennis Santa Monica shieldback katydid	--/SA	Occur nocturnally in chaparral and canyon stream bottom vegetation, in the Santa Monica Mountain of Southern California. Inhabits introduced iceplant and native chaparral plants.	**Low.** Could occur in mixed scrub on Candidate Sites #1 and #7.
Danaus plexippus monarch butterfly (wintering sites)	--/SA	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**Low to moderate**. May occur in eucalyptus trees on Candidate Site #1.
Trimerotropis occidentaloides Santa Monica grasshopper	--/SA	Known only from the Santa Monica Mountains. Found on bare hillsides and along dirt trails in chaparral.	**None**. No suitable habitat onsite.
Fish			
Eucyclogobius newberryi tidewater goby	FE/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	**None**. No suitable aquatic habitat onsite.
Gila orcutti arroyo chub	--/SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, and Santa Ynez. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation & associated invertebrates.	**None**. No suitable aquatic habitat onsite.

Table 4.3-3
Special Status Wildlife Species in the Vicinity of the Candidate Sites

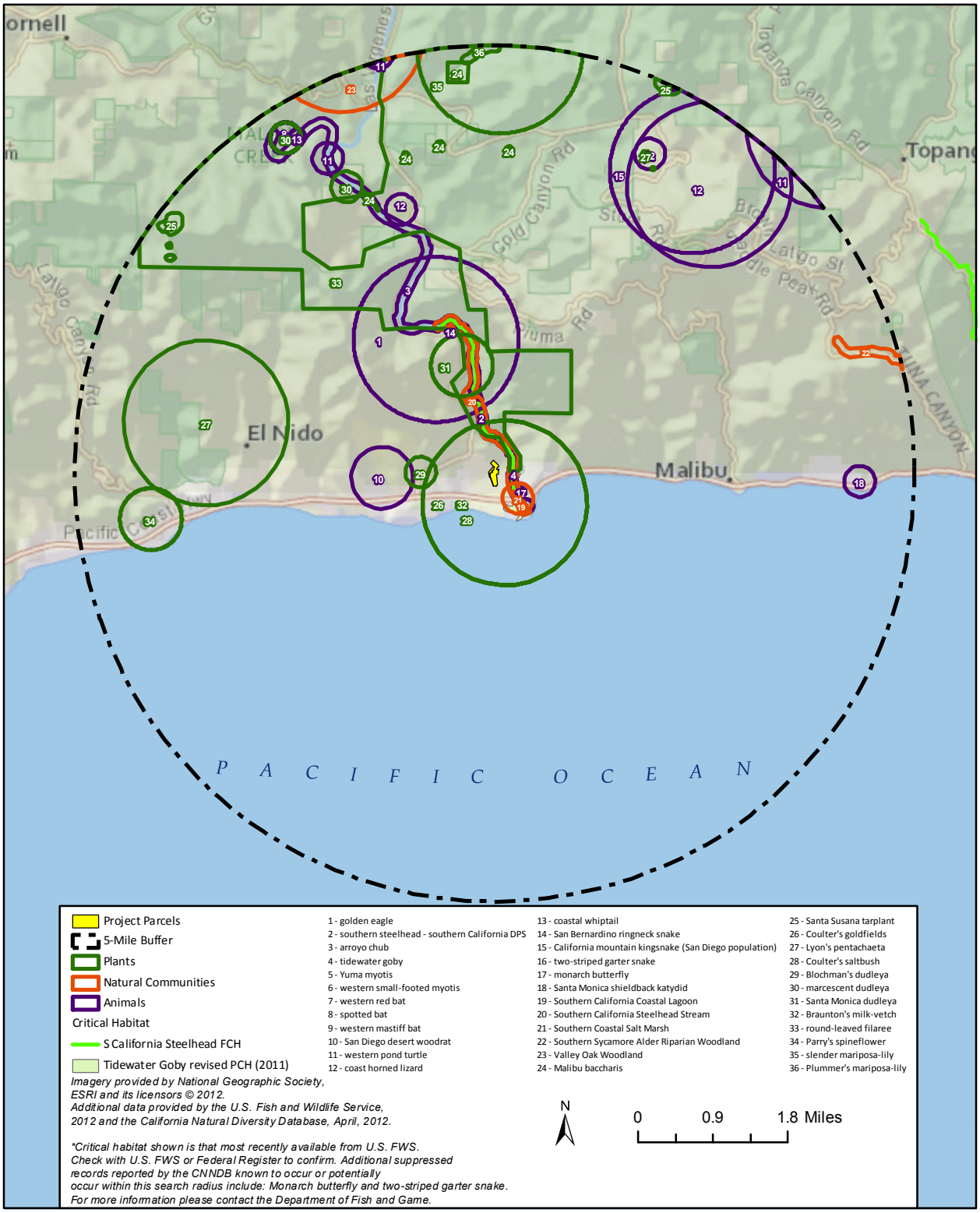
Species	Statusa Federal/State	Habitat Requirements	Potential to Occur
Oncorhynchus mykiss irideus southern steelhead – southern California DPS	FE/SSC	Fed listing refers to pops from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Habitat includes all river reaches and estuarine areas accessible to listed steelhead in coastal river basins.	**None**. No suitable aquatic habitat onsite.
Mammals			
Euderma maculatum spotted bat	--/SSC	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.	**None**. Could forage onsite, but no suitable roosting habitat onsite.
Eumops perotis californicus western mastiff bat	--/SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	**Low to moderate**. Could roost in trees on Candidate Sites #1 and #2.
Lasiurus blossevillii western red bat	--/SSC	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**Moderate to High**. Could roost in trees on Candidate Sites #1 and #2.
Lasiurus cinereus hoary bat	--/SA	Roosts primarily in trees, 2 to 40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges & mosaics with trees that are protected from above & open below with open areas for foraging.	**Moderate to High**. Could roost in trees on Candidate Sites #1 and #2.
Myotis ciliolabrum western small-footed myotis	--/SA	Wide range of habitats mostly arid wooded & brushy uplands near water. Seeks cover in caves, buildings, mines and crevices. Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.	**None**. Could forage onsite, but no suitable roosting habitat onsite.
Myotis yumanensis Yuma myotis	--/SA	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	**None**. Could forage onsite, but no suitable roosting habitat onsite.
Neotoma lepida intermedia San Diego desert woodrat	--/SSC	Coastal scrub of southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops & rocky cliffs & slopes.	**Low to Moderate**. Could occur in mixed scrub on Candidate Site #7, as well as mixed scrub and woodlands on Candidate Site #1.
Taxidea taxus American badger	--/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs and burrows.	**None**. Scattered development throughout region restricts movements.

Source: California Department of Fish and Game, 2003; California Department of Fish and Wildlife, 2011.
[a]Status Codes:
CFP = CDFG Fully Protected
CSC = California Species of Special Concern
FC = Federal Candidate Species
FE = Federally Endangered
FT = Federally Threatened
SE = State Endangered
ST = State Threatened
SA = no status but included in Rarefind database as deserving of concern
DPS = Distinct Population Segment



Candidate Sites #1 and #2
Sensitive Elements Reported by the California Natural Diversity Database and Federally Designated Critical Habitat

Figure 4.3-3



Candidate Site #7
Sensitive Elements Reported by the California Natural Diversity Database and Federally Designated Critical Habitat

Figure 4.3-4

A wetland delineation was conducted on October 18, 2012 for Candidate Sites #1 and #2 to document the presence and extent of wetlands identified during earlier site visits (Appendix C). The wetland delineation examined the ravine that traverses Candidate Site #1 and intersects PCH at the southeastern portion of the parcel. The ravine lacked sufficient wetland indicators (hydrology, hydric soils, hydrophytic vegetation); however, three distinct predominantly hydrophytic vegetation were identified in the southern portion of Candidate Site #1, which include an isolated stand of arroyo willow within the south central portion of the ravine. Two mixed stands of arroyo willow and southern California walnut are located within the basin area at the southern extent of the site. These wetlands were mapped based solely on the presence of hydrophytic vegetation per the California Code of Regulations Section 13577(b) of Title 14, Division 5.5, Article 18. No wetlands were mapped on Candidate Site #2.

Special-Status Plants. Per the LCP, special-status plant species within the City boundaries include those that are designated or candidates for listing as rare, threatened, or endangered under state or federal law; and plant species eligible for state listing as demonstrated by their designation as CRPR 1B or 2. A search of the CNDDB and CNPS databases identified 34 special-status plant species within a nine-quadrangle search radius (defined as the area within nine U.S. 7.5 minute topographic maps) around and including the candidate sites (Table 4.3-2), 15 of which have been documented within five miles of the candidate sites (Figures 4.3-3 and 4.3-4). The potential for each species to occur on each of the candidate sites has been evaluated and is presented in Table 4.3-2. One of these species was identified on Candidate Site #1: southern California black walnut. An additional 16 special-status plant species have a low to moderate potential to occur on at least one of the candidate sites, with 5 species potentially occurring on Candidate Site #1, and 15 species potentially occurring on Candidate Site #7. No special status plant species are expected to occur on Candidate Site #2 (see Table 4.3-2).

Protected Trees. The City of Malibu's Native Tree Protection Ordinance (LIP Chapter 5) is intended to recognize the importance of native oak, walnut, sycamore, alder and toyon trees in preventing the erosion of hillsides and stream banks, moderating water temperatures in streams through shading, contributing nutrients to streams, supporting a wide variety of wildlife species through the provision of food, nesting, and roosting cover, and contributing to the scenic quality of the community and to provide for the protection and preservation of these native trees. The provisions of this ordinance apply to those areas containing one or more native oak (*Quercus species*), California Walnut (*Juglans californica*), Western Sycamore (*Platanus racemosa*), Alder (*Alnus rhombifolia*), or Toyon (*Heteromeles arbutifolia*) tree, that has at least one trunk measuring six inches or more in diameter, or a combination of any two trunks measuring a total of eight inches or more in diameter, measured at four and one-half feet above natural grade. As noted above, one black walnut tree was identified on Candidate Site #1; however, it has not been determined whether this tree meets protection status.

Special-Status Animals. A search and review of the CNDDB identified 23 special-status animal species occurring within the vicinity of the candidate sites (see Table 4.3-3), 20 of which have been documented within five miles of the candidate sites (Figures 4.3-3 and 4.3-4). The potential for each species to occur on each of the candidate sites has been evaluated and is presented in Table 4.3-3. Of the species evaluated, 15 special-status animal species have a low to high potential to occur on at least one of the candidate sites, with 11 species potentially

occurring on Candidate Site #1, 5 species potentially occurring on Candidate Site #2, and 6 species potentially occurring on Candidate Site #7.

d. Wildlife Movement Corridors. Wildlife movement corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. These linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across large portions of the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return.

Wildlife movement can be limited by roads, railroads, dams, canals, urban development, and agriculture. Fragmentation of large habitat areas into small, isolated segments has been shown to generally reduce biological diversity, eliminate disturbance-sensitive species, restrict genetic flow between populations of organisms, and may eventually lead to the loss of local floral or faunal assemblages. Wildlife corridors and habitat linkages are important landscape elements that reduce the potential for loss of biological diversity.

Corridors usually connect one large habitat area with another, and while there is no pre-defined size limit for such areas, they most often are on the scale of mountain ranges, valleys, rivers and creeks, or clearly delimited ecological situations (e.g., vernal pools). The *Missing Linkages: Restoring Connectivity to California Landscape* (Penrod et al., 2001) conference refers to such corridors as "landscape linkages." These are specifically defined in that report as:

> "Large, regional connections between habitat blocks ("core areas") meant to facilitate animal movement and other essential flows between different sections of a landscape (taken from Soulé and Terborgh, 1999). These linkages are not necessarily constricted, but are essential to maintain connectivity function in the ecoregion."

The General Plan considers the preservation of wildlife habitat linkages important to protecting the biodiversity of the Santa Monica Mountains Natural Recreation Area and surrounding area. None of the sites are located within mapped wildlife habitat linkages as depicted on Figure CO-3 in the General Plan Conservation Element. The disturbed ephemeral ravine on Candidate Site #1 may serve as a local movement corridor; however, given the level of disturbance, close proximity to residences, and intersection with roads, including PCH, wildlife use of this ravine is expected to be low.

e. Regulatory Setting. Regulatory authority over biological resources is shared by Federal, State, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, codified in the LCP and M.M.C.

Special-status habitats are plant or vegetation communities, associations, or sub-associations that support concentrations of special-status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa (species, subspecies, and varieties) that are formally listed as endangered or threatened by the federal government (i.e., USFWS, National Marine Fisheries Service [NMFS]) pursuant to the FESA, or as endangered, threatened, or rare (for plants only)

by the State of California (i.e., California Fish and Wildlife Commission) pursuant to the CESA or the California Native Plant Protection Act. Some species are considered sensitive or rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g., Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources occurring on the candidate sites include:

- *U.S. Army Corps of Engineers (wetlands and other waters of the United States);*
- *Regional Water Quality Control Board (waters of the State);*
- *U.S. Fish and Wildlife Service (federally listed species and migratory birds);*
- *California Department Fish and Wildlife (riparian areas and other waters of the State, state-listed species, and nesting birds); and*
- *City of Malibu (special status plants and animals, riparian and wetland areas, ESHA).*

U.S. Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetlands. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge into wetlands or other "waters of the United States" that are hydrologically connected and/or demonstrate a significant nexus to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetlands is met through compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board. The State Water Resources Control Board and the local Central Coast Regional Water Quality Control Board (RWQCB) have jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The Central Coast RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and NMFS share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS

implements the FESA for marine and anadramous[1] species. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife. The CDFW derives its authority from the Fish and Game Code of California. The CESA (Fish and Game Code Section 2050 et seq.) prohibits take of state-listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under the Code.

California Fish and Game Code Sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

City of Malibu. Protection of biological resources within the City is guided by two documents: the LCP and the General Plan.

[1] *Anadramous species are those that are born in fresh water but spend most of their life in the sea and return to fresh water to spawn. Salmon, smelt, shad, striped bass, and sturgeon are common examples.*

The LUP is designed to ensure that conformance with the California Coastal Act, and the LIP provides development standards to implement the policies of the LUP. Applicable chapters in these documents include:

- *Marine and Land Resources (LUP Chapter 3)*
- *Environmentally Sensitive Habitat Area (ESHA) (LIP Chapter 4)*
- *Native Tree Protection (LIP Chapter 5)*

Provided in the LUP and LIP are guidelines, standards and policies regarding survey and reporting requirements, development setbacks, avoidance and minimization of impacts, and mitigation for unavoidable impacts.

The General Plan Land Use Element (LU) and Conservation Element (CON) each contain goals, objectives, policies and implementation measures aimed at the preservation of biological resources. Applicable goals and objectives include:

- ***LU Goal 1*** *The natural and environmental resources of Malibu are protected and enhanced*
- ***LU Objective 1.1*** *Development that does not degrade the environment*
- ***LU Objective 1.2*** *Preserve and protect Resource Protection Areas*
- ***LU Policy 1.2.1*** *The City shall prohibit development in Environmental Sensitive Habitat Areas (ESHA) unless no feasible alternative is available*
- ***LU Policy 1.2.2*** *The City shall require development in and adjacent to Resource Protection Areas (RPA) to be designed to mitigate environmental impacts to the fullest extent feasible*
- ***CON Goal 1*** *Natural Resources Preserved and Protected*
- ***CON Objective 1.1*** *Natural resources managed in accordance with this comprehensive natural resources protection and management plan*
- ***CON Objective 1.2*** *Wildlife and biota resources preserved, protected and reclaimed*

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. Data used for this analysis included aerial photographs, topographic maps, the CNDDB database, the CNPS online inventory of rare and endangered plants, accepted scientific texts to identify species, and reconnaissance site surveys conducted on March 5 and March 29, 2012 to characterize the existing conditions of the candidate sites. A wetland delineation conducted on October 18, 2012 for Candidate Sites #1 and #2 is also referenced herein.

Chapter 1, Section 21001(c) of the *CEQA Statute* states that it is the policy of the state of California to: "Prevent the elimination of fish and wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities." Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing the *CEQA Guidelines* and federal, state, and local plans, regulations, and ordinances. Project impacts to flora and fauna may be determined to be

significant even if they do not directly affect rare, threatened, or endangered species. The Housing Element Update would have a significant impact if it were found to:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;*
3. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*
4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*
6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

CEQA Checklist items #4 and #6 are not addressed in the impact analysis below because there are no components of the Housing Element update would directly interfere with the movement of native or migratory fish or other migratory wildlife, and because the Housing Element Update would not conflict any adopted Habitat Conservation Plan.

b. Project Impacts and Mitigation Measures.

Impact BIO-1 **Development facilitated by the Housing Element Update, notably on Candidate Site #1, may have an adverse effect on sensitive habitat including mixed woodland, mixed scrub, mixed ruderal, ornamental, riparian habitat, and disturbed/developed plant communities, as well as an adverse effect on wetlands. However, after implementation of LCP development requirements, this is a Class III, *less than significant* impact.**

Candidate Sites #1, #2, and #7. Development of Candidate Sites #1, #2, and #7 will result in impacts to a variety of habitats, each of which has been disturbed to some degree. As a worst case scenario, this impact analysis assumes a complete loss of all habitat acreages reported in Table 4.3-1. However, even though ESHA is not mapped on any of the sites ESHA may be determined to be present on Candidate Site #1. Per the LCP LUP, streams and wetlands are protected and may be considered ESHA if they are considered to provide an especially valuable role in the ecosystem. Further, LUP Section C.1.a.3.1 states "Regardless of whether streams and wetlands are designated as ESHA, the policies and standards in the LCP

applicable to streams and wetlands shall apply." A ravine traverses Candidate Site #1 in a general north-south direction through mixed woodland and mixed scrub habitats. This ravine appears to have been graded and/or filled in. It is not mapped on USGS topographic quadrangles; however, according to the USFWS National Wetlands Inventory, the ravine is mapped as a freshwater forested/shrub wetland originating approximately 0.30 mile to the north and emptying into the Pacific Ocean. It is likely that this ravine only carries flows following high volume precipitation events.

Riparian vegetation, including willows and southern California black walnut, was observed in the southern portion of the ravine where hydrophytic vegetation was dominant. Three distinct areas dominated by hydrophytic vegetated were mapped as wetlands on Candidate Site #1 (Appendix C). Pursuant to LUP Section 30242(C)(1)(a), wetlands within the City of Malibu are considered ESHA. Pursuant to LUP Section 30242(C)(3)(a), a minimum 100 foot buffer shall separate wetlands from developed areas. Hydrology and hydric soil indicators were absent onsite. In particular, the ravine lacked a definable bed, bank and channel. As such, none of the features onsite would fall under the jurisdiction of the USACE or the CDFW. Isolated wetlands are regulated by the RWQCB and the CCC.

The LIP contains standards regarding the protection of ESHA including the requirement to prepare a detailed biological assessment containing a description of the physical characteristics and biological resources onsite, identify special-status species present or expected to occur onsite, analyze impacts to habitats and species, and describe avoidance, minimization, and mitigation measures. The LIP also includes development standards aimed at avoiding and minimizing impacts to ESHA including the provision of habitat-specific buffers of not less than 100 feet from development; lighting standards to prevent light pollution within ESHA; and fencing restrictions to maintain wildlife movement. Finally, the LIP includes habitat impact mitigation requirements that allow for habitat restoration, habitat conservation, or payment into an approved in-lieu fee program should an ESHA be impacted by development. For habitat restoration, a Habitat Restoration Plan would be developed which would include a detailed description of the impact habitat, provisions for monitoring the restoration for a period of no less than five years, criteria for determining restoration success, and mid-course corrective measures. Restoration would occur at habitat-specific ratios ranging from 2:1 to 4:1. Areas subject to habitat restoration or habitat conservation would be restricted from future development through an open space deed restriction or other approved mechanism.

In summary, no ESHA or other sensitive habitats are present on Candidate Sites #2 and #7. As such, impacts to habitats on Candidate Sites #2 and #7 would be less than significant. Candidate Site #1 contains ESHA and wetlands. However, potential impacts to ESHA and wetlands on Candidate Site #1 would be mitigated by existing requirements of the LIP and M.M.C. As such, impacts to ESHA and wetlands on Candidate Site #1 would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family (MF) and Multi-Family Beachfront (MFBF). Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on sensitive biological resources, as these would not

result in new development. However, certain policies would have the potential to result in new development, thereby increasing the potential for impacts to sensitive biological resources. Amendments to the LCP and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, the total maximum impermeable coverage allowance of 25,000 square feet, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would have the potential to impact sensitive biological resources because they would allow for additional ground disturbance beyond that which would be permitted under existing development standards. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. As multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. They would also be subject to the requirements set forth in the LIP and M.M.C., which would ensure that impacts to biological resources are mitigated to the extent practical. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No additional mitigation is required.

Impact BIO-2 Development facilitated by the Housing Element Update, particularly on Candidate Sites #1 and #7, may adversely affect special-status plant species. This is a Class II, *significant but mitigable,* impact.

No special-status plant species were detected during site reconnaissance visits to Candidate Sites #1, #2, or #7. However, special-status plant species have the potential to occur on Candidate Sites #1 and #7 based on the existing habitat conditions and each species' ecological requirements. These species are listed below by site number.

Candidate Site #1. Five special-status plant species have the potential to occur on Candidate Site #1, primarily in association with the mixed scrub habitat onsite:

- *San Fernando Valley spineflower (federal candidate for listing, state Endangered, CRPR 1B.1)*
- *Parry's spineflower (CRPR 1B.1)*
- *Lyon's pentachaeta (federally and state Endangered, CRPR 1B.1)*
- *White rabbit-tobacco (CRPR 2.2)*
- *Chaparral ragwort (CRPR 2.2)*

Candidate Site #7. Fourteen special-status plant species have the potential to occur on Candidate Site #7, primarily in association with the mixed scrub habitat:

- *Braunton's milk-vetch (federally Endangered, CRPR 1B.1)*
- *Coulter's saltbush (CRPR 1B.2)*
- *Round-leaved filaree (CRPR 1B.1)*
- *Slender mariposa-lily (CRPR 1B.2)*
- *San Fernando Valley spineflower (federal candidate for listing, state Endangered, CRPR 1B.1)*
- *Parry's spineflower (CRPR 1B.1)*

- *Santa Susana tarplant (state Rare, CRPR 1B.2)*
- *Santa Monica Mountains dudleya (federally Threatened, CRPR 1B.2)*
- *Many-stemmed dudleya (CRPR 1B.2)*
- *Ojai navarretia (CRPR 1B.1)*
- *Chaparral nolina (CRPR 1B.2)*
- *Lyon's pentachaeta (federally and state Endangered (CRPR 1B.1)*
- *White rabbit-tobacco (CRPR 2.2)*
- *Chaparral ragwort (CRPR 2.2)*

Per the LUP, special-status plant species within the City boundaries include those that are designated or candidates for listing as rare, threatened, or endangered under state or federal law, and plant species eligible for state listing as demonstrated by their designation as CRPR 1B or 2 (see table 4.3-2 for definition). Any habitat that contributes to the viability of any of special-status plant species is considered an ESHA. Policies and development standards regarding impacts to ESHA are summarized in the impact discussion under **Impact BIO-1**.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on protected trees, as these would not result in new development. However, certain policies would have the potential to result in new development, thereby increasing the potential for impacts to protected trees. Amendments to the LCP and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, the total maximum impermeable coverage allowance of 25,000 square feet, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would have the potential to impact protected trees because they would allow for additional ground disturbance beyond that which would be permitted under existing development standards. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. However, since protected threes occur throughout the City, it is possible that similar impacts as described above for Candidate Sites #1 and #7 would occur on other MF sites. As such, impacts related to special status plant species would be significant but mitigable.

Mitigation Measures. The following mitigation measures are designed to address impacts to special-status plant species by requiring surveys specifically for special status plant species on Candidate Sites #1 and #7, as well as any MF site made subject to the AHO in the future.

BIO-2 **Special-Status Plant Surveys.** Prior to any vegetation removal, grubbing, or other construction onsite, seasonally-timed special-status plant surveys shall be conducted by a City-approved biologist no more than two years before initial ground disturbance. The consulting biologist may coordinate with CDFW staff and surveys may be provided to CDFW for review. The purpose of these surveys is to document the location(s) and number(s) of special-status plant

species within construction and mitigation areas so that mitigation can be accomplished. The surveys shall coincide with the bloom periods for each species listed above and all special-status plant species identified onsite shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted in accordance with CDFW and USFWS protocols (California Department of Fish and Game 2009, United States Fish and Wildlife Service 2000). Areas containing special-status plant species shall be considered ESHA per the LCP.

If special-status plant species are determined to be present onsite, the habitat within which said species are found shall be delineated as ESHA and all applicable LCP development standards shall be adhered to. The policies include assessment of the biological resources onsite prior to project approval, development standards that avoid or minimize impacts to sensitive resources such as establishment of buffers between development and specific types of habitats and resources, and mitigation requirements, including mitigation plan requirements, for unavoidable impacts.

Significance After Mitigation. Implementation of the LCP LUP and LCP LIP policies and the above mitigation measures would reduce impacts to special-status plants and ESHA to a less than significant level.

Impact BIO-3 Development facilitated by the Housing Element Update, including development on Candidate Sites #1, #2, and #7 would not conflict with the City of Malibu Native Tree Protection Ordinance. This is a Class III, *less than significant,* impact.

Native tree species are present on each of the three candidate sites; however, it is not known at this time whether the trees meet the criteria to be considered "protected" under the ordinance. As shown in Table 4.3-4, Candidate Site #1 contains southern California black walnut, Western sycamore, and toyon. Candidate Sites #2 and #7 contain southern California black walnut.

Table 4.3-4
Protected Native Tree Species Present on Each Candidate Site

Tree Species	Candidate Site #1	Candidate Site #2	Candidate Site #7
southern California black walnut	X	X	X
Western sycamore	X		
toyon	X		

Should these trees meet the criteria of the ordinance, the LIP contains requirements regarding the protection of native trees. Protected native tree species include native oaks (*Quercus* sp.), southern California black walnut, western sycamore, alder (*Alnus rhombifolia*.), and toyon. These requirements include development of a tree protection plan that would include an inventory and health assessment of all protected native trees onsite, site maps showing the locations of trees, an analysis of potential construction and post-construction impacts to protected native trees, identification of trees proposed for removal, project alternatives designed to avoid impacts, and a long-term maintenance and monitoring program. The LIP Chapter 5 outlines several Project Construction Measures designed to avoid and minimize impacts to native trees and describes mitigation requirements for trees that will be impacted, including a tree replacement ratio of 10:1. Trees replaced for mitigation would be monitored for a period of not less than 10 years and annual reporting would be required. Implementation of these requirements would reduce impacts to a less than significant level.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on native trees, as these would not result in new development. However, certain policies would have the potential to result in new development, thereby increasing the potential for impacts to native trees. Amendments to the LCP and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, the total maximum impermeable coverage allowance of 25,000 square feet, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would have the potential to impact sensitive biological resources because they would allow for additional ground disturbance beyond that which would be permitted under existing development standards. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. As multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. They would also be subject to the requirements set forth in the LIP and M.M.C., which would ensure that impacts to native trees are mitigated to the extent practical. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No additional mitigation is required.

Impact BIO-4 **Development facilitated by the Housing Element Update, including development on Candidate Sites #1, #2, and #7, may adversely affect special-status animals species, including nesting birds. This is a Class II, *significant but mitigable,* impact.**

Candidate Sites #1, #2, and #7. No special-status species were identified on any of the three candidate sites during the reconnaissance-level field surveys. Nevertheless, several species have a low to high potential to be present on all three sites based on the presence of suitable habitat characteristics observed during the field surveys (see Tables 4.3-2 and 4.3-5).

Table 4.3-5
Potential for Impact to Special-Status Animal Species by Candidate Site and Habitat in Which the Species is Likely to Occur

Species	Candidate Site #1	Candidate Site #2	Candidate Site #7
coastal whiptail	Low – mixed woodland and mixed scrub	None	Low to moderate – mixed scrub
San Bernardino ringneck snake	Low – mixed woodland and mixed scrub	None	Low – mixed scrub
coast horned lizard	Low – mixed scrub	None	Low – mixed scrub
Cooper's hawk	Low – mixed woodlands	Low – ornamental (trees)	None
Santa Monica shieldback katydid	Low – mixed scrub	None	Low – mixed scrub
monarch butterfly (wintering sites)	Low to moderate – ornamental	None	None
western mastiff bat	Low to moderate - woodland	Low – ornamental (trees)	None
western red bat	Moderate to high – mixed woodland	Low – ornamental (trees)	None
hoary bat	Moderate to high – mixed woodland	Low – ornamental (trees)	None
San Diego desert woodrat	Low to moderate – mixed woodland and mixed scrub	None	Low to moderate – mixed scrub
Nesting birds	Moderate to high – throughout site	Moderate to high – throughout site	Low to moderate – throughout site

Each of these species may be associated with mixed woodland and/or mixed scrub habitat at each of the sites. Bird and bat species may also be associated with trees on Candidate Sites #1 and #2. The ornamental eucalyptus trees located in the central portion of Candidate Site #1 provide potential habitat for over-wintering monarch butterflies. In addition, bird species protected by the Migratory Bird Treaty Act and California Fish and Game Code may nest in the vegetation on each of the candidate sites. Impacts to special-status animal species could occur during development of the sites and loss of habitat for future foraging and reproduction. These impacts would be considered potentially significant.

Per the LUP, special-status animal species within the City boundaries include those that are designated or candidates for listing as rare, threatened, or endangered under state or federal law, and animal species that are designated "fully protected" or "species of special concern" under state law or regulations. Any habitat that contributes to the viability of these special-status animal species is considered an ESHA. Regulations and development standards

regarding impacts to ESHA are summarized in the impact discussion under **Impact BIO-1**. In particular, the LIP includes requirements that address impacts to wildlife related to fencing and lighting, such as the selection and placement of exterior lighting to minimize light pollution in ESHA, limiting exterior light bulb wattage to 60 watts, requirement that a document is recorded against the title of the subject property which reflects the exterior lighting restrictions, and prohibiting fencing or walls within ESHA, except where necessary for public safety or habitat protection or restoration. Any fencing installed shall allow wildlife movement. These measures would apply to the special status plant species identified herein, which would help to mitigate potential impacts. Nonetheless, impacts would be considered potentially significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on special status plants, as these would not result in new development. However, certain policies would have the potential to result in new development, thereby increasing the potential for impacts to special status plants. Amendments to the LCP and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, the total maximum impermeable coverage allowance of 25,000 square feet, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would have the potential to impact special status plants because they would allow for additional ground disturbance beyond that which would be permitted under existing development standards. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. However, since protected special status plants occur throughout the City, it is possible that similar impacts as described above for Candidate Sites #1 and #7 would occur on other MF sites. As such, impacts related to special status plant species would be significant but mitigable.

Mitigation Measures. The following mitigation measures are designed to reduce impacts to special-status animal species to less than significant.

BIO-4(a) Coastal whiptail, San Bernardino Ringneck Snake, and Coast Horned Lizard Surveys, Capture, and Relocation. Prior to issuance of a building permit on Candidate Sites #1 and #7 and other MF sites that could be subject to the AHO, capture and relocation efforts shall be conducted where suitable habitat is present for the coastal whiptail, San Bernardino ringneck snake, and coast horned lizard. Surveys shall be conducted by a qualified biologist, approved by the City of Malibu, and shall include raking of leaf litter and sand under shrubs within suitable habitat in the area to be disturbed to a minimum depth of two inches. In addition to raking, coverboards shall be placed flat on the ground and checked regularly in the survey areas. Coverboards can consist of untreated lumber, sheet metal, corrugated steel, or other flat material used to survey for reptiles.

Coverboards shall be placed in the survey area two weeks before surveys begin and shall be checked at least twice per week during raking surveys. Captured animals shall be placed immediately into containers containing sand or moist paper towels and released in designated release areas either onsite or at a City-approved off-site location no more than three hours after capture.

During all grading activities, a qualified biologist shall be onsite to recover any coastal whiptails, San Bernardino ringneck snakes, or coast horned lizards that may be excavated/unearthed. If the animals are in good health, they shall be immediately relocated to the designated release area. If they are injured, the animals shall be released to a City-approved specialist until they are in a condition to be released into the designated release area.

BIO-4(b) **Monarch Butterfly Surveys and Avoidance.** A qualified biologist with expertise in Monarch ecology, approved by the City of Malibu, shall survey the eucalyptus trees on Candidate Site #1 and other MF sites that would be subject to the AHO to determine if monarch butterflies are roosting onsite prior to issuance of building permits. The survey shall occur during the peak of the winter roosting period (December to February). If the biologist determines that the habitat onsite serves as a winter roost, no development shall occur within 100 feet and the roost site shall be mapped as ESHA. If avoidance is not feasible, the development design of that site will be re-evaluated and consultation with CDFW shall occur to determine if development may proceed with additional specific mitigation.

BIO-4(c) **Special-Status Bat Surveys and Impact Avoidance.** A qualified biologist, approved by the City of Malibu, shall conduct presence/absence surveys for special-status bats where suitable roosting habitat is present on Candidate Site #1 and #2 and other MF sites that would be subject to the AHO prior to issuance of a building permit. Bat surveys shall be conducted in accordance with methods set forth by the CDFW Survey methods shall include the use of both acoustic detectors and by physically searching tree cavities, crevices, and other areas where bats may roost. Surveys shall be conducted no more than 30 days prior to initiation of construction activities.

Areas where bats are located shall be avoided where feasible. If impacts to bats cannot be avoided, with concurrence from CDFW, exclusionary devices, such as netting, shall be installed by a City-approved biologist around the roost(s) after the bats have left the roost in the evening and shall be monitored for a minimum of three days to ensure that no bats return to the roost. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately. Exclusion of bats must commence prior to establishment of maternity colonies, which varies by species. If a

maternity colony is determined to be present, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Bat roosts shall be removed after the breeding season has ended but before the onset of winter when temperatures are too cold for bat movement.

If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), installation of bat boxes near the impacted roost would be necessary to reduce the impact to the bat species present. Bat boxes shall be species-specific in design. Bat boxes shall be installed at a height that is appropriate for the bat species and anti-predator measures, such as small metal spikes on the top, shall be included to protect bats.

BIO-4(d) **Migratory Bird Treaty Act.** To avoid the accidental take of any migratory bird species or raptors, construction activities at any of the three candidate sites and other MF sites that would be subject to the AHO shall be conducted between September 1 and March 1, outside of the typical breeding season. If avoidance of the nesting season is not feasible, a qualified biologist, approved by the City of Malibu, shall conduct focused nesting surveys weekly for 30 days, with the final survey occurring not more than three days prior to initiation of ground and vegetation disturbance activities. The results of the nest survey shall be submitted upon completion of the surveys to the City for review via a letter report prior to initiation of grading or other construction activity. In the event that a nesting migratory bird species or raptor is observed within 300 feet of the construction work areas (500 feet for raptors), the project biologist shall demarcate the buffer area. No construction or other project-related disturbance shall occur in these areas until the active nest(s) is vacated for the season and there is no evidence of further nesting attempts, as determined by the project biologist. Construction personnel shall be instructed on the ecological sensitivity of the area.

BIO-4(e) **Worker Education.** Prior to initiation of any construction activities, a qualified biologist, approved by the City of Malibu, shall conduct a training session for all construction personnel on all candidates sites and other MF sites that would be subject to the AHO. At a minimum, the training shall include a description of all sensitive resource issues onsite as well as the general measures that are being implemented to protect these resources. A fact sheet shall be provided to all contractors, their employees, and any other personnel involved with the construction of the project, and shall include a description of the sensitive resources onsite, information on their occurrence onsite, a list of construction Best Management Practices (BMPs) outlined in **Mitigation Measure BIO-4(f)** and other applicable mitigation measures, instructions to follow when encountering sensitive

resources, and all applicable City-required conditions of approval.

BIO-4(f) **Construction Best Management Practices.** The following construction BMPs shall be incorporated into all grading and construction plans for any future development on the three candidate sites:

- *Designation of a 15 mph speed limit in all construction areas.*
- *All vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas, and clearing of vegetation for vehicle access shall be avoided to the greatest extent feasible. Development of new access and right-of-way (ROW) roads shall be minimized.*
- *Designation of equipment washout and fueling areas to be located within the limits of grading at a minimum of 100 feet from waters, wetlands, or other sensitive resources as identified by a qualified biologist. Washout areas shall be designed to fully contain polluted water and materials for subsequent removal from the site.*
- *Daily construction work schedules shall be limited to the hours between 7 AM and 7 PM and shall comply with Section 8.24.050(G) of the M.M.C.*
- *Mufflers shall be used on all construction equipment and light trucks shall be in good operating condition.*
- *Drip pans shall be placed under all stationary vehicles and mechanical equipment.*
- *All trash shall be placed in sealed containers and shall be removed from the candidate sites a minimum of once per week.*
- *No pets are permitted on candidate sites during construction.*

c. Cumulative Impacts.

*Candidate Sites***.** As shown in Table 3-1 in Section 3.0 *Environmental Setting*, 84 residential units and 748,460 square feet of non-residential development are approved or pending within the City. Two of the approved/pending residential projects are located within one mile of Candidate Sites #1 and #2. Eight of the approved/pending projects are located within one mile of Candidate Site #7, the majority of which are commercial developments located within the Civic Center area. Cumulative development may similarly impact biological resources; however, these projects would be subject to individual environmental review wherein potential impacts would be address accordingly. Cumulative development would also be subject to similar existing City regulations pertaining to sensitive biological resources. The LUP and General Plan Land Use and Conservation Elements contain a wide variety of goals and policies aimed at the conservation of biological resources including the protection of sensitive habitats and threatened plant communities such as wetlands, riparian habitats, coastal bluff, chaparral, and native woodlands such as oak woodlands; protection of native tree species; the preservation of wildlife habitats and habitat linkages; prevention of the spread of invasive plant species; and preservation of marine and beach resources. The LIP specifically outlines the procedures and requirements for issuance of a coastal development permit, which includes the provision of a detailed biological assessment for parcels planned for development and application of specific avoidance, minimization and mitigation requirements. As discussed

above, impacts to special status plant and animal species would be mitigated to a less than significant level, and impacts to sensitive habitat, protected trees and wetlands would be less than significant with implementation of existing regulations. As a result, the Housing Element Update's contribution to cumulative impacts would not be considerable since impacts would be less than significant with mitigation and/or with implementation of existing regulations. Therefore, cumulative impacts would be less than significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative biological resources impacts when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. However, cumulative development would be subject to the development standards set forth in the LCP and/or M.M.C. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, cumulative impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

4.4 CULTURAL RESOURCES

4.4.1 Archaeological Setting

a. Archaeological Overview of the Region. At Spanish contact, the Southern California region was occupied by the Native American Indian group known as the Chumash, a diverse population living in settlements along the California coast from Malibu Creek to the southeast, to Estero Bay in the north, including the islands of San Miguel, Santa Rosa, and Santa Cruz, and as far as Tejon Pass, Lake Casitas and the Cuyama River inland (Heat, 2011)

Chumash society became more complex over its last 9,000 years. After A.D. 1000, changes in bead types suggest the development of a highly developed economic system that was observed by early Spanish explorers. Following the 1542 Cabrillo voyage, many small Chumash settlements were abandoned and some of the largest historic towns were founded. This change in population distribution is attributed to growth in importance of trade centers and the development of more integrated political confederations. The Chumash economic system enabled them to make efficient use of diverse environments within their territory.

Prehistoric Chumash culture underwent dramatic changes following colonization in the late 1800s. The introduction of diseases weakened and destroyed many Native American cultures. Many Chumash towns and villages were abandoned by 1810. However, large segments of the population survived and worked to build the Spanish Missions, and the Mexican and American ranches that followed. Other Chumash managed to survive by effectively blending into the cultural landscape. Several thousand Chumash currently live in Los Angeles, Ventura, Santa Barbara and San Luis Obispo counties. They place a high value on objects and places associated with their past history, namely archaeological sites and artifacts. Present-day Chumash are concerned in the preservation of the prehistoric and ethnographic records, including sacred lands.

In Malibu, cemetery and residential contexts have been excavated which are approximately 7,500 years old. Artifacts and food remains recovered from sites in the Santa Monica Mountains and the Santa Barbara Channel area indicated that people living along the coast were fishing with bone hooks, using boats or rafts to trade with the Channel Islands, and were taking sea mammals and large fish. Early mainland residential sites frequently contain large numbers of milling stones for processing small seeds (City of Malibu General Plan Conservation Element, March 28, 1991).

b. Existing Candidate Site Archaeological Resources.

Candidate Site #1**.** A records search performed at the South Central Coast Information Center (SCCIC) on March 17, 2010 and March 8, 2011, indicated that no previously recorded prehistoric or historic archaeological sites or isolates exist on Candidate Site #1 (HEART, 2011). In addition to the records search, Candidate Site #1 was surveyed on-foot by HEART on March 22, 2011 in order to determine whether unrecorded archaeological sites are present. All exposed terrain and fortuitous exposures, such as rodent burrows and excavated or cleared areas, were thoroughly inspected for signs of cultural resources. No archaeological resources were encountered during the pedestrian survey (HEART, 2011). Figure 4.4-1 shows the survey locations for Candidate Site #1.

Candidate Site #1
Survey Area

Source: H.E.A.R.T., 2012.

Figure 4.4-1

Candidate Site #2**.** A records search performed at the SCCIC on March 17, 2010 and March 8, 2011, indicated that no previously recorded prehistoric or historic archaeological sites or isolates exist on Candidate Site #2 (HEART, 2011). In addition, to the records search, Candidate Site #2 was surveyed on-foot by HEART on March 22, 2011 in order to determine whether unrecorded archaeological sites are present. All exposed terrain and fortuitous exposures, such as rodent burrows and excavated or cleared areas, were thoroughly inspected for signs of cultural resources. No archaeological resources were encountered during the pedestrian survey (HEART, 2011). Figure 4.4-2 shows the survey locations for Candidate Site #2.

Candidate Site #7. A records search for Candiate Site #7 was conducted at the SCCIC at the request of Topanga Anthropological Consultants in April 1995 (City of Malibu, January 2008). An additional archaeological records search was conducted at SCCIC at the request of Christopher A. Joseph and Associates (CAJA) in February 2003. The findings indicate that no recorded prehistoric archaeological sites exist on the candidate site (La Paz Development Agreement FEIR, January 2008). Candidate Site #7 was initially surveyed for cultural resources by Chester King of Topanga Anthropological Consultants on June 7, 1994 and by E. Gary Stickel of Environmental Research Archaeologists (ERA) on February 4, 1999 (La Paz Development Agreement FEIR, January 2008). Both site surveys concluded that no evidence of either prehistoric or historic artifacts or features have been found on-site (La Paz Development Agreement FEIR, January 2008). Figure 4.4-3 provides an overview of the Candidate Site #7.

4.4.2 Historical Setting

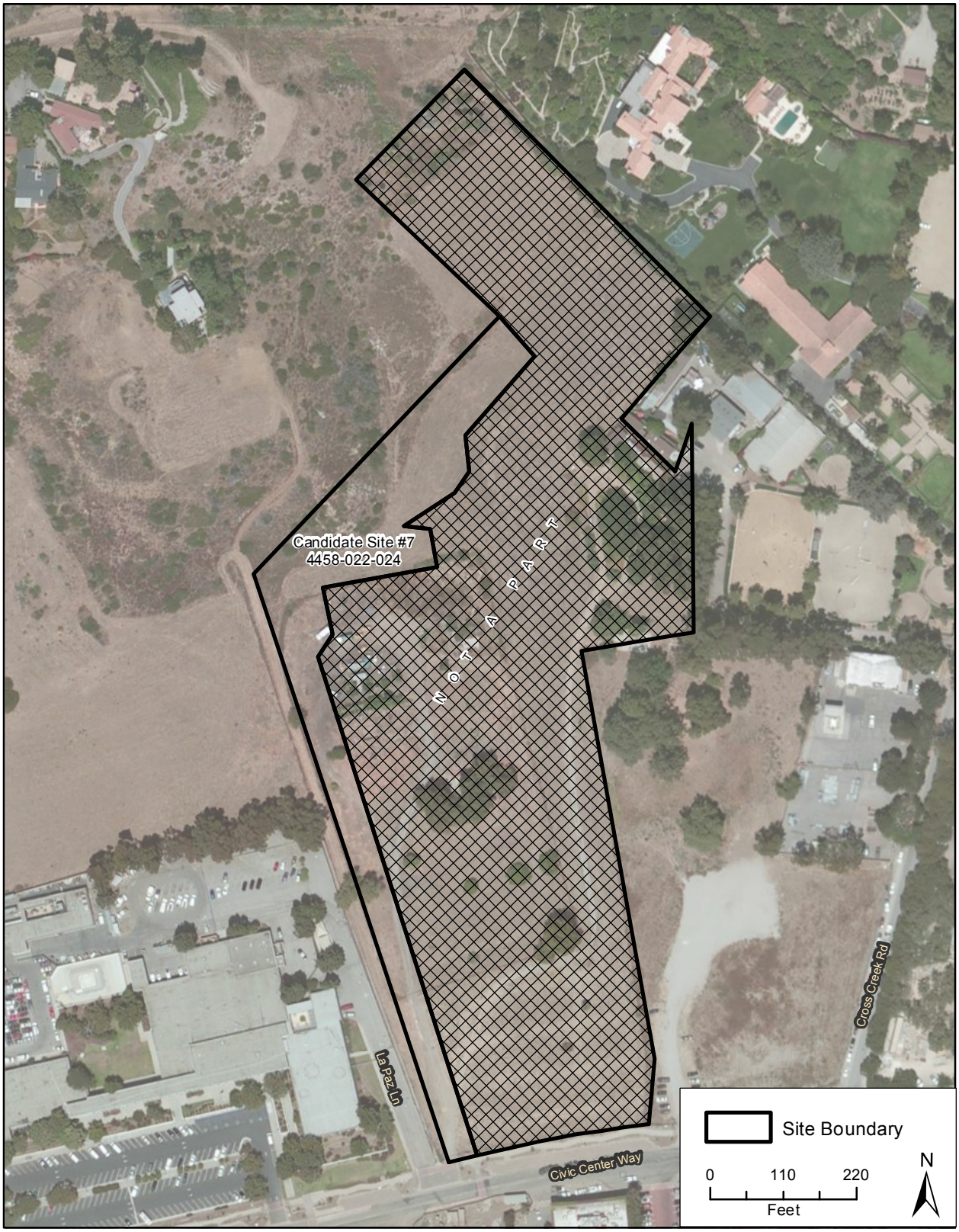
a. Historic Overview of the Region. From the voyages of Cabrillo in 1542 and Vizcaino in 1602, to the land expeditions of Portola in 1769 and Anza from 1773-1776, there was little interference from white men in the Chumash region. The Spanish Period was followed by the Mission Period, when 21 missions were established between 1769 and 1823. All of the missions were located a day's ride from one another along the Camino Real, which connected San Diego with Solano. Native Americans were slowly assimilated into the mission system through recruitment, and moved from their villages and the islands to help sustain the missions. During this period, many introduced diseases contributed to the decimation of Native Americans. After the decline of the mission system, large land grants became ranchos including Las Virgenes, El Conejo and Topanga Malibu-Sequit. During this time, land was primarily used for cattle grazing, agriculture and ranching.

The first European settlers in the Malibu area were Felipe Santiago Tapia and his family. Jose Bartolome, Tapia's eldest son eventually received a permit to graze cattle on the future rancho lands and in the late 1700s applied for formal possession of the land. Around 1802-1804, Tapia was granted most of the coastal land extending from the Ventura County line near Point Mugu, to Las Flores Canyon on the east as grazing area for his livestock. The only access at the time was by muleback or boat. The land passed from Tapia, to Bartolome, and to his son Tiburcio, and continued to be used for cattle and agricultural (Greene 1980). Eventually, Leon Victor Prudhomme, a Frenchman obtained title from Tapia's widow in 1848 by marrying a daughter of Tiburcio Tapia.

Candidate Site #2
Survey Area

Source: H.E.A.R.T., 2012.

Figure 4.4-2



Candidate Site #7
Aerial Photograph

Figure 4.4-3

Problems during the Land Commission hearings forced Prudhomme to sell to Matthew Keller. The 13,315-acre land grant was surveyed as Rancho Topanga Malibu Sequit and patented on August 29, 1873 to Keller. Passed down through family inheritance, the rancho was eventually sold by Henry Keller to Frederick Hastings Rindge in 1891. As one of the last intact Spanish land grants, it served as the ideal country home for the Rindge family, who kept a tight watch on their private domain. Since the 1900s, the construction of PCH and access roads through the Santa Maria Mountains helped promote the settlement of the area, making it one of the most desirable areas to own real estate in California.

There are over 250 officially recognized historic sites in Los Angeles County, four of which are located in Malibu (City of Malibu General Plan Conservation Element, March 28, 1991):

1. **Adamson House**: This site is located at the Malibu Lagoon State Park. It was once the home of Rhoda Rindge Adamson, daughter of Frederick and May. K. Rindge. It is the best surviving work and only intact example of architecture from Stiles O. Clements and represents the Moorish-Spanish Colonial Revival Style popular in the late 1920s. The site is listed in the National Register of Historic Places and as a California Historical Landmark.
2. **Serra House**: This site is located on Landumus Hill near the mouth of Malibu Creek. It is a site of local historic interest as it was once known as the unfinished Rindge Mansion. The site was purchased in 1942 by the Franciscan Order.
3. **Malibu Pier**: This site is located east of Malibu Lagoon State Park in the commercial core of the City. The site is a registered Los Angeles County Landmark and a California Point of Historical Interest.
4. **Historic Village of Humaliwo**: National register site located in the location of present day Malibu.

b. Existing Candidate Site Historic Resources .

Candidate Site #1. Candidate Site #1 is primarily undeveloped; however, a single-family residence exists onsite. The site is highly disturbed, contains ruderal grassland, California black walnut woodland, a California black walnut tree and several other trees. A records search performed at the South Central Coast Information Center (SCCIC) on March 17, 2010 and March 8, 2011, determined that there are no registered national or state historic resources, buildings, landmarks or Points of Interest on or near Candidate Site #1 (HEART, 2011).

Candidate Site #2. Candidate Site #2 is primarily undeveloped; however, a single-family residence exists onsite. The site has been previously disturbed and contains ornamental trees species and lawn. A records search performed by at the South Central Coast Information Center (SCCIC) on March 17, 2010 and March 8, 2011, determined that there are no registered national or state historic resources, buildings, landmarks or Points of Interest on or near Candidate Site #2 (HEART, 2011).

Candidate Site #7. Candidate Site #7 is vacant, has been cleared of most native flora, is devoid of any structures, vegetation with the exception of weeds, shrubs, a mature stand of California Sycamore trees, and small patches of native coastal shrub in the northern most

portions of the site. As discussed above, records searches for Candidate Site #7 were conducted at the SCCIC in April 1995 and February 2003. The findings indicate that there are no registered national or state historic resources, buildings, landmarks or Points of Interest on or near Candidate Site #7 (La Paz Development Agreement FEIR, January 2008).

4.3.3 Impact Analysis

a. Methodology and Significance Thresholds. This assessment is based on the information contained in the Phase I Archaeological Study (HEART, 2011). The Phase I included an archival records search and a field survey. As described in the *Setting*, a records search was conducted at SCCIC. The field survey methodology consisted of inspecting all exposed terrain and fortuitous exposures such as rodent burrows, excavated, landscaped and/or cleared areas for signs of cultural resources.

Pursuant to Appendix G of the *CEQA Guidelines*, cultural resource impacts are considered significant if the proposed project would:

1. *Cause a substantial adverse change in the significance of a historic or archaeological resources, as defined in Section 15064.5 of the CEQA Guidelines;*
2. *Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5;*
3. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or*
4. *Disturb any human remains, including those interred outside of formal cemeteries.*

b. Project Impacts and Mitigation Measures.

Impact CR-1 Development pursuant to the Housing Element Update would not affect any known archaeological resources. Impacts to known archaeological resources are Class III, *less than significant*. However, both future development on the candidate sites, and programs and policies under the proposed Housing Element Update have the potential to impact unknown archaeological resources. This is a Class II, *significant but mitigable*, impact.

Candidate Site #1. As discussed in subsection 4.4.1 *Archaeological Setting*, no recorded historic or prehistoric archaeological sites are present on or adjacent to Candidate Site #1. In addition, the surveys conducted in conjunction with the record searches did not identify any significant or potentially significant surface remains of a prehistoric or historic archaeological nature. Therefore, future development on this candidate site would not adversely affect known historic or prehistoric archaeological resources. However, several archaeological sites have been identified within a mile or less of this candidate site. By its nature, an archaeological survey can only confidently assess the potential for encountering surface cultural resource remains. As a result, ground disturbing activities, such as grading would have the potential to disturb as-yet undetected areas of prehistoric archaeological significance. Therefore, although no significant archaeological resources are known to occur on Candidate Site #1, impacts to as-yet undetected archaeological resource impacts would be potentially significant.

Candidate Site #2. As discussed in subsection 4.4.1, *Archaeological Setting,* and subsection 4.4.2, *Historical Setting*, no recorded historic or prehistoric archaeological sites, or historic structures are present on or adjacent to Candidate Site #2. In addition, the surveys conducted in conjunction with the record searches did not identify any significant or potentially significant surface remains of a prehistoric or historic archaeological nature. Therefore, future development on this candidate site would not adversely affect known historic or prehistoric archaeological resources. However, several archaeological sites have been identified within a mile or less of this candidate site. As a result, ground disturbing activities, such as grading would have the potential to disturb as-yet undetected areas of prehistoric archaeological significance. Therefore, although no significant archaeological resources are known to occur on this candidate site, impacts to as-yet unrecorded archaeological resource impacts would be potentially significant.

Candidate Site #7. As discussed in subsection 4.4.1, *Archaeological Setting,* and subsection 4.4.2, *Historical Setting*, no recorded historic or prehistoric archaeological sites, or historic structures are present on or adjacent to Candidate Site #7. In addition, the surveys conducted in conjunction with the record searches did not identify any significant or potentially significant surface remains of a prehistoric or historic archaeological nature. Therefore, future development on this candidate site would not adversely affect known historic or prehistoric archaeological resources. However, several archaeological sites have been identified within a mile or less of this candidate site. As a result, ground disturbing activities, such as grading would have the potential to disturb as-yet undetected areas of prehistoric archaeological significance. Therefore, although no significant archaeological resources are known to occur on this candidate site, impacts to as-yet unrecorded archaeological resource impacts would be potentially significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned Multifamily Residential. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on known or unknown cultural resources, as these would not result in any new development. However, certain policies would have the potential to facilitate new development, resulting in increased ground disturbance on some parcels within the City. On multi-family and multi-family beach front zoned parcels, amendments to the Local Coastal Program (LCP) and Malibu Municipal Code (M.M.C.) to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, remove the total maximum impermeable coverage allowance of 25,000 square feet, and remove the requirement that all multi-family development be located within a two-acre development convex on a parcel would have the potential to impact known cultural resources because they would allow for additional ground disturbance beyond that currently permitted, which could increase the potential to adversely affect cultural resources. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. However, there is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu,

wherein any project specific impacts would be addressed. Nonetheless, it is probable that these projects could result in similar impacts as described above. As result, impacts to unknown cultural resources would be significant but mitigable.

Mitigation Measures. The following measures are intended to mitigate potentially significant impacts relating to the possible discovery of cultural resources as a result of ground disturbing activities on Candidate Sites #1, #2, and #7, as well as any MF site that applies the AHO in the future.

CR-1(a) **Procedures for Discovery of Intact Cultural Resources.** In the event that archaeological resources are unearthed during project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until the Planning Director has been notified and an archaeologist has evaluated the nature and significance of the find, pursuant to Malibu Local Coastal Program (LCP) Local Implementation Plan (LIP) cultural resources regulations (LIP Section 11.5) and M.M.C. Section 17.54.060. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative shall monitor any mitigation work associated with Native American cultural material.

CR-1(b) **Procedures for Discovery of Human Remains.** If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC).

Significance After Mitigation. With implementation of the above measures, potential impacts to as-yet unknown archaeological resources would be reduced to a less than significant level.

Impact CR-2 **Development on Candidate Sites #1, #2, and #7, and other programs and policies under the Housing Element Update would not affect historic resources. Impacts to historic resources are Class III, *less than significant*.**

Candidate Site #1. As discussed in subsection 4.4.2, *Historical Setting*, no recorded historic structures are present on or adjacent to Candidate Site #1. In addition, the surveys conducted in conjunction with the record searches did not identify any significant or potentially significant surface remains of a historic nature. Therefore, future development on this candidate site would not adversely affect known historic resources. Impacts would be less than significant.

Candidate Site #2. As discussed in subsection 4.4.2, *Historical Setting*, no recorded historic structures are present on or adjacent to Candidate Site #2. In addition, the surveys conducted in conjunction with the record searches did not identify any significant or

potentially significant surface remains of a historic nature. Therefore, future development on this candidate site would not adversely affect known historic resources. Impacts would be less than significant.

Candidate Site #7. As discussed in subsection 4.4.2, *Historical Setting*, no recorded historic structures are present on or adjacent to Candidate Site #7. In addition, the surveys conducted in conjunction with the record searches did not identify any significant or potentially significant surface remains of a historic nature. Therefore, future development on this candidate site would not adversely affect known historic resources. Impacts would be less than significant.

Proposed Programs and Policies. The proposed Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned Multifamily Residential. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on historic resources, as these would not result in direct physical ground disturbances or result in the direct removal historic structures. It is possible that future projects pursuant to the Housing Element Update could adversely impact historic resources depending on the location, size and type of the project. However, determining the full extent of such impacts would be speculative at this time. Moreover, as multi-family residential projects are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None Required.

c. Cumulative Impacts.

*Candidate Sites***.** Cumulative development in the City of Malibu includes the potential development of 212 units facilitated under the proposed Housing Element Update along with 84 residential dwelling units and 748,460 square feet of non-residential development (see Table 3-1 in Section 3.0, *Environmental Setting*). Cumulative development in the City would continue to disturb areas with the potential to contain unknown cultural resources, including archaeological resources and historical resources. Each development proposal is reviewed by the City as required by the City's Archaeological/Cultural Resources Regulations Cumulative development may similarly impact cultural resources; however, these projects would be subject to individual environmental review wherein potential impacts would be addressed and mitigated accordingly. In the event that significant resources are discovered, impacts to such resources would be mitigated on a case-by-case basis based on site-specific conditions in accordance with the requirements of the City's LCP Local Implementation Plan, Chapter 11 and the City's Municipal Code, including notifying the City's Planning Director of the discovery and halting all excavation activities until the City's Planning Director give the approval to resume earthwork activities. As discussed above, impacts to unknown cultural resources and historic resources would be mitigated to a less than significant level, and impacts to known cultural resources would be less than significant. As a result, the Housing Element Update's

contribution to cumulative impacts would not be considerable since impacts would be less than significant with mitigation and/or with implementation of existing regulations. Therefore, cumulative impacts would be less than significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative cultural resource similar to those described above when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. However, cumulative development would be subject to the development standards set forth in the LCP and/or M.M.C. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, cumulative impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

This page intentionally left blank.

4.5 GEOLOGY AND SOILS

4.5.1 Setting

a. Regional Geology. California is divided into geomorphic provinces, which are distinctive, generally easy-to-recognize natural regions in which the geologic setting types of landforms, patterns of landscape features such as drainage, and climate are similar. The proposed project site is in the Transverse Ranges province, which extends from Santa Barbara County to the Mojave Desert. This province is characterized by an east–west–trending geologic grain, meaning that the faults, folds, mountains, and valleys of the region are generally aligned in an east–west direction. The east–west grain of the province is in marked contrast to the north–south alignment of neighboring provinces, giving rise to the name "transverse." The Transverse Ranges are a tectonically active region, with high rates of uplift, folding, and sedimentation. This deformation is driven by north–south compression from the convergence of the North American Plate and the Pacific Plate. The convergence has caused folding and faulting in the rock units and overlying sediments in the region.

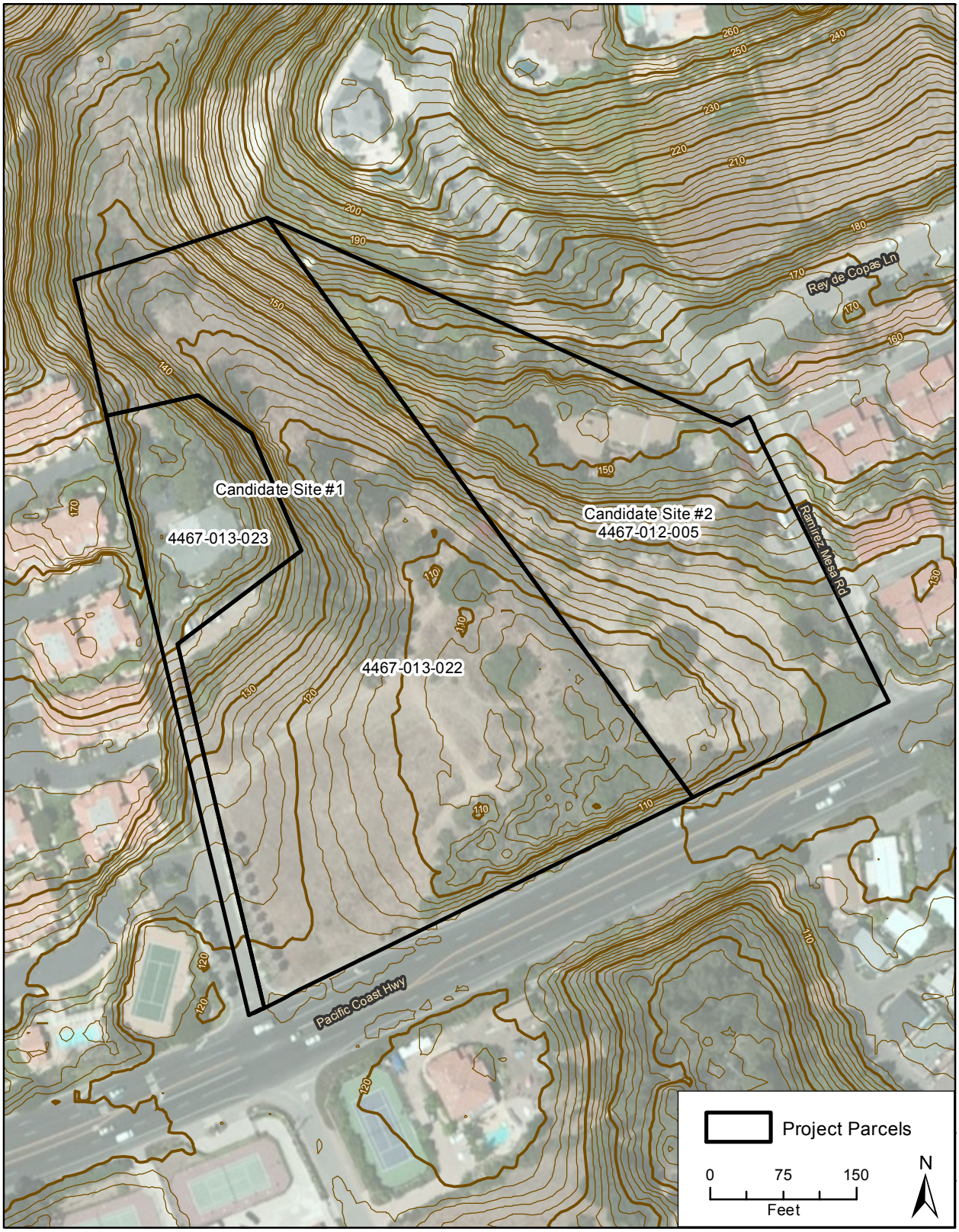
The Santa Monica Mountains are in the southernmost portion of the Transverse Ranges. The Santa Monica Mountains are roughly 45 miles long. They form an east–west range of low mountains along the southern California coast from the Oxnard Plain to the City of Los Angeles, and they are characterized by long, south-draining canyons on their south flank and short, north-draining canyons on their north flank. The main ridgeline of the range and the long ridges that extend southward from its crest generally reach altitudes of 1,500 to 2,100 feet above mean sea level.

The City of Malibu, which is in the southwest part of the Transverse Range Geomorphic Province, includes approximately 27 miles of coastline bounded by the Pacific Ocean. Coastal area within the City of Malibu is underlain by a wide variety of earth materials, including bedrock, terrace deposits, artificial fill, beach sand deposits, wind-blown dune sand, and rip-rap.

b. Site Geology.

Candidate Sites #1 and #2. The current United States Geological Survey (USGS) topographic map (Point Dume Quadrangle, 1995) indicates that Candidate Site #1 is situated at elevations ranging from 100 to 200 feet above Mean Sea Level (MSL), with topography sloping to the south-southwest, Candidate Site #2 is situated at elevations ranging from 125 to 200 feet above MSL, with topography sloping to the south-southwest. Figure 4.5-1 illustrates the topography of Candidate Sites #1 and #2.

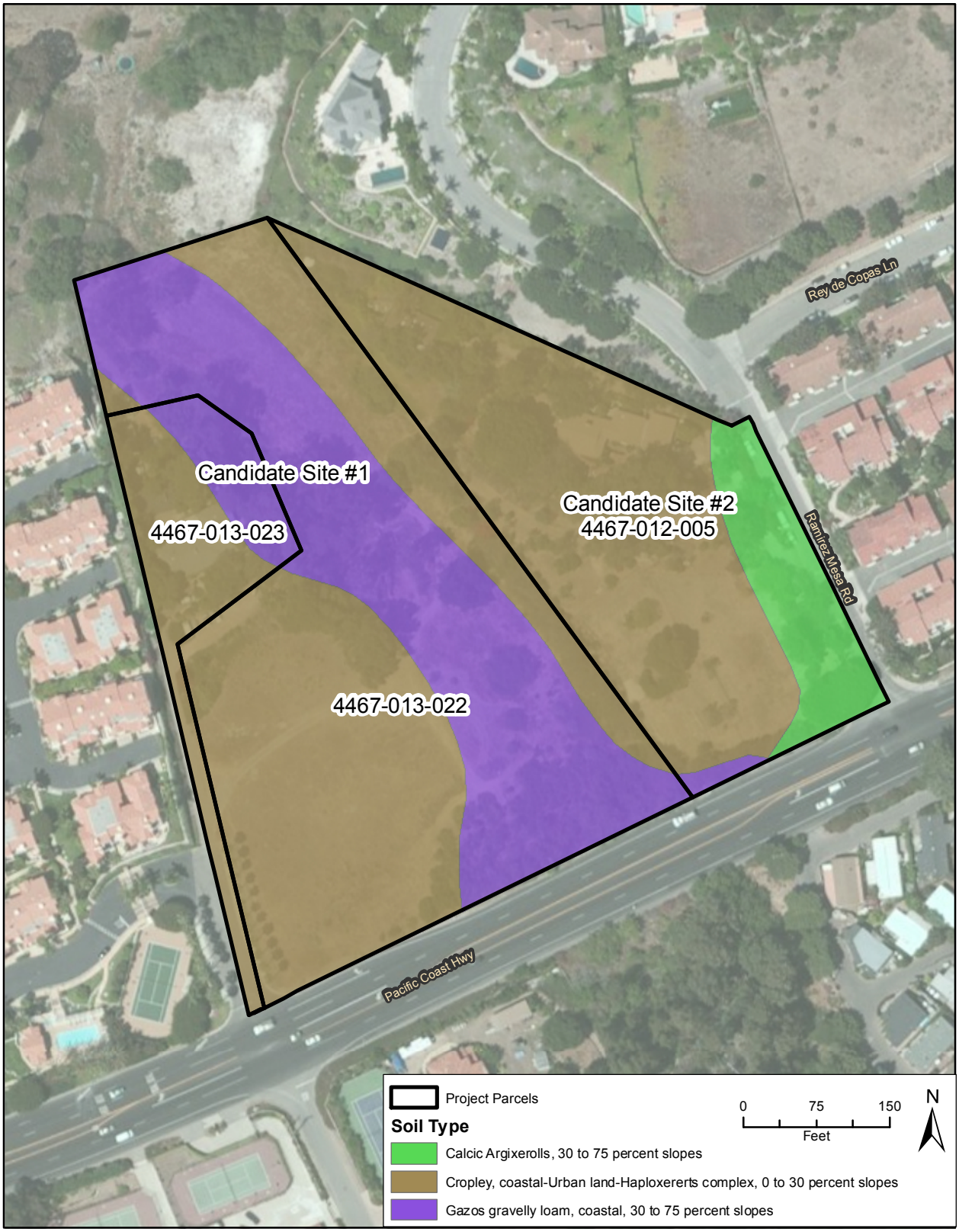
Soils on Candidate Site #1 are comprised primarily of Cropley, coastal-Urban land-Haploxerets complex, 0-30% slopes and Gazos gravelly loam, coastal, 30-75% slopes. Soils on Candidate Site #2 are comprised primarily of Cropley, coastal-Urban land-Haploxerets complex, 0-30% slopes and Calcic Agrixerolls, 30-75% slopes, with the remainder of the site being comprised of Gazos gravelly loam, coastal, 30-75% slopes, as shown on Figure 4.5-2.



Imagery provided by ESRI and its licensors © 2012.
Additional data provided by USGS, 2006.

Candidate Sites #1 and #2
Contour Map

Figure 4.5-1



Imagery provided by ESRI and its licensors © 2012.
Additional data provided by SSURGO, 2006.

Candidate Sites #1 and #2
Soil Map

Figure 4.5-2

Candidate Site #7. The current USGS topographic map (Malibu Beach Quadrangle, 1995) indicates that Candidate Site #7 is situated at elevations ranging from 15 to 20 feet above MSL, with topography sloping to the south-southeast. Figure 4.5-3 illustrates the topography of Candidate Site #7.

Soils on Candidate Site #7 are comprised primarily of Elder fine sandy loam, coastal, 0-2% slopes, with the remainder of the site being comprised of Chumash-Boades-Malibu association, 30-75% slopes, as shown on Figure 4.5-4.

c. Seismic Hazards.

Regional Seismic Hazards. Earthquakes are common to southern California. Faults are typically classified as active, potentially active, or inactive based on geologic evidence used to determine the likelihood of future ruptures along a fault. Those faults that have evidence of surface displacement within (the last 11,000 years) have the highest potential of generating earthquakes and are described as active. Distinct landforms that could suggest movement within the last 11,000 years include sag ponds, offset drainages, linear valleys, and springs.

Seismic Potential. The Homeowners Guide to Earthquake Safety (California Seismic Safety Commission, 2005) depicts seismic zones within California. As referenced in the Homeowners Guide, the International Building Code ranks the different regions according to their seismic hazard potential. Four regions have been established, Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest seismic potential. As depicted in the Homeowners Guide to Earthquake Safety, Candidate Sites #1, #2, and #7 lie within Seismic Zone 4, as does the remainder of the City of Malibu.

The proximity of active faults is such that the project area has experienced and will continue to experience strong seismically induced ground motion. The State of California defines active faults as those that have had surface displacement within Holocene time (about the last 11,000 years). Surface displacement can be recognized by the existence of bluffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts. Potentially active faults are those that have had surface displacement during the last 1.6 million years. Inactive faults have not had surface displacement within the last 1.6 million years.

Several active and potentially active faults are located in the general site vicinity (refer to Figure 4.5-5). These nearby faults include:

- *Anacapa (Dume)-Santa Monica Fault Zone (Active)*
- *Santa Monica Fault (Potentially Active)*
- *Newport-lnglewood Structural Zone (Active)*
- *Palos Verdes Fault Zone (Active)*
- *Ventura/Pitas Point Fault (Active)*
- *San Fernando Fault (Active)*
- *Malibu Coast Fault (Potentially Active)*

None of the candidate sites are located within a State-defined Alquist-Priolo Earthquake Fault Zone (refer to "Surface Rupture," below). However, as shown on Figure 4.5-5, according to

Imagery provided by ESRI and its licensors © 2013.
Additional data provided by USGS, 2006.

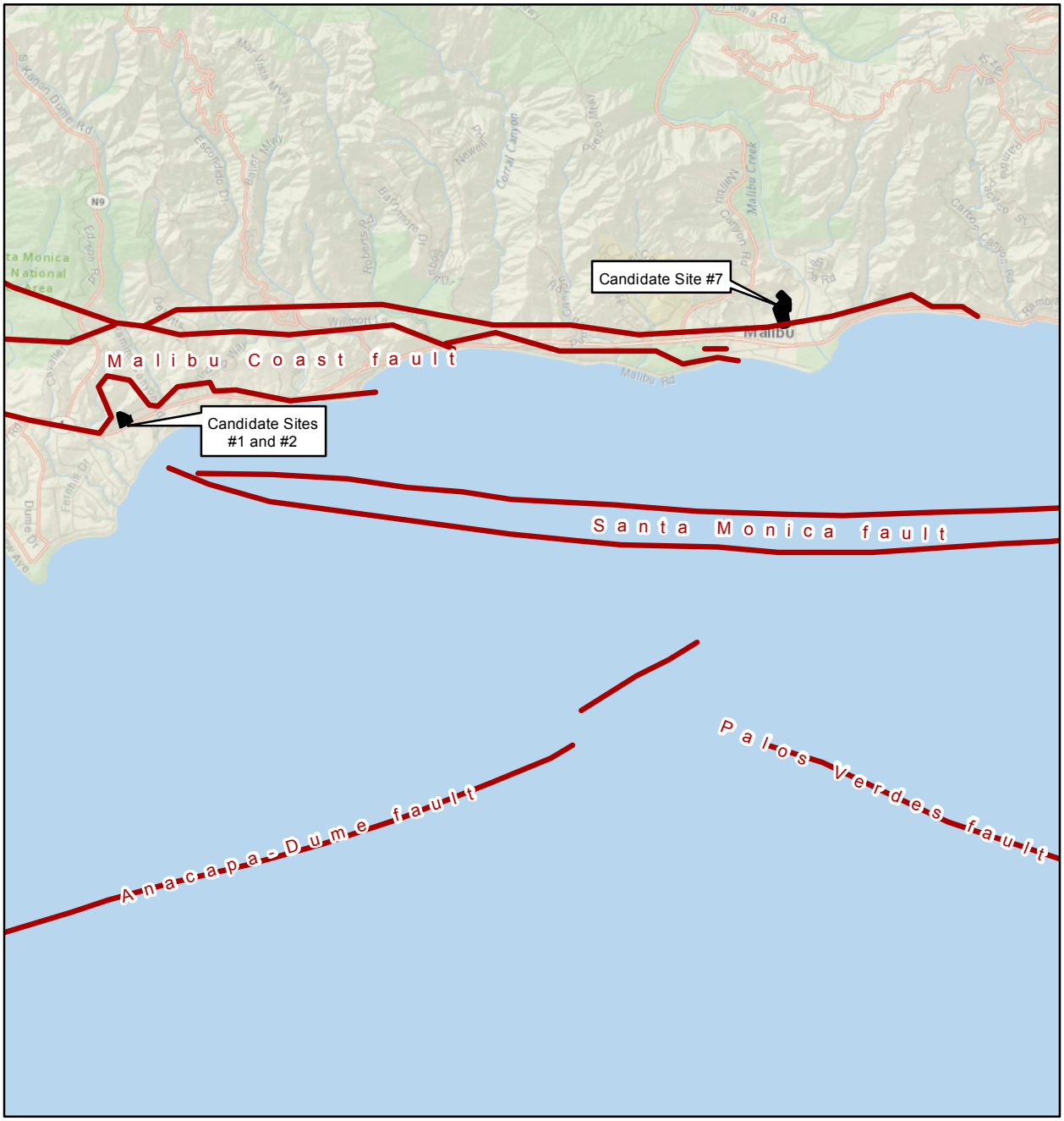
Candidate Site #7
Contour Map

Figure 4.5-3

Imagery provided by ESRI and its licensors © 2013.
Additional data provided by SSUGRO, 2006.

Candidate Site #7
Soil Map

Figure 4.5-4



Imagery provided by National Geographic Society, ESRI and its licensors © 2012.
Additional data provided by Bryant, W.A. (compiler), 2005, Digital Database of Quaternary and Younger Faults from the Fault Activity Map of California, version 2.0: California Geological Survey Web Page, 2010.

Project Locations

0 0.75 1.5
Miles

N

Regional Fault Map

Figure 4.5-5

maps provided by CGS and the U.S. Geological Survey (USGS), the Malibu Coast Fault lies north of Candidate Sites #1 and #2, and passes east-west through Candidate Site #7. The Malibu Coast Fault Zone is considered active by the Malibu General Plan Safety and Health Element and the Los Angeles County Seismic Safety Element. However, a geotechnical survey by GCGS Inc. in 1999 did not identify any geographic features such as closed depressions, scarps, etc. to indicate that the Malibu Coast Fault traverses Candidate Site #7. Therefore, GCGS concluded that the location of the Malibu Coast Fault through the area as mapped by the USGS was postulated and not based on an actual subsurface fault investigation to precisely locate the fault. In addition to GCGS Inc.'s site-specific investigation, a 1989 subsurface fault exploration study on the subject property by GeoSoils, Inc., did not disclose any subsurface information to precisely locate the fault, and concluded that the Malibu Coast fault is not located within the property, but may be located further north or south of the site; or that if it underlies the site it is pre-Holocene in age (La Paz Development Agreement Final EIR, January 2008).

Other faults in the Southern California area that have the potential to seismically affect the site include the San Gabriel Fault, the San Andreas Fault, and the probable existence of large blind thrust faults currently undocumented. Faults generally produce damage in two ways: surface rupture and seismically induced ground shaking. Surface rupture is limited to areas near the fault and ground shaking covers a wide area.

Surface Rupture. Surface rupture along a fault is the surface expression of fault displacement. Fault displacement occurs when material on one side of a fault moves relative to the material on the other side of the fault. Surface displacement can range from a few inches to tens of feet during a rupture event. This can have disastrous consequences, including injury and loss of life, when buildings are located within the rupture zone. It is not practically feasible (structurally or economically) to design and build structures that can accommodate the rapid displacement involved with surface rupture.

Alquist-Priolo Earthquake Fault Zones are areas within 500 feet from a known active fault trace. Pursuant to the Alquist-Priolo legislation, no structure for human occupancy is permitted on the trace of an active fault. The term "structure for human occupancy" is defined as any structure used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year. Any new development proposed within an Alquist-Priolo Zone must be preceded by a fault study. If the study indicates that an active fault is located within a proposed development site, then all structures associated with the development must be set back at least 50 feet on both sides of the fault trace. According to the California Division of Mines and Geology (CDMG), the Alquist-Priolo legislation presumes that any area within 50 feet of an active fault is underlain by active branches of the fault unless proven otherwise (CDMG, interim revision 2007).

According to the 2000 CDMG Digital Images of Official Maps[1] of Alquist-Priolo Earthquake Fault Zones of California, Southern Region, Candidate Sites #1 and #2 are located approximately 0.6 mile southwest of the nearest Alquist-Priolo Earthquake Fault Zone, and Candidate Site #7 is located approximately 3 miles east of the nearest Alquist-Priolo Earthquake Fault Zone (CDMG, 2000). This zone is associated with a segment of the Malibu Coast Fault. As noted above, and shown on Figure 4.5-5, the Malibu Coast Fault lies north of Candidate Sites #1

[1] *As available online at http://www.conservation.ca.gov/cgs/rghm/ap/Pages/Index.aspx*

and #2, and passes east-west through Candidate Site #7 (see discussion in Seismic Potential section on this issue).

Seismically Induced Ground Shaking. Ground shaking covers a wide area and is greatly influenced by the distance of the site to the seismic source, soil conditions, and depth to groundwater. Ground shaking is a result of the seismic waves produced by a fault rupture event. Secondary hazards associated with seismically induced ground shaking include liquefaction, seismically induced settlement, earthquake-triggered landslides, tsunamis and seiches. Any of the faults listed above could generate substantial ground shaking at the candidate sites or elsewhere in Malibu.

As shown in the Peak Ground Acceleration Map of California by the California Geologic Survey (CGS) (CGS Map, 2006), the region has a 10 percent probability of experiencing 0.4 to 0.5 gravity (g) peak horizontal ground acceleration within the next 50 years. A Probabilistic Seismic Hazard Assessment and Map produced by CGS for the California/Nevada region (CGS, 2006) depicts peak ground acceleration (Pga), spectral acceleration (Sa) at short (0.2 second) and moderately long (1.0 second) periods. The probabilistic seismic hazards for Candidate Sites #1 and #2 are shown in Table 4.5-1, and the probabilistic seismic hazards for Candidate Site #7 are shown in Table 4.5-2. Ground movements (10% probability of being exceeded in 50 years) are expressed as a fraction of the acceleration due to gravity (g). Ground movement accelerations were calculated based on firm rock conditions, soft rock conditions, and alluvium site conditions and are discussed below (CGS, 2006).

Table 4.5-1
Probabilistic Seismic Hazards for Candidate Sites #1 and #2

Ground Motion	Firm Rock	Soft Rock	Alluvium
Pga	0.465	0.465	0.481
Sa 0.2 sec	1.077	1.077	1.152
Sa 1.0 sec	0.394	0.482	0.572

Notes:
National Earthquake Hazard Reduction Program (NEHRP) Soil Corrections were used to calculate Soft rock and Alluvium.
Ground Motion values are interpolated from a grid (0.05 degree spacing) of calculated values.

Table 4.5-2
Probabilistic Seismic Hazards for Candidate Site #7

Ground Motion	Firm Rock	Soft Rock	Alluvium
Pga	0.488	0.488	0.494
Sa 0.2 sec	1.129	1.129	1.184
Sa 1.0 sec	0.418	0.509	0.596

Notes:
NEHRP Soil Corrections were used to calculate Soft rock and Alluvium.
Ground Motion values are interpolated from a grid (0.05 degree spacing) of calculated values.

According to the Geologic Map of the Point Dume Quadrangle (1993), the earth materials immediately beneath Candidate Sites #1 and #2 consist of surficial sediments including artificial fill and alluvial gravel, sand and clay of flood plains, and Monterey Formation including white, weathered, thin bedded, platy siliceous shale.

According to the Geologic Map of the Malibu Beach Quadrangle (1993), the earth materials immediately beneath Candidate Site #7 consist of surficial sediments including alluvial gravel, sand and clay of flood plains. Rock outcrops of the Sespe Formation occur along the northern portion of the site. Thus, the appropriate horizontal ground acceleration expected at each Candidate Site would be modeled by the alluvial conditions, soft rock conditions, or firm rock conditions, depending on where structures are proposed onsite. The strength of ground shaking in an area is primarily a function of the distance between the area and the seismic source epicenter, the type of material underlying the property, and the motion of fault displacement. Because of the proximity to major active faults, such as the Malibu Coast Fault, and the San Andreas and Newport-Inglewood fault systems, it is possible that accelerations near or over 1.0g could occur anywhere within Malibu, including the three candidate sites.

d. Secondary Seismic Hazards and Soil Hazards.

Liquefaction. Liquefaction is a temporary, but substantial, loss of shear strength in water-saturated sediment (such as granular sediment, such as sand, silt, or gravel), usually occurring during or after a major earthquake. This occurs when the shock waves from an earthquake of sufficient magnitude and duration compact and decrease the volume of the soil; if drainage cannot occur, this reduction in soil volume will increase the pressure exerted on the water contained in the soil, forcing it upward to the ground surface. This process can transform stable granular material into a fluid-like state. Liquefaction is most likely to occur in unconsolidated, sandy sediments which are water-saturated within less than 30 feet of the ground surface. Liquefaction can result in slope and foundation failure. Other effects of liquefaction include lateral spread, flow failures, ground oscillations, and loss of bearing strength (Tinsley et al., 1985).

CDMG prepared Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, 1997 which describes reasonable recommendations to ascertain the degree of risk that may exist on a site relative to seismic hazards, such as from landslides, liquefaction, and ground shaking. For liquefaction, the CDMG recommends that the following be performed:

- *Completion of screening investigations for liquefaction potential*
- *Qualitative evaluation of liquefaction potential*
- *Evaluation of potential liquefaction hazards*
- *Mitigation of liquefaction hazards*

Few areas of significant liquefaction susceptibility exist in the City of Malibu. These few areas are located along the beaches and in the flood plains of the major streams, such as Malibu Creek. Liquefaction susceptibility as used for this study is a qualitative measure of the fraction, or percent, of the area considered likely to be underlain by deposits susceptible to liquefy if strong shaking occurs.

Subsidence, Settlement, and Hydroconsolidation. Subsidence is the withdrawal of fluid (oil, natural gas, or water) from compressible sediments. As water is withdrawn and the water table lowered, the effective pressure in the drained sediments is increased. Compressible layers then compact under the over-pressure burden that is no longer compensated by hydrostatic pressure. The resulting land subsidence is most pronounced in uncompacted sediments throughout Southern California. No withdrawal of fluid currently occurs from beneath any of

the candidate sites. Due to the fault zones and the unconsolidated alluvial sediments underlying much of the City, the potential for seismically-induced subsidence is considered high. Some subsidence could also be expected if large volumes of groundwater are withdrawn.

Seismically induced settlement occurs in loose to medium dense unconsolidated soil. Loose to medium dense unconsolidated soil can compress (settle) when subject to seismic shaking. The settlement is exacerbated by increased loading, such as from the construction of structures onsite. This settlement can be mitigated prior to development through the removal and recompaction of loose soils. All three candidate sites are underlain by artificial fill and alluvial gravel that may be subject to seismic settlement.

Hydroconsolidation is the gradual reduction in soil mass resulting from an increase in compressive stress caused by high groundwater or the introduction of water. No introduction of water is proposed as part of the project, though onsite water treatment systems (OWTS) may be used on the project site and depending on the type of treatment system used, could introduce water. Requirements for OWTS are discussed further in Section 4.14, *Utilities and Service Systems*.

Expansive and Collapsible Soils. Each of the different geologic formations and soils mapped in the Malibu area consists of various units which may possess expansive characteristics. Silt and clay deposits near and around the Malibu Creek lagoon would possess expansion potential. Typically, these include mudstones, claystones, siltstones, and clay fault gouge. Clay fault gouge is clay formed along the fault due to movement along the fault. Silt and clay deposits near and around Malibu Creek and Malibu Lagoon could be expansive. Geologic units mapped as colluvium or slopewash, would commonly be expansive in nature. The terrace deposits shown along the coast could also be locally expansive.

Collapsible soils may be present in areas of Malibu where alluvial or colluvial soils are present. Undetected, development on these types of soils may become distressed to collapse or consolidation of the foundation soils (Malibu General Plan Safety and Health Element).

Landsliding and Slope Instability. Landslides occur when slopes become unstable and masses of earth material move downslope. Stability of a slope is influenced by many factors. Some of these factors include material type, moisture content, organic content, gradient of a slope, and geologic structure. Landslides are generally considered to be rapid events, often triggered during or after periods of rainfall, or by earthquakes. Mudslides and slumps are shallow types of slope failures compared to landslides. These typically affect the upper soil horizons, and are not bedrock features. Historically, mudslides and slumps occur during or soon after periods of heavy rainfall. Erosion can occur along manufactured slopes that are improperly designed or not adequately re-vegetated.

The size of a landslide varies from minor slumps to large hillside failures. The underlying bedrock bedding planes, degree of water saturation, steepness of a slope and the general strength of the soil all contribute to the stability or instability of a hillside. Erosion along the toe of a slope caused by water or human-induced modifications to the natural contour of a hill, including grading, has the potential to destabilize a hillside.

CDMG prepared Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, 1997. This document provides recommendations to effectively reduce seismic hazards to acceptable levels, as defined in California Code of Regulations (CCR Title 14, Section 3721). For landslides, CDMG Special Publication 117 recommends that the following be performed:

- *A screening investigation to determine the possible presence of landslides*
- *If the screening investigation identifies the likely presence of landslides, a quantitative evaluation of earthquake-induced landslide potential (this task includes field exploration, site sampling, and geotechnical testing; a slope stability analysis might also be appropriate here)*
- *Evaluation of potential earthquake-induced landslide hazards*
- *Mitigation of earthquake-induced landslide hazards*

Landslides are a common occurrence in the hillside areas of Malibu (Malibu General Plan, 1995). Portions of Candidate Site #1 along the northeastern boundary and northwestern boundary contain soils with slopes in excess of 30%. Candidate Sites #2 and #7 also have areas with slopes in excess of 30%

Tsunamis and Seiches. Tsunamis are large ocean surges that are created as a result of a subsea earthquake or landslide. The waves created by the subsea earthquake or landslide travel across the ocean at high speeds (several hundreds of miles per hour). As the waves reach shore, their amplitudes increase. Once the waves reach land, they can cause widespread flooding. The areas susceptible to tsunamis are those near to the ocean and along low-lying river channels. A seiche is a wave or series of waves that are produced within an enclosed or partially enclosed body of water (such as a lake or bay). Most seiches are created as landslides fall into the body of water and displace the water. The water then sloshes out of the bay or lake, creating the seiche. If a seiche overtops a dam, the water can erode the dam face to the point where the dam can fail.

Most of the coastal dwellings and low lying coastal areas can expect to be damaged some time in the future by an earthquake generated tsunami. Damage due to flooding in the Malibu Civic Center area can be expected. The most vulnerable objects would be people on the beaches, houses or other buildings constructed on or near the beach, and bridges over the streams near the beach, such as along the Pacific Coast Highway at Malibu Creek and Corral Creek.

The Malibu General Plan Tsunami Runup Map and the CGS Tsunami Inundation Maps for Emergency Planning (March 2009) show that the runup heights for the Malibu coast in general are between five and seven feet for the 100-year zone and between eight and 12 feet for the 500-year zone. The candidate sites are all located approximately 0.4 mile north of the Pacific Ocean at elevations ranging from 15 to 160 feet above MSL. As such, the risk of damage from a tsunami is low. The site does not lie in an area near any large bodies of water or bays that could be affected by a seiche. Therefore, the risk from seiches is also considered to be low (Malibu General Plan Safety and Health Element).

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. This evaluation is based on a review of existing information that has been developed for the candidate sites and other available regional sources, including the CDMG and the U.S. Department of Agriculture (USDA) Soil Conservation Service Soil Surveys for Los Angeles County, and supplemented by the findings of a reconnaissance-level site visit to each of the housing opportunity sites performed by a certified engineering geologist. In accordance with Appendix G of the *CEQA Guidelines,* impacts would be considered potentially significant if development facilitated by the Housing Element Update would:

1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
    a. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;*
    b. *Strong seismic ground shaking;*
    c. *Seismic-related ground failure, including liquefaction;*
    d. *Landslides;*
2. *Result in substantial soil erosion or the loss of topsoil;*
3. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;*
4. *Be located on expansive soil, creating substantial risks to life or property; or*
5. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*

Impacts related to the use of onsite wastewater treatment systems (OWTS) or alternative onsite wastewater treatment systems (AOWTS) are discussed in Section 4.14, *Utilities and Service Systems*.

b. Project Impacts and Mitigation Measures.

Impact GEO-1 Development facilitated by the Housing Element Update, notably on Candidate Site #7, may expose residents and property to seismically induced ground surface rupture. This would be a Class II, *significant but mitigable,* impact.

<u>Candidate Sites #1 and #2</u>. According to the 2000 CDMG Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region, Candidate Sites #1 and #2 are located approximately 0.5 mile east of the nearest Alquist-Priolo Earthquake Fault Zone. This zone is associated with a segment of the active Malibu Coast Fault. Segments of the Malibu Coast Fault have been documented to be active within the last 11,000 years as defined by the Alquist-Priolo Act, and the Malibu Coast Fault is considered active by the Malibu General Plan Safety and Health Element and the Los Angeles County Seismic Safety Element. However, as shown on Figure 4.5-5, the Malibu Coast Fault trends north of Candidate Sites #1 and #2. Because these candidate sites are not within 500 feet of an Alquist-Priolo

Earthquake Fault, and the Malibu Coast Fault does not cross the site, impacts would be less than significant.

Candidate Site #7. According to the 2000 CDMG Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region, Candidate Site #7 is located approximately one mile southwest of the nearest Alquist-Priolo Earthquake Fault Zone (CDMG, 2000). This zone is associated with a segment of the active Malibu Coast Fault. Segments of the Malibu Coast Fault have been documented to be active within the last 11,000 years as defined by the Alquist-Priolo Act, and the Malibu Coast Fault on Candidate Site #7 is considered active by the Malibu General Plan Safety and Health Element and the Los Angeles County Seismic Safety Element. Though existing CGS mapping shows the Malibu Coast Fault passing east-west through Candidate Site #7 (see Figure 4.5-5), a site-specific survey was conducted in 1999 and found no evidence to indicate the location of the Malibu Coast Fault through the project site. Therefore, because Candidate Site #7 is not within an Alquist-Priolo Earthquake Fault Zone, and there is no evidence that the Malibu Coast Fault traverses the project site, impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned Multi-Family (MF) and Multi-Family Beachfront (MFBF). Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no potential to impact geological resources within the City, as these would not result in new development. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. However, it is possible that future residential projects developed pursuant to these programs and policies would be located in areas on or near the Malibu Coast Fault. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be potentially significant and mitigation is required.

Mitigation Measures. The following measure is intended to mitigate potentially significant impacts associated with seismically-induced ground surface rupture on development resulting from the proposed policies and programs of the Malibu Housing Update.

GEO-1 **Fault Study and Mitigation**. Because portions of the Malibu Coast Fault meet the definition of an active fault per the Alquist-Priolo legislation (passed in 1972), any future application for development within 500 feet of the Malibu Coast Fault shall require a fault study prepared by a certified engineering geologist for the project site, consistent with the requirements of the Alquist-Priolo legislation and City of Malibu Geotechnical Guidelines prior to issuance of a building permit. The study shall identify the precise location of the fault relative to proposed structures to ensure that the structure is located at least 50 feet from the fault to avoid damage and risk from

fault rupture. The applicant shall also conform to any other recommendations of the study relative to building positioning, structural design, foundation materials or other necessary earth work to minimize hazards associated with the Malibu Coast Fault. The fault study shall be submitted to the City of Malibu for review and approval prior to Planning Department approval.

Significance After Mitigation. With implementation of the above measure, potential impacts to seismically induced ground surface rupture would be reduced to a less than significant level.

Impact GEO-2 Seismically induced ground shaking could potentially destroy or damage structures developed pursuant to the Housing Element Update, resulting in loss of property or risk to human health. However, provided that the design and construction of any proposed structures complies with all applicable provisions of the California Building Code, impacts would be Class III, *less than significant*.

Candidate Sites #1 and #2. As shown in the Peak Ground Acceleration Map of California by the CGS (CGS Map, 2006), the region has a 10% probability of experiencing 0.4 to 0.5 gravity (g) peak horizontal ground acceleration within the next 50 years. As shown in Table 4.5-1, there is a 10% chance of peak ground accelerations at Candidate Sites #1 and #2 to exceed 0.481 g over a 50 year time span under alluvial conditions. Peak ground acceleration under soft rock or firm rock conditions would be slightly lower. Therefore, impacts would depend on where structures are proposed onsite. In addition, because of the proximity to major active faults, such as the Malibu Coast Fault, and the San Andreas and Newport-Inglewood fault systems, it is possible that accelerations near or over 1.0g could occur. Earthquakes along these faults could produce potentially significant impacts to structures onsite. Although nothing can ensure that structures do not fail under seismic stress, proper engineering can minimize the risk to life and property. The most recent California Building Code (CBC) requirements ensure that new structures are engineered to withstand the expected ground acceleration. With adherence to CBC requirements, impacts would be less than significant.

Candidate Site #7. As shown in the Peak Ground Acceleration Map of California by the CGS (CGS Map, 2006), the region has a 10% probability of experiencing 0.4 to 0.5 gravity (g) peak horizontal ground acceleration within the next 50 years. As shown in Table 4.5-2, there is a 10% chance that peak ground accelerations at Candidate Site #7 would exceed 0.494 g over a 50 year time span under alluvial conditions. As with Candidate Sites #1 and #2, impacts would depend on where structures are proposed onsite. Earthquakes along the Malibu Coast Fault, and the San Andreas and Newport-Inglewood fault systems could produce potentially significant impacts to structures onsite. Although nothing can ensure that structures do not fail under seismic stress, proper engineering can minimize the risk to life and property. The most recent California Building Code requirements ensure that new structures are engineered to withstand the expected ground acceleration. With adherence to CBC requirements, impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and MFBF. None of these policies would increase risk associated with seismic groundshaking, as this would occur anywhere throughout the region, regardless of the Housing Element Update. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. All future development pursuant to the Housing Element Update would be subject to all applicable state and local building code requirements pertaining to seismic groundshaking, which would ensure that new structures are engineered to withstand the expected ground acceleration. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No mitigation is required.

Impact GEO-3 Portions of each candidate site are underlain by artificial fill and alluvial materials that may be subject to seismic settlement, expansion, or liquefaction. Other properties on which the Housing Element Update may facilitate development may also be subject to such hazards. This is a Class II, *significant but mitigable impact.*

Candidate Sites #1 and #2. Seismic settlement occurs in alluvial soils, as well as in areas where structures have been placed on improperly compacted artificial fill. Portions of Candidate Sites #1 and #2 are underlain by artificial fill and alluvial gravel that may be subject to seismic settlement. In addition, geologic units mapped as colluvium/alluvium or slopewash, are commonly expansive in nature. The presence of artificial fill and the risk of settlement and expansion indicate that the candidate sites are located on soils that may be or may become unstable, creating a substantial risk to life or property. This is a potentially significant impact.

Candidate Site #7. Seismic settlement occurs in alluvial soils, as well as in areas where structures have been placed on improperly compacted artificial fill. Portions of Candidate Site #7 are underlain by alluvial gravel that may be subject to seismic settlement. Geologic units mapped as colluvium/alluvium or slopewash, are commonly expansive in nature. In addition, the Seismic Hazard Zones Map for the Malibu Beach Quadrangle (DCMG, October 2001) shows that Candidate Site #7 is located in an area with a risk of liquefaction. The presence of artificial fill and the risk of settlement, expansion, and liquefaction indicate that Candidate Site #7 is located on soils that may be or may become unstable, creating a substantial risk to life or property. This is a potentially significant impact.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and MFBF. It is possible that future residential projects pursuant to these programs and policies would be located in an area where unconsolidated soils are present. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant

parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Nonetheless, given the presence of unconsolidated soils in the City, it is possible that future projects pursuant to the AHO could encounter such geologic issues. Therefore, it is conservatively concluded that impacts would be potentially significant.

Mitigation Measures. The following measure would apply to any future project developed pursuant to the Housing Element Update.

GEO-3 **Geotechnical Study and Mitigation.** Prior to Planning Department approval, a geotechnical study shall be prepared by a registered civil or geotechnical engineer and certified engineering geologist for any future project developed pursuant to the Housing Element Update. This study shall include an analysis of the settlement, expansion, and liquefaction potential of the underlying materials. If a particular development site is confirmed to be in an area prone to seismic settlement or expansion, appropriate techniques to comply with the requirements of the California Building Code shall be prescribed and implemented.

Suitable measures to reduce impacts may include: removal of any undocumented fill or topsoil; specialized design of foundations by a structural engineer; removal or treatment of liquefiable soils to reduce the potential for liquefaction; drainage to lower the groundwater table to below the level of liquefiable soils, in-situ compaction of soils; or other alterations to the ground characteristics. In areas prone to settlement or liquefaction, current structural engineering methods for foundation design may not be sufficient to prevent a building's foundation from failing in a larger earthquake which would result in stronger and longer ground shaking.

Significance After Mitigation. Provided that the recommendations contained in the site-specific geotechnical study for mitigation to prevent or reduce the risk of settlement and liquefaction are implemented in conjunction with all City, state, and federal regulations, the impacts related to settlement and liquefaction would be reduced to less than significant. In addition, any structures constructed on any of the candidate sites would be required to comply with applicable methods of the California Building Code.

Impact GEO-4 **Portions of Candidate Sites #1, #2, and #7 are located in areas of potential landslide hazard and contain slopes in excess of 30%, which could expose future residential development and people to landslide and erosion risks. Other properties on which the Housing Element Update may facilitate development may also be subject to landslide hazards. This is a Class II, *significant but mitigable*, impact.**

Candidate Site #1. The Seismic Hazard Zones Map for the Point Dume Quadrangle (DCMG, October 2001) shows parts of the northern portion of Candidate Site #1 as being in an area of potential earthquake-induced landslides. During a site reconnaissance visit, no landslide hazards or surface faults were identified on Candidate Site #1. However, as shown on Figure 4.5-1 and Figure 4.5-2, portions of the project site along the northeastern boundary and northwestern boundary contains soils with slopes in excess of 30%. The potential for landsliding and erosion on slopes along the northeastern boundary and northwestern boundary of the site cannot be ruled out; therefore, impacts are potentially significant and future development would require site-specific mitigation in order to reduce this potential impact to a less than significant level.

Candidate Site #2. The Seismic Hazard Zones Map for the Point Dume Quadrangle (DCMG, October 2001) shows parts of the eastern portion of Candidate Site #2 as being in an area of potential earthquake-induced landslides. During a site reconnaissance visit, no landslide hazards or surface faults were identified on Candidate Site #2. However, as shown on Figure 4.5-1 and Figure 4.5-2, a small portion near the center of the site contains soils with slopes in excess of 30%. The potential for landsliding and erosion on slopes on the eastern portion of the site cannot be ruled out; therefore, impacts are potentially significant and future development would require site-specific mitigation in order to reduce this potential impact to a less than significant level.

Candidate Site #7. The Seismic Hazard Zones Map for the Malibu Beach Quadrangle (DCMG, October 2001) shows that Candidate Site #7 is not located in an area of potential earthquake-induced landslides. During a site reconnaissance visit, no landslide hazards or surface faults were identified on Candidate Site #7. However, as shown on Figure 4.5-3 and Figure 4.5-4, the northern portion of the site contains soils with slopes in excess of 30%. The potential for landsliding and erosion on slopes on the eastern portion of the site cannot be ruled out; therefore, impacts are potentially significant and future development and would require site-specific mitigation in order to reduce this potential impact to a less than significant level.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and MFBF. It is possible that future development pursuant to these programs and policies would be located in an area where landslides are present. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Nonetheless, the potential for landsliding and erosion on steep slopes on areas that are developed pursuant to the proposed programs and policies cannot be ruled out; therefore, impacts are potentially significant and future development and would require site-specific mitigation in order to reduce this potential impact to a less than significant level.

Mitigation Measures. The following measure, along with all other recommendations made in geotechnical reports and geotechnical reviews prepared pursuant to development on Candidate Sites #1, #2, and #7, would ensure that future development would not increase the

instability of soils underlying the sites, and would therefore reduce project impacts associated with landslides and slope instability to a less than significant level:

GEO-4 **Landslide Study and Mitigation.** The future applicant for development of residential structures pursuant to the Housing Element Update on sites with slopes above 30% shall have a geotechnical study prepared by a certified engineering geologist and geotechnical engineer for the project site prior to Planning Department approval. This study shall include an analysis of the erosion and landslide potential of portions of the sites with steep slopes. If a particular development site is confirmed to be in an area prone to erosion or landsliding, appropriate techniques to comply with the requirements of the California Building Code shall be prescribed and implemented.

Suitable measures to reduce impacts may include the stabilization of the building site utilizing grading or structural solutions, deepened foundations, thickened slabs, or a combination of all of the above. Proper maintenance of the site (utilities, landscaping, irrigation, onsite wastewater treatment systems, etc.) after construction will be required. The landslide study and recommendations shall be submitted to the City of Malibu for review and approval prior to Planning Department approval.

Significance After Mitigation. In combination with all City, state, and federal regulations, the above mitigation measure would reduce project impacts associated with landslides and slope instability to a less than significant level

c. Cumulative Impacts.

*Candidate Sites***.** As shown in Table 3-1 in Section 3.0, *Environmental Setting*, 84 residential units and 748,460 square feet of non-residential development are approved or pending within the City. The proposed project plus cumulative projects would increase development in Malibu. Such development could expose future residents and property to geologic hazards such as seismically induced ground rupture, liquefaction, settlement, and landslide hazards that exist in the area. However, these geologic hazards are present throughout California and are not unique to Malibu. In general, compliance with California Building Code would mitigate these potential impacts. In addition, geologic hazards are not additive in nature; in other words, the presence of a particular hazard on one site does not increase the severity of impacts on another site. Cumulative projects could be exposed to the type of geologic hazards described above; however, these issues would be addressed on a case-by-case basis to mitigate impacts resulting from individual projects, which would ensure that structures and people are not exposed significant geologic risks. As discussed above, geologic hazard impacts associated with the Housing Element Update would be reduced to a less than significant level. As a result, the Housing Element Update's contribution to cumulative impacts would not be considerable since impacts would be less than significant with mitigation and/or with implementation of existing regulations. Therefore, cumulative impacts would not be significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the Local Coastal Program (LCP) and Malibu Municipal Code (M.M.C.) to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. However, geologic hazards are present throughout California and are not unique to Malibu. In general, compliance with California Building Code would mitigate these potential impacts. In addition, geologic hazards are not additive in nature. Moreover, as multi-family residential projects subject to the AHO are proposed in the future, they would be subject to individual project and environmental review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, cumulative impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

4.6 GREENHOUSE GAS EMISSIONS

4.6.1 Setting

a. Overview of Climate Change and Greenhouse Gases. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2007), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (90% or greater chance) that the global average net effect of human activities since 1750 has been one of warming. The prevailing scientific opinion on climate change is that most of the observed increase in global average temperatures, since the mid-20th century, is likely due to the observed increase in anthropogenic greenhouse gas (GHG) concentrations (IPCC, 2007).

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2E), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a GWP of one. By contrast, methane (CH_4) has a GWP of 21, meaning its global warming effect is 21 times greater than carbon dioxide on a molecule per molecule basis (IPCC, 1997).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHG, Earth's surface would be about 93° F (34° C) cooler (CalEPA, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [USEPA], April 2011). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th Century. Concentrations of CO_2 in the atmosphere have risen approximately 40% since the industrial revolution. The global atmospheric concentration of CO_2 has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; Oceanic and Atmospheric Association [NOAA], 2010). The average annual CO_2 concentration growth rate was larger during the last 10 years (1995–2005 average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO_2 represents an estimated 82.7% of total GHG emissions (Department of Energy [DOE] Energy Information Administration [EIA], December 2008). The largest source of CO_2, and of overall GHG emissions, is fossil fuel combustion.

Methane. Methane (CH_4) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. It has a GWP approximately 21 times that of CO_2. Over the last 250 years, the concentration of CH_4 in the atmosphere has increased by 148% (IPCC, 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH_4 include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (USEPA, April 2011).

Nitrous Oxide. Concentrations of nitrous oxide (N_2O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA, 2010). N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions. The GWP of nitrous oxide is approximately 310 times that of CO_2.

Fluorinated Gases (HFCS, PFCS and SF_6). Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfurhexafluoride (SF_6), are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990.

Electrical transmission and distribution systems account for most SF_6 emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the IPCC has evaluated.

b. Greenhouse Gas Emissions Inventory. Worldwide anthropogenic emissions of GHG were approximately 40,000 million metric tons (MMT) CO_2E in 2004, including ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes (i.e., deforestation, biomass decay) (IPCC, 2007). CO_2 emissions from fossil fuel use accounts for 56.6% of the total emissions of 49,000 million metric tons CO_2E (includes land use changes) and all CO_2 emissions are 76.7% of the total. Methane emissions account for 14.3% of GHGs and N_2O emissions account for 7.9% (IPCC, 2007).

Total U.S. GHG emissions were 6,633.2 million metric tons CO_2E in 2009 (USEPA, April 2011). While total U.S. emissions have increased by 7.3% from 1990 to 2009, emissions decreased from 2008 to 2009 by 427.9 million metric tons CO_2E, or 6.1% (DOE EIA, Table 12.1, August 2010). This decrease was primarily due to (1) a decrease in economic output resulting in a decrease in energy consumption across all sectors; and (2) a decrease in the carbon intensity of fuels used to generate electricity due to fuel switching as the price of coal increased, and the price of natural gas decreased substantially. Since 1990, U.S. emissions have increased at an average annual rate of 0.4%. The transportation and industrial end-use sectors accounted for 33% and 26%, respectively, of CO_2 emissions from fossil fuel combustion in 2009. Meanwhile, the residential and commercial end-use sectors accounted for 22% and 19%, respectively, of CO_2 emissions from fossil fuel combustion in 2009 (USEPA, 2011).

Based upon the California Air Resources Board (ARB) *California Greenhouse Gas Inventory for 2000-2008* (ARB, 2011), California produced 478 MMT CO_2E in 2008. The major source of GHG in California is transportation, contributing 36% of the state's total GHG emissions. Electricity generation is the second largest source, contributing 24% of the state's GHG emissions (ARB, June 2010). California emissions are due in part to its large size and large population compared to other states. Another factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. ARB has projected statewide unregulated GHG emissions for the year 2020, which represent the emissions that would be expected to occur in the absence of any GHG reduction actions, will be 596 MMT CO_2E (ARB, 2007).

c. Effects of Climate Change. Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21^{s}t century than were observed during the 20th century. Scientists have projected that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and the increase may be as high as 2.2-10°F (1.4-5.8°C) in the next century. In addition to these projections, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic (IPCC, 2007).

According to the CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, April 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Sea Level Rise. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (May 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The study identifies a sea level rise on the California coast over the past century of approximately eight inches. Based on the results of various global climate change models, sea level rise is expected to continue. The California Climate Adaptation Strategy (December 2009) estimates a sea level rise of up to 55 inches by the end of this century.

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC March, 2009).

Water Supply. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, May 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during our wet winters and releasing it slowly when we need it during our dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR, 2008).

Hydrology. As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise may be a product of climate change through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a $30 billion agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as two feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: 1) timing of ecological events; 2) geographic range; 3) species' composition within communities; and 4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2004; Parmesan, C. and H. Galbraith, 2004).

While the above-mentioned potential impacts identify the possible effects of climate change at a global and potentially statewide level, in general scientific modeling tools are currently unable to predict what impacts would occur locally with a similar degree of accuracy. In general, regional and local predictions are made based on downscaling statewide models (CEC, March 2009).

d. Regulatory Setting. The following regulations address both climate change and GHG emissions.

International and Federal Regulations. The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced by the United Nations in 1992. The objective of the treaty is "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." This is generally understood to be achieved by stabilizing global greenhouse gas concentrations between 350 and 400 parts per million (ppm), in order to limit the global average temperature increases between 3.6 and 4.3°F (2 and 2.4°C) above pre-industrial levels (IPCC 2007). The UNFCC itself does not set limits on

greenhouse gas emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called "protocols," that would identify mandatory emissions limits.

Five years later, the UNFCC brought nations together again to draft the *Kyoto Protocol* (1997). The Protocol established commitments for industrialized nations to reduce their collective emissions of six greenhouse gases (carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons) to 5.2% below 1990 levels by 2012. The United States is a signatory of the Protocol, but Congress has not ratified it and the United States has not bound itself to the Protocol's commitments (UNFCCC, 2007).

The United States is currently using a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol's mandatory framework. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (led by the Secretaries of Energy and Commerce) that is charged with carrying out the President's National Climate Change Technology Initiative (USEPA, December 2007).

The voluntary approach to address climate change and greenhouse gas emissions is changing. The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the United States Environmental Protection Agency (EPA) has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act.

California Regulations. Assembly Bill (AB) 1493 (2002), referred to as "Pavley," requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 per cent reduction by 2012 and 30 per cent by 2016.

In 2005, the governor issued Executive Order S-3-05, establishing statewide GHG emissions reduction targets. Executive Order (EO) S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80% of 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to

prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, the ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2E. The Scoping Plan was approved by ARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms.

Executive Order S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing ARB to develop regional greenhouse gas emission reduction targets to be achieved from vehicles for 2020 and 2035. SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted final regional targets for reducing greenhouse gas emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG) was assigned targets of an 8% reduction in GHGs from transportation sources by 2020 and a 13% reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

On April 4, 2012, SCAG adopted its first RTP/SCS. The RTP/SCS demonstrates the region's ability to attain and exceed the GHG emission-reduction targets set forth by the ARB. The SCS outlines the region's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures. The

SCS also provides CEQA streamlining incentives for development projects. Projects that rely upon the SCS for CEQA streamlining need to demonstrate consistency with the SCS.

ARB Resolution 07-54 establishes 25,000 metric tons of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005% of California's total inventory of GHG emissions for 2004.

In April 2011, the governor signed SB 2X requiring California to generate 33% of its electricity from renewable energy by 2020.

For more information on the Senate and Assembly bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and http://www.arb.ca.gov/cc/cc.htm.

Local Regulations and CEQA Requirements. Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, they give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The general approach to developing a Threshold of Significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move the state towards climate stabilization. If a project would generate GHG emissions above the threshold level, its contribution to cumulative impacts would be considered significant. To date, the Bay Area Air Quality Management District (BAAQMD), the South Coast Air Quality Management District (SCAQMD), San Luis Obispo Air Pollution Control District (SLOAPCD) and the San Joaquin Air Pollution Control District (SJVAPCD) have adopted quantitative significance thresholds for GHGs. The SCAQMD threshold, which was adopted in December 2008, considers emissions of over 10,000 metric tons CO_2E /year to be significant. However, the SCAQMD's threshold applies only to stationary sources and is expressly intended to apply only when the SCAQMD is the CEQA lead agency. Although SCAQMD has not adopted a threshold for projects with other CEQA lead agencies, it recommends a quantitative threshold for residential land use types of 3,500 metric tons CO_2E /year (SCAQMD, "Proposed Tier 3 Quantitative Thresholds – Option 1", September 2010).

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds.

Study Methodology. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9% of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, because the project would involve

primarily residential development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent weight in CO_2 (CO_2E). Minimal amounts of other main GHGs (such as chlorofluorocarbons [CFCs]) would be emitted, and these other GHG emissions would not substantially add to the calculated CO_2E amounts.

Onsite Operational Emissions. Operational emissions from energy use (electricity and natural gas use) for the candidate sites were estimated using the California Emissions Estimator Model (CalEEMod) computer program (see Appendix B for calculations.). The default values on which the CalEEMod computer program are based include the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. CalEEMod provides operational emissions of CO_2, N_2O and CH_4. This methodology is considered reasonable and reliable for use, as it has been subjected to peer review by numerous public and private stakeholders, and in particular by the CEC. It is also recommended by the California Air Pollution Officers Association (CAPCOA) (January 2008).

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, USEPA, and district supplied emission factor values (CalEEMod User Guide, 2011).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2011). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California.

Direct Emissions from Mobile Combustion. Emissions of CO_2 and CH_4 from transportation sources for the proposed project were quantified using the CalEEMod computer program. Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (January 2009) direct emissions factors for mobile combustion (see Appendix B for calculations). The estimate of total daily trips associated with buildout of the three rezoned parcels under the Housing Element Update (212 units), was based on trip rates as used by the traffic study (Appendix E) and was calculated and extrapolated to derive total annual mileage in CalEEMod. Emission rates for N_2O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

One of the limitations to a quantitative analysis is that emission models, such as CalEEMod, evaluate aggregate emissions and do not demonstrate, with respect to a global impact, what proportion of these emissions are "new" emissions, specifically attributable to the project in question. For most projects, the main contribution of GHG emissions is from motor vehicles and the total vehicle miles traveled (VMT), but the quantity of these emissions appropriately

characterized as "new" is uncertain. Traffic associated with a project may be relocated trips from other locales, and consequently, may result in either higher or lower net VMT. For the proposed project analyzed in this report, it is likely that some of the GHG emissions associated with traffic and energy demand would be truly "new" emissions. However, it is also likely that some of the emissions represent diversion of emissions from other locations. Thus, although GHG emissions are associated with onsite development, it is not possible to discern how much diversion is occurring or what fraction of those emissions represents global increases. In the absence of information regarding the different types of trips, the VMT estimate generated by CalEEMod is used as a conservative, "worst-case" estimate.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches (as discussed below in *GHG Cumulative Significance*) adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA, 2008). Nevertheless, air districts such as the SCAQMD (2011) have recommended amortizing construction-related emissions over a 30-year period.

Construction activity would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. Emissions associated with the construction period were estimated using the CalEEMod computer program, based on the projected maximum amount of equipment that would be used onsite at one time. Complete CalEEMod results and assumptions can be viewed in Appendix B. As a worst case scenario, it was assumed that construction activities would occur simultaneously on all three candidate sites.

Thresholds of Significance. Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the *CEQA Guidelines f*or the feasible mitigation of GHG emissions or the effects of GHG emissions in March 2010. These guidelines are used in evaluating the cumulative significance of GHG emissions from the proposed project. According to the adopted *CEQA Guidelines,* impacts related to GHG emissions from the proposed project would be significant if the project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines*, Section 1535).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a

Climate Action Plan). However, because the SCAQMD has not yet adopted GHG emissions thresholds that apply to land use projects where the SCAQMD is not the lead agency and the City of Malibu has not adopted a GHG emissions reduction plan or GHG emissions thresholds, the proposed project is evaluated based on the SCAQMD's preliminary guidance option threshold of 3,500 metric tons CO_2E per year (SCAQMD, "Proposed Tier 3 Quantitative Thresholds – Option 1", September 2010) for residential land use types. It is important to note that the City of Malibu has not recommended this threshold for any other purpose at this time, but that numeric threshold is recommended for this analysis. As such, the proposed project would have a significant impact related to GHG emissions if the project would generate more than 3,500 metric tons of CO_2E per year.

In addition, in order to determine whether or not the proposed project's GHG emissions are "cumulatively considerable," an inconsistency with applicable GHG emissions reductions strategies would be a significant impact under the second significance threshold discussed above.

b. Project Impacts and Mitigation Measures.

Impact GHG-1 Development facilitated by the Housing Element Update would generate GHG emissions from both mobile and operational sources, as well as temporary GHG emissions from construction. However, emissions would not exceed the 3,500 metric tons/year threshold and the Housing Element Update would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Therefore, impacts would be Class III, *less than significant*.

Construction Emissions for Candidate Sites #1, #2, and #7. Existing GHG emissions from the Candidate Sites are minimal. Candidate Site #7 is currently undeveloped and therefore there are no existing GHG emissions. Candidate Sites #1 and #2 each have one existing single-family residence which emits some GHG emissions associated with energy and vehicle usage. As described in Section 2.0, *Project Description,* under the Housing Element Update, up to 212 residential units could be constructed on Candidate Sites #1, #2, and #7. Based on the CalEEMod model results, construction activity facilitated by the Housing Element Update on all three candidate sites would generate a total of 1,076.76 metric tons of CO_2E (as shown in Table 4.6-1). Amortized over a 30-year period, construction facilitated by the Housing Element Update would generate just under 36 metric tons of CO_2E per year for 30 years.

Table 4.6-1
Estimated Construction Emissions of Greenhouse Gases

	Annual Emissions	
	Emissions (metric tons)	**30 Year Emissions Amortization (metric tons)**
Carbon Dioxide Equivalent (CO_2E)[1]	1,076.76	35.89

[1] See Appendix B for calculations and for GHG emission factor assumptions from the CalEEMod model run performed by Rincon Consultants in December 2012.

Operational Indirect and Stationary Direct Emissions.

Area Source Emissions. CalEEMod was used to calculate direct sources of GHG emissions. These emissions include consumer product use, architectural coatings, and landscape maintenance equipment. As shown in Table 4.6-2, area source emissions associated with the Housing Element Update would generate approximately five metric tons of CO_2E per year.

Table 4.6-2
Estimated Annual Area-Related Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2E
Area	5.39 metric tons

See Appendix B for calculations and for GHG emission factor assumptions from the CalEEMod run performed by Rincon Consultants in December 2012.

Energy Use. Operation of the 212 residential units that could be developed under the Housing Element Update would consume both electricity and natural gas (see Appendix B for calculations). The generation of electricity through combustion of fossil fuels typically yields CO_2, and to a smaller extent, N_2O and CH_4. As shown in Table 4.6-3, energy consumption associated with the Housing Element Update would generate just under 434 metric tons of CO_2E per year.

Table 4.6-3
Estimated Annual Energy-Related Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2E
Energy	433.92 metric tons

See Appendix B for calculations and for GHG emission factor assumptions from the CalEEMod run performed by Rincon Consultants in December 2012.

Solid Waste. It is anticipated that the 212 residential units facilitated by the Housing Element Update would generate solid waste, which would be direct to nearby landfills and result in emissions, primarily associated with decomposition. As shown in Table 4.6-4, this aspect of the Housing Element Update would generate just over 44 metric tons of CO_2E per year.

Table 4.6-4
Estimated Annual Solid Waste Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2E
Solid Waste	44.36 metric tons

See Appendix B for calculations and for GHG emission factor assumptions from the CalEEMod run performed by Rincon Consultants in December 2012.

Water Use. Based on the amount of electricity needed to supply water to the 212 residential units facilitated by the Housing Element Update, delivery of water would generate approximately 150 metric tons of CO_2E per year, as shown in Table 4.6-5.

Table 4.6-5
Estimated Greenhouse Gas Emissions from Water Use

Emission Source	Annual Emissions CO_2E
Water Use	150.07 metric tons

See Appendix B for calculations and for GHG emission factor assumptions from the CalEEMod run performed by Rincon Consultants in December 2012.

Transportation Emissions. Table 4.6-6 shows the estimated mobile emissions of GHGs for the Housing Element Update based on the estimated annual vehicle miles traveled (VMT)

calculated by CalEEMod. As noted above, CalEEMod does not calculate N_2O emissions related to mobile sources. As such, N_2O emissions were calculated based on the project's VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (January 2009). Vehicle miles traveled associated with the 212 residential units facilitated by the Housing Element Update would generate just over 2,374 metric tons of CO_2E.

Table 4.6-6
Estimated Annual Mobile Emissions of Greenhouse Gases

Emission Source	Annual Emissions CO_2E
Mobile Emissions	
CO_2 and CH_4	2,280.37 metric tons
N_2O	94 metric tons
Total Mobile	2,374.37 metric tons

[1] See Appendix B for calculations and for GHG emission factor assumptions from the CalEEMod run performed by Rincon Consultants in December 2012

Combined Construction, Stationary and Mobile Source Emissions. Table 4.6-7 combines the construction, operational and mobile GHG emissions associated with onsite development for the Housing Element Update. As indicated, overall annual CO_2E emissions would be about 3,044 metric tons per year.

Table 4.6-7
Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions CO_2E
Construction	35.89 metric tons
Operational	
Area	5.39 metric tons
Energy	433.92 metric tons
Solid Waste	44.36 metric tons
Waste	150.07 metric tons
Total Operational	**633.74 metric tons**
Mobile	2,374.37 metric tons
Total	**3,044 metric tons**

Sources: See Appendix B for calculations and for GHG emission factor assumptions from Air Quality Analysis performed by Rincon Consultants in December 2012.

As discussed under "Methodology and Significance Thresholds," neither the SCAQMD nor the City of Malibu has adopted formal GHG emissions thresholds that apply to land use projects, and no GHG emissions reduction plan has been adopted in Malibu. Therefore, the Housing Element Update is evaluated based on the SCAQMD's recommended interim threshold of 3,500 metric tons CO_2E per year for residential land uses. The 3,044 metric tons of CO_2E generated

annually by development facilitated by the Housing Element Update is below the 3,500 metric tons of CO_2E per year threshold. Therefore, GHG impacts would be less than significant. The Housing Element Update is generally consistent with applicable regulations or plans addressing GHG reductions.

As discussed above, the CAT Report identifies a recommended list of strategies that the State could pursue to reduce climate change greenhouse gas emissions. The CAT strategies are recommended to reduce GHG emissions at a statewide level to meet the goals of the Executive Order S-3-05. These are strategies that could be implemented by various State agencies to ensure that the Governor's targets are met and can be met with existing authority of the State agencies. In addition, in 2008 the California Attorney General published The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level (Office of the California Attorney General, Global Warming Measures Updated May 21, 2008). This document provides information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project. Tables 4.6-8 and 4.6-9 illustrate that the Housing Element Update would be consistent with the GHG reduction strategies set forth by the 2006 CAT Report as well as the 2008 Attorney General's Greenhouse Gas Reduction Measures.

Table 4.6-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	***Project Consistency***
California Air Resources Board	
Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.	**Consistent** Vehicles that travel to and from future housing developments on public roadways would be in compliance with ARB vehicle standards that are in effect at the time of vehicle purchase.
Diesel Anti-Idling The ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.	**Consistent** Current State law restricts diesel truck idling to five minutes or less. Diesel trucks operating from and making deliveries to the candidate sites are subject to this state-wide law. Construction vehicles are also subject to this regulation.
Hydrofluorocarbon Reduction 1) Ban retail sale of HFC in small cans. 2) Require that only low GWP refrigerants be used in new vehicular systems. 3) Adopt specifications for new commercial refrigeration. 4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. 5) Enforce federal ban on releasing HFCs.	**Consistent** This strategy applies to consumer products. All applicable products would be required to comply with the regulations that are in effect at the time of manufacture.
Alternative Fuels: Biodiesel Blends ARB would develop regulations to require the use of 1 to 4% biodiesel displacement of California diesel fuel.	**Consistent** Diesel vehicles such as construction vehicles or delivery trucks that travel to and from the candidate sites on public roadways could utilize this fuel once it is commercially available.
Alternative Fuels: Ethanol Increased use of E-85 fuel.	**Consistent** Residents of future housing developments could choose to purchase flex-fuel vehicles and utilize this fuel once it is commercially available regionally and locally.
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.	**Consistent** The heavy-duty vehicles for construction activities that travel to and from future housing developments on public roadways would be subject to all applicable ARB efficiency standards that are in effect at the time of vehicle manufacture.

Table 4.6-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	***Project Consistency***
Achieve 50% Statewide Recycling Goal Achieving the State's 50% waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48% has been achieved on a statewide basis. Therefore, a 2% additional reduction is needed.	**Consistent** The Malibu Garbage Disposal District and the Los Angeles County Sanitation District are responsible for complying with AB 939. The City has enacted numerous programs to achieve the mandated 50% diversion. The programs include residential curbside recycling, residential drop-off locations, commercial and industrial recycling programs, residential curbside green waste collection, and public outreach. The City achieved a diversion rate of 57% in 2000. It is anticipated that the future housing developments would participate in the City's waste diversion programs and would similarly divert at least 50% of its solid waste. Future housing developments would also be subject to all applicable State and County requirements for solid waste reduction as they change in the future.
Department of Water Resources	
Water Use Efficiency Approximately 19% of all electricity, 30% of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	**Consistent** Future housing projects would include water saving features such as the use of gray water for landscape irrigation and providing low flow plumbing fixtures pursuant to the requirements of the California Green Building Code.
Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	**Consistent** Future housing developments under the Housing Element Update would need to comply with the standards of Title 24 that are in effect at the time of development.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	**Consistent** Under State law, appliances that are purchased for the project, both pre- and post-development, would be consistent with energy efficiency standards that are in effect at the time of manufacture.
Fuel-Efficient Replacement Tires & Inflation Programs State legislation established a statewide program to encourage the production and use of more efficient tires.	**Consistent** Residents of future housing developments could purchase tires for their vehicles that comply with state programs for increased fuel efficiency.
Municipal Utility Energy Efficiency Programs/Demand Response Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	*Not applicable*, but development facilitated by the Housing Element Update would not preclude the implementation of this strategy by municipal utility providers.

Table 4.6-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	***Project Consistency***
Municipal Utility Renewable Portfolio Standard California's Renewable Portfolio Standard (RPS), established in 2002, requires that all load serving entities achieve a goal of 20% of retail electricity sales from renewable energy sources by 2017, within certain cost constraints.	*Not applicable*, but the project would not preclude the implementation of this strategy by Southern California Edison.
Municipal Utility Combined Heat and Power Cost effective reduction from fossil fuel consumption in the commercial and industrial sector through the application of onsite power production to meet both heat and electricity loads.	*Not applicable* since this strategy addresses incentives that could be provided by utility providers such as Southern California Edison and The Gas Company.
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	**Consistent** Residents of future housing developments could purchase alternative fuel vehicles and utilize these fuels once they are commercially available regionally and locally.
Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20% by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions state agencies are to take with state-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20% target.	**Consistent** As discussed previously, future residential developments under the Housing Element Update would be required to be constructed in compliance with the standards of Title 24 that are in effect at the time of development. The 2008 Title 24 standards are approximately 15% more efficient than those of the 2005 standards.
Business, Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. The Governor is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity and a quality environment.	**Consistent** Candidate Sites #1, #2, and #7 are located adjacent to existing public transit stops. Residents of future residential developments would have adequate access to and from the sites via public transportation.

Table 4.6-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	***Project Consistency***
Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include: promoting jobs/housing proximity and transit-oriented development; encouraging high density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33% renewable in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33% goal.	*Not applicable*, but project development would not preclude implementation of this strategy by energy providers.

Table 4.6-9
Project Consistency with Applicable Attorney General Greenhouse Gas Reduction Measures

Strategy	***Project Consistency***
Transportation-Related Emissions	
Diesel Anti-Idling Set specific limits on idling time for commercial vehicles, including delivery vehicles.	**Consistent** Currently, the California Air Resources Board's (CARB) Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling restricts diesel truck idling to five minutes or less. Construction vehicles are also subject to this regulation.
Transportation Emissions Reduction Provide shuttle service to public transportation.	**Consistent** The candidate sites are located within walking distance to existing public transit stops.
Solid Waste and Energy Emissions	
Solid Waste Reduction Strategy Project construction shall require reuse and recycling of construction and demolition waste.	**Consistent** In accordance with AB 341, a multi-family residential dwelling of five units or more must arrange for recycling services, consistent with state or local laws or requirements. Future residential development pursuant to the Housing Element Update would be subject to this requirement.

Table 4.6-9
Project Consistency with Applicable Attorney General Greenhouse Gas Reduction Measures

Strategy	***Project Consistency***
Water Use Efficiency Require measures that reduce the amount of water sent to the sewer system – see examples in CAT standard above. (Reduction in water volume sent to the sewer system means less water has to be treated and pumped to the end user, thereby saving energy.	**Consistent** As described above, future residential development would include water saving features such as the use of gray water for landscape irrigation and low flow plumbing fixtures as required by California Green Building Code.
Land Use Measures, Smart Growth Strategies and Carbon Offsets	
Smart Land Use and Intelligent Transportation Systems Require pedestrian-only streets and plazas within the candidate sites and destinations that may be reached conveniently by public transportation, walking or bicycling.	**Consistent** The candidate sites are located within walking distance of public transportation.

As discussed above, SCAG recently adopted the 2012 RTP/SCS. As stated in the RTP/SCS, lead agencies (including local jurisdictions) are solely responsible for determining consistency of any future project with the SCS when a project is using the RTP/SCS to streamline the GHG analysis for CEQA purposes. The Housing Element Update does not use the RTP/SCS for streamlining purposes, and as such, no consistency analysis is required. It is important to note however, that the Housing Element Update would be consistent with the population growth assumptions used in the RTP/SCS, as discussed in Sections 4.2 *Air Quality* and 4.11 *Population and Housing*.

In summary, development facilitated by the Housing Element Update would result in an incremental increase in GHG emissions. However, as indicated above in Table 4.6-7, GHG emissions would not exceed the 3,500 metric tons per year threshold. In addition, as indicated in Tables 4.6-8 and 4.6-9, the Housing Element would be consistent with CAT strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures and the growth assumptions of the 2012 SCAG RTP/SCS. Therefore, implementation of the Housing Element Update would be consistent with the objectives of AB 32, SB 97, and SB 375, and the Element's contribution to cumulative GHG emissions and climate change would not be significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family (MF) and Multi-Family Beachfront (MFBF). Some of these proposed policies would have no impact as these would not result in new sources of GHG emissions. However, other programs would have the potential to create new sources of greenhouse gas emissions. The Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program would remove regulatory barriers to affordable housing development. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed. There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is

not possible. However, as multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, impacts associated with the programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No mitigation measures are required.

c. Cumulative Impacts. As shown in Table 3-1 in Section 3.0, *Environmental Setting*, 84 residential units and 748,460 square feet of non-residential development approved or pending within the City. As indicated in Impact GHG-1, GHG emissions associated with the Housing Element Update were found to be less than significant. Analysis of GHG-related impacts is cumulative in nature as climate change is related to the accumulation of GHGs in the global atmosphere. Although cumulative increases in atmospheric GHGs may be significant, the Housing Element Update's contribution to cumulative levels of GHGs is not considered considerable since emissions associated with development under the Housing Element would not exceed quantitative thresholds and future development would comply with applicable plans and policies pertaining to GHG reduction.

This page intentionally left blank.

4.7 HAZARDS and HAZARDOUS MATERIALS

4.7.1 Setting

a. Hazardous Materials. The State of California defines a hazardous material as a substance that is toxic, flammable/ ignitable, reactive, and/or corrosive. Extremely hazardous materials are substances that show high or chronic toxicity, are carcinogenic, have bioaccumulative properties, persist in the environment, or are water reactive. Hazardous substances include both hazardous wastes and hazardous materials. In general, a material or waste is classified as hazardous if it is one of more than 700 chemicals specifically listed in the California Code of Regulations; if it contains one of these chemicals; or if it is reactive, ignitable, corrosive, or toxic. Because of their potential threat to public health and the environment, hazardous substances are closely regulated by federal, state, and local laws that focus on controlling their production, handling, storage, transportation, and disposal.

Hazards and hazardous materials include those actions and materials affecting health and safety of the public and the release of hazardous materials into the environment. Hazards discussed in this section include naturally occurring contamination (i.e., oil fields and soil gas), man-made contamination in soil (as well as groundwater), and public nuisances (vector management issues, such as activities that could involve conditions that attract rodents and insects that could transmit disease and create a health hazard). Hazardous materials include solids, liquids, or gaseous materials which, because of their quantity, concentration or physical, chemical or infectious characteristics may: 1) cause or contribute to an increase in mortality or serious illness; or 2) pose a substantial present or potential harm to human health or the environment when improperly handled, used, transported, stored or disposed. This section addresses the environmental safety issues listed below:

- ***Hazardous Materials Use and Storage****: Hazardous materials use and storage refers to procedures for the acquisition, use, handling and storage of hazardous materials (i.e., limitations on use and storage quantities and types, employee training and storage design requirements) at candidate sites.*

- ***Hazardous Materials Management:*** *Hazardous materials management refers to the planning for the acquisition, use, storage, disposal, and potential accidental release of hazardous materials, and the tracking of hazardous materials throughout their life cycle.*

- ***Hazardous Waste:*** *Hazardous waste refers to either: 1) refuse associated with the use of hazardous materials in certain industrial and commercial processes (i.e., operational hazardous waste); or 2) residual contamination of soil and groundwater by hazardous materials at the candidate sites which could pose a significant existing or future hazard to public health or the environment unless measures are taken during development of the project.*

A "Recognized Environmental Condition" (REC) is defined pursuant to the American Society of Testing and Materials (ASTM) as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or

petroleum products into structures on the candidate sites or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies**.**

b. Candidate Site Setting. A Preliminary Site Assessment was conducted for Candidate Sites #1, #2, and #7 identified in the Housing Element Update. The findings of the Preliminary Site Assessments are summarized below and the full reports are included in Appendix F. Each Preliminary Site Assessment includes an environmental records search performed by Environmental Data Resources, Inc. (EDR). The EDR report includes a database search of public lists of sites that generate, store, treat or dispose of hazardous materials or sites for which a release or incident has occurred. Federal, State and County lists were reviewed as part of the research effort. Descriptions of the databases that identified sites in the project vicinity are provided below.

AST: A list of above-ground Petroleum Storage Tank facilities provided by the State Water Resources Control Board.

Ca. FID: The California Facilities Inventory Database contains active and inactive underground storage tank locations as provided by the California State Water Resources Control Board.

CANPDES: A listing of NPDES permits, including storm water permits.

Ca. SLIC: A listing of sites that have had known spills, leaks, investigations or clean-ups of hazardous wastes or substances provided by California Regional Water Quality Control Board.

Ca. WDS: A list of Waste Discharge Systems that includes site that have been issued waste discharge requirements as provided by the State Water Resources Control Board.

CLEANERS: A list of drycleaner related facilities such as: power laundries, family and commercial, garment pressing and cleaners' agents, linen supply, coin-operated laundries and cleaning, dry cleaning plants except rugs, carpet and upholsterer cleaning, industrial launderers, laundry, and garment services.

EMI: Toxics and criteria pollutants emissions inventory data. collected by the California Air Resources Board and local air pollution agencies (information is provided by the California Air Resources Board).

ENF: Listings of Water Board Enforcement Actions.

FINDS: The Facility Index Systemcontains both facility information and points to other sources that contain more detail.

HAZNET: The Hazardous Waste Information System database contains data that is extracted from the copies of hazardous waste manifests received each year by the Department of Toxic Substances Control.

HIST CORTESE: This historical listing includes sites designated by the State Water Resources Control Board (LUST), the Integrated Waste Board - Solid Waste

Information System (SWIS), and the Department of Toxic Substances Control (CALSITES). CALSITES contains information on Brownfield properties with confirmed or potential hazardous contamination. The SWIS records contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

HIST UST: The Hazardous Substance Storage Container Database is a historical listing of underground storage tank (UST) sites. This database is maintained by the State Water Resources Control Board.

HMS: A list of Industrial Waste and Underground Storage Tank Sites which includes sites that temporarily store industrial waste or use underground storage tanks onsite (information is provided by the Los Angeles Department of Public Works).

LUST: Leaking underground storage tank records contain an inventory of reported leaking underground storage tank incidents. This database is maintained by the State Water Resources Control Board.

NPDES: A listing of NPDES permits, including storm water permits.

RCRA-(TSD, LQG, SQG): RCRAInfo is U.S. EPA's comprehensive information system providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data and recording abilities of the Resource Conservation and Recovery Information System (RCRIS). The RCRAInfo database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by RCRA. Conditionally exempt small quantity generators (CESQG) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQG) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQG) generate over 1,000 kg of hazardous waste or over 1 kg of acutely hazardous waste per month. Transporters move hazardous wastes from the generator off-site to a facility that can recycle, treat, store or dispose of the waste. TSDFs treat store or dispose of the waste.

SWEEPS UST: The Statewide Environmental Evaluation and Planning System underground storage tank listings were updated and maintained by a company contracted by the State Water Resources Control Board in the early 1980s. This database contains a historical listing of active and inactive UST locations. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

SWRCY: A list of recycling facilities.

UST: The UST database contains registered USTs. This database is maintained by the State Water Resources Control Board.

Candidate Sites #1 and #2.

Historic Land Use/Records Review. A historic records review was completed for the Preliminary Site Assessment and included aerial photographs and topographic maps. The historical photographs and maps reviewed indicate that the existing single-family residence on

Candidate Site #1 was present from 1958 to the present day. Prior to 1958, the site was vacant and undeveloped. The existing single-family residence on Candidate Site #2 was present on the site from at least 1957 to the present day. A second residence was depicted on Candidate Site #2 in the 1989 aerial photograph, but is longer on the property. Prior to 1957, the site was vacant and undeveloped.

The Assessment has revealed evidence of the following potential RECs in connection with Candidate Sites #1 and #2:

- *Aerially deposited lead associated with PCH, which is located adjacent to the south of the candidate sites; and*
- *The potential presence of lead-based paint or asbestos-containing materials in the onsite structure.*

Because the candidate sites incorporate areas immediately adjacent to Pacific Coast Highway (PCH), there is a potential for aerial deposited lead to be present within the soils on the project site. Aerially deposited lead associated with PCH has the potential to have impacted the project site with lead. Therefore, the presence of PCH adjacent to the south of these sites is a potential REC.

The potential presence of lead-based paint and asbestos-containing materials in the onsite structures is a potential REC. Lead-based paints may be present in buildings constructed prior to 1978 and asbestos-containing materials may be present in structures regardless of construction date. Based on the ages of the structures, there is the possibility that lead-based paints and asbestos-containing materials could be present in the onsite structure.

Site Reconnaissance Findings. A field reconnaissance was performed at Candidate Sites #1 and #2 on March 22, 2012 as part of the Preliminary Site Assessment. The purpose of the reconnaissance was to observe existing site conditions and to obtain information indicating the possible presence of recognized environmental conditions in connection with the candidate sites. The onsite structures were not included in the site reconnaissance. During the site reconnaissance, the use, storage, or disposal of hazardous materials on Candidate Sites #1 and #2 was not observed. This includes, but is not limited to, storage tanks, drums, hazardous substances and petroleum products, unidentified substance containers, and odors.

Environmental Records Search. As part of the Assessment, a database search was performed by EDR on April 12, 2012. The EDR report, which specifies the ASTM search distance for each public list, is included as part of the Preliminary Site Assessment in Appendix F. Candidate Sites #1 and #2 and adjacent properties were not listed in any of the databases searched by EDR; however, the EDR database search found two sites with environmental listings that are located within one-quarter mile of the candidate sites. The results of the EDR database search are shown in Table 4.7-1.

The Los Angeles County Fire Station 71 site is listed in the historic UST database. This listing is not indicative of a hazardous materials release. The other site, owned by the Paradise Cove Land Company, was listed in several databases searched by EDR, including the leaking UST database. According to the EDR report, the site has been a closed leaking UST site since February 13, 1998.

Table 4.7-1
EDR Listing Summary of Sites within 0.5 Mile of Candidate Sites #1 and #2

Site Name	Site Address	Distance from Candidate Sites (miles)	Database Reference
Fire Station 71	28722 Pacific Coast Highway	About 1/4 mile – southwest	HIST UST
Paradise Cove Land Company / Paradise Cove Beach Café	28128 Pacific Coast Highway	Between 1/4 mile and 1/2 mile – east-southeast	LUST, NPDES, HIST CORTESE, ENF, HAZNET
Source: Rincon Consultants, Inc., Preliminary Site Assessments conducted for Candidate Site #1 and Candidate Site #2,April 2012, included in Appendix F.			

*Sensitive Receptors***.** The following land uses are generally considered to be sensitive receptors with respect to potential hazardous releases (particularly air-borne releases): long-term health care facilities; rehabilitation centers; convalescent centers; retirement homes; residences; schools; playgrounds; child care centers; and athletic facilities. For the purpose of this evaluation, sensitive receptors with respect to hazardous materials exposure would include uses immediately bordering the candidate sites, including the existing multi-family residential developments to the east and west of the sites. Other, somewhat more distant, sensitive receptors in the vicinity of the sites include existing residential uses such as the single and multi-family buildings located just south of PCH and the rural residential dwellings to the north of the site.

Candidate Site #7.

Historic Land Use/Records Review. A historic records review was completed for the Preliminary Site Assessment and included aerial photographs and topographic maps. The historical photographs and maps reviewed indicate that Candidate Site #7 was in agricultural use (row crops) from at least 1928 through at least 1989. The candidate site is vacant and undeveloped from at least 1994 to present day.

This Assessment revealed evidence of the following potential RECs in connection with the property:

- *The former agricultural use of the site.*

The former agricultural use of the site is a potential REC since there is a potential that the property could be affected with pesticides due to the historic agricultural use of the site.

Site Reconnaissance Findings. A field reconnaissance was performed at the site on March 22, 2012 as part of the Assessment. The purpose of the reconnaissance was to observe existing site conditions and to obtain information indicating the possible presence of recognized environmental conditions in connection with the property. During the site reconnaissance, the use, storage, or disposal of hazardous materials on the site was not observed. This includes, but is not limited to, storage tanks, drums, hazardous substances and petroleum products, unidentified substance containers, and odors.

Environmental Records Search. As part of the Assessment, a database search was performed by EDR on April 12, 2012. The EDR report, which specifies the ASTM search distance for each public list, is included as part of the Preliminary Site Assessment in Appendix F. Candidate Site #7 was not listed in any of the databases searched by EDR; however, the EDR database search found one adjacent site and several nearby sites with environmental listings. The results of the EDR database search are shown in Table 4.7-2.

Table 4.7-2
EDR Listing Summary of Sites within 0.5 Mile of Candidate Site #7

Site Name	Site Address	Distance from Candidate Site (miles)	Database Reference
Malibu Sheriff's Station / Malibu Sheriff / LA Co. DPW WW Malibu Yard	23555 Civic Center Way	Adjacent property – west	HIST CORTESE, LUST, HAZNET, HIST UST, UST
Land Mark Cleaners	23410 Civic Center Way	Less than 1/8 mile – southeast	RCRA-SQG, FINDS, HAZNET
Connies Kids	3838 Cross Creek Road	Between 1/8 mile and 1/4 mile – southeast	RCRA-NonGen, FINDS, HAZNET
Cross Creek Shopping Center / Colony Cleaners	3872 Cross Creek Road	Between 1/8 mile and 1/4 mile – southeast	LUST, RCRA-SQG, FINDS, HIST CORTESE, DRYCLEANERS, HAZNET
GTE (Verizon) Malibu Plant Yard / Malibu	3705 Cross Creek Road	Between 1/8 mile and 1/4 mile – east	AST, LUST, HAZNET, HIST UST
Adamson Companies / Crosscreek Yard / Adamson Companies Maintenance	3728 Cross Creek Road	Between 1/8 mile and 1/4 mile – east	CA FID UST, SWEEPS UST, HIST CORTESE, LUST, HIST UST
Chevron USA SS 7774 / Chevron Station No. 97774 / Chevron #9-7774 / Chevron Station 97213 / Chevron #9-7213 (Demolished in 2012)	23614Pacific Coast Highway	Between 1/8 mile and 1/4 mile – south-southwest	SWEEPS UST, UST, RCRA-SQG, FINDS, HAZNET, HIST UST, HIST CORTESE, LUST, NPDES, Los Angeles Co. HMS
Texaco / Texaco Oil Corp. / Malibu Texaco / Texaco Service Station	23387 Pacific Coast Highway	About 1/4 mile – southeast	LUST, HIST UST, EMI, HIST CORTESE, ENF, HAZNET, SWEEPS UST, Los Angeles Co. HMS, UST, RCRA-SQG
Union Oil #6267 / Service Station 6267 / Tosco #31138 / Charlie's Union 76 Service / Tosco/Unocal #31138 / 76 Station No. 6267	23670 Pacific Coast Highway	About 1/4 mile – southwest	HIST UST, LUST, SWEEPS UST, HAZNET, UST, HIST CORTESE
Malibu Colony Plaza	23705 Malibu Road	Between 1/4 mile and 1/2 mile – southwest	SLIC, WDS, ENF

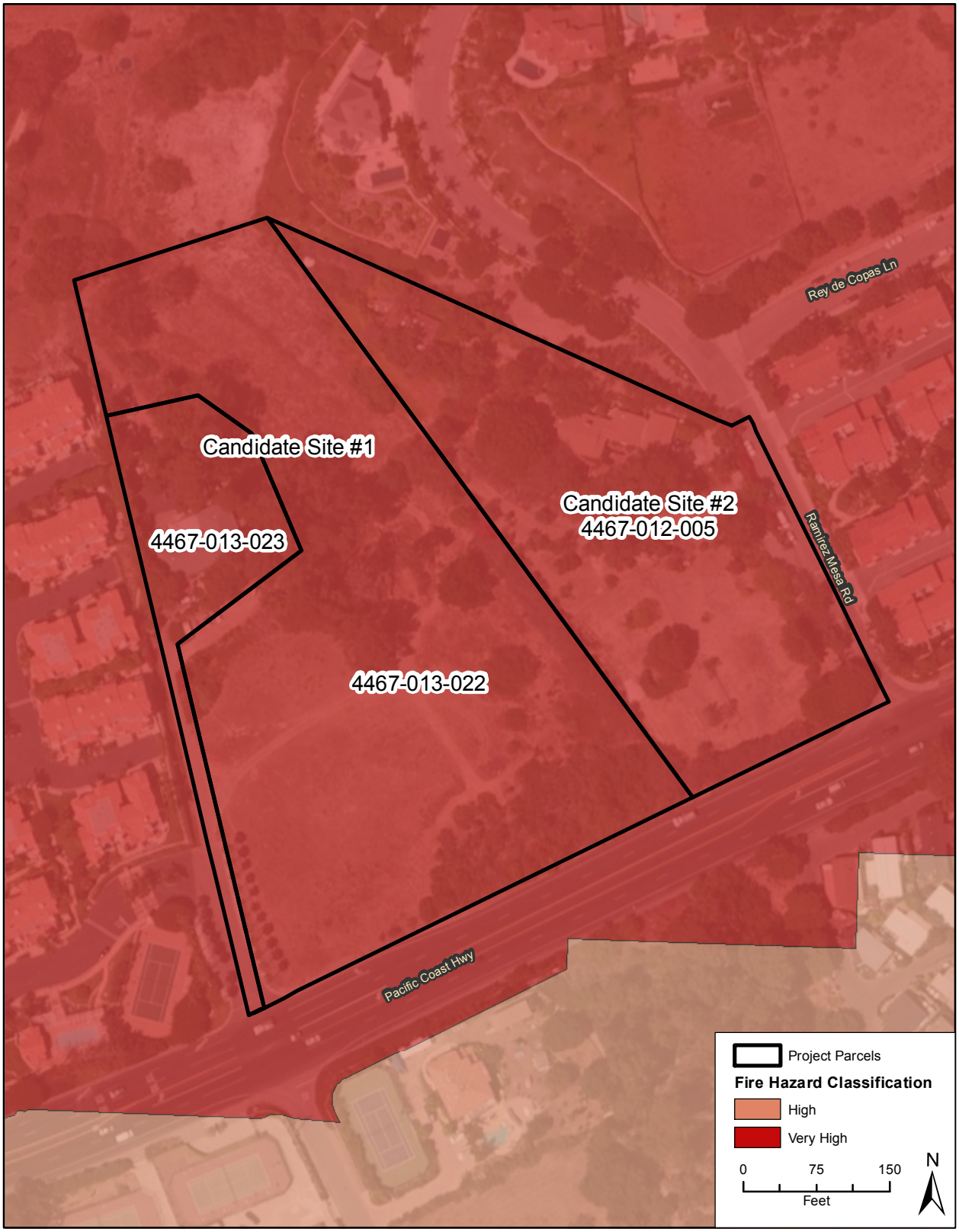
Table 4.7-2
EDR Listing Summary of Sites within 0.5 Mile of Candidate Site #7

Site Name	Site Address	Distance from Candidate Site (miles)	Database Reference
Tomra Pacific Inc./ Malibu Colony Plaza	23841 Malibu Road	Between 1/4 mile and 1/2 mile – southwest	SWRCY
Source: Rincon Consultants, Inc., Preliminary Site Assessments conducted for Candidate Site #7, April 2012, included in Appendix F.			

The EDR database search found one property with environmental listings located immediately adjacent and to the west of Candidate Site #7. The Malibu Sheriff's Station (53555 Civic Center Way) is listed as a leaking UST site. According to the EDR report, the site has been considered a closed case since October 4, 1996. Additionally, six properties with environmental listings are reported to be located between one-eighth and one-quarter mile of the candidate site. Five of these six sites are listed as a site on which a hazardous materials release has occurred. Two properties with environmental listings are reported to be located about one-quarter mile from the candidate site. Both of the sites are listed as a site on which a hazardous materials release has occurred. Two properties with environmental listings are reported to be located between one-quarter and one-half mile from the candidate site. One of these sites (Malibu Colony Plaza) is listed as a site on which a hazardous materials release has occurred.

*Sensitive Receptors***.** For the purpose of this evaluation, sensitive receptors with respect to hazardous materials exposure would include uses surrounding the candidate site including the Malibu Sheriff's Station to the west, single family homes and vacant land to the north, and a shopping center to the south. Other, somewhat more distant, sensitive receptors in the project vicinity would include existing residential uses to the north.

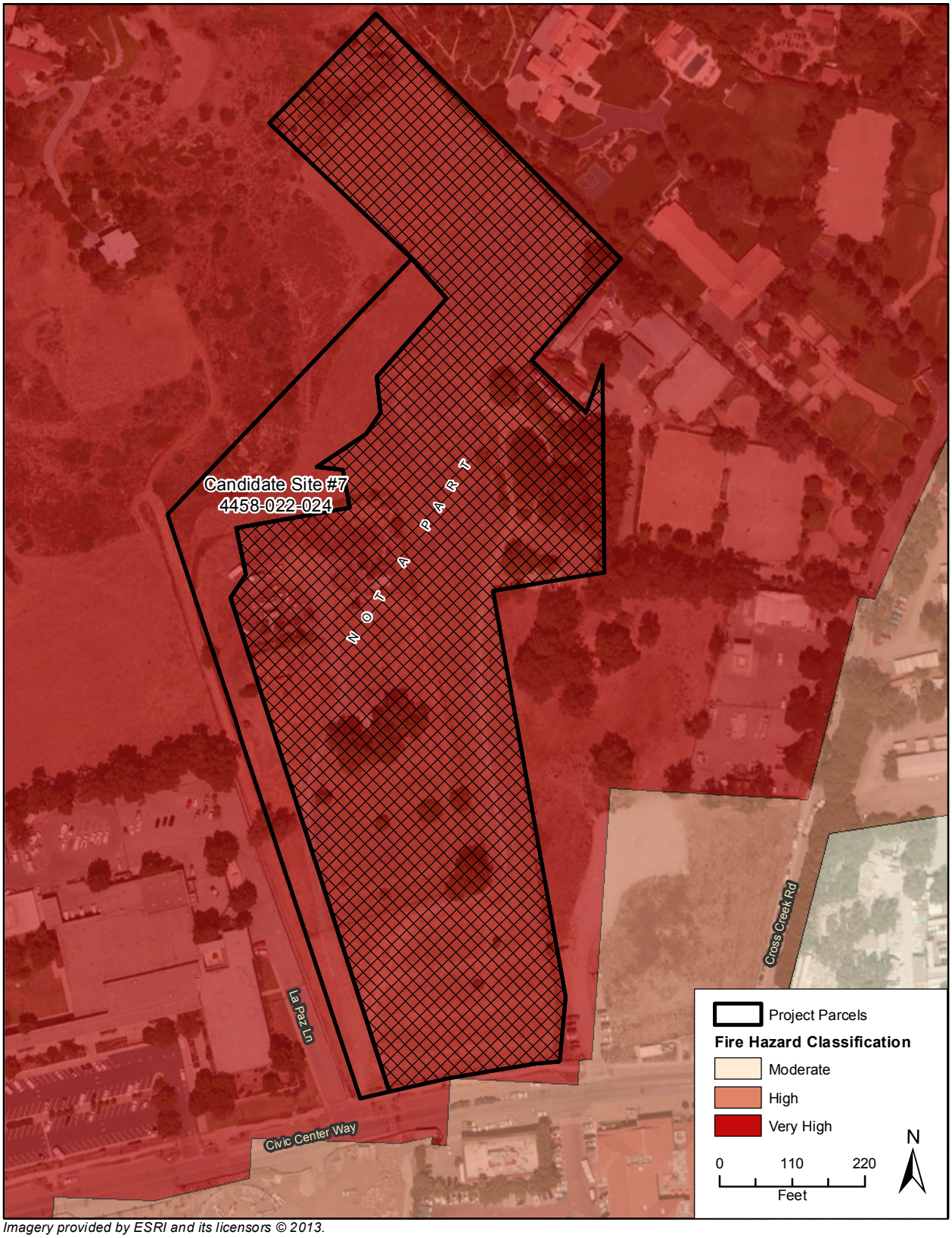
c. Wildland Fire Hazards. Malibu is located in the Santa Monica Mountains, bordering the Pacific Ocean and is subject to high fire hazards due to highly flammable chaparral vegetation covering thousands of acres in brushlands. Fires in these brushland areas are frequent because of the flammability of both living and non-living brush and the variable weather conditions that exist. Approximately three-fourths of the mountains in the surrounding area have burned more than once in the past 50 years. Candidate Sites #1, #2, and #7 are located in an urban/wildfire interface area that could be adversely affected by wildfires. Figures 4.7-1a and 4.7-1b show the fire hazard designations for the candidate sites. The hillsides in the vicinity of the sites are interspersed with grasses and brush among residential development. The general lack of rain from May to November in southern California causes this vegetation to become very dry, making the hillsides a high fire hazard. According to the California Department of Forestry (CDF) and the County Fire Department, Malibu is considered to be an extreme fire hazard zone. Variations in slope, weather, fuel load, aspect, elevation, and air movement may influence hazard conditions in a specific location. Risk to any individual structure also depends on factors such as access, water supply, clearance, and structural characteristics.



Imagery provided by ESRI and its licensors © 2012.
Additional data provided by CALFire, 2008.

Candidate Sites #1 and #2
Fire Hazard Zones

Figure 4.7-1a



Imagery provided by ESRI and its licensors © 2013.
Additional data provided by CALFire, 2008.

Candidate Site #7
Fire Hazard Zones

Figure 4.7-1b

According to Malibu General Plan Safety and Health Element Chapter 5.2.5, some preventive measures, required by County and/or City ordinances, have been taken to offset the risk factors involved. These measures include:

- *Elimination of wood shake roofs for new construction;*
- *Establishment of minimum greenbelt systems along new subdivisions;*
- *Improvement in existing water systems and vehicular access in a number of areas;*
- *Improvements made in the "Incident Command System" used by the Los Angeles County Fire Department and in the emergency communications and coordination among various fire resource agencies;*
- *Installation of smoke detectors in homes and sprinkler systems in commercial buildings;*
- *An aggressive brush clearance program that has been undertaken in the past few years*

Due to local high fire hazard ratings, projects within Malibu are subject to the requirements of the Los Angeles County Fire Department's (LACFD) Fuel Modification Plan. The Fuel Modification Plan is designed to reduce the radiant and convective heat of fires and to provide fire suppression forces with a defensible space in which to take action. The Fuel Modification Plan identifies one or more of the following zones: Setback Zone, Irrigated Zone, Thinning Zone, Interface Thinning Zone, and requires each zone to conform to specific requirements as outlined in the Fuel Modification Plan.

The LACFD provides fire protection service to the City of Malibu. Currently, four stations (Nos. 70, 71, 88 and 99) directly serve the City; however, all available LACFD resources are available to serve the City. LAFCD operations are divided into nine operational Divisions, which are composed of 22 Battalions serving unincorporated area of Los Angeles County and 57 contract cities, including the City of Malibu. Candidate Sites #1, #2, and #7 are all located within Battalion #5 (LACFD, 2012). Candidate Sites #1 and #2 would be served by LACFD Fire Station 71. Fire Station 71 is located at 28722 PCH, in the City of Malibu, approximately 0.30 miles southwest of Candidate Site #1 and 0.35 miles southwest of Candidate Site #2. According to the LACFD, Fire Station 88 would be the primary station serving Candidate Site #7 (Personal Communication, David Bloom, April 2012). Fire Station 88 is located at 23720 Malibu Road, in the City of Malibu, approximately 0.5 miles southwest of Candidate Site #7.

In the event of a major fire, additional equipment is kept in reserve at most of the stations to be used by off-duty firefighters (LACFD, 2012). Also, Los Angeles County has mutual aid agreements with cities and counties throughout the state so that additional personnel and firefighting equipment can augment the LACFD. The Ventura County Fire Department's staff indirectly provides fire protection services to the Santa Monica Mountains by protection and control of fires on adjacent lands. The U.S. Park Service also provides additional fire protection (Malibu General Plan, Chapter 4, Section 4.3 Public Services, 1991).

d. Regulatory Setting. Numerous federal, state, and local regulations regarding use, storage, transportation, handling, processing and disposal of hazardous materials and waste have been adopted since the passage of the federal Resource Conservation and Recovery Act (RCRA) of 1976. The goal of RCRA is to assure adequate tracking of hazardous materials from generation to proper disposal. California Fire Code (CFC) Articles 79, 80 et al., which augment RCRA, are the primary regulatory guidelines used by the City to govern the storage and use of hazardous materials. The CFC also serves as the principal enforcement document from which

corresponding violations are written. In addition, according to the California Health and Safety Code (HSC 25500 et seq.), all California facilities that store hazardous materials in quantities that, cumulatively for a site, exceed 55 gallons of a liquid or 500 pounds of a solid or 200 cubic feet of a gas at standard temperature and pressure or, for radioactive materials, the quantity for which an emergency response plan is required under federal or state regulations, are subject to hazardous material inventory and reporting regulations.

Federal EPA laws governing the use, storage, and disposal of hazardous substances include the following:

- **Resources Conservation and Recovery Act (RCRA)**—hazardous waste management.
- **Hazardous and Solid Waste Amendments Act (HSWA)**—hazardous waste management.
- **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**—cleanup of contamination.
- **Superfund Amendments and Reauthorization Act (SARA)**—cleanup of contamination.
- **Emergency Planning and Community Right-to-Know (SARA Title III)**—business inventories and emergency response planning.
- **Toxic Substances Control Act (TSCA)**—tracks and screens industrial chemicals.
- **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)**—controls pesticide distribution, sale, and use.

Specific requirements for implementation of these statutes are codified in Title 40 of the CFR.

State agencies governing the use, storage, and disposal of hazardous substances include the following:

- **California Environmental Protection Agency (Cal/EPA).** Cal/EPA has broad jurisdiction over hazardous materials management in the State. Within Cal/EPA, the Department of Toxic Substances Control (DTSC) has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of State regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law. Along with the DTSC, the Regional Water Quality Control Board (RWQCB), which operates under the jurisdiction of Cal/EPA, is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. RWQCB regulations are contained in Title 27 of the California Code of Regulations (CCR). Additional state regulations applicable to hazardous materials are contained in Title 22 of the CCR. Title 26 of the CCR is a compilation of those sections or titles of the CCR that are applicable to hazardous materials.
- **Department of Toxic Substances Control (DTSC).** The DTSC regulates hazardous waste in California under the authority granted to it by the federal Resource Conservation and Recovery Act (RCRA) of 1976, and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling,

storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Under the provisions of the RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements.

Both federal and state agencies have developed Occupational Safety Standards intended to enhance worker safety by reducing both physical and chemical hazards in the workplace. For example, the California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. Cal/OSHA rules require provision of Material Safety Data Sheets which must be available in the workplace, and the training of employers in the proper handling of materials.

The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) enforce hazardous materials transportation regulations. Transporters of hazardous materials and waste are responsible for complying with all applicable packaging, labeling, and shipping regulations. The LA County Office of Emergency Management also provides emergency response services involving hazardous materials incidents.

The oversight of hazardous materials release sites often involves several different agencies with often overlapping authority and jurisdiction. The DTSC and RWQCB are the two primary state agencies responsible for the regulation, investigation and cleanup of hazardous materials release sites. Air quality issues related to remediation and construction at contaminated sites are also subject to federal and state laws and regulations which are administered at the local level. Investigation and remediation activities which have the potential for disturbing or releasing hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has either been identified or could exist based on current or past uses. The standards identify approaches to determine if a release of hazardous wastes/substances exists at a site and delineates the general extent of contamination; estimates the potential threat to public health and/or the environment from the release and provides an indicator of relative risk; determines if an expedited response action is required to reduce an existing or potential threat; and completes preliminary project scoping activities to determine data gaps, and identifies possible remedial action strategies to form the basis for development of a site strategy.

South Coast Air Quality Management District (SCAQMD) Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including removal and associated disturbance of asbestos-containing materials (ACM). Requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials (ACWM). All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

Federal and state regulations require businesses storing, using, or manufacturing specific amount of hazardous materials to report the quantities and types of materials to its local administering agency [otherwise known as the Certified Unified Program Agency (CUPA)].

The LACFD is the CUPA for the City. The Unified Program is operated by the Health Hazardous Materials Division (HHMD) and is responsible for permits, inspection, and enforcement activities for hazardous materials and hazardous waste programs within the Los Angeles County, including the City. The HHMD administers six programs within Los Angeles County: the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program (Cal-ARP), the Aboveground Storage Tank Program, the Underground Storage Tank Program, and Household Hazardous Waste Collection.

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds. The methodology used in this assessment includes review of the Preliminary Site Assessments that were prepared for the candidate sites to identify the potential presence of hazards and contamination sources within the project area. Significant human health and safety impacts would occur if project implementation would expose residents, employees, facility users and nearby land users to concentrations of hazardous materials exceeding regulatory levels, or high risk of injury or death from wildland fires.

Appendix G of the *CEQA Guidelines* considers a project to have significant environmental impacts if the project would:

1. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*
2. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
3. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school;*
4. *Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;*
6. *For a project in the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the area;*
7. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or*
8. *Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.*

Impacts related to the routine transport, use, or disposal of hazardous materials; emission of hazardous materials within one-quarter mile of an existing school; and airport hazards were

found not to be significant. Further discussion of these issues can be found in Section 4.15, *Effects Found Not to be Significant*.

b. Project Impacts and Mitigation Measures.

Impact HAZ-1 Future development facilitated by the Housing Element Update could expose future residents to potentially harmful chemicals and materials resulting from accidents along Pacific Coast Highway. However, existing regulations pertaining to the transportation of hazardous materials would reduce these impacts to a Class III, *less than significant* level.

Candidate Sites #1 and #2. The southern boundaries of Candidate Sites #1 and #2 abut PCH, a major hauling route within the City. An accident along this route involving the transportation of hazardous materials could create health hazards for future residents.

As discussed above, both the USEPA and the DOT regulate the transport of hazardous waste and material, including transport via highway. The USEPA administers permitting, tracking, reporting, and operations requirements established by RCRA. DOT regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act. This act administers container design, and labeling and driver training requirements. These established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste. Additionally, State and Local agencies enforce the application of these acts and provide coordination of safety and mitigation responses in the case that accidents involving hazardous materials occur. Enforcement of these acts and rapid response by local agencies would reduce hazardous materials transportation health hazards to a less than significant level. Additionally, setback requirements for multi-family zones would require 20% of the lot depth or 65 feet, whichever is less, between residential structures and the roadway (PCH). The front-yard setback requirement would further contribute to reducing the hazard to future residents from hazardous materials. Impacts associated with the transportation of hazardous materials along PCH would therefore be less than significant.

Candidate Site #7. Candidate Site #7 is located near Cross Creek Road and Civic Center Way, which are not major hauling routes. The closest major hauling route is PCH approximately 850 feet away. Land uses in the vicinity of Candidate Site #7 are primarily commercial and residential uses. Therefore, there are no roadways or facilities in the vicinity of Candidate Site #7 that would be likely to cause an accident involving the release of hazardous materials. Impacts to Candidate Site #7 would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned Multi-Family (MF) and Multi-Family Beachfront (MFBF). Some of the proposed policies, such as amendments to the Local Coastal Program (LCP) and Malibu Municipal Code (M.M.C.) to revise development standards pertaining to multi-family development, would allow for increased development on other existing multi-family zoned sites throughout the City. Increases in the development potential of these sites could expose new residents to hazardous materials resulting from accidents along PCH. In

addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO for these other parcels and therefore a detailed analysis of associated impacts is not possible. However, as discussed above, compliance with existing federal, state, and local laws regarding the transportation of hazardous materials would reduce impacts to a less than significant level. Furthermore, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Impact HAZ-2 Surficial soil on Candidate Sites #1 and #2 adjacent to PCH could contain aerially-deposited lead (ADL). Exposure to ADL could result in human health hazards for construction workers or future residents of these candidate sites. This would be a Class II, *significant but mitigable*.

Candidate Sites #1 and #2. The southern boundaries of Candidate Sites #1 and #2 abut PCH. According to the Preliminary Site Assessments, the proximity of Candidate Sites #1 and #2 to PCH indicates that there could be ADL in the soil. The presence of ADL could result in health risks to construction workers, and, if left in place, could result in adverse health risks to future residents. This is considered a potentially significant impact. Mitigation Measure HAZ-2 would be required to reduce impacts to a less than significant level.

Candidate Site #7. ADL was not identified as a potential Recognized Environmental Condition (REC) in the Preliminary Site Assessment prepared for Candidate Site #7. Candidate Site #7 is located approximately 850 feet from PCH. Therefore, health hazard impacts associated with ADL would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and MFBF. Some of the proposed policies, such as amendments to the LCP and M.M.C. to revise development standards pertaining to multi-family development, would allow for increased development on other existing multi-family zoned sites throughout the City. Increased development could expose new residents adjacent to PCH to health hazards resulting from ADL. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. However, future development on MF sites could be exposed to ADL. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be significant but mitigable.

Mitigation Measure. The following mitigation measure would be required to reduce potential human health impacts.

HAZ-2 **Aerially-Deposited Lead (ADL) Study.** Prior to issuance of grading permits on Candidate Sites #1 and #2 and other MF sites that apply the AHO adjacent to PCH, an ADL study must be performed by a qualified consultant. The ADL study shall include soil sampling to determine the presence of onsite lead concentrations, as well as a remediation plan if lead levels are detected above the hazardous material thresholds. If soil removal is required, the soil shall be hauled and disposed of by a transportation company licensed to transport hazardous material. In addition, the hazardous material shall be taken to a landfill or receiving facility licensed to accept hazardous waste. Documentation of the appropriate sampling, transportation and disposal must be prepared and include the volume of soil removed, where the material was moved to, and include soil profiling, and transportation and disposal manifests. The soil removal documentation shall be prepared for the property owner or other responsible party, with a copy submitted to the City of Malibu.

Significance After Mitigation. With implementation of Mitigation Measure HAZ-2, impacts related to contaminated soil would be reduced to a less than significant level.

Impact HAZ-3 **Development facilitated by the Housing Element Update, notably on Candidate Sites #1 and #2, may require the demolition of existing residential structures that could contain asbestos or lead based paints. The release of these materials has the potential to adversely affect human health and safety. However, existing regulations pertaining asbestos and lead-based materials would reduce these impacts to a Class III, *less than significant* level.**

Candidate Sites #1 and #2. The development of Candidate Sites #1 and #2 pursuant to the Housing Element Update may require the demolition of the existing residential structures on site, which, due to their age, could contain asbestos and/or lead. The removal of any asbestos and lead-containing materials would be required to comply with all pertinent existing rules and regulations, including SCAQMD Rule 1403, Asbestos Emissions from Demolition/Renovation Activities, which would minimize health hazards associated with these activities. In addition, future development on Candidate Sites #1 and #2 would have to comply with CalOSHA regulations regarding lead-based materials. California Code of Regulations, §1532.1, requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels do not exceed CalOSHA standards. Impacts would be less than significant.

Candidate Site #7. Because there are no existing structures located on Candidate Site #7, asbestos or lead-based paints were not identified as potential RECs in the Preliminary Site

Assessment prepared for Candidate Site #7. Therefore, health hazard impacts associated with asbestos or lead-based paint would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of the proposed policies, such as amendments to the LCP and M.M.C. to revise development standards pertaining to multi-family development, would allow for increased development on existing multi-family zoned sites throughout the City that could require the demolition of structures containing asbestos or lead-based paints. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites. However, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Impact HAZ-4 Candidate Site #7 in the Housing Element Update has the potential to contain onsite soil contamination due to the previous agricultural use of the site. Soil contaminated with pesticides could pose a health hazard to construction workers or future residents of the site. However, existing mitigation measures as prescribed by the La Paz EIR would reduce potential impacts to a Class III, *less than significant* level.

Candidate Sites #1 and #2. There are no known historical uses of Candidate Sites #1 or #2 for agricultural purposes. Therefore, there would be no impact regarding potential soil contamination with pesticides.

Candidate Site #7. The Preliminary Site Assessment (Appendix F) performed for Candidate Site #7 in 1999 determined that the site was previously used for agricultural purposes. Aerial photographs reviewed as part of the Preliminary Site Assessment indicate that row crops were planted on the site from at least 1928 through at least 1989. Therefore, pesticides could be present in the soil onsite. If Candidate Site #7 is developed, the presence of pesticides could result in health risks to construction workers, and if left in place, could result in adverse health risks to future occupants of the residential units. However, Candidate Site #7 has already undergone extensive environmental review on this issue for the La Paz Project (Final EIR SCH# 2003011131). This EIR required various mitigation measures that would require on-site testing to determine the presence or absence of hazardous substances. The La Paz EIR concluded that with implementation of prescribed mitigation measures, impacts would be less than significant.

Exposed soils, which could potentially contain hazardous materials, pesticides and/or other contaminants, could also be discharged into Malibu Creek during grading and excavation. This potential impact would be mitigated through required adherence to existing regulations

pertaining to construction activity storm water runoff. The National Pollution Discharge Elimination System General Plan requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre. The SWPPP requires specific actions, termed best management practices (BMPs), to control the discharge of pollutants, including sediment, into local surface water drainages, which would ensure that exposed soils are contained and nearby surface water bodies are not significantly impacted. Refer to Section 4.9, *Hydrology and Water Quality*, for further discussion.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and MFBF. Some of the proposed policies, such as amendments to the LCP and M.M.C. to revise development standards pertaining to multi-family development, would allow for increased development on other existing multi-family zoned sites throughout the City. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. However, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Impact HAZ-5 None of the candidate sites are identified on any public lists of hazardous materials sites subject to potential impacts associated with hazardous material release from nearby sites. Therefore, potential hazards resulting from hazardous material sites would be Class III, *less than significant*.

Candidate Sites #1 and #2. According to the Preliminary Site Assessments, neither Candidate Site #1 or #2 is listed on any of the databases searched for hazardous materials storage or releases. In addition, none of the adjacent properties were listed on the databases searched.

Two sites located within one-half mile of Candidate Sites #1 and #2 have environmental listings. Fire Station #71, located at 28722 West Pacific Coast Highway, is listed in the Historic UST database. However, this listing is not indicative of any hazardous materials release. Furthermore, groundwater flow from the Fire Station #71 flows southeast to south, and Candidate Sites #1 and #2 are located northeast of the Fire Station. Therefore, based on the nature of the listing and the groundwater flow direction, Fire Station #71 would not be expected to impact Candidate Sites #1 or #2.

The second site within one-half mile of Candidate Sites #1 and #2 that was identified in the database search is the Paradise Cove Land Company, located at 28128 Pacific Coast Highway. As shown in Table 4.7-1 above, this site is listed in several databases searched, including the

leaking UST database. According to the EDR report, the site has been a closed leaking UST site since February 13, 1998. Groundwater in the vicinity of the Paradise Cove site is anticipated to flow southeast to south. Based on the distance to the candidate sites, the case-closed status of the site, and the anticipated groundwater flow direction (away from the candidate sites), the Paradise Cove Land Company site is not expected to impact the sites. Impacts associated with hazardous materials sites on or in the vicinity of Candidate Site #1 and #2 would be less than significant.

Candidate Site #7. According to the Preliminary Site Assessment, Candidate Site #7 is not listed on any of the databases searched for hazardous materials storage or releases. The Malibu Sheriff's Station, located at 53555 Civic Center Way, directly adjacent to Candidate Site #7 is listed as a site on which a hazardous materials release has occurred. According to the EDR report, the site has been a closed leaking UST site since October 4, 1996. Furthermore, groundwater was not listed as an affected media. Due to the case-closed status of the site and the affected media (soil), the Sheriff's Station site is not expected to impact Candidate Site #7.

As shown in Table 4.7-2, ten other sites with environmental listings were identified within one-half mile of Candidate Site #7. Three of these sites, Land Mark Cleaners, Connies Kids, and Tomra Pacific Inc. are not listed as sites on which a hazardous materials release has occurred. Based on the nature of these listings, releases associated with Land Mark Cleaners, Connies Kids, and Tomra Pacific Inc. would not be expected to impact Candidate Site #7.

The other seven properties listed, including Cross Creek Shopping Center, GTE (Verizon) Malibu Plant Yard, Adamson Companies, Chevron Station No. 97774, Texaco Oil Corp., Union Oil #6267, and Malibu Colony Plaza, are located hydrologically cross-gradient or down-gradient of Candidate Site #7. Therefore, these seven sites would not be expected to impact Candidate Site #7. Impacts associated with hazardous materials sites on or in the vicinity of Candidate Site #7 would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned Residential MF and MFBF. Some of the proposed policies, such as amendments to the LCP and M.M.C. to revise development standards pertaining to multi-family development, would allow for increased development on other existing multi-family zoned sites throughout the City. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites. The potential for hazardous materials releases on or in the vicinity of future sites is speculative in nature and cannot be determined at this time. However, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Impact HAZ-6 **Future development facilitated by the Housing Element Update would not interfere with any adopted emergency response or evacuation plans. Furthermore, all new development pursuant to the Housing Element Update would be required to comply with LACFD access standards to provide adequate onsite access in the event of an emergency. Impacts related to emergency plans would be Class III, *less than significant.***

Candidate Sites #1, #2, and #7. Future development facilitated by the candidate sites would be located on existing parcels already designated for residential development within the City of Malibu and would not encroach on or obstruct any existing evacuation routes. All new development would be required to comply with existing fire codes and ordinances regarding emergency access, such as the widths, surfaces, vertical clearance, brush clearance, and allowable grades. Emergency access would be addressed during coastal development permit review and LACFD approval would be required as part of that review. Compliance with existing fire codes and ordinances would ensure that impacts to emergency response evacuation plans would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and MFBF. Some of the proposed policies, such as amendments to the LCP and M.M.C. to revise development standards pertaining to multi-family development, would allow for increased development on other existing multi-family zoned sites throughout the City. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). Any new development on future sites would be subject to LACFD standards regarding emergency access. Furthermore, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Impact HAZ-7 **Future development facilitated by the Housing Element Update would be located in a wildland fire hazard area, which could create a potential safety hazard. New development located on the candidate sites and other multi-family housing sites would be required to comply with existing regulations intended to minimize the potential effects associated with wildfires. This is considered to be a Class III, *less than significant impact.***

Candidate Sites #1, #2, and #7. The entire City of Malibu is designated as a Very High Fire Hazard Severity Zone. As such, all of the candidate sites are located in an area subject to wildfire. Future development within this area has the potential to increase the likelihood of

wildfire impacts in two ways: 1) increased human activity within the interface area could result in greater probability of the ignition of a fire; and 2) encroachment of new development into the high fire hazard areas would increase the risk that a wildfire would impact people and property.
The City has adopted the Los Angeles County Fire Code, Title 32 of the Los Angeles County Code, and the California Fire Code, Part 9 of Title 24 of the California Code of Regulations, to enforce fire safety within the city. Any project within the City of Malibu is required to comply with applicable codes and submit their plans to LACFD for review during the coastal development permit review stage of the development process. For projects located within a Very High Fire Hazard Severity Zone, such as the candidate sites, the preparation of a Fuel Modification Plan is also required by the LACFD. The Fuel Modification Plan for each site will identify the specific size and type of fuel modification zones required for that specific site, such as a setback zone, an irrigated zone, a thinning zone, or an interface thinning zone. Review and approval of the Fuel Modification Plan is required prior to the issuance of building permits.

The implementation of standard fire prevention measures and proper site design, as well as compliance with existing codes and ordinances would ensure that impacts resulting from fire hazards would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and MFBF. Some of the proposed policies, such as amendments to the LCP and M.M.C. to revise development standards pertaining to multi-family development, would allow for increased development other existing multi-family zoned sites throughout the City. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites. Any new development on future sites would be subject to the City of Malibu, County of Los Angeles, and California fire codes and regulations. Furthermore, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. None required.

Significance After Mitigation. Impacts associated with wildland fire hazards would be less than significant without mitigation.

c. Cumulative Impacts.

*Candidate Sites***.** Cumulative development in the City of Malibu includes the potential development of 212 units facilitated under the Housing Element Update along with 84 residential dwelling units and 748,460 square feet of non-residential development (see Table 3-1 in Section 3.0, *Environmental Setting*). Cumulative development within the City of Malibu could have the potential to place people in areas with risk of accidents involving hazardous materials, health hazards associated with hazardous materials, or wildland fires. The magnitude of hazards for individual projects would depend upon the location, type, and size of development

and the specific hazards associated with individual sites. Therefore, individual hazard evaluations would need to be completed on a case-by-case basis and impacts would be addressed based on site-specific conditions. In general, compliance with existing regulations pertaining to hazardous materials, health hazards associated with hazardous materials, and wildland fires, as discussed above, would generally minimize such impacts to a less than significant level. Potentially hazardous impacts associated with the Housing Element Update would be mitigated to a less than significant level or would be less than significant without mitigation. As a result, the Housing Element Update's contribution to cumulative impacts would not be considerable since impacts would be less than significant with mitigation and/or with implementation of existing regulations. Therefore, cumulative impacts would be less than significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative hazardous impacts when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. However, cumulative development would be subject to the development standards set forth in the LCP and/or M.M.C. The magnitude of hazards for individual projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Therefore, individual hazard evaluations would need to be completed on a case-by-case basis and impacts would be addressed based on site-specific conditions. In general, compliance with existing regulations pertaining to hazardous materials, health hazards associated with hazardous materials, and wildland fires, as discussed above, would generally minimize such impacts to a less than significant level. Therefore, cumulative impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

4.8 HYDROLOGY and WATER QUALITY

4.8.1 Setting

a. Existing Hydrology and Storm Drain Facilities. The City of Malibu is located within the Malibu Hydrologic Unit of the South Coastal Hydrologic area. Steep hillsides, valleys and canyons characterize this unit. Approximately 62 separate watersheds are present within the City. Larger watersheds, such as Malibu Creek, drain extended portions of the Santa Monica Mountains. The Malibu Creek watershed is the largest watershed within the Malibu Hydrologic Unit, encompassing approximately 115 square miles. Watershed elevations range from sea level at the coast to over 2,800 feet above sea level at Castro Peak in the Santa Monica Mountains. The only primary drainage courses near any of the project components is Malibu Creek. The entire Malibu Hydrologic Unit drains to the Santa Monica Bay, by way of streams, creeks and Malibu Lagoon.

Candidate Site #1. Candidate Site #1 is located in a rural sub-watershed of the Santa Monica Mountains within the North Santa Monica Bay watershed (LADPW, 2012). Candidate Site #1 is located approximately 1,600 feet west of Ramirez Canyon drainage and approximately 775 feet east of Walnut Canyon drainage (Malibu General Plan, 1995).

Existing topography varies from moderately steep slopes in the northern portion of the property, ranging from 15% to 49%, to gentle slopes in the southern portion, ranging from 0% to 15%. There is an ephemeral drainage onsite that traverses the eastern boundary of the property in a north-south direction. The drainage widens at the southern extent of the property, abutting Pacific Coast Highway (PCH). A culvert conveys ephemeral storm flows under PCH, where the drainage continues and ultimately ends at the Pacific Ocean, approximately 0.35 miles downstream (Rincon Consultants Inc., November 2012).

The majority of the site is undeveloped, with the exception of a single-family residence located on top of a slope on the western side of the property. There are no existing storm drain facilities. Candidate Site #1 is designated by the Federal Emergency Management Agency (FEMA) as Zone D, which indicates that flood hazards are undetermined, but possible (FEMA Map No. 06037C1518F, 2008). Figure 4.8-1a shows the flood zones for Candidate Sites #1 and #2. The candidate site is situated at elevations ranging from 100 to 200 feet above Mean Sea Level (MSL).

Candidate Site #2. Candidate Site #2 is located in a rural sub-watershed of the Santa Monica Mountains within the North Santa Monica Bay watershed (LADPW, 2012). Candidate Site #2 is located approximately 1,400 feet west of Ramirez Canyon drainage and approximately 1,200 feet east of Walnut Canyon drainage.

Existing topography varies from moderately steep slopes in the northern portion of the property, ranging from 15% to 49%, to gentle slopes in the southern portion, ranging from 0% to 15%. Drainage generally flows southwesterly, toward the ephemeral drainage on the adjacent western property (Candidate Site #1). The ephemeral drainage on the adjacent property widens at the southern extent of the property.

Imagery provided by ESRI and its licensors © 2012.
Additional data layers from Federal Emergency Management Agency National Flood Hazard Layer (NFHL), May, 2012.

Candidate Sites #1 and #2
FEMA Flood Hazard Zones

Figure 4.8-1a

The site is undeveloped, with the exception of a single-family residence located on top of a slope on the eastern side of the property. There are no existing storm drain facilities. However, onsite drainage flows toward the culverts located on the adjacent property, Candidate Site #1. Candidate Site #2 is designated by FEMA as Zone D, which indicates that flood hazards are undetermined, but possible (FEMA Map No. 06037C1518F, 2008). Figure 4.8-1a shows the flood zones for Candidate Sites #1 and #2. The site is situated at elevations ranging from 125 to 200 feet above MSL.

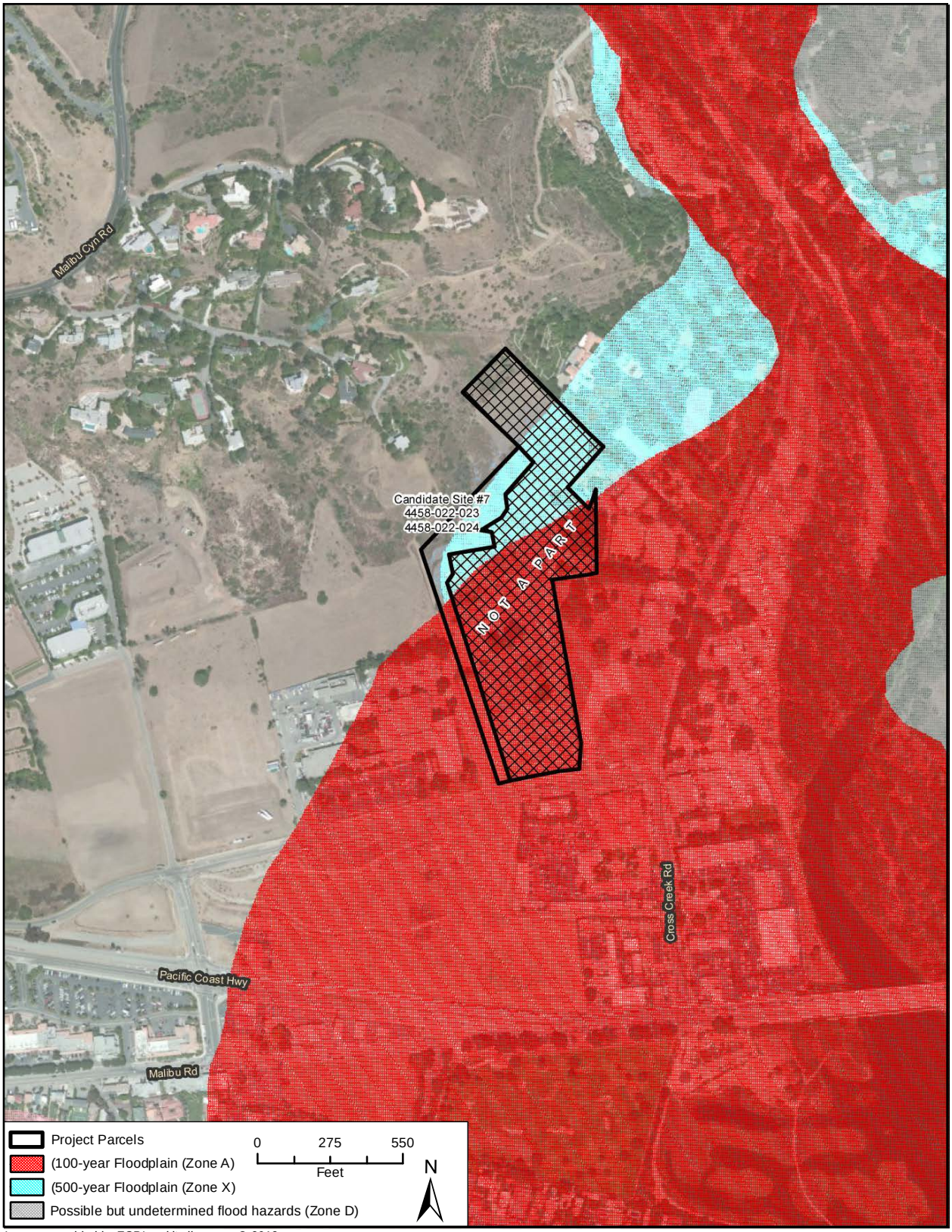
Candidate Site #7. Candidate Site #7 is located approximately 1,000 feet west of Malibu Creek and falls within the Malibu Creek Watershed. The Malibu Creek Watershed is part of the greater Northern Santa Monica Bay watershed. The Malibu Creek Watershed covers 109 square miles and drains into the Santa Monica Bay via Malibu Creek, which runs 25 miles through Malibu Creek State Park and Malibu Lagoon. The majority of this watershed is undeveloped public land.

Existing topography varies from steep slopes in the northern portion of the property ranging from 24% to 45% to gentle slopes in the southern portion ranging from 0% to 11%. Onsite drainage generally flows south-southeasterly. The site is currently undeveloped and there are no existing storm drain facilities onsite.

As shown on Figure 4.8-1b, Candidate Site #7 is located in designated FEMA flood hazard zones. The southern half of the site is located in Zone AO (depth two feet), which is defined as an area within the 100-year flood zone subject to flooding of up to two feet and flooding is generally characterized by sheet flow (FEMA Map No. 06037C1541F, 2008). Most of the northern half of the site is located in Zone X which is an area in the 500-year flood zone, an area in the 100-year flood zone with an average depth of less than 1 foot, or an area protected by levees from the 100-year flood. . A small portion of Candidate Site #7 located in the northwest region of the property is designated as Zone D which is an area in which flood hazards are undetermined, but possible. Figure 4.8-1b shows the Candidate Site #7 designated flood zones. The site is situated at elevations ranging from 15 to 20 above MSL.

b. Ground Water. According to the Malibu General Plan, the primary factors that affect the presence of groundwater in the Malibu area are seasonal and annual precipitation patterns, topography, soil and rock permeability, and faults. Many of the rock formations within the City are not conducive for holding groundwater. Groundwater can be found along the coast in alluvium, beach deposits, and terrace deposits at a depth of only a few feet, but depth of groundwater increases in the consolidated rock of inland areas and can reach several hundred feet. The dominant source of groundwater recharge in the City is groundwater flow from the upper portions of the watersheds. Other sources of recharge include more localized percolation of rainfall, streamflow, irrigation runoff, and onsite wastewater treatment system (OWTS) disposal (Malibu General Plan, 1995). Groundwater is not used as a source of water supply in Malibu due to the steep and impermeable nature of the small watersheds and the rapid runoff of low and variable rainfall.

Candidate Site #1. The site is located in the South Coast Hydrologic Region, which covers approximately 6.78 million acres of the southern California watershed that drains to the Pacific Ocean [California Department of Water Resources (DWR), 2003]. The South Coast



Imagery provided by ESRI and its licensors © 2012.
Additional data layers from Federal Emergency Management Agency National Flood Hazard Layer (NFHL), May, 2012.

Candidate Site #7
FEMA Flood Hazard Zones

Figure 4.8-1b

Hydrologic Region and has 56 delineated groundwater basins, but the site is not located in a delineated groundwater basin as groundwater is not a reliable source of water supply in the project area. The project area consists of non-water bearing Tertiary age rocks at the foothills of the Santa Monica Mountains (DWR, 2010), which inhibit groundwater recharge and retention.

Candidate Site #2. The site is located in the South Coast Hydrologic Region, but is not located in a delineated water basin as groundwater is not a reliable source of water supply in the project area. The project area consists of non-water bearing Tertiary age rocks at the foothills of the Santa Monica Mountains (DWR, 2010), which inhibit groundwater recharge and retention.

Candidate Site #7. Candidate Site #7 is located in the Malibu Valley Groundwater Basin, which is part of the South Coast Hydrologic Region. The Malibu Valley Groundwater Basin is a small alluvial basin located along the Los Angeles County coastline that is drained by Malibu Creek to the Pacific Ocean (DWR, 2010). Average annual rainfall in the Malibu Valley Groundwater Basin is about 16.5 inches. Recharge of the basin occurs through percolation of precipitation, runoff, and effluent from domestic OWTSs. Groundwater is not a reliable source of water in the Malibu Valley Groundwater Basin or the City of Malibu due to limited supply, seasonal and annual fluctuations, and seawater intrusion (Malibu General Plan, 1995). Groundwater is not extracted from the Malibu Valley Groundwater Basin and all known wells have been abandoned. Ground water onsite was encountered at relatively shallow depths varying from 8 to 29 feet across the property (La Paz Development Agreement EIR, 2008).

c. Regulatory Setting. The Malibu General Plan includes land use policies and implementation measures aimed at maintaining the quality of the community's water resources and reducing the impact of storm water runoff. Policies are directed toward maintaining the water quality; enhancing habitat values; protecting biological communities and preserving the natural hydrological patterns of the coastal canyons; and balancing the protection of private property rights with the protection of natural watersheds and their associated resources.

The Local Coastal Program (LCP) Land Use Plan (LUP) contains policies to protect the quality of the storm water runoff from developed areas, as found in LUP Policy 3.96:

> *New development shall not result in the degradation of the water quality of groundwater basins or coastal surface water including the ocean, coastal streams, or wetlands.*

The protection of water quality in the watercourses of Los Angeles County is under the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB). The RWQCB establishes requirements prescribing discharge limits and establishes water quality objectives through the Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit. The Standard Urban Storm Water Mitigation Plan (SUSMP), which is part of the MS4 Permit, addresses specific storm water pollution requirements for certain new development. As permittee, the City of Malibu is responsible for assuring that new development which meets the requirements in the LCP Local Implementation Plan (LIP) Section 17.3.3(A) are in compliance with the SUSMP, referred to as a Water Quality Mitigation Plan (WQMP) in the LCP. The City of Malibu recently obtained a new MS4 permit with new requirements. Future projects

facilitated by the Housing Element Update would be subject to the new MS4 permit requirements.

The SUSMP requires that certain development projects implement various control techniques (termed best management practices, or BMPs) to minimize the amount of pollutants entering surface waters. The following requirements apply to all new housing developments with ten or more unit homes within Malibu:

- *Peak Storm Water Runoff Discharge Rates: Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion.*
- *Conserve natural areas.*
- *Minimize storm water pollutants of concern.*
- *Protect slopes and channels.*
- *Provide storm drain system stenciling and signage.*
- *Properly design outdoor material storage areas.*
- *Properly design trash storage areas.*
- *Provide proof of ongoing BMP maintenance.*
- *Design standards for structural or treatment control BMPs.*

The City further implements policies for protecting surface water quality through its "City of Malibu Storm Water Management and Discharge Control Ordinance" (M.M.C. Chapter 13.04). Development standards under the LIP Chapter 3 (Zoning Ordinance) and LIP Chapter 17 (Water Quality Protection Ordinance) implement the policies of the LUP.

4.8.2 Impact Analysis

a. Methodology and Significance Thresholds. Appendix G of the *CEQA Guidelines* considers a project to have significant impacts if a project would:

1. *Violate any water quality standards or waste discharge requirements;*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;*
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;*
4. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;*
5. *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;*
6. *Otherwise substantially degrade water quality;*
7. *Place housing within a 100-year flood hazard area which would impede or redirect flood flows;*

8. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows;*
9. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or*
10. *Be subject to inundation by seiche, tsunami, or mudflow.*

Impacts to groundwater supply and recharge and levee or dam failure were found not to be significant. Further discussion of these issues can be found in Section 4.15, *Effects Found Not to be Significant*.

The Rational Method was used to calculate storm water runoff flow rates. According to the Hydrology Manual (Los Angeles County Department of Public Works, 2006), the Rational Method is the preferred method for small areas, which are defined as having a drainage area of 40 acres or less. The Rational Method uses the equation, Q = CIA, where Q is the volumetric flow rate in cubic feet per second (cfs), C is the Runoff Coefficient (dimensionless), I is the rainfall intensity at a given point in time in inches/hour, and A is the watershed area in acres. Calculations were performed using the Santa Barbara County Flood Control & Water Conservation District *Program Rational – XL Model* (1962), as calibrated to account for site-specific factors of the three candidate sites. Data for calculation inputs was derived from the Los Angeles County Department of Public Works' Hydrology Manual (2006) appendices. The Hydrology Manual (2006) also provides the proportion of impermeable surfaces for different land uses. According to the manual, in general, multi-family residential land uses, or high density residential land uses, such as those that would be developed under the Housing Element Update typically result in a 74% site impermeability. In other words, such land uses typically cover approximately 74% of the site with impermeable surfaces once constructed.

b. Project Impacts and Mitigation Measures.

Impact HWQ-1 Construction activities associated with future development facilitated by the Housing Element Update would potentially expose soils to erosion. As a result, the downstream watershed could be subject to temporary sedimentation and discharge of various pollutants. However, future development would be subject to state and local regulations, which would ensure that significant impacts do not occur. This would be a Class III, *less than significant*, impact.

<u>Candidate Sites #1 and #2</u>. Development facilitated by zoning modification to Candidate Sites #1 and #2 would require grading to re-contour the slopes and construct multi-family housing units. While grading activity would likely occur during the dry season, if large amounts of disturbed, bare soils are exposed during the rainy season, these soils could erode and discharge downstream during a storm event, resulting in sedimentation and degradation of water quality.

Regulations under the federal Clean Water Act and the State require construction activity that disturbs greater than one acre including development of Candidate Sites #1 and #2, to comply with the NPDES State General Construction Permit. The NPDES Permit requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that contains specific actions,

termed Best Management Practices (BMPs), to control the discharge of pollutants, including sediment, into local surface water drainages. A Notice of Intent (NOI) to perform work under the Permit must be filed with the State.

The preparation of a SWPPP requires the developer to select a suite of BMPs that are designed to specifically address the potential pollution risks that will be incurred during project construction. BMPs are selected from an approved list of documents (i.e., the California Storm Water BMP Handbook, the Caltrans Storm Water Handbook, Los Angeles County Watershed Management Database, the EPA database, and the ASCE database), which describe practices that have a proven track record of effectively preventing storm water pollution from construction sites. BMPs appropriate for construction activities are organized into four major categories:

1. *Erosion Control: Measures that prevent erosion and keep soil particles from entering storm water, lessening the eroded sediment that must be trapped, both during and at completion of construction*
2. *Sediment Control: Feasible methods of trapping eroded sediments so as to prevent a net increase in sediment load in storm water discharges from the site*
3. *Site Management: Methods to manage the construction site and construction activities in a manner that prevents pollutants from entering storm water, drainage systems or receiving waters*
4. *Materials and Waste Management: Methods to manage construction materials and wastes that prevent their entry into storm water, drainage systems, or receiving waters*

The BMPs to be implemented during construction would be developed as part of the SWPPP. Implementation of the SWPPP is the responsibility of the construction site contractor with oversight and inspection by the City and the RWQCB, as development on each candidate site would exceed one acre of disturbed area. Full realization of the specific measures in the SWPPP would comply with NPDES General Construction Permit requirements.

Furthermore, in accordance with LIP Section 17.3.1, development of Candidate Sites #1 and #2 would require a Local Storm Water Pollution Prevention Plan (SWPPP). These regulations apply to all development that requires a Coastal Development Permit and a grading or building permit. The SWPPP must include construction BMPs to prevent contamination of runoff by construction chemicals and materials.

Compliance with these regulations would ensure that water quality impacts related to construction activities are less than significant.

Candidate Site #7. Development facilitated by the rezoning of Candidate Site #7 would require grading to re-contour the slopes and construct multi-family housing. Construction related erosion and sedimentation could have adverse effects on the nearby Malibu Creek watershed. While grading activity would likely occur during the dry season, as required by LIP Chapter 8.4, if large amounts of disturbed, bare soils are exposed during the rainy season, these soils could erode and discharge downstream into the Malibu Creek Watershed during a storm event, resulting in sedimentation and degradation of water quality. However, as discussed above, the project site is larger than one acre and regulations under the federal Clean Water Act

and the State require construction activity that disturbs greater than one acreto comply with the NPDES State General Construction Permit. Development of a SWPPP would also be required. Compliance with these regulations would ensure that water quality impacts related to construction activities are less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family (MF) and Multi-Family Beachfront (MFBF). Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on water quality due to erosion or sedimentation, as these would not result in direct physical ground disturbances or pollutant runoff. However, certain policies would have the potential to impact local watersheds.

Amendments to the Malibu Municipal Code (M.M.C.) and LCP to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, to increase the total maximum impermeable coverage allowance per parcel, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would have the potential to affect water quality because they would allow for additional ground disturbance beyond that currently permitted, which could increase sedimentation and pollutant discharge resulting from storm water runoff. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). Any future multi-family project pursuant to the proposed programs and policies exceeding one-acre in size would similarly be subject to the regulations pertaining to storm water as discussed above, which would ensure impacts are reduced to a less than significant level. Moreover, as multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No mitigation measures are required.

Impact HWQ-2 Future development facilitated by the Housing Element Update would increase the amount of impermeable surfaces onsite, thereby increasing storm water runoff flows. An increase in storm water runoff flows could increase flows into nearby creeks and drainages, exceed drainage infrastructure capacity, or alter wetlands. However, existing City of Malibu policies and regulations would ensure that significant impacts do not occur. Impacts would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. The Housing Element Update would facilitate the development of multi-family housing on each of the candidate sites. Full build-out of these sites would include the construction of multi-family units, parking spaces, walking paths, driveways

and access roads; all of which would decrease the amount of permeable surface onsite. Currently, the three sites are primarily undeveloped and thereby predominantly pervious, with the exception of a single-family home located on each of Candidate Sites #1and #2. A single culvert is present on Candidate Site #1 that provides outlet for the existing onsite ephemeral drainage, but no other storm water infrastructure is present on any of the candidate sites. The culver extends under the PCH in a northwest-southwest orientation.

The Rational Method was used to calculate the increase in storm water flows subsequent to the development of the candidate sites. Conservatively, the existing condition of each site was assumed to be 100% permeable. Because no specific multi-family residential project is proposed at this time on any of the candidate sites, the LA County Public Works Hydrology Manual's (2006) general approximation for a multi-family land use was used, which assumes that multi-family projects cover approximately 74% of a given site with impermeable surfaces.

The existing runoff flow rate from Candidate Site #1 is estimated to be 18 cubic feet per second (cfs) of water in a 50-year storm event. A 74% increase in impermeable surfaces resulting from multi-family residential development as facilitated by the proposed Affordable Housing Overlay District (AHO) would yield a runoff flow rate of 19 cfs. The increase in runoff flow resulting from development of Candidate Site #1 with a multi-family use would be approximately 1 cfs.

The existing runoff flow rate from Candidate Site #2 is estimated to be 10 cfs of water in a 50-year storm event. A 74% increase in impermeable surfaces resulting from multi-family residential development as facilitated by the proposed zoning modification would yield a runoff flow rate of 11 cfs. The increase in runoff flow resulting from development of Candidate Site #2 with a multi-family use would be approximately 1 cfs.

The existing runoff flow rate from Candidate Site #7 is estimated to be 8 cfs of water in a 50-year storm event. A 74% increase in impermeable surfaces resulting from multi-family residential development as facilitated by the proposed AHO would yield a runoff flow rate of 8 cfs. There would be no measureable increase in runoff flow rates resulting from development of Candidate Site #7 with a multi-family use.

Future development on these candidate sites would be subject to the policies and regulations of the Malibu General Plan, LCP, and M.M.C., including an approved storm water management plan for the specific project (M.M.C. Section 13.04.100(A)). According to M.M.C. Section 13.04.100(A), "Prior to issuance of a building permit for any new development (on undeveloped land) or final map approval for any subdivision of property the applicant shall be required to obtain approval of a storm water management plan from the department of public works and the department of environmental and building safety" to mitigate increased storm water runoff. The storm water management plan for the project must incorporate the following elements:

1) *Construction erosion control, as required under M.M.C. Title 15, building regulations of the code.*
2) *Storm drainage improvement measures to mitigate any offsite/downstream negative impacts due the proposed development. This includes, but not limited to:*

a) Mitigating increased runoff rate due to new impervious surfaces through onsite detention such that peak runoff rate after development does not exceed the peak runoff of the site before development for the one hundred (100) year clear flow storm event (note; Q/100 is calculated using the Caltrans Nomograph for converting to any frequency, from the Caltrans "Hydraulic Design and Procedures Manual"). The detention basin/facility is to be designed to provide attenuation and released in stages through orifices for two-year, ten (10)-year and one hundred (100)-year flow rates, and the required storage volume of the basin/facility is to be based upon one-inch of rainfall over the proposed impermeable surfaces plus one-half-inch of rainfall over the permeable surfaces. All onsite drainage devices, including pipe, channel, and/or street and gutter, shall be sized to cumulatively convey a one hundred (100) year clear flow storm event to the detention facility,

b) Demonstrating by submission of hydrology/hydraulic report by a registered engineer that determines entire downstream storm drain conveyance devices (from candidate site to the ocean outlet) are adequate for twenty-five (25)-year storm event,

c) Constructing necessary off-site storm drain improvements to satisfy subsection (2)(b) of this section, or

d) Other measures accomplishing the goal of mitigating all off-site/downstream impacts.

3) Storm drain pollution prevention measures including all construction elements and best management practices (BMP's) to address the following goals in connection with both construction and long-term operation of the site:

a) Maximize, to the extent practicable, the percentage of permeable surfaces in order to allow more percolation of runoff into the ground,and

b) Maximize, to the extent practicable, retention of dry-weather runoff on-site to allow percolation into the ground, or installation of other treatment measures thereby preventing pollutants from entering the storm drain system.

4) The city's evaluation of the storm water management plan will ascertain how well the proposed plan meets the combined objectives set forth above. In addition, the city will analyze the watershed characteristics and land uses, and estimate water quality requirements for each project. Each plan will be evaluated on its own merits according to the particular characteristics of the project and the site to be developed.

5) The storm water management plan shall be approved or disapproved by the director of public works and the director of building and safety (or their designees) within twenty-one (21) calendar days following submittal. If the plan is disapproved, the reasons for disapproval shall be given in writing to the applicant.

Adherence to all applicable requirements listed above and found in the M.M.C. and the Los Angeles County NPDES permit, as well as applicable policies in the Malibu General Plan and LIP regarding development adjacent to creeks (see Section 4.3, *Biological Resources,* and Section 4.8, *Land Use and Planning,* for discussions of the policies and development standards) would ensure that post-project storm water runoff flows do not exceed existing storm water runoff flows, thereby ensuring that downstream facilities and creek capacities are not exceeded, substantial erosion and siltation does not occur, and runoff flows do not result in downstream flooding. These regulations would also ensure that appropriate storm water conveyance facilities are constructed to accommodate anticipated storm water flows. In addition, the City of

Malibu has standard conditions of approval pertaining to stormwater runoff. Future development projects on Candidates Sites #1, #2, and #7 would be subject to these standard conditions, which would further minimize stormwater impacts. Storm water runoff impacts resulting from increased impermeable surfaces associated with the future development of Candidate Sites #1, #2, and #7 would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on storm water runoff flows, as these would not result in direct physical ground disturbances. However, certain policies would have the potential to increase storm water runoff flows. Amendments to the LCP and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, to increase the total maximum impermeable coverage allowance per parcel, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would allow for additional ground disturbance and impermeable surfaces beyond that currently permitted, which could increase storm water flows. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). However, any future multi-family project pursuant to the proposed programs and policies would similarly be subject to the regulations pertaining to runoff as discussed above, which would ensure impacts are reduced to a less than significant level. Moreover, as multi-family residential projects are proposed in the future throughout the City, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact HWQ-3 Future development facilitated by the Housing Element Update could adversely affect surface water quality due to increased storm water runoff, which can include pollutants such as oil, pesticides, herbicides, and effluent. However, existing City of Malibu regulations would ensure that significant impacts do not occur. Impacts would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Development that could be facilitated on the proposed candidate sites would increase impermeable surfaces, such as multi-family residential units, sidewalks, roads, parking lots, and driveways. These surfaces would accumulate deposits of oil, grease, and other vehicle fluids, hydrocarbons and heavy metals. Other sources of water quality degradation include pet waste, trash and other debris. During storms, these deposits could be washed into and through the ephemeral drainage on Candidate Site #1 (via Candidate

Sites #1 and #2) and/or Malibu Creek (via Candidate Site #7) and ultimately to the Pacific Ocean.

Urban runoff can have a variety of deleterious effects. Oil and grease contain a number of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Heavy metals such as lead, cadmium, and copper are the most common metals found in urban storm water runoff. These metals can be toxic to aquatic organisms, and have the potential to contaminate drinking water supplies. Nutrients from fertilizers, including nitrogen and phosphorous, can result in excessive or accelerated growth of vegetation or algae, resulting in oxygen depletion and additional impaired uses of water. Therefore, the potential increase in urban pollutants in runoff from development facilitated by the proposed rezone of Candidate Sites #1, #2, and #7 would have potentially significant impacts to surface water quality.

Future development on all three Candidate Sites would be subject to the City's stormwater quality regulations. Water quality objectives would be addressed through both source control and treatment control measures. Source control measures that may be used for development on of Candidate Sites #1, #2, and #7 include those that are required by the SUSMP, such as conserving natural areas, minimizing storm water pollutants of concern, protecting slopes and channels, providing storm drain stenciling and signage, properly designing and constructing outdoor material and refuse storage areas, and properly designing and constructing parking lots.

In addition to source control measures, treatment control measures would be addressed and incorporated as appropriate through a Storm Water Management Plan, which is required for all new development, including development on all three candidate sites, per M.M.C. Section 13.04.100(A). In addition, per LIP Section 17.3.3, a Water Quality Mitigation Plan would be required. These requirements are described under Impact HWQ-2. Treatment Control BMPs would remove the pollutants of concern from runoff before leaving the sites. Treatment Control BMPs can include any of the following (or combination thereof):

- *Catch basin filters*
- *Proprietary treatment devices placed in the main storm drain infrastructure*
- *Grass swale filters*
- *Extended impoundment facilities that allow sedimentation of pollutants to occur*

The requirements of the Storm Water Management Plan, although pertaining to storm water runoff flows, would provide the co-benefit of also reducing impacts to water quality by reducing overall storm water runoff flows.

M.M.C. Section 13.04.110(B)(4) identifies numerical design criteria for new development projects within the City. The post-construction treatment control BMPs for all projects must incorporate, at a minimum, either a volumetric or flow based treatment control design standard, or both, as identified below to mitigate (infiltrate, filter or treat) storm water runoff:

1) *Volumetric Treatment Control BMPs*
   a) *The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban*

Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or

b) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook - Industrial/Commercial, (1993); or

c) The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system; or

d) The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" (0.75-inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

2) Flow Based Treatment Control BMPs

a) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

b) The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for Los Angeles County; or

c) The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

In addition, the City of Malibu has standard conditions of approval pertaining to stormwater runoff. Future development projects on Candidates Sites #1, #2 and #7 would be subject to these standard conditions, which would further minimize water quality impacts. Impacts to water quality would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no impact on the water quality of surface runoff, as these would not result in direct physical ground disturbances. However, certain policies would have the potential to increase storm water runoff flows.

Amendments to the LCP and the M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per parcel, to increase the total maximum impermeable coverage allowance per parcel, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would allow for additional ground disturbances and impermeable surfaces beyond that currently permitted, which could increase onsite pollutants and affect surface runoff water quality. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). Any future multi-family project pursuant to the proposed programs and policies would similarly be subject to the regulations pertaining to storm water as discussed above, which would ensure impacts are reduced to a less than significant level. Moreover, as multi-family residential projects are proposed in the future throughout the City, they would be subject to individual project review and approval by the City, wherein any project specific

impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact HWQ-4 **Future development facilitated by the Housing Element Update could adversely affect surface water quality due to the use of onsite wastewater treatment systems. However, existing City of Malibu regulations would ensure that significant impacts do not occur. Impacts would be Class III, *less than significant*.**

Candidate Sites #1, #2, and #7. Any development facilitated by the proposed AHO would utilize OWTSs or similar package plants. Operation of a private OWTS could result in the release of untreated effluent in to the soil and surface water unless properly designed and implemented. Improperly treated effluent from Candidate Sites #1 and #2 could wash away with surface water and drain into nearby watersheds and improperly treated effluent from Candidate Site #7 could drain into habitat associated with Malibu Creek. Improperly treated effluent contains bacteria and other compounds that would be harmful to the sensitive creak ecosystem. However, incorporation of all City, County, and State requirements and compliance with all existing regulations in regard to OWTS would reduce impacts to less than significant. Specifically, LIP Section 18.4(J) and M.M.C. Section 15.14.030(B) stipulate that all new, modified, and expanded OWTS must apply for and obtain an OWTS operating permit. Furthermore, the M.M.C. also stipulates that OWTS for multi-family developments are subject to wastewater discharge requirements/permits issued by the RWQCB (M.M.C. Section 15.14.030(F)). The RWQCB discharge permit would ensure that the system meets water quality standards. A discharge permit from the RWQCB must be obtained before the City will issue a permit to operate for a new OWTS or similar package plant.

Through Resolution R4-2009-007, the Los Angeles Regional Water Quality Control Board (RWQCB) has issued a prohibition on new OWTS discharges in the City's Civic Center area. The RWQCB ban excludes certain properties that have already been identified for development within the Civic Center Area (as listed in Table 4-zz of Resolution R4-2009-007), including Candidate Site #7, which is referred to in the resolution as "3700 La Paz Lane" (RWQCB, 2009)[1].

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. The proposed policies would not result in physical changes that would result in the increased use or expansion of OWTSs. However, in addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). Future development that would require the use or expansion of an existing OWTS would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed.

[1] *Since the adoption of the Resolution, this site has been re-addressed to 23465 Civic Center Way.*

Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact HWQ-5 **Future development facilitated by the Housing Element Update, specifically on Candidate Site #7, would place housing and structures within a FEMA-designated flood zone and could impede or redirect flood flows. However, compliance with existing City of Malibu regulations regarding construction in flood zones would reduce impacts to a Class III, *less than significant*, level.**

Candidate Sites #1 and #2. Candidate Sites #1 and #2 are located in FEMA-designated flood Zone D. This flood zone is not considered a "Special Flood Hazard Area," per M.M.C. Section 15.20.040. Therefore, there would be no flood hazard impacts for Candidate Sites #1 or #2, nor would people and housing would not be exposed to flood hazards.

Candidate Site #7. The southern portion of Candidate Site #7 is located within FEMA-designated Zone AO (see Figure 4.8-1b). The M.M.C. identifies Zone AO as a "Special Flood Hazard Area (SFHA)." Construction of multi-family housing and associated structures within the SFHA could impede or redirect flood flows. However, any construction within Zone AO is subject to the regulations set forth in M.M.C. Chapter 15.20. Specifically, all development within Zone AO would be required to obtain approval from the City's Public Works Department prior to construction. Furthermore, development in Zone AO would be required to comply with building standards set forth in LIP Section 9.4(H) and M.M.C. Section 15.20.100, which requires adequate drainage paths around structures to guide flood waters around and away from proposed structures and that the lowest floor level be elevated at least one foot above the flood elevation. Compliance with the existing City regulations regarding construction of buildings within a SFHA would reduce flood impacts to a less than significant level and ensure that people and housing would not be exposed to flood hazards.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. The proposed policies would not result in physical changes that would impede or redirect flood flows in FEMA-designated flood zones. However, in addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). Existing policies and regulations regarding construction in SFHAs would be applicable to any future multi-family residential project pursuant to the Housing Element Update. Future development within the City located in flood zones would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact HWQ-6 **The candidate sites are located at elevations above the run-up heights for tsunamis or seiches and proposed programs and policies of the Housing Element Update would not increase exposure to such hazards. Potential impacts due to inundation from a tsunami or seiche event would be Class III, *less than significant*.**

Candidate Site #1. The elevation of Candidate Site #1 ranges from 100 to 200 feet above MSL. Tsunami or seiches in the Santa Monica Bay would have a run-up height of up to 12 feet above Mean Lower Low Water (the average of the lowest sea water tidal levels)(General Plan EIR, 1995; CGS, 2009). The candidate site elevation would be well above the tsunami or seiche inundation line. There would be no impacts due to tsunami or seiche at Candidate Site #1.

Candidate Site #2. The elevation of Candidate Site #2 ranges from 125 to 200 feet above MSL. Tsunami or seiches in the Santa Monica Bay would have a run-up height of up to 12 feet above Mean Lower Low Water (General Plan EIR, 1995, CGS, 2009). The candidate site elevation would be well above the tsunami or seiche inundation line. There would be no impacts due to tsunami or seiche at Candidate Site #2.

Candidate Site #7. The elevation of Candidate Site #7 ranges from 15 to 20 feet above MSL. Tsunami or seiches in the Santa Monica Bay would have a run-up height of up to 12 feet above Mean Lower Low Water (General Plan EIR, 1995; CGS, 2009). The candidate site elevation would be more than three feet above the tsunami or seiche inundation line, as Mean Lower Low Water is lower than MSL. Impacts due to tsunami or seiche at Candidate Site #7 would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. The proposed policies would not increase exposure risks beyond existing conditions, but rather modify the development standards for future multi-family residential projects within the City. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). Future development within the City located in tsunami zones would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed. Existing policies and regulations regarding construction in tsunami and seiche inundation areas would remain the same. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

c. Cumulative Impacts.

Candidate Sites.

Storm Water Runoff**.** As shown in Table 3-1 in Section 3.0, *Environmental Setting*, 84 residential units and 748,460 square feet of non-residential development are approved or pending within the City, in addition to the development that could be facilitated by the Housing Element Update. Cumulative development would generally increase impermeable surface area, presuming such development occurs on vacant lots, thereby potentially increasing peak flood flows and overall runoff volumes. However, both the City of Malibu and the County of Los Angeles Department of Public Works-Watershed Management regulations require that post-development peak discharges be reduced to or below pre-development peak discharge rates for individual developments. Cumulative development would similarly be subject to these regulations. In addition, as discussed above, the project would result in less than significant impacts to stormwater runoff and therefore its contribution to cumulative impacts would not be considerable. Therefore, cumulative impacts would be less than significant.

Water Quality. Construction activity associated with cumulative development would increase sedimentation relating to grading and construction. In addition, new development would increase the generation of urban pollutants that may adversely affect water quality in the long term. However, certain future development would be subject to implementation of appropriate BMPs in accordance with MS4 permit and SUSMP requirements. The MS4 Permit and the SUSMP are specifically designed to develop, achieve, and implement a timely, comprehensive, and cost-effective storm water pollution control program. The ultimate goal is to reduce pollutants in Los Angeles County storm water discharges to the maximum extent practicable. Cumulative development would similarly be subject to these regulations. In addition, as discussed above, the project would result in less than significant impacts to water quality and therefore its contribution to cumulative impacts would not be considerable. Therefore, cumulative impacts would be less than significant.

The use of OWTSs associated with cumulative development could result in water quality impacts. Operation of private OWTSs and/or package plants could result in the release of untreated effluent in to the soil and surface water unless properly designed and implemented. Improperly treated effluent from cumulative projects could wash away with surface water and into area drainages and watersheds. However, incorporation of all City, County, and State requirements and compliance with all existing regulations in regard to OWTS would reduce cumulative impacts. In addition, as discussed above, the project would result in less than significant impacts related to the use of OWTS and therefore its contribution to cumulative impacts would not be considerable. Therefore, cumulative impacts would be less than significant.

Flooding. Cumulative development may potentially increase runoff volumes that could contribute to increased flood volumes. However, planned and pending development would be required to comply with the existing floodplain management and storm water discharge regulations in the LCP and M.M.C., if such development is located in a flood zone. As discussed above, the project would result in less than significant impacts related to flooding and therefore

its contribution to cumulative impacts would not be considerable. Therefore, cumulative impacts would be less than significant.

Tsunamis and Seiche. Cumulative development could incrementally increase exposure to tsunami hazards. However, the proposed candidate sites are not located in the tsunami run-up zone and therefore its contribution to cumulative impacts would not be considerable. Future cumulative development within the City located in tsunami zones would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed. Existing policies and regulations regarding construction in tsunami and seiche inundation areas would remain the same. Therefore, cumulative impacts would be less than significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards.

This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative hydrology and water quality impacts when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. However, cumulative development would be subject to existing regulations described in detail above. The magnitude of impacts for individual projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Therefore, individual evaluations would need to be completed on a case-by-case basis and impacts would be addressed based on site-specific conditions. In general, compliance with existing regulations pertaining to hydrology and water quality would generally minimize such impacts to a less than significant level. Therefore, cumulative impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

This page intentionally left blank.

4.9 LAND USE and PLANNING

4.9.1 Setting

a. Land Use Patterns.

Citywide Land Use. Land use patterns vary considerably throughout the City. Commercial and residential development flanks Pacific Coast Highway (PCH) from Topanga to Point Dume. The Malibu Civic Center, located at the base of Malibu Canyon, and Point Dume Plaza, at the intersection of Heathercliff Road and PCH, contain the major commercial areas. The balance of the City generally consists of residentially zoned lots in small clusters of approximately 10,000 square feet to an acre in size; mid-sized parcels of 2, 5, and 10 acres and large parcels exceeding 20 acres on the coastal slopes throughout the City, and up to 100 acres in the extreme western portion of the City.

Land Uses in the Site Vicinity.

Candidate Sites #1 and #2. Candidate Sites #1 and #2 are located adjacent to each other at 28517 PCH and 28401 PCH, respectively. Candidate Site #1 is comprised of two separate parcels: 28517 PCH and an unaddressed parcel (APN 4467-013-022). Both sites front PCH, which borders the sites to the southeast. Candidate Site #1 is 5.8 acres (3.66 developable acres) and Candidate Site #2 is 3.25 acres (2.59 developable acres) and both are zoned Multi-Family Residential (MF) (6 dwelling units/acre). The overall topography of both sites is relatively flat, with moderate to steep slopes along the northeastern edge of Candidate Site #1 and the northwestern edge of Candidate Site #2. Properties surrounding both sites have similar topography, consisting of moderately sloped hills with a trend of increasing elevation heading north toward the Santa Monica Mountains. The base of the Santa Monica Mountains is approximately one mile north of the two candidate sites.

Candidate Sites #1 and #2 are primarily undeveloped with the exception of one single family residence on each site. Candidate Site #1 contains wetlands (see Section 4.3 Biological Resources) grassland, scrub brush, southern California black walnut woodland, native and ornamental woodland. Candidate Site #2 contains grassland, eucalyptus woodland, and ornamental woodland.

Surrounding land uses are primarily comprised of residential uses, including multi-family and rural residential development. Directly adjacent to the sites to the east and west are existing condominium housing developments. Development to the north and south of the sites consists of lower density rural residential housing units. Across PCH to the southeast resides a mobile home park. According to the Conservation Element of the Malibu General Plan (November 1995) and the Local Coastal Program (LCP) Land Use Plan (LUP), there are no scenic resources on or within the vicinity of Candidate Sites #1 and #2.

Candidate Site #7. Candidate Site #7 encompasses approximately 2.3 acres of a larger 15.2 acre site and is located at 23465 Civic Center Way, approximately 6.5 miles east of Candidate Sites #1 and #2. All 2.3 acres of Candidate Site #7 are developable. Candidate Site #7 is located within the Civic Center and is adjacent to the Los Angeles Superior Court Malibu Courthouse, the Los Angeles District Attorney, and the Malibu Library. PCH is located

approximately 0.15 mile to the south of Candidate Site #7. The overall topography of the site is relatively flat, with some moderate slopes near the northern portion of the property. Surrounding topography is similar, with a trend of increasing elevation heading north toward the Santa Monica Mountains.

Candidate Site #7 is currently undeveloped. Several scattered trees are located onsite, while the rest of the site is mostly covered by shrubs and grassland. The remaining 12.9 acres of the Candidate Site #7 are approved for commercial retail and office space development (known as the La Paz Project). Surrounding land uses within the vicinity include Commercial, Institutional, and Rural Residential. Directly adjacent to the site to the west is a parcel zoned Institutional, containing the County buildings described above. The site is surrounding by commercial development to the south, east and west, and residential development to the north. Additionally, properties currently occupied by single family development are located approximately 500 feet north of the site.

Current Land Use at the Project Site.

Candidate Sites #1 and #2. Candidate Site #1 is 5.8 acres and Candidate Site #2 is 3.25 acres. Both sites are primarily undeveloped with the exception of one single family residence on each site. Candidate Sites #1 and #2 are currently zoned MF (6 units/acre).

Candidate Site 7. Candidate Site #7 is 2.3 acres of currently undeveloped land. Candidate Site #7 is within the Town Center Overlay District (TCO). Figures 4.9-1 and 4.9-2 show the existing and surrounding Land Use and Zoning designations, respectively.

b. Regulatory Setting. All of the candidate sites are within the jurisdiction of the City of Malibu, and are entirely within the City's Coastal Zone. Development in Malibu is subject to the City's General Plan, adopted in 1995; the LCP, adopted in 2002; and the Malibu Municipal Code (M.M.C.).

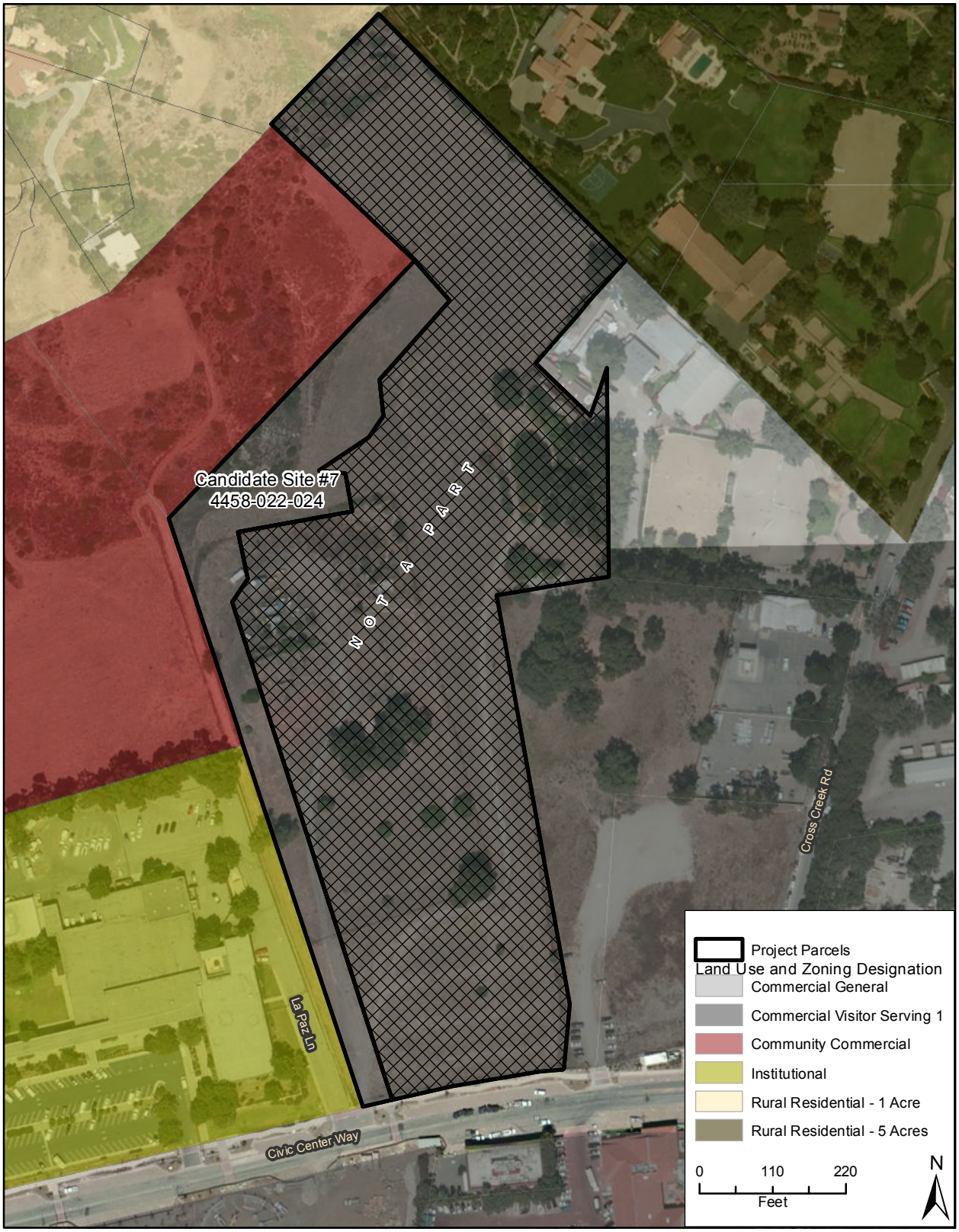
City of Malibu General Plan. Housing developments in Malibu are subject to the policies of Malibu's General Plan (1995), which is the City's primary tool for directing growth and development consistent with the goals, objectives and policies for achieving the overall vision for the City of Malibu. The section most applicable to the proposed project is the *Land Use Element,* which designates the distribution, location, and extent of the various land uses throughout the City.

Local Coastal Program. Since the City is located within the Coastal Zone, the project is also subject to the LCP LUP and Local Implementation Plan (LIP) in compliance with the California Coastal Act (1976). The LUP includes policies, maps and designations for the various permitted land uses within the City and the LIP includes the implementation measures. According to the LCP, Candidate Sites # 1 and #2 are designated as MF and Candidate Site #7 is designated as being within the TCO. As discussed in the LCP:

> *The MF designation provides for multi-family residential developments, such as duplexes, condominiums, stock cooperatives, and apartments. The MF designation allows a maximum density of six units per acre on a minimum lot size of 20,000 square feet. Public open space and recreation may be permitted.*

Imagery provided by ESRI and its licensors © 2012.
Additional data provided by Los Angeles County Assessor, August, 2010.

Candidate Sites #1 and #2
Existing LCP Land Use and Zoning Designations Figure 4.9-1a



Imagery provided by ESRI and its licensors © 2013.
Additional data provided by Los Angeles County Assessor, August, 2010.

Candidate Site #7
Existing LCP Land Use and Zoning Designations Figure 4.9-1b

The TCO meets the intent of LUP Policy 5.17 to provide specific development criteria for parcels within the Civic Center Area. These include land use designations and permitted uses; maximum density and intensity standards, including floor area ratios for commercial use not to exceed the maximum floor area ratio currently allowed pursuant to the LUP where public benefits and amenities are provided as part of the project; development standards, including heights, lot coverage, setbacks, and open space requirements; and provisions for shared or consolidated parking areas.

The provisions of the TCO shall apply to the 15.2 acre site currently identified as Los Angeles County Assessor Parcel Numbers 4458-022-023 and 4458-022-024. The site, currently addressed as 3700 La Paz Lane, is surrounded by a largely undeveloped hillside to the northwest, a single-family residence to the northeast, vacant land directly to the east, commercial uses the future Malibu Legacy Park site across Civic Center Way to the south and the Los Angeles County government building complex to the west as indicated on the Overlay Map.

Implementing measures establish the specific uses and development standards for the commercial development of the site. The TCO will help guide development toward a "town center" that is geographically centrally located, that provides interdependent uses thereby minimizing trips and enhances the existing civic center uses and permanently establishes a City Hall in the Civic Center.

Where any policy or standard provided in this chapter conflicts with any other policy or standard contained in the City's General Plan, Zoning Code or other City-adopted plan, resolution or ordinance not included in the LCP, and it is not possible for the development to comply with both the TCO and other plan, resolution or ordinance, the policies, standards or provisions contained herein shall govern.

Malibu Municipal Code. The City of Malibu's zoning regulations are contained in Title 17 of the M.M.C. The zoning regulations are designed to guide the growth and development of the City in an orderly manner consistent with the land use and environmental goals and policies of the City. Design and development standards are specified for each designated zone requiring projects within these zones to be consistent with the outlined standards.

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds. This evaluation is based on review of existing information that has been developed for the candidate sites and other available sources. Under Appendix G of the *CEQA Guidelines*, a project is considered to have potentially significant land use impacts if it would:

1. *Physically divide an established community;*
2. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or*
3. *Conflict with any applicable habitat conservation plan or natural community conservation plan.*

The Housing Element Update would allow increased density multi-family development on Candidate Sites #1, #2, and #7, which are located within developed areas of the City. This would not physically divide an established community, as discussed in Section 4.15, *Effects*

Found Less Than Significant. In addition, Candidate Sites #1, #2, and #7 are not located within any applicable habitat conservation plan or natural community conservation plan, as discussed in Section 4.15 *Effects Found Less Than Significant.*

The following discussion provides an analysis of the proposed project's consistency with applicable policies and regulations of the General Plan, LCP and M.M.C. Anticipated physical impacts of the project that may affect neighboring land uses, such as aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, noise, population and housing, public services, transportation, and utilities, are discussed in their respective sections of this EIR. The final determination regarding a project's consistency with policies rests with the Planning Commission and/or City Council, as the decision-makers for the City of Malibu (i.e., the lead agency) on this project.

Impact LU-1 Development facilitated by the Housing Element Update would be consistent with General Plan land use policies. This would be a Class III, *less than significant,* impact.

As discussed in Section 2.0, *Project Description*, the proposed Housing Element Update includes implementation of an Affordable Housing Overlay District (AHO) for Candidate Sites #1, #2, and #7. With implementation of the AHO, all three candidate sites would permit increased density for multi-family residential development to accommodate the City's required housing needs allocation as determined by the Southern California Association of Governments (SCAG) in the Regional Housing Needs Assessment (RHNA). The AHO will increase the density permitted on Candidate Sites #1 and #2 from 6 units/acre (as permitted in the MF zone) to 25 units/acre. Candidate Site #7, which currently is in the TCO, would be rezoned to Planned Development (PD)[1] and allow residential development up to 25/units per acre or a mix of commercial and residential development which still includes up to 25 units per acre.

Table 4.8-1 provides an analysis of the proposed project's consistency with adopted City policies. Only policies relevant and applicable to the Housing Element Update are included. Policies that are redundant between elements, such as habitat protection policies in the General Plan Conservation or Land Use Elements that effectively duplicate policies in the LUP, are omitted. Many policies call for City actions to achieve the stated objectives; of these, only those that apply to City design, review and approval of the future development consistent with the Housing Element Update are included in the analysis.

As indicated by Table 4.9-1, the Housing Element update would be consistent with applicable General Plan policies. Therefore, impacts would be less than significant.

Mitigation Measures. No mitigation measures are required.

[1] The Planned Development zone is intended to provide for a mix of residential and recreational development of the Crummer Trust property located east of Malibu Bluffs State Park and south of Pacific Coast Highway, and other commercial areas in order to encourage innovation in development concepts, land use mixes, and site design. Any planned developments in such commercial areas would require an amendment to the Malibu Local Coastal Program in order to specify the permitted type, density, and intensity of development.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
Aesthetics	
GP Land Use Element Policy 1.1.5: The City shall require careful site planning which blends development with the natural topography. *GP Land Use Element Policy 1.4.1: The City shall preserve significant ridgeline and other significant topographic features (such as canyons, knolls, hills and promontories).* *GP Land Use Element Policy 2.1.1: The City shall promote an aesthetically pleasing and visually stimulating environment whose architecture, common and open spaces inspire and uplift the human spirit.* *Land Use Element Policy 2.1.4: The City shall require development to be landscaped so that the project blends in with the environment and neighborhood.* *Land Use Element Policy 2.1.5: Consistent with the primary objective of protecting RPAs, the City shall protect and preserve public and private ocean and mountain views, by striking an equitable balance between the right to reasonable use of one's property including the maintenance of privacy and the right to protection against unreasonable loss of views.* *Conservation Element Policy 1.4.2: The City shall protect viewsheds of the ocean and surrounding mountains and hillsides.* *Conservation Element Policy 1.4.3: The City shall protect Pacific Coast Highway as a significant viewshed.* *LUP Policy 6.5: New development shall be sited and designed to minimize adverse impacts on scenic areas visible from scenic roads or public viewing areas to the maximum feasible extent. If there is no feasible building site location on the proposed project site where development would not be visible, then the development shall be sited and designed to minimize impacts on scenic areas visible from scenic highways or public viewing areas, through measures including, but not limited to, siting development in the least visible portion of the site, breaking up the mass of new structures, designing structures to blend into the natural hillside setting, restricting the building maximum size, reducing maximum height standards, clustering development, minimizing grading, incorporating landscape elements, and where appropriate, berming.*	Consistent. Development facilitated by the Housing Element Update would not adversely impact scenic vistas of the ocean or mountains through or from the sites. While Candidate Sites #1 and #2 are located along a designated Scenic Road (PCH), the sites are located opposite of the ocean view and are located in largely urbanized areas of the City. Views from PCH to the ridgelines of the Santa Monica Mountains would not be affected due to the large elevation difference between the sites and these features. While development of the sites would change the visual character of the sites from mostly vacant land to residential development, this change is consistent with the visual character of the surrounding area. Candidate Sites #1 and #2 are currently occupied by a single family residence on each site and are surrounded by existing housing developments. Candidate Site #7 is located within the City's Civic Center and is almost entirely surrounded by existing commercial development. Additionally, Candidate Sites #1, #2, and #7 are located in largely developed areas of the City and are also planned for development. Furthermore, development facilitated by the proposed project would be required to comply with existing City policies of the LUP which regulate development standards regarding the protection of visual resources. These policies restrict building location, height, setbacks, design, and other relevant building parameters, thereby ensuring that visual resources are maintained.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
LUP Policy 6.7: The height of structures shall be limited to minimize impacts to visual resources. The maximum allowable height, except for beachfront lots, shall be 18 feet above existing or finished grade, whichever is lower. On beachfront lots, or where found appropriate through Site Plan Review, the maximum height shall be 24 feet (flat roofs) or 28 feet (pitched roofs) above existing or finished grade, whichever is lower. Chimneys and rooftop antennas may be permitted to extend above the permitted height of the structure. *LCP Policy 6.8: Prominent ridgelines and other intervening ridgelines that are visible from a public road, a beach, public viewing areas, or public hiking trails, shall be protected by setting structures below the ridgeline to avoid intrusions into the skyline where feasible. Where there are no feasible alternative building sites below the ridgeline or where the only alternative building site would result in unavoidable adverse impacts to ESHA, structures shall be limited to one-story (18 feet maximum from existing or finished grade, whichever is lower) in height to minimize visual impacts.* *LCP Policy 6.9: All new development shall be sited and designed to minimize alteration of natural landforms by:* *- Conforming to the natural topography.* *- Preventing substantial grading or reconfiguration of the project site.* *- Eliminating flat building pads on slopes. - Building pads on sloping sites shall utilize split level or stepped-pad designs. - Requiring that man-made contours mimic the natural contours.* *- Ensuring that graded slopes blend with the existing terrain of the site and surrounding area.* *- Minimizing grading permitted outside of the building footprint.* *- Clustering structures to minimize site disturbance and to minimize development area.* *- Minimizing height and length of cut and fill slopes.* *- Minimizing the height and length of retaining walls* *- Cut and fill operations may be balanced onsite, where the grading does not substantially alter the existing topography and blends with the surrounding area.* *- Export of cut material may be required to preserve the natural topography.*	

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
LCP Policy 6.10: New development, including a building pad, if provided, shall be sited on the flattest area of the project site, except where there is an alternative location that would be more protective of visual resources or ESHA. *LCP Policy 6.11: The length of onsite roads or driveways shall be minimized, except where a longer road or driveway would allow for an alternative building site location that would be more protective of visual resources or ESHA. Driveway slopes shall be designed to follow the natural topography. Driveways that are visible from a scenic road, a beach, a public viewing area, or public hiking trail shall be a neutral color that blends with the surrounding landforms and vegetation.* *LCP Policy 6.12**:** All new structures shall be sited and designed to minimize impacts to visual resources by:* *-Ensuring visual compatibility with the character of surrounding areas.* *-Avoiding large cantilevers or understories.* *-Setting back higher elements of the structure toward the center or uphill portion of the building.(Resolution No. 07-04)* *LCP Policy 6.13: New development in areas visible from scenic roads or public viewing areas, shall incorporate colors and exterior materials that are compatible with the surrounding landscape. The use of highly reflective materials shall be prohibited.* *LCP Policy 6.14: The height of permitted retaining walls shall not exceed six feet. Stepped or terraced retaining walls up to twelve feet in height, with planting in between, may be permitted. Where feasible, long continuous walls shall be broken into sections or shall include undulations to provide visual relief. Where feasible, retaining walls supporting a structure should be incorporated into the foundation system in a stepped or split level design. Retaining walls visible from scenic highways, trails, parks, and beaches should incorporate veneers, texturing and/or colors that blend with the surrounding earth materials or landscape.* *LCP Policy 6.15**:** Fences, walls, and landscaping shall not block views of scenic areas from scenic roads, parks, beaches, and other public viewing areas.*	

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
LCP Policy 6.20: New development on properties visible from and inland of Pacific Coast Highway shall be sited and designed to protect public views of the ridgelines and natural features of the Santa Monica Mountains through measures including, but not limited to, restricting the building maximum size, reducing maximum height limits, clustering development, incorporating landscape elements, and, where appropriate, berming. *LCP Policy 6.23: Exterior lighting (except traffic lights, navigational lights, and other similar safety lighting) shall be minimized, restricted to low intensity fixtures, shielded, and concealed to the maximum feasible extent so that no light source is directly visible from public viewing areas. Night lighting for sports courts or other private recreational facilities in scenic areas designated for residential use shall be prohibited.* *LCP Policy 6.27: New development shall minimize removal of natural vegetation. Existing native trees and plants shall be preserved on the site, consistent with Policy 3.60.* *LCP Policy 6.33: The Pacific Coast Highway corridor shall be protected as a scenic highway and significant viewshed.*	
Air Quality	
GP Safety and Health Element Policy 1.1.6: The City shall reduce air pollution and improve Malibu's air quality.	Consistent. Development facilitated by the Housing Element Update would be required to comply with existing City and SCAQMD policies regulating air quality. Mitigation measures in Section 4.2, *Air Quality*, require dust and construction equipment controls to reduce air quality impacts from construction activities to less than significant levels.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
Biology	
GP Conservation Element Policy 1.2.5: The City shall discourage plant species which are invasive in the Santa Monica biogeographic area where such invasive plant species would degrade native plant communities. *GP Conservation Element Policy 1.2.7: The City shall reduce impacts resulting from night lighting so as not to disturb natural habitats.* *LUP Policy 3.59: All new development shall be sited and designed to minimize required fuel modification and brushing to the maximum extent feasible in order to minimize habitat disturbance or destruction, removal or modification of natural vegetation, and irrigation of natural areas, while providing for fire safety, as required by Policies 4.45 through 4.54. Development shall utilize fire resistant materials and incorporate alternative fuel modification measures, such as firewalls (except where this would have impacts on visual resources), and landscaping techniques, where feasible, to minimize the total area modified. All development shall be subject to applicable federal, state and county fire protection requirements.*	Consistent. Development facilitated by the d Housing Element Update would be required to comply with existing City policies, including the LUP and LIP, regarding the protection of biological resources. These policies and development requirements include development setbacks, habitat impact mitigation, native tree protection plans and landscape plans. Additionally, mitigation measures in Section 4.3, *Biological Resources*, require special-status plant and animal surveys, avoidance and relocation, worker education and construction best management practices to further protect habitat and individuals of special-status plant and animal species.
Cultural Resources	
GP Conservation Element Policy 2.1.1: The City shall identify, designate, protect and preserve areas, sites or structures of historic, cultural, paleontological and/or archeological significance. *GP Conservation Element Policy 2.1.2: The City shall avoid the destruction or alteration of cultural resources.*	Consistent. Development pursuant to the Housing Element Update would not affect any known archaeological resources. Mitigation measures in Section 4.4, *Cultural Resources*, include procedures for discovery of intact cultural resources and/or human remains to reduce impacts to as-yet unknown archaeological resources to a less than significant level.
Geology and Soils	
GP Land Use Element Policy 1.3.2: The City shall require proposed development to avoid geologic safety hazards created by development. *GP Land Use Element Policy 1.4.3: The City shall minimize the alteration of existing land forms and require design consistent with natural topography and processes of the site (i.e. geological, soils, hydrological, water percolation and runoff).* *GP Safety and Health Element Policy 1.2.1: The City shall require development to provide for analyses of site safety related to potential hazards of fault rupture, earthquake ground shaking, liquefaction, and rockfalls.* *GP Safety and Health Element Policy 1.2.2: The City shall require development to provide site safety analyses related to landsliding, debris flows, expansive soils, collapsible soils, erosion/sedimentation, and groundwater effects.*	Consistent. Development facilitated by the Housing Element Update will be required to comply with existing City policies, including the LUP and LIP regarding geologic hazards. Mitigation measures in Section 4.5, *Geology and Soils,* require fault, geotechnical, and landslide study and mitigation, to avoid or remediate geologic hazards and protect people and property from those hazards. In addition, project structures must comply with all applicable provisions of the most recent Uniform Building Code and California Building Code, including those that address seismic hazards.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
LUP Policy 4.5: Applications for new development, where applicable, shall include a geologic/soils/geotechnical study that identifies any geologic hazards affecting the proposed project site, any necessary mitigation measures, and contains a statement that the project site is suitable for the proposed development and that the development will be safe from geologic hazard. Such reports shall be signed by a licensed Certified Engineering Geologist (CEG) or Geotechnical Engineer (GE) and subject to review and approval by the City Geologist.	
Hazards	
GP Land Use Element Policy 1.3.3: The City shall require fire protection measures for development. *GP Safety and Health Element Policy 1.1.1: The City shall protect people and property from environmental hazards.* *GP Safety and Health Element Policy 1.2.3: The City shall require development to provide for safety from coastal storm flooding, coastal erosion, surfacing septic effluent, and tsunami.* *GP Safety and Health Element Policy 1.2.4: The City shall require development to be consistent with minimum Federal Emergency Management Agency (FEMA) guidelines for flood plain management.* *LUP Policy 4.2: All new development shall be sized, designed and sited to minimize risks to life and property from geologic, flood, and fire hazard.* *LUP Policy 4.45 New development shall minimize risks to life and property from fire hazard through:* *- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.;* *- Siting and designing development to avoid hazardous locations;* *- Incorporation of fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent;* *- Use of appropriate building materials and design features to insure the minimum amount of required fuel modification;* *- Use of fire-retardant, native plant species in landscaping. (Resolution No. 07-04)*	Consistent. Development facilitated by the Housing Element Update will be required to comply with existing City policies, including the LUP and LIP regarding hazards and hazardous materials. Mitigation measures in Section 4.7, *Hazards*, require fault, geotechnical, and landslide study and mitigation to avoid or remediate geologic hazards and protect people and property from those hazards. In addition, project structures must comply with all applicable provisions of the most recent Uniform Building Code and California Building Code, including those that address seismic hazards.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
Hydrology and Water Quality	
GP Land Use Element Policy 1.1.2: The City shall ensure that land uses avoid or minimize adverse impacts on water quality and other natural resources, such as undisturbed watershed and riparian areas. *GP Land Use Element Policy 1.1.3: The City shall control surface water runoff into coastal waters, wetlands and riparian areas.* *GP Land Use Element Policy 1.4.3: The City shall minimize the alteration of existing landforms and require design consistent with natural topography and processes of the site (i.e., geological, soils, hydrological, water percolation and runoff).* *GP Land Use Element Policy 2.2.1: The City shall require adequate infrastructure, including but not limited to roads, water, and wastewater disposal capacity, as a condition of proposed development.* *GP Conservation Element Policy 4.1.2: The City shall coordinate development to ensure adequate water supplies.* *GP Conservation Element Policy 4.1.3: The City shall encourage water conservation design measures in residential, commercial and industrial development.* *GP Conservation Element Policy 4.1.5: The City shall encourage the use of drought resistant landscaping.* *LUP Policy 3.45: All new development shall be sited and designed so as to minimize grading, alteration of physical features, and vegetation clearance in order to prevent soil erosion, stream siltation, reduced water percolation, increased runoff, and adverse impacts on plant and animal life and prevent net increases in baseline flows for any receiving water body.* *LUP Policy 3.95: New development shall be sited and designed to protect water quality and minimize impacts to coastal waters by incorporating measures designed to ensure the following:* *- Protecting areas that provide important water quality benefits, areas necessary to maintain riparian and aquatic biota and/or that are susceptible to erosion and sediment loss.* *- Limiting increases of impervious surfaces.* *- Limiting land disturbance activities such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss.* *- Limiting disturbance of natural drainage features and vegetation.*	Consistent. Development facilitated by the Housing Element Update would be required to comply with existing City policy regulating hydrologic resources. These policies specifically include storm water-related regulations, onsite wastewater treatment systems (OWTS)-related regulations, and flood hazard construction regulations. Additionally, mitigation measures found in Section 4.8, *Hydrology and Water Quality*, require the preparation of a Storm Water Pollution Prevention Plan (SWPPP) in compliance with RWQCB and LCP requirements and containing specific BMPs to be implemented during project construction to reduce erosion and sedimentation to the maximum extent practicable.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
LUP Policy 3.96: New development shall not result in the degradation of the water quality of groundwater basins or coastal surface water including the ocean, coastal streams, or wetlands. *LUP Policy 4.11 New development shall provide adequate drainage and erosion control facilities that convey site drainage in a non-erosive manner in order to minimize hazards resulting from increased runoff, erosion and other hydrologic impacts to streams.* *LUP Policy 5.46: All new development shall demonstrate that an adequate potable water supply is available to each parcel.*	
Land Use	
GP Land Use Element Policy 1.1.1: The City shall protect the natural environment by regulating design and permitting only land uses compatible with the natural environment. *GP Land Use Element Policy 2.3.1: The City shall preserve and protect the unique character of Malibu's many distinct neighborhoods.* *LUP Policy 5.20: All residential development, including land divisions and lot line adjustments, shall conform to all applicable LCP policies, including density provisions. Allowable densities are stated as maximums. Compliance with the other policies of the LCP may further limit the maximum allowable density of development.*	Consistent. Development facilitated by the Housing Element Update would be required to comply with existing City policies regulating land use including the LCP and M.M.C. In addition, Candidate Sites #1, #2, and #7 are located in areas of the City which are zoned to allow development. Development on these sites would be consistent with surrounding land use and the existing character of the neighborhoods near Candidate Sites #1 and #2. Multi-family development on Candidate Site #7 would be consistent with surrounding land uses, including Commercial General, which allows mixed use development. In addition, mixed use development provides a benefit to residences by location them close to good and services, as well as public transportation hubs. The discussion under Impact LU-2 provides more detail on project compatibility with surrounding land uses and resources.
Noise	
GP Noise Element Policy 1.1.2: The City shall protect noise sensitive land uses from negative impacts of proximity to noise generating uses. *GP Noise Element Policy 1.1.5: The City shall encourage new construction and remodels which utilize designs and materials that reduce exposure to noise sources.* *GP Noise Element Policy 1.1.6: The City shall review proposed development to ensure the average ambient noise is as low as feasible to maintain the rural atmosphere.*	Consistent. Development facilitated by the Housing Element Update will be required to comply with existing City and state policy regulating noise including the Malibu General Plan Noise Element, the City's Noise Control Ordinance, and the California Department of Environmental Health Office Noise Control guidelines. As discussed in Section 4.10, *Noise*, construction noise experienced by nearby residents would be reduced to less-than-significant levels through proposed mitigation measures. Neither increases in ambient noise due to residential use nor noise associated with increased traffic would exceed City noise level standards.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
Population and Housing	
GP Housing Element Policy 1.1.2: Encourage new housing to meet housing needs based on the ability to provide public services and within the limits of Malibu's environmental constraints.	Consistent. The Housing Element Update would create an Affordable Housing Overlay District and increase multi-family residential density allowed on Candidate Sites #1, #2, and #7 to accommodate the City's required housing needs allocation as determined by the SCAG in the RHNA. Growth facilitated by the Housing Element Update would be within SCAG regional growth forecasts for Malibu and will be supported by the existing capacity of public services.
Public Services	
GP Land Use Element Policy 1.3.3: The City shall require fire protection measures for development. *LUP Policy 4.50: New development shall provide for emergency vehicle access and fire-flow water supply in accordance with applicable fire safety regulations.* *LUP 4.51: All new development shall demonstrate the availability of an adequate water supply for fire protection, as required by applicable fire safety regulations.*	Consistent. As discussed in Section 4.12, *Public Services*, the proposed project could add up to 212 new dwelling units causing additional demand on water service, fire and police protection services, and school facilities. Current capacity of these services and facilities are such that adequate capacity exists to serve project Candidate Sites #1, #2, and #7.
Transportation	
GP Land Use Element Policy 2.2.1: The City shall require adequate infrastructure, including but not limited to roads, water, and wastewater disposal capacity, as a condition of proposed development. *GP Land Use Element Policy 2.2.4: The City shall manage development in accordance with the efficient operation of the traffic system and service infrastructure.* *GP Land Use Element Policy 2.2.5: The City shall evaluate the effect on roadway capacity of traffic impacts from all sources when determining the type and intensity of land use.* *GP Circulation and Infrastructure Element Policy 1.1.1: Where level of service at signalized intersections and roadways is below LOS C, the City shall ensure that proposed development maintains the then current LOS. Where LOS at signalized intersections and roadways is at LOS C or above, the City shall ensure that proposed development (1) does not cause a degradation of LOS greater than or equal to two percent in the circumstances set forth in Land Use Implementation Measure 70 and (2) does not degrade LOS below LOS C.* *GP Circulation and Infrastructure Element Policy 1.1.2: The City shall utilize sound traffic engineering and enforcement principles to safely regulate traffic and improve traffic flow.*	Consistent. As discussed in Section 4.13, *Traffic and Circulation*, proposed project traffic volumes would not degrade intersection levels of service such that it would result in a significant impact.

Table 4.9-1 City Policy Consistency

City Policy	Consistency Discussion
GP Circulation and Infrastructure Element Policy 1.1.3: The City shall improve traffic flow through procedural improvements. *GP Circulation and Infrastructure Element Policy 1.1.4: The City shall reduce peak time traffic.*	
Utilities and Service Systems	
GP Land Use Element Policy 2.2.1: The City shall require adequate infrastructure, including but not limited to roads, water, and wastewater disposal capacity, as a condition of proposed development. *GP Land Use Element Policy 2.2.8: The City shall require adequate wastewater management for all development.* *GP Circulation and Infrastructure Element Policy 2.1.4: The City shall encourage utilization of innovative alternative methods of wastewater treatment.*	Consistent. As discussed in Section 4.14, *Utilities and Service Systems*, the proposed project could add up to 212 new dwelling units, causing additional demand for water and additional generation of wastewater. The City's existing agreement with West Basin Municipal Water District would ensure that adequate water supply is available. Each candidate site would be required to install a new OWTS with capacity specific to the development size based on existing City requirements. Each OWTS would be required to obtain an operating permit from the City of Malibu, which would ensure the proper design, operation, and maintenance of each system.

Impact LU-2 Development facilitated by the Housing Element Update would be compatible with existing adjacent land uses. This is considered a Class III, *less than significant*, impact.

Candidate Sites #1 and #2. As discussed in Section 4.9.1(b) *Setting*, Candidate Sites #1 and #2 are currently designated as MF. Both sites will remain zoned MF with the incorporation of the proposed revisions to the Housing Element and are located in an area with residential development. Similar MF residential uses are located immediately to the west of Candidate Site #1 and to the east of Candidate Site #2. Therefore, future residential development on Candidate Sites #1 and #2 would be compatible with surrounding land uses.

Compatibility with surrounding land uses is further ensured through analysis of the types of impacts that most affect neighboring land uses. These are aesthetics, air quality, and noise. No significant and unavoidable impacts have been identified in any of these areas. Adoption of the proposed mitigation measures, as well as adherence to required City policies contained primarily in the LCP, would further reduce land use incompatibilities arising from environmental impacts. Impacts would be less than significant.

Candidate Site #7. As discussed in Section 4.9.1(b) *Setting*, Candidate Site # 7 is currently designated TCO. The site is immediately surrounded on all sides by non-residential development, mainly consisting of commercial and institutional uses, while single-family residences are located just to the north. Specifically, the Malibu Country Mart shopping center is located approximately 800 feet from the candidate site and L.A. County Courthouse is located approximately 250 feet from the candidate site, and Whole Foods is approved for development immediately to the east of the candidate site. These uses may generate temporary, intermittent nuisance noise associated with commercial deliveries, heating and cooling systems, trash hauling activities and parking lots. However, noise associated with these commercial uses would not be expected to generate noise in excess of City standards,

which is based on 24-hour average ambient noise levels. Similarly, any noise generated by the commercial uses would be intermittent in nature (e.g. deliveries, trash hauling, and parking vehicles), and would not exceed City noise standards, which are based on 24-hour average ambient noise levels.

Compatibility with surrounding land uses is further ensured through analysis of the types of impacts that most affect neighboring land uses. These are aesthetics, air quality, and noise. No significant and unavoidable impacts have been identified in any of these areas. Adoption of the proposed mitigation measures, as well as adherence to required City policies contained primarily in the LCP, would further reduce land use incompatibilities arising from environmental impacts. Impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, that would apply to parcels throughout the City that are zoned MF and Multi-Family Beachfront (MFBF). Some of the proposed policies, such as amendments to the LCP and M.M.C. to revise development standards pertaining to multi-family development, would allow for increased development on other existing multi-family zoned sites throughout the City, which may increase the potential for land use compatibility conflicts. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites. However, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific compatibility conflicts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts.

*Candidate Sites***.** Cumulative development in the City of Malibu includes the potential development of 212 units facilitated under the Housing Element Update along with 84 residential dwelling units and 748,460 square feet of non-residential development (see Table 3-1 in Section 3.0, *Environmental Setting*). As cumulative development occurs, it is possible that land use compatibility conflicts occur. However, the intention of the City's land use designation and zoning is to ensure that land uses are arranged in a compatible pattern. As development occurs, compliance with existing policies of the General Plan, LCP and M.M.C., which are specifically intended to address compatibility issues associated with development in the City, would reduce land use compatibility impacts. As discussed above, the Housing Element Update would not conflict with the policies of the General Plan or result in significant land use compatibility conflicts. As a result, the Housing Element Update would not result in a cumulatively considerable land use impact. Therefore, cumulative impacts would be less than significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative hazardous impacts when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. However, as discussed above, as development occurs, compliance with existing policies of the General Plan, LCP and M.M.C., which are specifically intended to address compatibility issues associated with development in the City, would reduce land use compatibility impacts. Therefore, cumulative impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

4.10 NOISE

4.10.1 Setting

a. Overview of Sound Measurement. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers duration as well as sound power level is the equivalent noise level (Leq). The Leq is defined as the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual time-varying levels over a period of time. Typically, Leq is summed over a one-hour period.

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Decibels cannot be added arithmetically, but rather are added on a logarithmic basis. A doubling of sound energy is equivalent to an increase of 3 dB and a sound that is 10 dB less than another does not increase the overall sound level. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dB change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. The Community Noise Equivalent Level (CNEL) recognizes this characteristic by weighting the hourly Leqs over a 24-hour period. The weighting involves the addition of 10 dB to noise occurring at night (10 PM – 7 AM) to account for the greater amount of disturbance associated with noise at this time period, and a weighting of 5 dB to the evening hours (7 PM –10 PM).

b. Sensitive Receptors. Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. According to Section 6.3.1 of the City of Malibu General Plan Noise Element, noise sensitive land uses include "single and multiple family residences, schools, libraries, medical facilities, retirement/rest homes, and places of religious worship." Refer to Figures 4.9-1 and 4.9-2 in Section 4.9 *Land Use*, for land use designations and zoning districts near the Candidate Sites, and Section 4.1 *Aesthetics*, which shows photos of surrounding land uses of the Candidate Sites. The City's Local Coastal Program (LCP) maps show land use designations and zoning districts throughout the City (http://www.ci.malibu.ca.us/download/index.cfm/fuseaction/download/cid/1603/). Sensitive receptors have more stringent noise exposure targets than commercial or agricultural uses that are not subject to impacts such as sleep disturbance. Sensitive receptors near Candidate Sites #1, #2, and #7 are described below.

<u>Candidate Sites #1 and #2.</u> Candidate Sites #1 and #2 are located adjacent to each other at 28517 Pacific Coast Highway (PCH) and 28401 PCH, respectively. Candidate Site #1 is

comprised of two separate parcels: 28517 PCH and an unaddressed parcel (APN 4467-013-022). Both sites front PCH, which borders the sites to the southeast. Candidate Site #1 is 5.8 acres (3.66 developable acres) and Candidate Site #2 is 3.25 acres (2.59 developable acres) and both are zoned Multi-Family Residential (MF) (6 dwelling units/acre). The overall topography of both sites is relatively flat, with moderate to steep slopes along the northeastern edge of Candidate Site #1 and the northwestern edge of Candidate Site #2. Properties surrounding both sites have similar topography, consisting of moderately sloped hills with a trend of increasing elevation heading north toward the Santa Monica Mountains. The base of the Santa Monica Mountains is approximately one mile north of the two candidate sites.

Candidate Sites #1 and #2 are primarily undeveloped with the exception of one single-family residence on each site. Candidate Site #1 contains wetlands (see Section 4.3 Biological Resources) grassland, scrub brush, southern California black walnut woodland, native and ornamental woodland. Candidate Site #2 contains grassland, eucalyptus woodland, and ornamental woodland.

Surrounding land uses are primarily comprised of residential uses, including multi-family and rural residential development. Directly adjacent to the sites to the east and west are existing condominium housing developments. Development to the north and south of the sites consists of lower density rural residential housing units. Across PCH to the southeast resides a mobile home park. According to the Conservation Element of the Malibu General Plan (November 1995) and the LCP Land Use Plan (LUP), there are no scenic resources on or within the vicinity of Candidate Sites #1 and #2.

Candidate Site #7. Candidate Site #7 encompasses approximately 2.3 acres of a larger 15.2 acre site and is located at 23465 Civic Center Way, approximately 6.5 miles east of Candidate Sites #1 and #2. All 2.3 acres of Candidate Site #7 are developable. Candidate Site #7 is located within the Civic Center and is adjacent to the Los Angeles Superior Court Malibu Courthouse, the Los Angeles District Attorney, and the Malibu Library. PCH is located approximately 0.15 mile to the south of Candidate Site #7. The overall topography of the site is relatively flat, with some moderate slopes near the northern portion of the property. Surrounding topography is similar, with a trend of increasing elevation heading north toward the Santa Monica Mountains.

Candidate Site #7 is currently undeveloped. Several scattered trees are located onsite, while the rest of the site is mostly covered by shrubs and grassland. The remaining 12.9 acres of the Candidate Site #7 are approved for commercial retail and office development (known as the La Paz Project). Surrounding land uses within the vicinity include Commercial, Institutional, and Rural Residential. Directly adjacent to the site to the west is a parcel zoned Institutional, containing the County buildings described above. The site is surrounding by commercial development to the south, east and west, and residential development to the north. Additionally, properties currently occupied by single family development are located approximately 500 feet north of the site.

c. Regulatory Setting. Plans and policies that pertain to noise and its effect on the City include the Malibu General Plan Noise Element, the City's Noise Ordinance found in Malibu Municipal Code (M.M.C.) Chapter 8.24, and the California Department of Environmental Health Office of Noise Control guidelines for noise and land use compatibility.

The Office of Noise Control has published recommended guidelines for mobile source noise and land use compatibility. Each jurisdiction is required to consider these guidelines when developing its General Plan Noise Element and determining the acceptable noise levels with its community. The state guidelines include a noise compatibility matrix that specifies the types of ambient noise levels that are considered compatible with various uses, as shown in Figure 4.10-1.

The Office of Noise Control land use compatibility guidelines shown in Figure 4.10-1 recommend 60 dBA Ldn as the maximum "normally acceptable" for residences and areas with ambient noise levels between 60 dBA and 70 dBA as "conditionally acceptable" for residential uses.[1] For schools and libraries, the maximum "normally acceptable" level is 65 dBA CNEL, while noise levels up to about 70 dBA CNEL are considered conditionally acceptable. For parks, 70dBA CNEL is considered the maximum normally acceptable level.

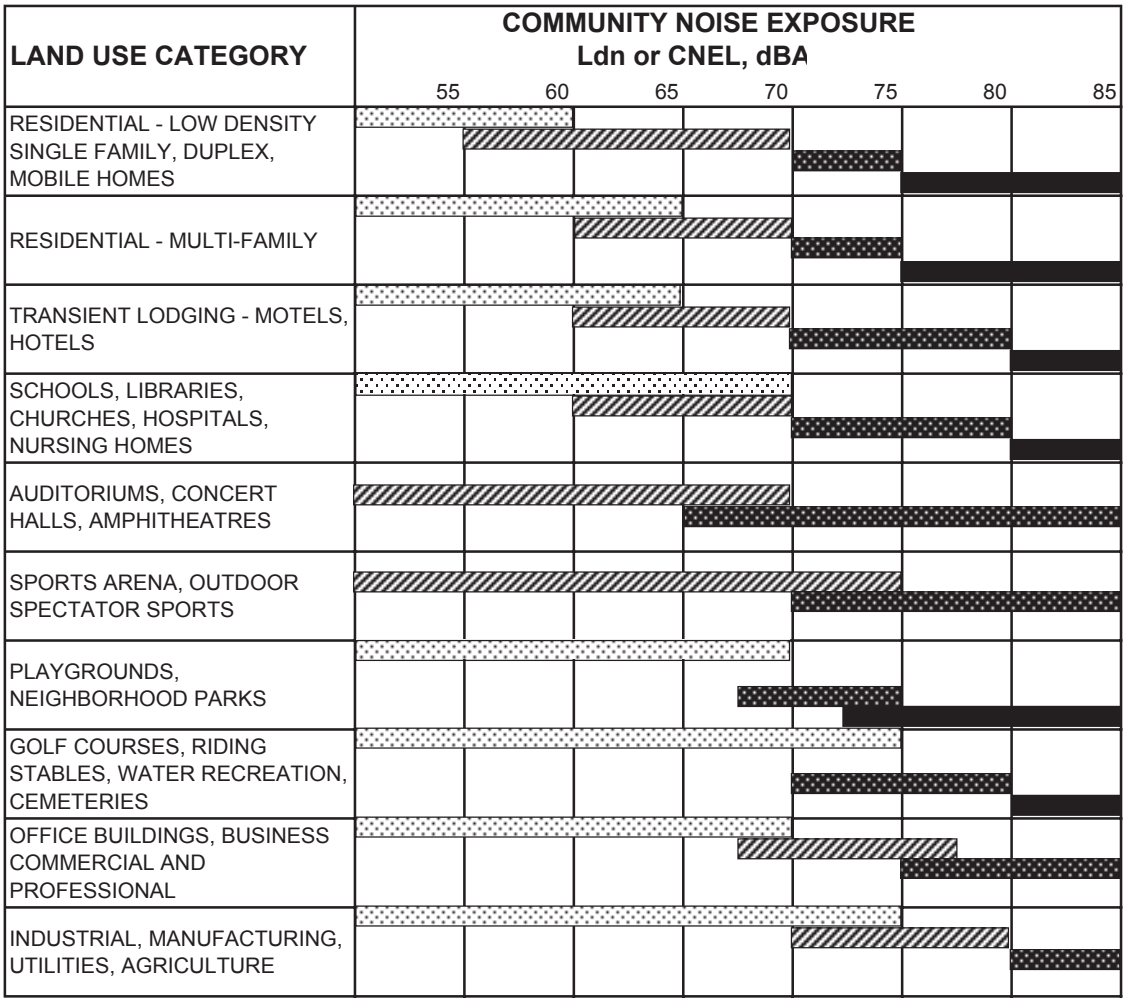
Table 4.10-1 shows the Malibu General Plan Noise Element noise limits for non-transportation sources. As shown therein, the maximum noise limits for residential uses (including single-family residential and multi-family residential) are 55 dBA Leq from 7 AM to 7 PM, 50 dBA from 7 PM to 10 PM, and 45 dBA from 10 PM to 7 AM. Table 4.10-2 shows the Malibu General Plan Noise Element noise limits for transportation noise sources. As shown therein, the maximum allowable exterior noise exposure from transportation sources is 50 dBA CNEL for residences, 60 dBA CNEL for libraries, and 70 dBA CNEL for playgrounds and neighborhood parks. However, an exterior noise level of up to 65 dBA CNEL for residences may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with Table 4.10-2.

Table 4.10-1 Maximum Exterior Noise Limits Non-Transportation Sources

Receiving Land Use Category	General Plan Land Use Districts	Time Period	Noise Level, dBA	
			L_{eq}	L_{max}
Rural	All RR zones, PRF and OS	7 AM – 7 PM	55	75
		7 PM – 10 PM	50	65
		10 PM – 7 AM	40	55
Other Residential	All SF, MHR, MF and MFBF zones	7 AM – 7 PM	55	75
		7 PM – 10 PM	50	65
		10 PM – 7 AM	45	60
Commercial, Institutional	CN, CC, CV, CG, CR, and I	7 AM – 7 PM	65	85
		7 PM – 7 AM	60	70

Source: Malibu General Plan Noise Element 1995.
RR = Rural Residential, PRF = Private Recreational Facilities, and OS = Open Space
SF = Single-Family Residential and MHR = Mobile Home Residential
CN = Commercial Neighborhood, CC = Community Commercial, CV = Commercial Visitor-Serving, CG = Commercial General, CR = Commercial Recreation, and I = Institutional

[1] *"Normally acceptable" indicates that the ambient noise level is appropriate for the specified land use without any special noise insulation requirements. "Conditionally acceptable" indicates that new construction should be undertaken only after a noise analysis is undertaken and needed noise insulation features are incorporated. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally suffice to achieve acceptable interior noise levels when the exterior level is within the conditionally acceptable range.*



NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

Source: Guidelines for the Preparation and Content of Noise Elements of the General Plan, State Office of Noise Control.

Noise Compatibility Standards

Figure 4.10-1

Table 4.10-2 Maximum Allowable Noise Exposure Transportation Noise Sources

Land Use	Outdoor Activity Areas* L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}/dB**
Residential	50	45	---
Transient Housing	60	45	---
Hospitals, long term in-patient medical treatment and care facilities	60	45	---
Theaters, Auditoria, Music Halls	60	---	35
Churches and Meeting Halls	60	---	40
Office Buildings	60	---	45
Schools, Libraries and Museums, Child Care	60	---	45
Playgrounds and Neighborhood Parks	70	---	---

Source: Malibu General Plan Noise Element, 1995
**Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving use.*
***As determined for a typical worst-case hour during period of use.*

The Noise Ordinance of the M.M.C. prohibits any unnecessary, excessive, or annoying noise and vibration in the City. However, it does not directly control traffic noise, but applies to all noise sources located on private property. The ordinance does not specify quantitative exposure limits. In addition, M.M.C. Section 8.24.060 exempts outdoor activities conducted on public playgrounds and public or private school grounds.

d. Existing Noise Sources. The most common sources of noise in the City are transportation-related, including automobiles, trucks, and motorcycles. Motor vehicle noise is characterized by a high number of individual events, which often create sustained noise levels, and is typically located near areas sensitive to noise exposure. Table 4.10-3 shows the existing measured noise levels on the candidate sites. Noise at each of the candidate sites was measured by Rincon Consultants, Inc. using an ANSI Type II Integrating sound level meter during peak traffic hours, which reflect the loudest noise periods throughout the day. Sound measurements were taken on March 22, 2011 at Candidate Sites #1 and #2 and on January 14, 2011 at Candidate Site #7. Noise measurements at Candidate Sites #1 and #2 were taken during the morning peak period (7 AM 9 AM), while noise measurements on Candidate Site #7 were taken during the evening peak period (4 PM - 6 PM).

Candidate Sites #1 and #2. In general, any noise generated at the time the noise measurement was collected would be reflected in the noise measurement results in Table 4.10-3. The primary source of noise near Candidate Sites #1 and #2 is vehicular traffic on PCH, which borders both sites to the south. At the portion of PCH adjacent to the project site, ambient noise levels are highest during the daytime and peak commute hours (7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on weekdays, 11:00 AM to 2:00 PM on Saturdays) and during holidays unless congestion slows speeds substantially. Other sources of noise in the vicinity include low level noise typical of residential neighborhoods from the surrounding residential areas. Existing noise sources within the candidate sites are limited to one single-family home on each site.

Candidate Site #7. In general, any noise generated at the time the noise measurement was collected would be reflected in the noise measurement results in Table 4.10-3. The predominant source of noise near Candidate Site #7 is vehicular traffic on PCH, which is located approximately 850 feet south of the site. Some vehicular traffic noise occurs from Civic Center Way, which borders the site to the south. There is also intermittent noise generated by commercial uses south of the site, across Civic Center Way. There are no existing noise sources onsite.

Table 4.10-3
Noise Monitoring Results

Measurement Location	Sample Time	Leq (dBA)
Candidate Site #1	Weekday morning	72.8
Candidate Site #2	Weekday morning	68.6
Candidate Site #7	Weekday evening	44.8

Source: Field visit using ANSI Type II Integrating sound level meter. Sound measurements were 20-minute samples taken on March 22, 2011 at Candidate Sites #1 and #2 and on January 14, 2011 at Candidate Site #7.
See Appendix for noise monitoring data sheets

4.10.2 Impact Analysis

a. Methodology and Thresholds of Significance. The noise levels associated with existing and future traffic noise were calculated using the Federal Highway Administration Traffic Noise Model (TNM®) version 2.5 (see Appendix G for calculations). The model calculations are based on traffic data from the traffic study prepared for the project by Fehr & Peers (see Appendix G). Construction noise was estimated based on noise level estimates from the U.S. Environmental Protection Agency document *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*.

For traffic-related noise, impacts are considered significant if traffic-generated noise associated with development of the project would result in exposure of sensitive receptors to unacceptable noise levels in accordance with Table 4.10-4. To evaluate traffic noise, the noise model must be consistent with the traffic study prepared for the Housing Element Update and the roadway segments studied therein. Noise modeling result evaluated an "existing plus project" scenario, an "opening year plus project" scenario, and a "cumulative year plus project" scenario. These scenarios are consistent with the traffic analysis and the roadway segments studied, as contained Section 4.13, *Transportation and Circulation*. Existing conditions are based on the traffic counts performed in July 2012. These traffic counts were used in the traffic study, but prepared by the City of Malibu. Each scenario is described below:

- Existing (Year 2012) plus Project Conditions – This is an analysis of existing noise conditions with noise expected from the proposed project.

- Opening Year plus Project Conditions – This is an analysis of opening year noise conditions with noise expected from the proposed project added to the opening year base noise forecasts. Opening year plus proposed project conditions were developed for year 2014, which accounts for growth that is expected to occur by that time.

- Cumulative Year plus Project Conditions – This is an analysis of cumulative year noise conditions with noise expected from the proposed project added to the general plan buildout year base traffic forecasts. Cumulative Year plus proposed project conditions were developed for year 2030.

In addition, the traffic study also provided data on roadway segments. The traffic data was used to model roadway noise.
The May 2006 Transit Noise and Vibration Impact Assessment created by the Federal Transit Administration (FTA) recommendations were used to determine whether increases in roadway noise would be considered significant. The allowable noise exposure increase changes with increasing noise exposure, such that lower ambient noise levels have a higher allowable noise exposure increase. Table 4.10-4 shows the significance thresholds for increases in traffic related noise levels caused either by the project alone or by cumulative development.

Table 4.10-4
Significance of Changes in Operational Roadway Noise Exposure

dBA (Ldn or Leq)	
Existing Noise Exposure	**Allowable Noise Exposure Increase***
45-50	7
50-55	5
55-60	3
60-65	2
65-75	1
75+	0

Source: Federal Transit Administration (FTA) May 2006.
** Rounded to the nearest whole decibel. For example, where the existing noise exposure exceeds 75 dBA, a significant impact would occur if the noise level increase is 0.5 dBA or greater.*

Impacts relating to operational onsite activities would be considered significant if project-related activities would create noise exceeding the City's standards, as shown in Tables 4.10-1 and 4.10-2, for on- and off-site sensitive receptors.

The following thresholds are based on Appendix G of the *CEQA Guidelines*. Impacts would also be potentially significant if the Housing Element Update would result in:

1. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
2. *Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;*
3. *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*
4. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels; or*
6. *For a project within the vicinity of private airstrip, would the project expose people residing or working the project area to excessive noise levels.*

Noise impacts related to private airstrips (Items #5 and #6) are discussed in Section 4.15 *Effects Found to be Less Than Significant*.

b. Project Impacts and Mitigation Measures.

Impact N-1 Future development facilitated by the Housing Element Update would intermittently generate high noise levels during construction in excess of City noise standards. This would affect nearby sensitive receptors. This is a Class II, *significant but mitigable,* impact.

Nearby noise-sensitive land uses would be exposed to temporary construction noise during development of the candidate sites in accordance with the Housing Element Update. Noise is a function of the type of construction activity being undertaken and the distance to the receptor location. While the precise timing of future development pursuant to the Housing Element Update is not known at this time, in general however, it is assumed that typical multifamily housing projects may require one and half years of construction to complete the development.

Table 4.10-5 shows typical noise levels associated with the various phases of construction at a distance of 50 feet from the noise source. As shown therein, typical noise levels range from about 80 to 89 dBA. The grading/excavation phase of project construction tends to create the highest construction noise levels because of the operation of heavy equipment. However, during grading operations, the equipment would be dispersed in various portions of the candidate sites in both time and space. Physically, a limited amount of equipment can operate near a given location at a particular time.

Candidate Sites #1 and #2. Temporary construction activity on Candidate Sites #1 and #2 would generate intermittent noise that could be audible to sensitive receptors on or near the sites, including the single-family residences on each of the sites. The closest off-site sensitive receptors are located immediately adjacent to the western boundary of Candidate Site #1 and approximately 50 feet from the eastern boundary of Candidate Site #2, across Ramirez Mesa Road. Additional sensitive receptors are located approximately 100 feet north of the northeastern boundary of Candidate Site #2 and approximately 100 feet south of the southern boundary of both candidate sites. The single-family residences within the project sites may

experience construction noise up to 95 dBA; multi-family residences to the east and west may experience construction noise of up to 89 dBA; and single-family residences to the north and south may experience construction noise up to 83 dBA. The City does not have significance thresholds for construction-related noise. However, given the proximity of onsite and nearby residential uses, these uses could be exposed to noise levels over City standards (see Table 4.10-1). This would be a potentially significant impact.

Table 4.10-5
Typical Noise Levels at Construction Sites

Equipment	Typical Level (dBA) 25 Feet from the Source	Typical Level (dBA) 50 Feet from the Source	Typical Level (dBA) 100 Feet from the Source
Air Compressor	87	81	75
Backhoe	86	80	74
Concrete Mixer	91	85	79
Paver	95	89	83
Saw	82	76	70
Scraper	95	89	83
Truck	94	88	82

Note: Construction would not include the use of a pile driver; therefore, pile driving equipment was not included in the analysis of construction noise.
Noise levels assume a noise attenuation rate of 6dBA per doubling of distance.
Source: FTA, May 2006

Candidate Site #7. Temporary construction activity on Candidate Site #7 would generate intermittent noise that could be audible to nearby sensitive receptors. The closest receptors are the Malibu Library, located approximately 60 feet west of the site, and single-family residences located approximately 320 feet west, 330 feet northeast (known as Malibu Knolls), and 380 feet east of the site's northeastern-most border. At these distances, the Malibu Library may experience construction noise up to 89 dBA; residences could experience noise up to 70 dBA. Though the City does not have significance thresholds for construction-related noise, the noise-sensitive uses located near Candidate Site #7 could be exposed to noise levels over City standards (see Table 4.10-1). This would be a potentially significant impact.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family Residential (MF) and Multi-Family Beachfront (MFBF). Some of these proposed programs and policies would have no direct impact on construction noise levels as these would not result in development of new structures. However, implementation of certain policies has the potential to result in new development that would generate construction noise. For example, amendments to the Local Coastal Program (LCP) and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per MF and MFBF parcel, the total maximum impermeable coverage allowance of 25,000 square feet, and the requirement that all multi-family development be located within a two-acre development convex on a parcel would allow for additional ground disturbance beyond that

currently permitted and could lead to additional construction noise. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites. However, determining the full extent of such impacts would speculative because the timing, size and location of such projects is not known at this time. Moreover, as multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed. Nonetheless, future multi-family residential projects within the City could result in similar levels of construction-related noise. Therefore, impacts related to proposed programs and policies would be significant but mitigable.

Mitigation Measures. The following mitigation measures are required to reduce construction-related noise impacts.

N-1(a) **Diesel Equipment Mufflers.** All future project sponsors on Candidate Sites #1, #2, and #7 and all other MF sites to which the AHO is applied shall ensure that all diesel equipment shall be operated with closed engine doors and shall be equipped with factory recommended mufflers during construction.

N-1(b) **Electrically-Powered Tools.** All future project sponsors on Candidate Sites #1, #2, and #7 and all other MF sites to which the AHO is applied shall ensure that electrical power is used to run air compressors and similar power tools during construction.

Significance After Mitigation. The above mitigation measures would reduce construction-related noise impacts to a less than significant level.

Impact N-2 **Development facilitated by the Housing Element Update including the candidate sites has the potential to increase operational traffic-related noise on study area roadway segments under existing plus project conditions. However, the change in noise levels would not exceed thresholds. Impacts would be Class III, *less than significant*.**

Development facilitated by the Housing Element Update would increase the number of vehicle trips to and from the candidate sites and other multi-family-zoned sites in the City, which would increase traffic noise on area roadways. Estimated peak hour volumes from the traffic study prepared by Fehr & Peers (see Appendix E) were used to model the change in noise levels resulting from increased traffic on six roadway segments within the vicinity of the candidate sites. These six roadway segments were those identified in the traffic study as those that would be most impacted by traffic from development of the candidate sites.

Table 4.10-6 shows exterior noise levels at 50 feet from the centerline of each modeled roadway segment. As shown therein, existing plus project traffic volumes would not significantly increase exterior noise leves on any of the study segments. As shown in Table 4.10-4, a significant impact would occur with an increase of 1 dBA where existing levels are between 65

and 75 dBA and with an increase of 0 dBA where existing levels are over 75 dBA (rounded to the nearest whole decibel).

Table 4.10-6
Comparison of Pre-Project and Post-Project Traffic Noise on Study Area Roadways

Location	Near Candidate Site(s)	Existing dBA (1)	Existing plus Project dBA (2)	Change in Noise Level due to Project Traffic (2 minus 1)	Exceed Threshold?
1. PCH East of Paradise Cove	1,2	74.4	74.4	0.0	No
2. PCH East of Corral Canyon Road	1,2	74.8	74.8	0.0	No
3. PCH West of Malibu Canyon Rd	7	74.9	75.0	0.1	No
4. PCH East of Cross Creek Rd	7	75.9	76.0	0.1	No
5. Malibu Canyon Rd North of Civic Center Drive	7	73.4	73.4	0.0	No
6. Civic Center Way btwn Webb Way and Cross Creek Road	7	65.4	65.7	0.3	No

Candidate Sites #1 and #2. Traffic resulting from full buildout of Candidate Sites #1 and #2 under existing plus project conditions would be generated throughout the day and night, with the majority of noise generated during peak commute hours, which are 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on weekdays, and 11:00 AM to 2:00 PM on Saturdays. As indicated in Table 4.10-5, the increase in noise along study roadway segments near these two candidate sites (segments 1 and 2) would be less than 0.1 dBA. Therefore, project-generated traffic noise impacts would be less than significant for Canditate Sites #1 and #2.

Candidate Site #7. As shown in Table 4.10-6, all but one of the roadway segments near Candidate Site #7 would experience a noise level increase under existing plus project conditions. For the roadway segments with existing noise levels between 65 and 75 dBA, the maximum increase would be 0.3 dBA. This would not exceed the FTA threshold of 1 dBA. PCH east of Cross Creek Road has an existing noise level over 75 dBA and would experience an estimated noise increase of 0.1 dBA. Though the FTA threshold for roadways over 75 dBA is 0 dBA, this number is rounded to the nearest whole decibel. Therere, an increase under 0.5 dBA would be less than significant. Further, a 0.1 dBA noise increase would not be perceptible. Therefore, project-generated traffic noise impacts would be less than significant for Candidate Site #7.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies are not expected to generate traffic-related noise. However, certain policies would have the potential to result in higher density development, which may increase traffic-related noise. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the

AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. As multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be identified and mitigated. Therefore, impacts would be less than significant.

Mitigation Measures. No mitigation measures are required.

.

Impact N-3 Development facilitated by the Housing Element Update has the potential to increase traffic-related noise under opening year (2014) plus project conditions. However, the change in noise levels would not exceed thresholds. Impacts would be Class III, *less than significant*.

Opening year development reflects the changes to existing traffic conditions that can be expected due to ambient growth and planned projects in Malibu in the year 2014. Table 4.10-7 shows exterior noise levels at 50 feet from the centerline of each modeled roadway segment in opening year conditions. As shown therein, opening year (2014) plus project traffic volumes would not significantly increase exterior noise leves on any of the study segments. As shown in Table 4.10-4, a significant impact would occur with an increase of 1 dBA where existing levels are between 65 and 75 dBA and with an increase of 0 dBA where existing levels are over 75 dBA (rounded to the nearest whole decibel).

Candidate Sites #1 and #2. Traffic resulting from growth (opening year plus project conditions) would be generated throughout the day and night, with the majority of noise generated during the AM, PM and Saturday peak hours. As indicated in Table 4.10-7, the segment of PCH east of Paradise Cove would not experience a noise increase. PCH east of Corral Canyon road would experience a maximum increase in traffic generated noise of 0.1 dBA. This would not exceed the FTA threshold of 0 dBA. As mentioned previously, the FTA threshold of 0 dBA for roadways with noise levels over 75 dBA is rounded to the nearest whole decibel. Therefore, noise increases less than 0.5 dBA would not be significant. Further, a 0.1 dBA increase would not be perceptible. Therefore, project-generated traffic noise impacts would be less than significant for Candidate Sites #1 and #2 under opening year plus projet conditions.

Candidate Site #7. Traffic resulting from growth and the development of Candidate Site #7 (opening year plus project conditions) would be generated throughout the day and night, with the majority of noise generated during the AM, PM and Saturday peak hours. As shown in Table 4.10-6, the study roadway segments near Candidate Site #7 with opening year noise levels between 65 and 75 dBA would experience a maximum noise increase of 0.2 dBA. This would not exceed the FTA threshold of 1dBA. Though the segments with opening year noise levels over 75 dBA would experience a 0.1 dBA increase, this is not a significant impact. As mentioned previously, the FTA threshold of 0 dBA for roadways with noise levels over 75 dBA is rounded to the nearest whole decibel. Therefore, a noise increase less than 0.5 dBA would not be significant. Further, a 0.1 dBA increase would not be perceptible. Therefore, project-generated traffic noise impacts would be less than significant for Candidate Site #7 under opening plus project conditions.

Table 4.10-7
Comparison of Opening Year (2014) Pre-Project and Post-Project Traffic Noise on Study Area Roadways

Location	Near Candidate Site(s)	Opening Year dBA (1)	Opening Year plus Project dBA (2)	Change in Noise Level due to Project Traffic (2 minus 1)	Exceed Threshold?
1. PCH East of Paradise Cove	1,2	75.0	75.0	0.0	No
2. PCH East of Corral Canyon Road	1,2	75.3	75.4	0.1	No
3. PCH West of Malibu Canyon Road	7	75.5	75.6	0.1	No
4. PCH East of Cross Creek Road	7	76.4	76.5	0.1	No
5. Malibu Canyon Rd North of Civic Center Drive	7	73.7	73.7	0.0	No
6. Civic Center Way between Webb Way and Cross Creek Road	7	66.6	66.8	0.2	No

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies are not expected to generate traffic-related noise. However, certain policies would have the potential to result in higher density development, which may increase traffic-related noise. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. As multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be identified and mitigated. Therefore, impacts would be less than significant.

Mitigation Measures. No mitigation measures are required.

Impact N-4 Development facilitated by the Housing Element Update has the potential to increase traffic-related noise under cumulative plus project conditions. However, the change in noise levels would not exceed thresholds. Impacts would be Class III, *less than significant*.

Cumulative development reflects the changes to existing traffic conditions that can be expected due to ambient growth and planned projects in Malibu in the year 2030. Table 4.10-8 shows exterior noise levels at 50 feet from the centerline of each roadway segment in the cumulative year (2030). As shown therein, cumulative plus project traffic volumes would not significantly

increase exterior noise levels on any of the study segments. As shown in Table 4.10-4, a significant impact would occur with an increase of 1 dBA where existing levels are between 65 and 75 dBA and with an increase of 0 dBA where existing levels are over 75 dBA (rounded to the nearest whole decibel).

Table 4.10-8
Comparison of Pre-Project and Post-Project
Cumulative (Year 2030) Traffic Noise on Study Area Roadways

Location	Near Candidate Site(s)	Cumulative Year (1)	Cumulative Year + Project (2)	Change in Noise Level due to Project Traffic (2 minus 1)	Exceed Threshold?
1. PCH East of Paradise Cove	1,2	75.2	75.3	0.1	No
2. PCH East of Corral Canyon Road	1,2	75.6	75.6	0.0	No
3. PCH West of Malibu Canyon Road	7	75.7	75.8	0.1	No
4. PCH East of Cross Creek Road	7	76.6	76.7	0.1	No
5. Malibu Canyon Road North of Civic Center Drive	7	73.9	73.9	0.0	No
6. Civic Center Way between Webb Way and Cross Creek Road	7	66.8	66.9	0.1	No

Candidate Sites #1 and #2. Traffic resulting from cumulative growth and full buildout of Candidate Sites #1 and #2 (cumulative plus project conditions) would be generated throughout the day and night, with the majority of noise generated during the AM, PM and Saturday peak hours. As indicated in Table 4.10-8, the study roadway segments near these two candidate sites would experience a maximum increase in traffic generated noise of 0.1 dBA. This would not exceed the FTA threshold of 0 dBA. As mentioned previously, the FTA threshold of 0 dBA for roadways with noise levels over 75 dBA is rounded to the nearest whole decibel. Therefore, a noise increase less than 0.5 dBA would not be significant. Further, a 0.1 dBA increase would not be a perceptible. Therefore, project-generated traffic noise impacts would be less than significant for Candidate Sites #1 and #2 under cumulative plus projet conditions.

Candidate Site #7. Traffic resulting from cumulative growth and the development of Candidate Site #7 (cumulative plus project conditions) would be generated throughout the day and night, with the majority of noise generated during the AM, PM and Saturday peak hours. As shown in Table 4.10-8, the study roadway segments near Candidate Site #7 would experience a maximum noise increase of 0.1 dBA. This would not exceed the FTA threshold of 0 dBA. As mentioned previously, the FTA threshold of 0 dBA for roadways with noise levels over 75 dBA is rounded to the nearest whole decibel. Therefore, a noise increase less than 0.5 dBA

would not be significant. Further, a 0.1 dBA increase would not be a perceptible. Therefore, project-generated traffic noise impacts would be less than significant for Candidate Site #7 under cumulative plus project conditions.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies are not expected to generate traffic-related noise. However, certain policies would have the potential to result in higher density development, which may increase traffic-related noise. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. As multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be identified and mitigated. Therefore, impacts would be less than significant.

Mitigation Measures. No mitigation measures are required.

Impact N-5 Operational noise generated by existing traffic, commercial, and institutional uses near the candidate sites could expose future residential units facilitated by the Housing Element Update to noise levels that exceed City standards. Potential impacts would be Class II, *significant but mitigable*.

Candidate Sites #1 and #2. Candidate Sites #1 and #2 would be limited to residential uses, and are surrounded by similar residential uses. Therefore, the candidate sites would not be expected to result in land use noise compatibility issues. However, the candidate sites are just north of PCH. As shown in tables 4.10-5 through 4.10-7, traffic noise on PCH near Paradise Cove Road is estimated to be 74.4 dBA in existing conditions, 75.1 dBA in the opening year (2014) and 76.8 in 2030. Table 4.10-2 shows the Malibu General Plan Noise Element noise limits for transportation noise sources. As shown therein, the maximum allowable exterior noise exposure from transportation sources is 50 dBA CNEL for residences. An exterior noise level of up to 65 dBA CNEL for residences may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are below 45 dBA CNEL. Traffic-related noise near the candidate sites may exceed 65 dBA CNEL. This is a potentially significant impact.

Candidate Site #7. The Malibu Country Mart shopping center is located approximately 800 feet south of Candidate Site #7 and the Malibu Library and LA County Courthouse are located approximately 250 feet to the west. In addition, the remaining 12.9 acres of the Candidate Site #7 are approved for commercial retail and office development (known as the La Paz Project). These uses may generate periodic noise associated with commercial deliveries, heating and cooling systems, trash hauling activities and parking lots. However, these commercial uses would not be expected to generate noise in excess of City standards due to the distant from the commercial uses to the candidate site (250 and 800 feet). In addition, any noise

generated by the commercial / institutional uses would be intermittent in nature (e.g. deliveries, trash hauling, and parking vehicles), and would not exceed City noise standards, which are based on 24-hour average ambient noise levels. Therefore, future residential development on the Candidate Site would not be exposed to excessive noise from commercial operations in the vicinity. Impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed programs and policies are not expected to generate noise. However, certain policies would have the potential to result in higher density development, which may increase noise. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). Given that a number of roadway segments throughout the City generate noise in excess of City standards, it is conservatively assumed that future housing projects pursuant to the AHO would be exposed to noise that exceed City standards. Therefore, impacts would be potentially significant.

Mitigation Measures. The following mitigation measure is required to reduce traffic-related noise impacts to Candidate Sites #1 and #2, and all other MF sites that would be subject to the AHO.

N-5 **Interior Noise.** All residential structures within the 65 dB(A) noise contour shall include the following or equivalent to achieve an acceptable interior noise level of 45 CNEL:

- Windows shall be dual pane, laminated, or similar with a Sound Transmission Class rating of at least 30 for all residential units with direct exposure to PCH;
- Exterior doors facing PCH shall have a sound insulating design with an STC rating of at least 35;
- Solid core exterior doors with perimeter weather stripping and threshold seals shall be used;
- Roof and attic vents shall face away from PCH.

Significance After Mitigation. Incorporation of Mitigation Measure N-5 would be expected to achieve an interior noise level reduction of 25 dBA or greater. Therefore, noise impacts related to traffic-related noise would be less than significant after mitigation.

c. Cumulative Impacts. Impact N-4 represents a cumulative impact analysis because it represents all development that could occur under Malibu's General Plan. As discussed in Impact N-4, cumulative development plus the development that could occur under the Housing Element Update would not result in a significant increase in noise. Therefore, cumulative impacts are less than significant.

4.11 POPULATION AND HOUSING

4.11.1 Setting

a. Current Population, Housing, and Employment. As of 2011, Malibu's population is estimated to be 12,699 [California Department of Finance (DOF), 2012]. There are a total of 6,868 residential units in the City; however, an estimated 1,597 of these units are vacant or are not permanently occupied thereby resulting in a total of 5,271 occupied households (DOF, 2012). The average household size is 2.38 persons (DOF, 2012). As of 2010, employment in the City was estimated at 6,736 jobs [Southern California Association of Governments (SCAG) Profile of the City of Malibu, 2011; City of Malibu, letter to SCAG, 2011]. Table 4.11-1 illustrates the 2011 population, housing and jobs estimates for Malibu in comparison to Los Angeles County.

Table 4.11-1
City of Malibu and Los Angeles County
Population, Housing and Jobs Estimates

	Malibu	Los Angeles County
2011 Population	12,699	9,884,632
2011 Households	5,271	3,249,575
2011 Persons per Household	2.38	2.99
2010 Jobs*	6,736**	4,123,262

Sources: California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, January 2011 and 2012, with 2010 Benchmark, 2012.
**SCAG, Profile of the City of Malibu, 2011.*
http://www.scag.ca.gov/resources/pdfs/2011LP/LosAngeles/Malibu.pdf
*** Includes correction as discussed in the City of Malibu's Letter to SCAG re: Integrated Growth Forecast and 2006-2014 RHNA, July 11, 2011. The letter states that there are 1,461 jobs assigned to Malibu that are not actually in Malibu, therefore the SCAG numbers have been adjusted down by 1,461 jobs.*

b. Future Growth Projections. The *Adopted 2012 Regional Transportation Plan (RTP) Growth Forecast* (2012) prepared by SCAG presents forecasts of population, households, and employment between 2008 and 2035 for all of Los Angeles County, including Malibu. SCAG projections for Malibu and Los Angeles County are shown in Table 4.11-2.

Malibu is expected to have a population of 13,800 by 2020. Based on the 2011 population of 12,699 residents, this represents an increase of approximately nine percent from 2011 to 2020. The total number of occupied households in Malibu is expected to increase from 5,271 in 2011 to 5,400 in 2020, representing an increase of approximately 2.5 percent. Employment within the City limits is expected to increase from 6,736 in 2010 to 7,439 in 2020 and 8,439 in 2035.

c. Jobs-to-Housing Ratio. A jobs-to-housing ratio divides the number of jobs in an area by the number of total housing units.[1] Communities are generally considered to be in balance

[1] *Jobs-to-housing ratio calculation (i.e. 9,099 jobs/5,267 houses=~1.73).*

when the ratio of jobs-to-housing is close to 1.0, or lies within the range of 1.0 to 1.29 (SCAG, April 2001). A ratio higher this range generally indicates an excess of jobs, and a ratio lower than this range generally indicates an excess of housing. The jobs-to-housing ratio forecasts for Malibu and Los Angeles County are shown in Table 4.11-3.

Table 4.11-2
Malibu and Los Angeles County
Population, Housing and Employment
Estimates

	2020	2035
Malibu		
Population	13,800	14,800
Households	5,400	6,100
Employment*	7,439	8,439
Los Angeles County		
Population	10,404,000	11,353,000
Households	3,513,000	3,852,000
Employment	4,558,000	4,827,000

**SCAG, Profile of the City of Malibu, 2011. http://www.scag.ca.gov/resources/pdfs/2011LP/LosAngeles/Malibu.pdf, takes into account discrepancy in jobs calculations detailed in letter from City of Malibu to SCAG dated July 11, 2011*

Table 4.11-3
Jobs-to-Housing Ratio for
Malibu and Los Angeles County

	2010	2020	2035
Malibu	1.28	1.38	1.38
Los Angeles County	1.27	1.30	1.25

The 2010 jobs-to-housing ratio in Malibu was 1.28, while the existing ratio countywide was 1.27. The Malibu ratio is just inside the 1.0-1.29 range.

Housing in Malibu is generally very expensive and limited in availability. According to the 2008-2014 Draft Housing Element, median single-family home prices were more than $2 million in 2009. Based on estimated affordable purchase prices, only upper-income residents can afford to purchase a home in the City (Table II-17, 2008-2014 Draft Housing Element). Additionally, the total housing growth need for the City during the 2006-2014 planning period is 441 units (2007 SCAG RHNA). Combined with the high number of jobs-relative-to housing in the community, this data indicates that many Malibu workers commute into the City from surrounding areas.

b. Regulatory Setting.

City of Malibu Housing Element**.** The Malibu General Plan serves as the long-term policy guide for the physical, economic and environmental growth of Malibu. The existing Housing Element of the General Plan contains the general community goals related to population, and housing, which include:

- *Adequate housing for existing and projected needs of all economic segments of the community*

  a) All residents, including those with special needs, have access to decent, safe and sanitary housing that is safe and affordable;
  b) Equal opportunity for all residents to live in housing of their choice;
  c) Creating additional affordable housing opportunities;
  d) No net loss of affordable housing; and
  e) Addressing housing needs regionally.

The currently proposed project and subject of this EIR is an update of the Housing Element.

4.11.2 Impact Analysis

a. Methodology and Impact Criteria. Based on Appendix G of the *CEQA Guidelines*, a significant impact could occur if development pursuant to the Housing Element Update would:

1. *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);*
2. *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or*
3. *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

For the purposes of this analysis, "substantial" population growth is defined as growth exceeding SCAG population forecasts for the City. "Substantial" displacement would occur if allowed land uses would displace more residences than would be accommodated through housing development facilitated by the Housing Element Update.

As discussed in the *Setting,* a jobs-to-housing ratio within the range of 1.0 to 1.29 is considered balanced (SCAG, April 2001). Malibu is currently inside of this identified range (refer to Table 4.11-3). Therefore, for the purpose of this analysis, a potentially significant impact related to jobs-to-housing balance would occur if the Housing Element Update would create a jobs-to-housing imbalance or worsen the projected imbalance in 2020 or 2035.

Impacts related to population and jobs/housing ratios are generally social or economic in nature. Under CEQA, a social or economic change generally is not considered a significant effect on the environment unless the changes can be directly linked to a physical change. Impacts related to the project's potential to induce growth are discussed in Section 5.0.

b. Project Impacts and Mitigation Measures.

Impact PH-1 Implementation of the Housing Element Update would not result in the displacement of substantial numbers of people or housing. Impacts would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. The intent of the Housing Element Update is to further the goal of meeting the existing and projected housing needs of all family income levels of the community, and specifically to provide evidence of the City's ability to meet the RHNA allocation through the year 2014. The Housing Element Update does not propose the demolition of any existing housing structures. The Housing Element Update includes applying an Affordable Housing Overlay District (AHO) to three parcels within the City, as described in Section 2.0 *Project Description*, to accommodate additional residential development at a density of 25 units /acre, as required by the RHNA allocation. Two of the three parcels have an existing single-family residence located on the property; however, the demolition of these structures is not proposed or necessary to facilitate rezoning and any future development on the parcels occupied by single-family residences would occur only with the consent of the property owner. The three parcels proposed for the AHO in the Housing Element Update would accommodate up to 212 dwelling units, as compared to 38 which could be permitted under the existing permitted density of 6 units/acre, thereby facilitating an overall increase in housing stock within the City. Therefore, impacts related to displacement of people or housing would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family Residential (MF) and Multi-Family Beachfront (MFBF). These new programs and policies are intended to foster affordable multi-family residential projects and provide additional housing within the City. These programs and their associated policies would not result in the displacement of people or housing. Therefore, impacts would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact PH-2 Growth facilitated by the Housing Element Update would be within SCAG regional growth forecasts for Malibu. As a result, the Housing Element Update would not induce substantial population growth beyond that currently anticipated within the City and impacts would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. The Housing Element Update would facilitate the construction of up to 212 new affordable housing units on the three candidate sites through 2014 (see Table 2-2 in Section 2.0, *Project Description*). Based on the current citywide average of 2.38 persons per household, this number of new units would increase the population of Malibu by approximately 505 persons (2.38 persons per household x 212 proposed dwelling units=505). Added to the existing population of 12,699 (California Department of Finance, May 2012), the population would increase to 13,204. This new total is within the estimated 2014 population forecast of 13,251, which was extrapolated from SCAG projections in Table 4.11-2. Therefore, the

population impact of the Housing Element Update is consistent with SCAG regional growth forecasts and impacts would be less than significant.

Table 4.11-3 shows the jobs-to-housing ratio for the City and County. The projected 2020 jobs-to-housing ratio is 1.38 jobs per housing unit (See Table 4.11-3). Development accommodated under the Housing Element Update would add 212 housing units to the City. If 212 housing units were added to the City, the jobs-to-housing ratio would be 1.33 jobs per housing unit. As discussed above, an area is considered to be "in balance" if there are 1.0 to 1.29 jobs per housing unit. The Housing Element Update would bring Malibu closer to a "balanced" jobs-to-housing unit ratio. Therefore, potential impacts related to the jobs to housing ratio would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These new programs and policies are intended to foster affordable multi-family residential projects and provide additional housing within the City. These programs and their associated policies are not anticipated to result in substantial population growth in excess of SCAG projections for the City. Therefore, impacts would be less than significant.

Mitigation Measures. Mitigation measures are not required.

c. Cumulative Impacts.

Housing and Population Growth. Cumulative development (either under construction or currently under review by the City) within the City includes 84 residential dwelling units, and 748,460 square feet of non-residential, along with the potential 212 units facilitated under the Housing Element Update. Based on 2.38 persons per household (Table 4.11-1), cumulative development would increase population by 200 persons and the proposed project would increase population by 505 persons. Added to the existing population of 12,699 (California Department of Finance, May 2012), cumulative and project development would cause a population increase to 13,404. This estimate is within SCAG projections of 13,800 persons by the year 2020. Therefore, cumulative impacts related to population would be less than significant.

Displacement of Housing and Population. The Housing Element Update, in addition to cumulative growth, would not be anticipated to displace substantial amounts of housing or numbers of people in the City. The Housing Element Update would increase housing opportunities in the City, especially for low income families. Therefore, cumulative impacts related to the displacement of people and housing would be less than significant.

This page intentionally left blank.

4.12 PUBLIC SERVICES

4.12.1 Setting

a. Fire Protection. The Los Angeles County Fire Department (LACFD) provides fire protection service in Malibu. Currently, four stations (Nos. 70, 71, 88 and 99) directly serve the City; however, all LACFD resources are available to serve the City. LAFCD operations are divided into nine operational Divisions, which are composed of 22 Battalions serving unincorporated area of Los Angeles County and 58 contract cities, including the City of Malibu. Candidate Sites #1, #2, and #7 are all located within Battalion #5 (LACFD, 2012). In the event of a major fire, additional equipment is kept in reserve at most of the stations to be used by off-duty firefighters (LACFD, 2012).

The Ventura County Fire Department's staff indirectly provides fire protection services to the Santa Monica Mountains by protection and control of fires on adjacent lands. The United States Park Service also provides additional fire protection (City of Malibu General Plan Circulation and Infrastructure Element, Section 4.3.1, 1995).

Candidate Sites #1 and #2. Candidate Sites #1 and #2 would be served by LACFD Fire Station 71. Fire Station 71 is located at 28722 Pacific Coast Highway (PCH), in the City of Malibu, and is approximately 0.30 miles southwest of Candidate Site #1 and 0.35 miles southwest of Candidate Site #2. Fire Station 71 is staffed with a 3-person engine company (consisting of one Fire Captain, one Fire Fighter Specialist and one Fire Fighter Paramedic) and a 2-person paramedic squad (consisting of two Fire Fighter Paramedics) (LACFD Comment Letter, June 12, 2013). Equipment includes one Fire Engine, one Paramedic Ambulance and one patrol unit (Captain Leary, Personal Communication, April 24, 2013). According to the LACFD, the average response time to Candidate Sites #1 and #2 would be approximately one minute (Buck, Lorraine, Personal Communication April 17, 2012).

Candidate Site #7. According to the LACFD, Fire Station 88 would be the primary station serving Candidate Site #7 (Bloom, David, Personal Communication April 2012). Fire Station 88 is located at 23720 Malibu Road, in Malibu, and is approximately 0.5 miles southwest of Candidate Site #7. Fire Station 88 is staffed with a 3-person engine company (consisting of one Fire Captain, one Fire Fighter Specialist and one Fire Fighter Paramedic) and a 2-person paramedic squad (consisting of two Fire Fighter Paramedics) (LACFD Comment Letter, June 12, 2013). Equipment includes one Fire Engine and one Paramedic Ambulance (Steinberger, John. Personal Communication, April 24, 2013). According to LACFD, the response time to Candidate Site #7 would be approximately 1.7 minutes (Buck, Lorraine, Personal Communication April 17, 2012).

The City has a mixture of semi-rural and developed areas, which have different response time goals. For developed areas, the LACFD uses national guidelines to establish a five-minute response time goal for fire and Emergency Medical Services (EMS) and eight minutes for the advanced life support (paramedic) unit. In semi-rural areas, the LACFD uses national guidelines to establish an eight-minute response time goal for fire and EMS and a 12-minute response time goal for the advanced life support (paramedic) unit (Buck, Lorraine, Personal Communication April 17, 2012).

The LACFD has adopted a development impact fee mitigation program, which is imposed on all new development for the purpose of funding fire protection facilities (Buck, Lorraine, Personal Communication April 17, 2012). The fee is paid to the LACFD and is used to fund fire stations and equipment needed to deliver service to new development. The current fee is $0.9296 per square foot of new construction, and is annually reviewed and adjusted as needed.

b. Police Protection. The City contracts with the Los Angeles County Sheriff's Department (LACSD) for police protection, enforcement, and emergency services. The LACSD would serve Candidate Sites #1, #2, and #7. The LACSD serves unincorporated Los Angeles County and also provides contract services to 41 cities within the County. Deployment of deputies within the contract cities is determined by the contracting city and the LACSD based upon the anticipated needs and "appropriate level of service" consideration factors such as service area size, residential population, frequency and type of crimes, transient and visitor population, actual and expected service calls, traffic levels and response times. These anticipated needs are subject to periodic review by the LACSD and the City to assure adequate service.

The LACSD serves the City from the Malibu/Lost Hills Station located at 27050 Agoura Road in Agoura Hills. This station provides service to the cities of Agoura Hills, Calabasas, Hidden Hills, Malibu and Westlake Village as well as the surrounding unincorporated areas of LA County, including the communities of Chatsworth Lake Manor, Malibu Lake, Topanga and West Hills. According to the LACSD, the crime rate in the Malibu area is relatively low, and most of their efforts in the City revolve around traffic enforcement (Sergeant Philip Brooks, LACSD Malibu/Lost Hills Station, Personal Communication May 1, 2012). The estimated response time for Malibu is 6.3 minutes for emergency calls, and 19.6 minutes for routine calls. The LACSD estimates that about 90% of the emergency calls in the City are traffic related (Sergeant Philip Brooks, LACSD Malibu/Lost Hills Station, Personal Communication May 1, 2012).

The LACSD maintains a response time goal of ten minutes for emergency calls, 20 minutes for priority calls, and 60 minutes for routine calls (Sergeant Philip Brooks, LACSD Malibu/Lost Hills Station, Personal Communication May 1, 2012). Based on the average response times mentioned above, response time goals are generally met in the City.

The City has prepared an Emergency Preparedness program in preparation for a major emergency event. Under the City Manager's direction, the City's Emergency Services Coordinator is responsible for implementation of the State Emergency Management System Multi-Hazard Function Plan, which includes training staff and volunteers in preparation of a disaster and equipping the City's emergency operations center. The objective of the program is to train and coordinate personnel and facilities in Malibu in order to have an efficient organization capable of responding to a major emergency, to protect lives and preserve public and private property.

The City maintains a mutual aid agreement with other Fire and Law enforcement agencies in the area. In the event that all local resources are committed to the maximum and additional resources are required, the City will initiate requests for mutual aid through the Los Angeles County Operational Area.

c. Schools. The Santa Monica-Malibu Unified School District (SMMUSD), an independent agency governed by a Board of Trustees, provides public school service within the City of Malibu. Juan Cabrillo Elementary, Webster Elementary, Point Dume Elementary and Malibu High School would serve Candidate Sites #1, #2, and #7. Existing schools that would serve the candidate sites, along with their current enrollments and capacities, are listed in Table 4.12-1.

Table 4.12-1
Current School Enrollment and Capacities

School	Current Enrollment	Current Capacity*	Existing Capacity Available for Additional Students	Capacity Utilization
Juan Cabrillo Elementary	253	675	422	38%
Webster Elementary	337	567	230	59%
Point Dume Elementary	264	486	222	54%
Malibu High School	1,092	1,674	582	65%
Total	**1,946**	**3,402**	**1,456**	**54%**

** % Capacity is approximate and could change with budgetary restrictions.*

Source: Janece L. Maez, Chied Finalcial Officer, Assistant Superintendent Business and Fiscal Services for the Santa Monica-Malibu Unified School District, personal communication May 10, 2012.

In addition to the public schools included in Table 4.12-1, there are several private schools within the City. Impacts to these schools are not included herein, as CEQA requires an analysis of public schools. Nonetheless, for informational purposes, these schools include, Children's Creative Workshop, Gan Malibu Preschool, Malibu Jewish Center, Malibu Presbyterian Preschool, New Roads School, Our Lady of Malibu, St. Aidan's Preschool, and Wonder Years Family Preschool.

4.13.2 Impact Analysis

a. Methodology and Significance Thresholds. Information on current fire service demands and available staff and equipment was obtained from the LACFD. Information on current population to deputy ratios and police service demands was collected from the LACSD Malibu/Lost Hills Station. Student generation rates were provided by the SMMUSD and used to estimate the number of students generated per new residence.

Based on Appendix G of the *CEQA Guidelines*, public service impacts are considered potentially significant if development facilitated by the Housing Element Update would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain

acceptable service ratios, response time, or other performance objectives for any of the following services:

- *Fire protection;*
- *Police protection; or*
- *Schools.*

b. Project Impacts and Mitigation Measures.

Impact PS-1 Development facilitated by the Housing Element Update would place additional demand on fire protection services, but would not create the need for new or expanded fire protection facilities. Impacts would therefore be Class III, *less than significant*.

Candidate Sites #1 and #2. Residential development on Candidate Sites #1 and #2 would increase demand for fire and emergency services. Fire Station 71, which would serve Candidate Sites #1 and #2, is staffed daily by five firefighters and houses one Fire Engine, one Paramedic Ambulance, and one patrol unit. Under the Housing Element Update, up to 181 new dwelling units could be developed through 2014 on Candidate Sites #1 and #2. This number of units would generate an estimated 431 new residents (2.38 persons per household x 181 new units; see Section 4.12, *Population and Housing*, for more information). The ratio of firefighters to residents would decrease incrementally; however, this decrease would not adversely affect fire protection services (Buck, Lorraine, Personal Communication April 17, 2012). As discussed above, impacts related to fire protection service are primarily associated with response times. In developed areas, the LACFD uses national guidelines to establish a five minute response time goal for fire and EMS. According to the LACFD, the average response time to Candidate Sites #1 and #2 would be approximately one minute (Buck, Lorraine, Personal Communication April 17, 2012). As such, adequate fire protection would be available to serve future development on Candidate Sites #1 and #2 and no new or expanded fire facilities would be required. In addition, development impact fees collected by LACFD could be used as necessary for the purchase and maintenance of equipment. Therefore, impacts would be less than significant.

Candidate Site #7. Fire Station 88, which would serve Candidate Site #7, is staffed by five firefighters and houses a Fire Engine and one Paramedic Ambulance. Under the Housing Element Update, up to 46 new dwelling units could be added through 2014 on Candidate Site #7. This would add an estimated 110 new residents (2.38 persons per household x 46 new units; see Section 4.12 *Population and Housing* for more information). As discussed above, impacts related to fire protection service are primarily associated with response times. In developed areas, the LACFD uses national guidelines to establish a five minute response time goal for fire and EMS. According to the LACFD, the average response time to Candidate Site #7 would be approximately 1.7 minutes (Buck, Lorraine, Personal Communication April 17, 2012). As such, adequate fire protection would be available to serve future development on Candidate Site #7 and no new or expanded fire facilities would be required. In addition, development impact fees collected by LACFD could be used as necessary for the purchase and maintenance of equipment. Therefore, impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family Residential (MF) and Multi-Family Beachfront (MFBF). Some of these proposed policies, including amendments to the Local Coastal Plan (LCP) and the Malibu Municipal Code (M.M.C) to remove the maximum total grading allowance of 1,000 cumulative cubic yards per residential parcel and the total maximum impermeable coverage allowance of 25,000 square feet, would have no impact on fire protection services, as these would not result in substantial adverse impacts to response times resulting in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts.

However, other programs would have the potential to impact fire protection services within the City. The Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program would remove regulatory barriers to affordable housing development, which could result in the construction of new multi-family housing and associated population growth. This would incrementally increase demand for fire protection service. However, it is anticipated that any new residential development would be within the existing service area of the LACFD. In addition, as multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed, including fire protection services and fire flow, and development impact fees would be paid to the LACFD. Therefore, impacts associated with the programs and policies of the Housing Element Update would be less than significant.

Fire Flow. All future development on Candidate Sites #1, #2, and #7, as well as other multi-family residential projects pursuant to the Housing Element Update would be required to demonstrate adequate fire flow. A minimum fire flow is required to provide sufficient water to firefighters during an emergency. Fire flow is defined as the amount of water required, above and beyond domestic needs, to extinguish a fire in a structure and which should be available during peak water demand periods. The number and location of fire hydrants that would service development facilitated by the Housing Element Update would be determined in conjunction with the LACFD and the City of Malibu once final site plans are submitted for approval. In addition to maintaining the mandatory fire flow and acceptable response times, development would be required to comply with all fire safety regulations outlined in the California Uniform Fire Code. Therefore, impacts related to fire flow would be less than significant.

Mitigation Measures. No mitigation measures required.

Impact PS-2 Development facilitated by the Housing Element Update would increase the City's population, which would incrementally increase demand for police protection service. However, the increase would not substantially affect the personnel, equipment, or organization of the LACSD or require the expansion of existing facilities or construction of new facilities. Therefore, impacts to police service are considered Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Police protection services are not "facility-driven;" that is, police protection services are not reliant on facilities in order to effectively patrol a specific area. An expansion of, or intensification of development within, a specific area does not necessarily result in the need for additional facilities if police officers and patrol vehicles are equipped with adequate telecommunications equipment in order to communicate with police headquarters. However, if the geographical area of a specific area is expanded, population increases, or intensification/ redevelopment of an existing area results in the need for new police officers, new or expanded facilities could be needed.

Development of the three candidate sites with new multi-family housing would increase the City's housing stock by up to 212 units. This number of new units would add an estimated 505 residents, bringing the 2014 population to 13,204, which is a 4% increase. This population increase would result in an increase in demand for police protection service within the existing geographic area of the City. However, the LACSD Malibu/Lost Hills Station would be able to continue to provide adequate police protection services to the City with the addition of new development facilitated by the Housing Element Update, as the candidate sites are already within the LACSD service area. As a result, development of the candidate sites would not create the need for new or expanded police protection facilities nor impact response time goals (Sergeant Philip Brooks, LACSD Malibu/Lost Hills Station, Personal Communication May 1, 2012). Moreover, future development facilitated by the Housing Element Update would be required to pay developer impact fees to the LACSD. These fees would contribute to maintaining adequate police protection services. Therefore, impacts relating to the provision of police protection services would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family (MF) and Multi-Family Beachfront (MFBF). Some of these proposed policies, including amendments to the LCP and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per residential parcel and the total maximum impermeable coverage allowance of 25,000 square feet, would have no impact on police protection services, as these would not result in substantial adverse impacts to established service ratios resulting in the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts. However, other programs would have the potential to impact police protection services within the City. The Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program would have the potential to increase demand for police protection services because they would remove regulatory barriers to affordable housing development, which could result in the construction of new multi-family housing. However, because any new multi-family development would be within the existing service area of the LACSD, it would not be expected to create the need for new or expanded LACSD facilities. In addition, as multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed. Therefore, impacts associated with the programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No mitigation measures are required.

Impact PS-3 Residential development facilitated by the Housing Element Update would generate new students and increase the demand for school facilities. However, adequate capacity exists at public schools that would serve Candidate Sites #1, #2, and #7. Therefore, impacts are considered Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Development of the three candidate sites would add up to 212 new dwelling units in Malibu through 2014. The SMMUSD estimates that each new residence within its jurisdiction generates an average of 0.171 new students (Personal Communication, Janece L. Maez, SMMUSD, May 2012). Using this generation factor, the 212 dwelling units proposed by the Housing Element Update would generate an estimated 37 new students. As shown in Table 4.13-2, SMMUSD schools have the capacity to accommodate additional students and would therefore be capable of receiving the 37 new students potentially generated by development of the three candidate sites. Therefore, impacts to schools would be less than significant.

Table 4.12-2
Current School Enrollment and Capacities with the Inclusion of New Units Facilitated by the Housing Element Update

School	Current Enrollment	New Students Generated	Capacity With Housing Element Update	Current Capacity	Capacity Utilization With Housing Element Update
Juan Cabrillo Elementary	253	10	263	675	39%
Webster Elementary	337	9	34	567	61%
Point Dume Elementary	264	9	273	486	56%
Malibu High School	1,092	9	1,101	1,674	66%
Total	**1,946**	**37**	**1,953**	**3,402**	**57%**

** % Capacity is approximate and could change with budgetary restrictions.*

Source: Janece L. Maez, Chief Financial Officer, Assistant Superintendent Business and Fiscal Services for the Santa Monica-Malibu Unified School District, personal communication May 10, 2012.

**The 37 students generated are distributed evenly among all schools. In any scenario, any school would have the capacity to accommodate all 37students.*

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. Some of these proposed policies, including amendments to the LCP and M.M.C. to remove the maximum total grading allowance of 1,000 cumulative cubic yards per residential parcel and the total maximum impermeable coverage allowance of 25,000 square feet, would have no impact on schools, as these would not result in substantial adverse impacts to the demand for public school services

in the City. However, other programs would have the potential to impact the demand for public school services within the City. The Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program would have the potential to increase enrollment at public schools because they would remove regulatory barriers to affordable housing development, which could result in the construction of new multi-family housing and an increased demand for public school services. However, as multi-family residential projects are proposed in the future, they would be subject to individual project review and approval by the City, wherein any project specific impacts would be addressed and would be subject to school impact
mitigation fees, which constitute full mitigation under CEQA. Therefore, impacts associated with the programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No mitigation measures are required with payment of State-mandated school impact mitigation fees.

c. Cumulative Impacts.

Candidate Sites. As described in Section 3.0, *Environmental Setting*, cumulative development within the City (both approved projects and those proposed and currently under review) includes 84 residential dwelling units, and 748,460 square feet of non-residential, along with the potential 212 units facilitated by the Housing Element Update. Based on 2.38 persons per household (Table 4.11-1), cumulative projects would increase the City's population by 200 persons and the proposed project would increase the population by 505 persons. Added to the existing population of 12,699 (California Department of Finance, May 2012), cumulative and project development would increase the population to 13,404, a 6% increase. This estimate is within SCAG projections of 13,800 persons by the year 2020.

Fire Protection. Cumulative development would incrementally increase demand for fire protection services. However, it is not anticipated that development would occur outside the existing LACFD service area; therefore, new or expanded facilities would not be needed. In addition, development impact fees collected by the LACFD would be used as necessary for the purchase and maintenance of equipment to provide adequate service. As a result, cumulative impacts relating to the provision of fire protection service would not be significant.

Police Protection. Cumulative development would incrementally increase demand for police protection services. However, because new development would be within the existing LACSD service area, it would not create the need for new or expanded facilities. In addition, development impact fees collected from all developers could be used as necessary for the purchase and maintenance of equipment. Therefore, cumulative impacts relating to the provision of police protection service would be less than significant.

Schools. The potential development of 212 units facilitated under the Housing Element Update along with 84 residential dwelling units, and 748,460 square feet of non-residential development account for the anticipated cumulative development through the year 2014 for Malibu. The 212 residential units that could be added on the three candidate sites along with the proposed 84 residential units of pending development would generate an estimated 51 new students. The SMMUSD has sufficient capacity to accommodate 51 new students. In addition, future development would be required to pay school fees to offset development impacts.

Pursuant to Section 65995(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Therefore, cumulative impacts relating to the provision of public school service would not be significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards.

This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative hazardous impacts when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. This development when combined with cumulative development may increase the need for fire and police services as well as increase demand for school capacity. However, future development projects pursuant to the Housing Element Update would be required to pay fees as necessarily to LACFD and applicable public schools to offset increases in demand, and would be required to undergo subsequent environmental review, wherein any potential impacts to public services would be addressed accordingly. In addition, as discussed above, the Housing Element Update would not result in any significant impacts relative to these public services, and therefore would not contribute a cumulatively considerable impact. Therefore, cumulative impacts would be less than significant.

This page intentionally left blank.

4.13 TRANSPORTATION and TRAFFIC

4.13.1 Setting

This section evaluates the project's impacts to the local transportation and circulation network. The analysis is based upon a traffic study (December 2012) prepared by Fehr & Peers, which is included in its entirety in Appendix E.

a. Existing Street Network. Access to the project area is provided by Pacific Coast Highway (CA-1 or PCH) and other arterial and collector roadways that connect to PCH. The primary roadway facilities in the project area are shown in Figure 4.13-1 and briefly described below.

Pacific Coast Highway (State Route 1). PCH is a State Highway that provides east/west access through Malibu. In the project area, PCH is a four lane roadway with an intermittent center turning lane, with speed limits ranging from 45 to 55 miles per hour, and is a designated route in the Los Angeles County's Congestion Management Plan (CMP).

Data from the California Department of Transportation (Caltrans) shows that the average daily traffic (ADT) volume on the PCH in Malibu ranges between approximately 30,000 and 45,000 vehicles per day (vpd) (2010 Traffic Volumes on California State Highways, Caltrans, obtained April 2012).

Decker Road (SR-23). Decker Road is an undivided arterial roadway that provides north/south access in Malibu. Decker Road extends from PCH north to Mulholland Highway. In the project area, Decker Road is a two lane roadway and is a designated scenic route.

Trancas Canyon Road. Trancas Canyon Road is an undivided arterial roadway that provides north/south access in Malibu. Trancas Canyon Road extends from PCH north to the Santa Monica Mountains National Recreation Area. Near the project area, Trancas Canyon Road is a two lane roadway.

Kanan Dume Road (County Highway N9). Kanan Dume Road is a four lane highway providing north/south access in Malibu. Kanan Dume Road extends from PCH north to the City of Agoura. Kanan Dume Road also provides access to the Ventura Freeway (US 101). Within Malibu, Kanan Dume Road is classified as a city road, as opposed to a county road.

Zumirez Drive. Zumirez Drive is a private road providing north/south access in Malibu. Zumirez Drive is a two lane undivided roadway that extends from PCH north to Kanan Dume Road. Zumirez Drive is approximately one mile long.

Malibu Canyon Road (County Highway N1). Malibu Canyon Road is a north-south arterial roadway, extending from PCH northbound to US 101. Between PCH and Civic Center Way, Malibu Canyon Road is a four lane roadway; north of Civic Center Way, Malibu Canyon Road narrows to a two lane roadway. Near Mulholland Highway, Malibu Canyon becomes Las Virgenes Road and connects to US 101.

Analyzed Intersections and Candidate Sites

Figure 4.13-1

Base drawing source: Fehr & Peers, April 2013.

Civic Center Way. Civic Center Way provides east/west access in Malibu. It is a two lane undivided arterial roadway connecting Malibu Canyon Road and Cross Creek Road.

Webb Way. Webb Way provides north/south access in Malibu to City Hall. It extends from Malibu Road north to Civic Center Way, where it becomes Stuart Ranch Road. There are two to four travel lanes along Webb Way.

Cross Creek Road. Cross Creek Road provides north/south access in Malibu. It becomes a gated private road just north of the stop sign at Civic Center Way.

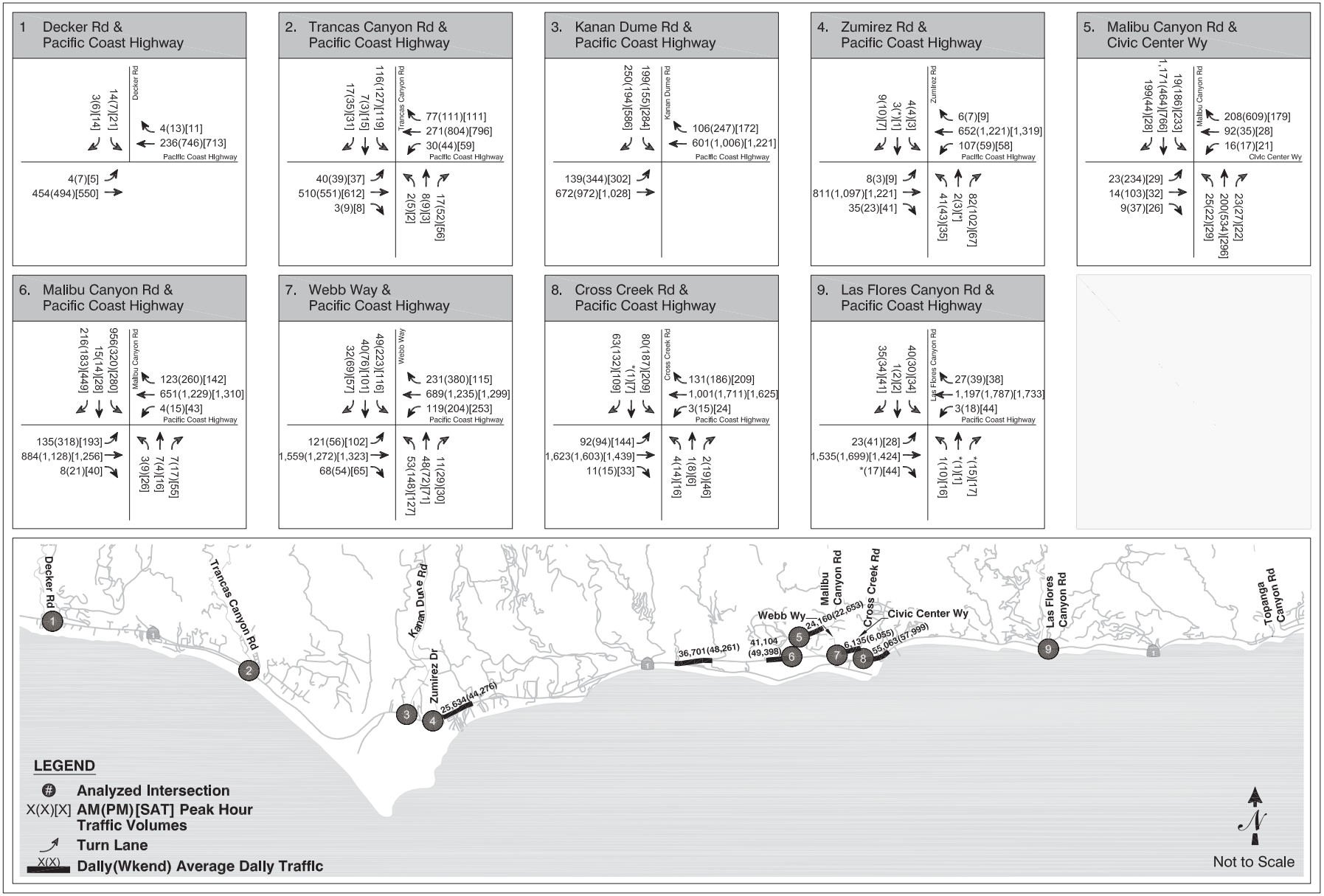
Los Flores Canyon Road. Los Flores Canyon Road is a north/south arterial roadway in Malibu. It is a two lane roadway extending from PCH north to Rambla Pacifico Street.

b. Existing Public Transit. The City of Malibu is served by bus transit lines operated by the Los Angeles County Metropolitan Transportation Authority (Metro). One bus route, Metro Line 534, connects the City to Los Angeles County along PCH. Line 534 provides service between Culver City and Malibu, with stops in Santa Monica, Pacific Palisades, and Castellamare. Line 534 operates from approximately 4:30 AM to 10:15 PM on weekdays, and from 5:30 AM to 10:15 PM on weekends. Bus headways are approximately 10 to 30 minutes on weekdays, and 20 to 60 minutes on weekends.

c. Existing Intersection Traffic Volumes and Levels of Service. This section presents the existing peak period turning movement traffic volumes for the analyzed intersections; describes the methodology used to assess the traffic conditions at each intersection; and analyzes the resulting operating conditions at each, indicating volume-to-capacity (V/C) ratios and level of service (LOS). LOS is a qualitative measure used to describe the condition of traffic flow, ranging from excellent "free-flow" conditions at LOS A to overloaded "stop-and-go" conditions at LOS F. LOS D is typically considered to be the minimum desirable level of service in urban areas.

Existing Peak Period Levels of Service. The existing weekday peak period turning movement volumes are presented in Figure 4.13-2. Table 4.13-1 summarizes the existing weekday morning and evening peak period V/C ratios and corresponding LOS at each of the study intersections. The results of this analysis indicate that seven of the nine intersections are currently operating at LOS C or better during the weekday morning and evening peak periods and Saturday peak periods. The following intersections currently operate at an LOS of D or worse during one or more peak periods:

- Malibu Canyon Road & PCH (Saturday peak hour)
- Cross Creek Road & PCH (Saturday peak hour)



Existing Peak Hour Traffic Volumes

Base drawing source: Fehr & Peers, April 2013.

Figure 4.13-2

Table 4.13-1
Existing (Year 2012) Intersection Level of Service Analysis

Intersection	Jurisdiction	Peak Hour	Existing Base Year (2012)	
			V/C or Delay	LOS
1. Decker Canyon Road and PCH [1]	Malibu	**AM**	11.5 s	B
		PM	16.2 s	C
		SAT	17.5 s	C
2. Trancas Canyon Road and PCH	Malibu	**AM**	0.319	A
		PM	0.480	A
		SAT	0.468	A
3. Kanan Dume Road and PCH	Malibu	**AM**	0.394	A
		PM	0.663	B
		SAT	0.799	C
4. Zumirez Road and PCH	Malibu	**AM**	0.406	A
		PM	0.484	A
		SAT	0.500	A
5. Malibu Canyon Road and Civic Center Drive	Malibu	**AM**	0.503	A
		PM	0.472	A
		SAT	0.345	A
6. Malibu Canyon Road and PCH	Malibu	**AM**	0.674	B
		PM	0.671	B
		SAT	0.807	D
7. Webb Way and PCH	Malibu	**AM**	0.517	A
		PM	0.668	B
		SAT	0.674	B
8. Cross Creek Road and PCH	Malibu	**AM**	0.594	A
		PM	0.781	C
		SAT	0.809	D
9. Las Flores Canyon Road and PCH	Malibu	**AM**	0.581	A
		PM	0.681	B
		SAT	0.668	B

Note: Intersections analyzed using Intersection Capacity Utilization (ICU) methodology unless otherwise noted.
1. Intersection is two-way stop-controlled. Analysis conducted using Highway Capacity Manual stop-controlled methodology. Average vehicular delay in seconds is reported for the stop-controlled approach.

d. Existing Roadway Segment Traffic Volumes and Level of Service. This section presents an analysis of the existing conditions of roadway segments.

Existing Roadway Segment Conditions. The roadway segments along PCH operate as a 4-lane divided arterial, with a daily capacity of 37,400 vehicles, per Highway Capacity Manual (HCM 2000) guidelines. The roadway segments on Malibu Canyon Road and Civic Center Way operate as a two-lane arterial with a roadway capacity of 18,700 vehicles. Table 4.13-2 presents

existing daily roadway segment volumes and segment LOS. As shown in Table 4.13-2, under existing conditions, the following roadway segments operate at LOS D or worse on weekdays and/or Saturdays:

- PCH east of Paradise Cove Road (Saturday mid-day and daily)
- PCH east of Corral Canyon Road (weekday daily, Saturday mid-day and daily)
- PCH between Malibu Canyon Road and John Tyler Drive (weekday daily, Saturday mid-day and daily)
- PCH east of Cross Creek Road (weekday PM and daily, Saturday mid-day and daily)
- Malibu Canyon Road north of Civic Center Way (weekday AM, PM, and daily, Saturday mid-day and daily)

f. Opening Year (2014) and Cumulative Year (2030) Traffic Projections. The opening year (2014) and cumulative year (2030) base traffic projections reflect the changes to existing traffic conditions that can be expected from three primary sources:

1. Ambient growth in traffic, which reflects increases in traffic because of regional growth and development;
2. Traffic generated by specific development projects located within, or in the vicinity of, the study area; and
3. Roadway or intersection capacity enhancements.

The opening year (2014) scenario assumes that all three candidate sites are constructed (all 212 units), in addition to a 1.5% growth rate for development elsewhere in the City. The project traffic study applied an ambient growth factor of 1.5% per year (compounded) to adjust the existing base year traffic volumes to reflect the effects of regional growth and development for the 2014 opening year. This adjustment was applied to the existing year 2012 traffic counts to reflect the effect of ambient growth of 3.04% by year 2014. It was also determined that an ambient growth rate of 0.48% (compounded) per year should be applied to adjust the existing base year traffic volumes to reflect the effects of regional growth and development for the 2030 cumulative year. This adjustment was applied to the existing year 2012 traffic counts to reflect the effect of ambient growth of 9% by year 2030.

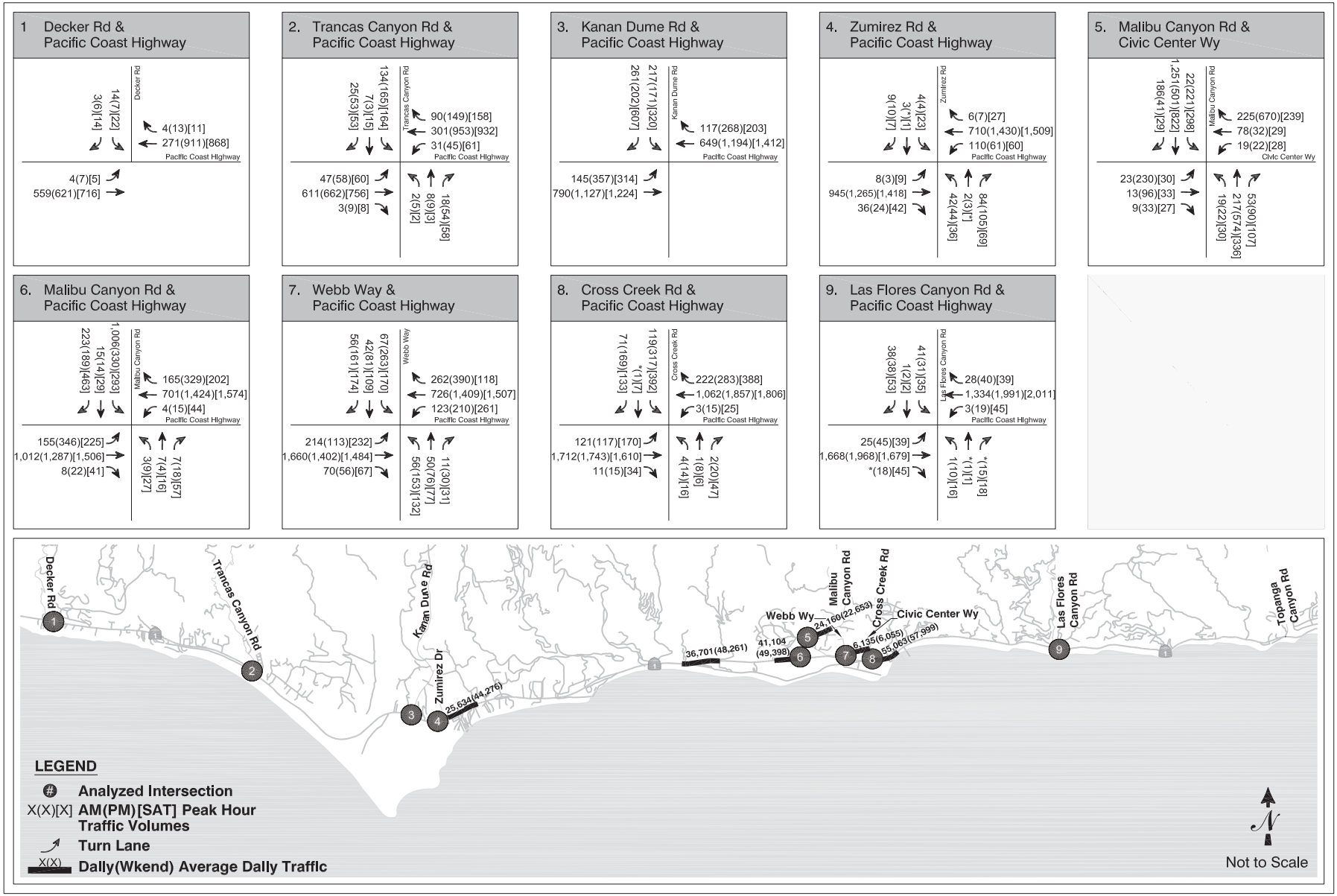
Cumulative base traffic forecasts include the effects of specific cumulative development projects. The cumulative (2030) scenario plus project assumes all three candidate sites are constructed, in addition to all cumulative development. The cumulative project list is shown in Table 3-1 in Section 3.0 *Environmental Setting*.

Opening Year (2014) peak hour traffic volumes are shown in Figure 4.13-3 and Cumulative Year (2030) peak hour traffic volumes are shown in Figure 4.13-4.

Table 4.13-2
Existing (2012) Roadway Segment Volumes

Roadway Segment	Class	Hourly Capacity	Daily Cap.	Weekday									Saturday					
				AM			PM			Daily			Mid-Day Peak			Daily		
				Vol.	V/C	LOS	Vol.	V/C	LOS	Vol.	V/C	LOS	Vol.	V/C	LOS	Vol.	V/C	LOS
PCH																		
east of Paradise Cove	4 Lane Divided Arterial	3,740	37,400	1,020	0.273	A	2,627	0.702	C	20,658	0.552	A	3,135	0.838	D	37,468	1.00	F
east of Corral Canyon Road	4 Lane Divided Arterial	3,740	37,400	1,978	0.529	A	2,878	0.770	C	31,401	0.840	D	3,280	0.877	D	41,337	1.11	F
Malibu Canyon Road to John Tyler Drive	4 Lane Divided Arterial	3,740	37,400	2,037	0.545	A	2,969	0.794	C	35,658	0.953	E	3,423	0.915	E	42,395	1.13	F
e/o Cross Creek Road	4 Lane Divided Arterial	3,740	37,400	2,856	0.764	C	3,685	0.985	E	46,392	1.240	F	670	0.179	A	46,790	1.25	F
Malibu Canyon Road																		
n/o Civic Center Way	2 Lane Arterial	1,870	18,700	1,861	0.995	E	2,073	1.109	F	23,009	1.230	F	1,678	0.897	D	20,568	1.10	F
Civic Center Way																		
Webb Way to Cross Creek Road	2 Lane Arterial	1,870	18,700	351	0.188	A	449	0.240	A	5,082	0.272	A	366	0.196	A	4,862	0.26	A

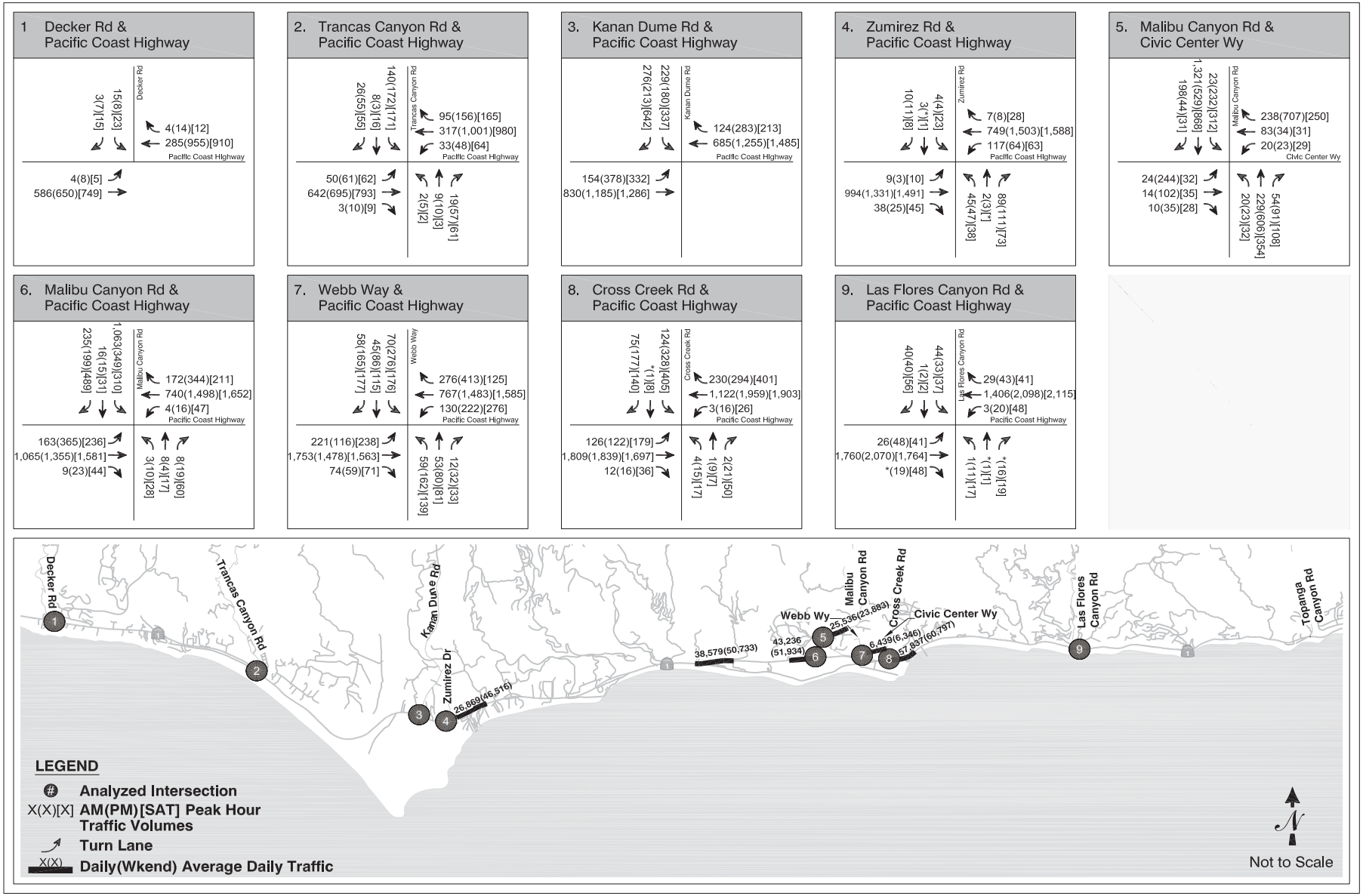
Source: Fehr & Peers, January 2013



Opening Year (2014) Base Peak Hour Traffic Volumes

Figure 4.13-3

Base drawing source: Fehr & Peers, April 2013.



Cumulative Year (2030) Base Peak Hour Traffic Volumes

Figure 4.13-4

Base drawing source: Fehr & Peers, April 2013.

4.13.2 Impact Analysis

a. Methodology and Significance Thresholds.

Existing Traffic Volumes. Traffic counts were conducted on a typical weekday during the morning peak period (between 7:00 AM and 10:00 AM) and evening peak period (between 3:00 PM and 6:00 PM) in July 2012 for all intersections. Traffic counts were also collected on a Saturday from 11:00 AM to 2:00 PM in July 2012.

Level of Service Thresholds. The traffic impact analysis compares the projected LOS at each study intersection under Existing, Opening Year and Cumulative Year plus Project conditions to the Existing, Opening Year and Cumulative Year base conditions to estimate the incremental increase in the V/C ratio caused by the proposed project. Detailed LOS calculations for the proposed project for Existing plus Project, Opening Year (2014) plus Project, and Cumulative Year (2030) plus Project are included in the project traffic study.

All of the nine study intersections are in the City of Malibu. Significance criteria established by the City of Malibu was used to assess the potential for significant project impacts at the study intersections.

The City of Malibu Traffic Impact Analysis Guidelines provides significant impact criteria for intersections operating at LOS C or worse before the addition of project traffic. Intersections operating at LOS A or B prior to the addition of project traffic are not considered significantly impacted regardless of the project-related increase in V/C ratio. Table 4.13-3 summarizes the impact criteria.

Table 4.13-3
Intersection Impact Criteria

LOS	Pre-Project V/C Ratio	Project-related Increase in V/C
C	>0.700	equal to or greater than 0.040
D	>0.800	equal to or greater than 0.020
E or F	>0.900	equal to or greater than 0.010

Roadway Segment Thresholds. The traffic impact analysis compares existing and future, without and with project conditions of roadway segments to determine the potential for traffic impacts of the proposed project on the operating conditions of the surrounding roadway segments. The traffic impact analysis compares the projected LOS at each study segments under Existing, Opening Year, and Cumulative Year plus Project conditions to the Existing, Opening Year and Cumulative Year base conditions to estimate the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significance criteria established by the City of Malibu. Detailed LOS calculations for the proposed project for Existing plus Project, Opening Year (2014) plus Project, and Cumulative Year (2030) plus Project are included in the project traffic study.

The City Traffic Impact Analysis Guidelines refer to the County of Los Angeles traffic impact study guidelines for determining significant impacts along roadway segments. Per the County guidelines, roadway segments operating at LOS A or B prior to the addition of the project traffic are not considered significantly impacted regardless of the project-related increase in V/C ratio. Table 4.13-4 summarizes the impact criteria:

Table 4.13-4
Roadway Segment Impact Criteria

Pre-Project LOS	Project-Related Increase in Traffic Volume
C	4%
D	2%
E or F	1%

Project Traffic Volumes. Traffic estimates for the proposed project were developed by Fehr & Peers using a 3-step process: traffic generation, trip distribution, and traffic assignment. Trip generation for the proposed project was estimated using trip rates for the apartment land use provided in *Trip Generation, 8th Edition* (Institute of Transportation Engineers, 2008). As shown in Table 4.13-5, the project would generate an estimated 1,410 daily trips, including approximately 108 trips during the AM peak period and 131 trips during the PM peak period. The project would also generate an estimated 1,354 Saturday daily trips, of which 110 trips are estimated to occur during the mid-day peak hour.

Trip distribution for each candidate site was conducted independently of the other two sites, based on access points and characteristics of the street system serving the site, the level of accessibility of routes to and from the project site and the locations of employment and commercial centers to which users of the project would be drawn. The trip generation estimates summarized in Table 4.13-5 and the distribution patterns illustrated in the project traffic study were used to assign project-generated traffic to the study intersections.

Congestion Management Program. The 2010 Congestion Management Program (CMP) for Los Angeles County outlines procedures for regional transportation system impact analysis. The CMP traffic impact analysis begins with determining the geographic scope of the study area. The criteria for determining the study area for CMP arterial monitoring intersections and for freeway monitoring locations are:

- *All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak periods of adjacent street traffic.*
- *All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either AM or PM weekday peak periods.*

The CMP arterial monitoring intersections nearest to the project site, and the only ones which are located within the City of Malibu, include:

- *PCH & Decker Road (study intersection #1)*
- *PCH & Kanan Dume Road (study intersection #3)*

- *PCH & Malibu Canyon Road (study intersection #6)*
- *PCH & Las Flores Canyon Road (study intersection #9)*

There are no CMP freeway monitoring locations near the project site. The closest CMP monitoring stations are I-10 at Lincoln Boulevard and US 101 at Reyes Adobe Road, both of which are more than 10 miles from the project site.

The CMP traffic impact analysis guidelines establish that a significant project impact occurs when the following threshold is exceeded:

- *The proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C >= 0.02), causing LOS F (V/C > 1.00).*
- *If the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C >= 0.02).*

These criteria were applied to existing year (2012), opening year (2014), and cumulative year (2030) plus project scenarios.

Table 4.13-5
Project Trip Generation Estimates

Trip Generation Rates													
Land Use	ITE Code	Unit	Weekday Daily Rate	AM Peak Hour			PM Peak Hour			Sat. Daily Rate	Saturday Peak Hour		
				Rate	% In	% Out	Rate	% In	% Out		Rate	% In	% Out
Apts.	220	DU	6.65	0.51	20%	80%	0.62	65%	35%	6.39	0.52	54%	46%
Trip Generation													
Site	ITE Code	Size	Weekday Daily Trips	AM Peak Hour			PM Peak Hour			Sat. Daily Trips	Saturday Peak Hour		
				Total	In	Out	Total	In	Out		Total	In	Out
1	220	91	605	46	9	37	56	36	20	581	47	25	22
2	220	64	426	33	7	26	40	26	14	409	33	18	15
7	220	57	379	29	6	23	35	23	12	364	30	16	14
Total		***212***	***1,410***	***108***	***22***	***86***	***131***	***85***	***46***	***1354***	***110***	***59***	***51***

Notes: Trip generation estimates developed using rates from Trip Generation, 8th Edition (Institute of Transportation Engineers, 2008).

Transit System Thresholds. A significant impact would occur if a project or project-related mitigation disrupts existing transit services or facilities. This includes disruptions caused by proposed project driveways on transit streets and impacts to transit stops/shelters; and impacts to transit operations from traffic improvements proposed or resulting from a project. Per City of Malibu impact criteria, a significant impact would also occur if a project interferes with planned transit services or facilities; conflicts or creates inconsistencies with adopted transit system plans, guidelines, policies, or standards; or creates demand for public transit service above the capacity which is provided, or planned.

Bicycle and Pedestrian Facilities Thresholds. Per City Traffic Impact Analysis Guidelines, a significant impact would occur if a project disrupts existing or planned bicycle or pedestrian facilities. For bicycle facilities, this includes failure to dedicate right-of-way for planned on- and off-street bicycle facilities included in an adopted Bicycle Master Plan or to contribute towards construction of planned bicycle facilities along the project frontage. For pedestrian facilities, this can include impacts to the quality of the walking environment or adding new vehicular, pedestrian, or bicycle traffic at locations experiencing pedestrian safety concerns such as an adjacent crosswalk or school, particularly if the added traffic reduces the number of pedestrian acceptable gaps at an un-signalized crossing or causes queues to spillback through pedestrian crossings. A significant impact would also occur if the project creates conflicts or inconsistences with adopted bicycle or pedestrian system plans, guidelines, policies, or standards.

b. Project Impacts and Mitigation Measures.

Impact T-1 The project would add new traffic to study area intersections under existing plus project conditions. Project-generated trips would result in significant impacts at one of nine study intersections based on City of Malibu thresholds. Impacts would be Class II, *significant but mitigable.*

The proposed project (consisting of all three candidate sites) would generate an estimated 1,410 daily weekday trips, including approximately 108 trips during the AM peak period and approximately 131 trips during the PM peak period. The project is also expected to generate 1,354 Saturday trips. Existing plus project peak period traffic volumes were analyzed to determine the projected existing (year 2012) operating conditions with the addition of the proposed project traffic. Existing plus project peak period traffic volumes are illustrated in Figure 4.13-5 (refer to Appendix E for worksheets showing level of service calculations). The results of the existing plus project analysis are presented in Table 4.13-6.

As indicated in Table 4.13-6, the following intersections are projected to operate at an unacceptable LOS D or worse during one or more peak periods:

- *Kanan Dume Road & PCH (Saturday peak hour)*
- *Malibu Canyon Road & PCH (Saturday peak hour)*
- *Cross Creek Road & PCH (PM and Saturday peak hours)*

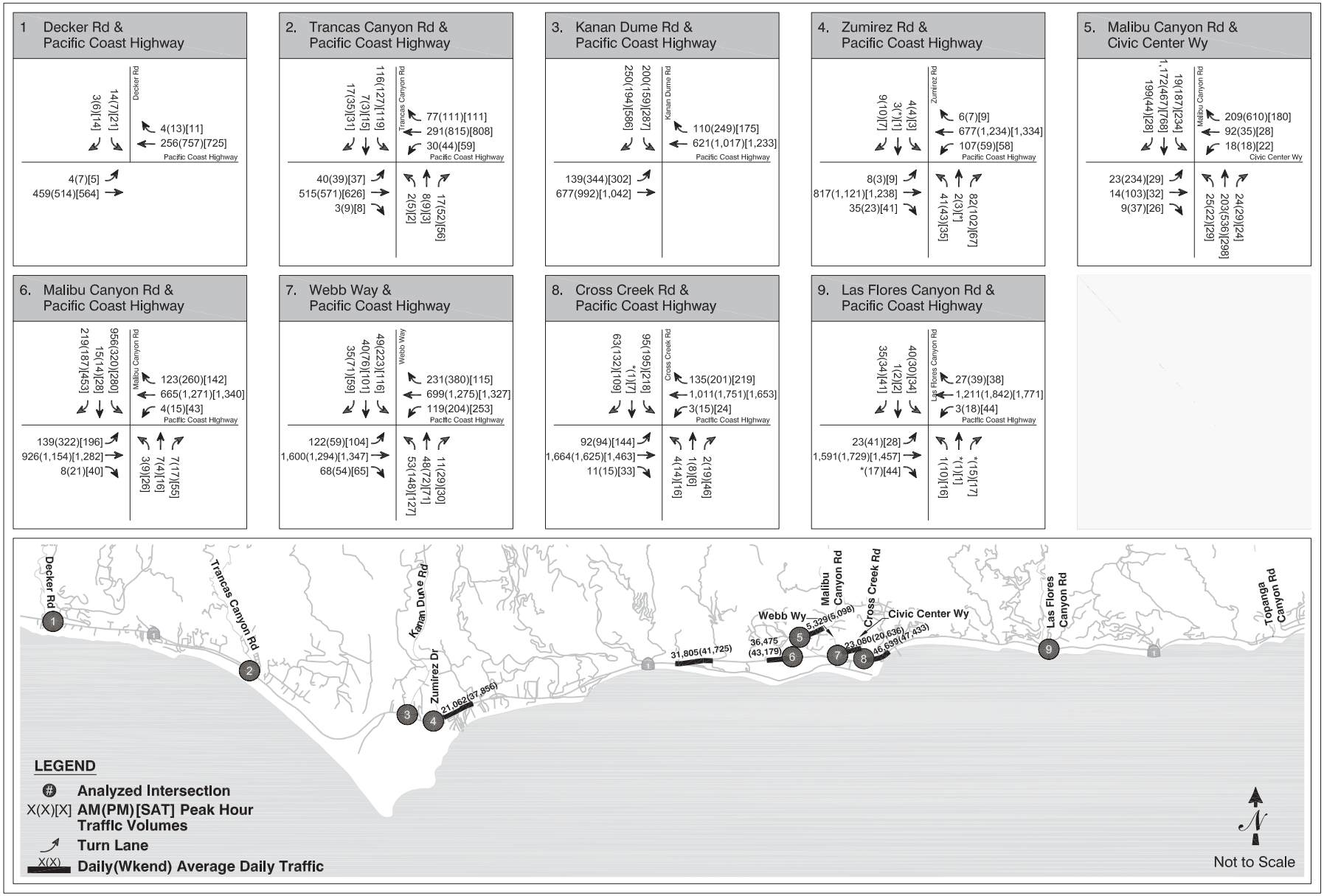
To determine whether significant impacts would occur at the study intersections, the existing plus project operating conditions were compared to the existing operating conditions. As shown in Table 4.13-6, using the City of Malibu criteria for determination of significant impacts, under existing plus project conditions, the proposed project would result in significant impacts at the following intersection:

- *Cross Creek Road & PCH (PM peak period)*

Table 4.13-6
Existing Plus Project Intersection Level of Service Analysis

Intersection	Jurisdiction	Peak Hour	Existing Base		Existing plus Project		Project Increase in V/C	Significant Project Impact
			V/C or Delay	LOS	V/C or Delay	LOS		
1. Decker Canyon Road and PCH	Malibu	**AM**	11.5 s	B	11.7 s	B	0.2 s	NO
		PM	16.2 s	C	16.5 s	C	0.3 s	NO
		SAT	17.5 s	C	17.8 s	C	0.3 S	NO
2. Trancas Canyon Road and PCH	Malibu	**AM**	0.319	A	0.321	A	0.002	NO
		PM	0.450	A	00.483	A	0.003	NO
		SAT	0.468	A	0.472	A	0.004	NO
3. Kanan Dume Road and PCH	Malibu	**AM**	0.394	A	0.400	A	0.006	NO
		PM	0.633	B	0.638	B	0.005	NO
		SAT	0.799	C	0.802	D	0.003	NO
4. Zumirez Road and PCH	Malibu	**AM**	0.406	A	0.408	A	0.002	NO
		PM	0.484	A	0.488	A	0.004	NO
		SAT	0.500	A	0.505	A	0.005	NO
5. Malibu Canyon Road and Civic Center Drive	Malibu	**AM**	0.503	A	0.503	A	0.000	NO
		PM	0.472	A	0.474	A	0.002	NO
		SAT	0.345	A	0.346	A	0.001	NO
6. Malibu Canyon Road and PCH	Malibu	**AM**	0.674	B	0.687	B	0.013	NO
		PM	0.671	B	0.686	B	0.015	NO
		SAT	0.807	D	0.820	D	0.013	NO
7. Webb Way and PCH	Malibu	**AM**	0.517	A	0.525	A	0.008	NO
		PM	0.668	B	0.756	C	0.016	NO
		SAT	0.674	B	0.684	B	0.010	NO
8. Cross Creek Road and PCH	Malibu	**AM**	0.594	A	0.611	B	0.017	NO
		PM	0.781	C	0.801	D	0.020	**YES**
		SAT	0.809	D	0.824	D	0.015	NO
9. Las Flores Canyon Road and PCH	Malibu	**AM**	0.581	A	0.598	A	0.017	NO
		PM	0.681	B	0.699	B	0.018	NO
		SAT	0.668	B	0.679	B	0.011	NO

Note: Intersections analyzed using Intersection Capacity Utilization (ICU) methodology unless otherwise noted.
1. Intersection is two-way stop-controlled. Analysis conducted using Highway Capacity Manual stop-controlled methodology. Average vehicular delay in seconds is reported for the stop-controlled approach.



Existing Plus Project Peak Hour Traffic Volumes

Base drawing source: Fehr & Peers, April 2013.

Figure 4.13-5

Mitigation Measures. Mitigation measures were identified in the project traffic study for each of the intersections potentially impacted by the addition of project traffic from the proposed project. The development of mitigation measures was limited to those that were considered physically feasible, and could be implemented without the acquisition of additional right-of-way.

T-1 **Cross Creek Road & PCH.** Future applicants of Candidate Sites #1, #2, and #7 shall contribute their fair share of payment to for construction of a westbound right-turn lane on PCH at Cross Creek Road. Sufficient right-of-way exists to accommodate this right-turn lane; however, the existing roadway is not centered within the existing right-of-way. In order to implement a new westbound right-turn lane at this location, the roadway centerline must be shifted to the south as PCH passes through the Cross Creek Road intersection. This improvement would result in the loss of approximately 12 on-street parking spaces on the shoulder of the south side of PCH west of Cross Creek Road. It would also result in a substandard 11-foot left-turn lane on PCH east of Cross Creek Road, which would require Caltrans approval. If Caltrans does not approve of non-standard narrower lane widths, then roadway widening on the south side of PCH on the approach and departure legs would allow the standard width lanes for this improvement.

Significance after Mitigation. The impact of project traffic on the intersection of Cross Creek Road & PCH under existing conditions would be reduced to a less than significant level by Mitigation Measure T-1.

Impact T-2 **The project would add new traffic to study area intersections under opening year plus project conditions. Project-generated trips would result in significant impacts at two of nine study area intersections based on City of Malibu thresholds. Impacts would be Class II, *significant but mitigable.***

Opening year plus project peak period traffic volumes were analyzed to determine the projected opening year (2014) operating conditions with the addition of the proposed project traffic. Opening plus project peak period traffic volumes are illustrated in Figure 4.13-6. The results of the opening year plus project analysis are presented in Table 4.13-7.

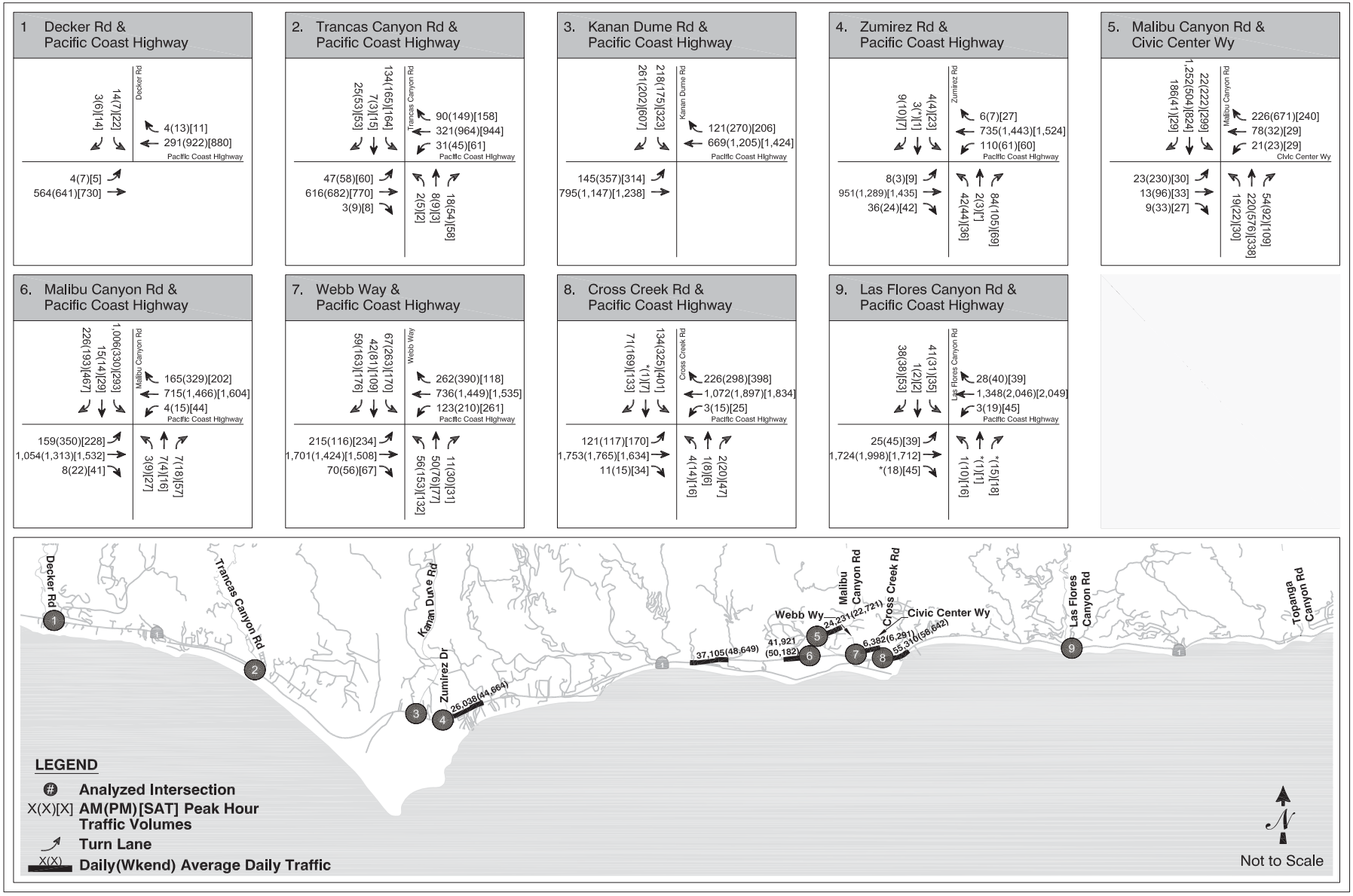
As indicated in Table 4.13-7, the following intersections are projected to operate at an unacceptable LOS D or worse during one or more peak periods:

- *Kanan Dume Road & PCH (Saturday peak hour)*
- *Malibu Canyon Road & PCH (Saturday peak hour)*
- *Webb Way & PCH (Saturday peak hour)*
- *Cross Creek Road & PCH (PM and Saturday peak hours)*

Table 4.13-7
Opening Year (2014) Plus Project Intersection Level of Service Analysis

Intersection	Jurisdiction	Peak Hour	Cumulative Base		Cumulative plus Project		Project Increase in V/C	Significant Project Impact
			V/C or Delay	LOS	V/C or Delay	LOS		
1. Decker Canyon Road and PCH	Malibu	**AM**	12.4 s	B	12.6 s	B	0.2 s	NO
		PM	20.2 s	C	20.6 s	C	0.4 s	NO
		SAT	23.1 s	C	23.7 s	C	0.6 s	NO
2. Trancas Canyon Road and PCH	Malibu	**AM**	0.366	A	0.367	A	0.001	NO
		PM	0.576	A	0.580	A	0.004	NO
		SAT	0.575	A	0.578	A	0.003	NO
3. Kanan Dume Road and PCH	Malibu	**AM**	0.419	A	0.426	A	0.007	NO
		PM	0.705	C	0.711	C	0.006	NO
		SAT	0.870	D	0.874	D	0.004	NO
4. Zumirez Road and PCH	Malibu	**AM**	0.450	A	0.452	A	0.002	NO
		PM	0.551	A	0.555	A	0.004	NO
		SAT	0.578	A	0.583	A	0.005	NO
5. Malibu Canyon Road and Civic Center Drive	Malibu	**AM**	0.515	A	0.515	A	0.000	NO
		PM	0.500	A	0.502	A	0.002	NO
		SAT	0.380	A	0.382	A	0.002	NO
6. Malibu Canyon Road and PCH	Malibu	**AM**	0.732	C	0.745	C	0.013	NO
		PM	0.745	C	0.760	C	0.015	NO
		SAT	0.906	E	0.918	E	0.012	**YES**
7. Webb Way and PCH	Malibu	**AM**	0.549	A	0.557	A	0.008	NO
		PM	0.776	C	0.791	C	0.015	NO
		SAT	0.846	D	0.856	D	0.010	NO
8. Cross Creek Road and PCH	Malibu	**AM**	0.634	B	0.653	B	0.019	NO
		PM	0.916	E	0.936	E	0.020	**YES**
		SAT	1.003	F	1.018	F	0.015	**YES**
9. Las Flores Canyon Road and PCH	Malibu	**AM**	0.624	B	0.642	B	0.018	NO
		PM	0.750	C	0.767	C	0.017	NO
		SAT	0.768	C	0.780	C	0.012	NO

Note: Intersections analyzed using Intersection Capacity Utilization (ICU) methodology unless otherwise noted.
1. Intersection is two-way stop-controlled. Analysis conducted using Highway Capacity Manual stop-controlled methodology. Average vehicular delay in seconds is reported for the stop-controlled approach.



Opening Year (2014) Plus Project
Peak Hour Traffic Volumes

Base drawing source: Fehr & Peers, April 2013.

Figure 4.13-6

To determine whether significant impacts would occur at the study intersections, the 2014 plus project operating conditions were compared to the 2014 base operating conditions. As shown in Table 4.13-7, using the City of Malibu criteria for determination of significant impacts, under opening year plus project conditions, the proposed project would result in impacts at the following two intersections:

- *Malibu Canyon Road & PCH (Saturday peak hour)*
- *Cross Creek Road & PCH (PM and Saturday peak hours)*

Mitigation Measures. Mitigation measures were identified in the project traffic study for each of the intersections potentially impacted by the addition of project traffic from the proposed project. The development of mitigation measures was limited to those that were considered physically feasible, and could be implemented without the acquisition of additional right-of-way. Mitigation Measure T-1, discussed above under Impact T-1, would reduce impacts at Cross Creek Road and PCH to a less than significant level.

T-2 **Malibu Canyon Road & PCH.** Future applicants of Candidate Sites #1, #2 and #7 shall contribute their fair share of payment to ensure that a southbound left-turn/through lane is modified to a left-turn/through/right-turn lane. Sufficient right-of-way exists on PCH to allow for a second receiving lane on this roadway.

Significance after Mitigation. The impact of project traffic on the intersection of Cross Creek Road & PCH under opening year conditions would be reduced to a less than significant level by Mitigation Measure T-1. The impact of project traffic on the intersection of Malibu Canyon Road & PCH under opening year conditions would be reduced to a less than significant level by Mitigation Measure T-2.

Impact T-3 **The project would add new traffic to study area intersections under cumulative plus project conditions. Project-generated trips would result in significant impacts at two of nine study intersections based on City of Malibu thresholds. Cumulative impacts would thus be Class II, *significant but mitigable.***

Cumulative plus project peak period traffic volumes were analyzed to determine the projected future (year 2030) operating conditions with the addition of the proposed project traffic. Cumulative plus project peak period traffic volumes are illustrated in Figure 4.13-7. The results of the cumulative plus project analysis are presented in Table 4.13-8.

As indicated in Table 4.13-8, the following intersections are projected to operate at an unacceptable LOS D or worse during one or more peak periods:

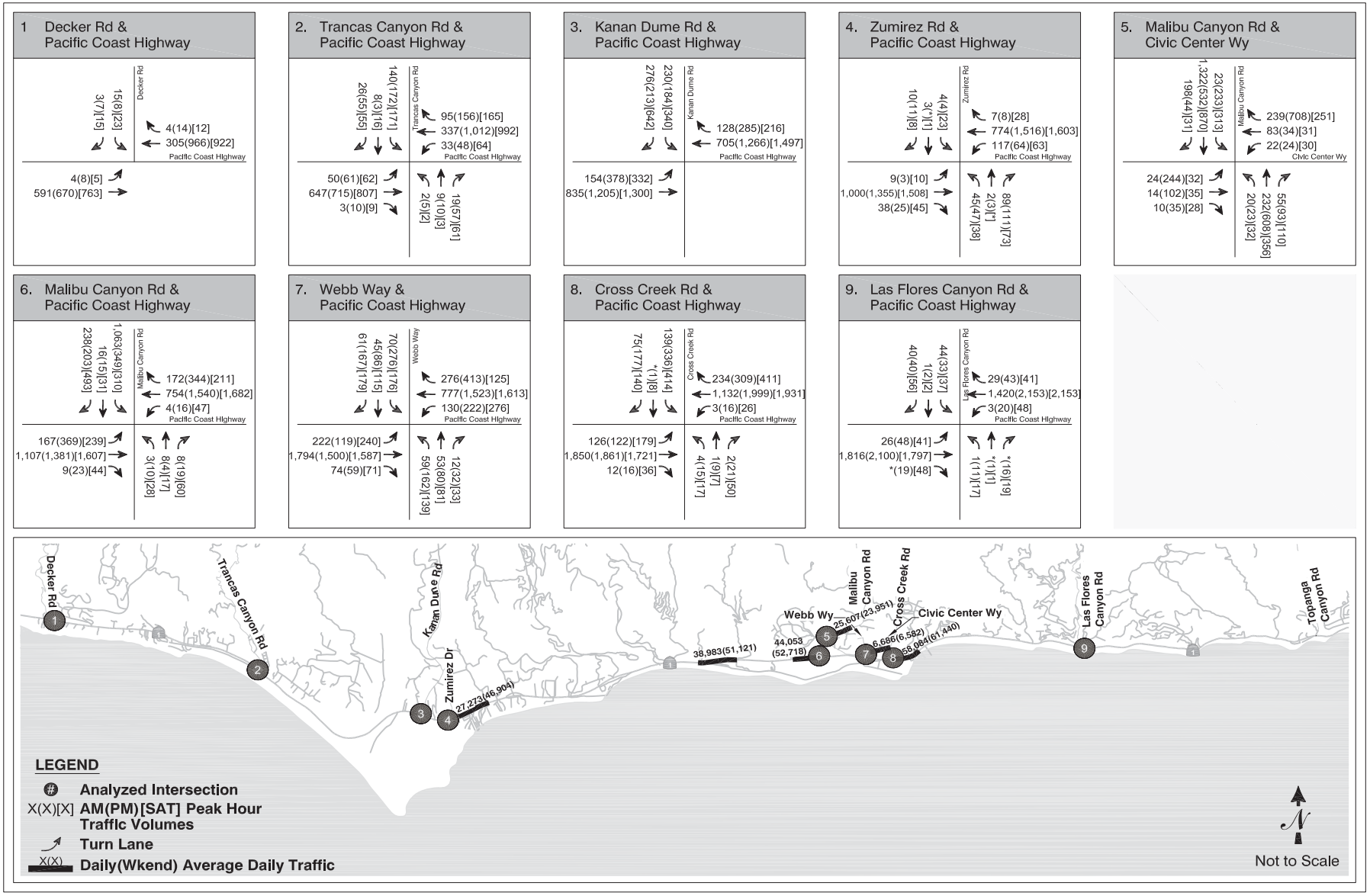
- *Decker Canyon Road & PCH (Saturday peak hour)*
- *Kanan Dume Road & PCH (Saturday peak hour)*
- *Malibu Canyon Road & PCH (Saturday peak hour)*
- *Webb Way & PCH (PM and Saturday peak hours)*

- *Cross Creek Road & PCH (PM and Saturday peak hours)*
- *Las Flores Canyon Road & PCH (PM and Saturday peak hours)*

Table 4.13-8
Cumulative Year (2030) Plus Project Intersection Level of Service Analysis

Intersection	Jurisdiction	Peak Hour	Cumulative Base		Cumulative plus Project		Project Increase in V/C	Significant Project Impact
			V/C or Delay	LOS	V/C or Delay	LOS		
1. Decker Canyon Road and PCH	Malibu	**AM**	12.7 s	B	13.0 s	B	0.3 s	NO
		PM	21.6 s	C	22.0 s	C	0.4 s	NO
		SAT	25.0 s	D	25.6 s	D	0.6 s	NO
2. Trancas Canyon Road and PCH	Malibu	**AM**	0.383	A	0.384	A	0.001	NO
		PM	0.603	B	0.606	B	0.003	NO
		SAT	0.599	A	0.603	B	0.004	NO
3. Kanan Dume Road and PCH	Malibu	**AM**	0.440	A	0.446	A	0.006	NO
		PM	0.741	C	0.746	C	0.005	NO
		SAT	0.916	E	0.920	E	0.004	NO
4. Zumirez Road and PCH	Malibu	**AM**	0.473	A	0.475	A	0.002	NO
		PM	0.576	A	0.580	A	0.004	NO
		SAT	0.605	B	0.610	B	0.005	NO
5. Malibu Canyon Road and Civic Center Drive	Malibu	**AM**	0.541	A	0.541	A	0.000	NO
		PM	0.525	A	0.527	A	0.002	NO
		SAT	0.397	A	0.398	A	0.001	NO
6. Malibu Canyon Road and PCH	Malibu	**AM**	0.770	C	0.783	C	0.013	NO
		PM	0.783	C	0.797	C	0.014	NO
		SAT	0.951	E	0.964	E	0.013	**YES**
7. Webb Way and PCH	Malibu	**AM**	0.577	A	0.586	A	0.009	NO
		PM	0.813	D	0.827	D	0.014	NO
		SAT	0.882	D	0.892	D	0.010	NO
8. Cross Creek Road and PCH	Malibu	**AM**	0.667	B	0.685	B	0.018	NO
		PM	0.959	E	0.979	E	0.020	**YES**
		SAT	1.048	F	1.064	F	0.016	**YES**
9. Las Flores Canyon Road and PCH	Malibu	**AM**	0.656	B	0.674	B	0.018	NO
		PM	0.790	C	0.807	D	0.017	NO
		SAT	0.807	D	0.819	D	0.012	NO

Note: Intersections analyzed using Intersection Capacity Utilization (ICU) methodology unless otherwise noted.
1. Intersection is two-way stop-controlled. Analysis conducted using Highway Capacity Manual stop-controlled methodology. Average vehicular delay in seconds is reported for the stop-controlled approach



Cumulative Year (2030) Plus Project
Peak Hour Traffic Volumes

Base drawing source: Fehr & Peers, April 2013.

Figure 4.13-7

To determine whether significant impacts would occur at the study intersections, the 2030 plus project operating conditions were compared to the 2030 base operating conditions. As shown in Table 4.13-8, using the City of Malibu criteria for determination of significant impacts, under cumulative plus project conditions, the proposed project would result in impacts at the following two intersections:

- *Malibu Canyon Road & PCH (Saturday peak hour)*
- *Cross Creek Road & PCH (PM and Saturday peak hours)*

Mitigation Measures. Mitigation measures were identified in the project traffic study for each of the intersections potentially impacted by the addition of project traffic from the proposed project. The development of mitigation measures was limited to those that were considered physically feasible, and could be implemented without the acquisition of additional right-of-way. Mitigation Measure T-1, discussed above under Impact T-1, would reduce impacts at Cross Creek Road and PCH to a less than significant level. Mitigation Measure T-2 under Impact T-2 would reduce impacts at Malibu Canyon Road and PCH to a less than significant level.

Significance after Mitigation. The impact of project traffic on the intersection of Malibu Canyon Road and PCH under future conditions would be reduced to a less than significant level by Mitigation measure T-2. The impact of project traffic on the intersection of Cross Creek Road & PCH under future conditions would be reduced to a less than significant level by Mitigation Measure T-1.

Impact T-4 The project would not result in impacts at any of the analyzed Congestion Management Plan facilities, including regional transit facilities, under existing, opening year, or future conditions. This is a Class III, *less than significant*, impact.

The criteria described above, in Section 4.13.2(a), were applied below to the existing (year 2012), opening year (2014) and future year (2030) plus project scenarios.

Existing Conditions. Based on the trip generation estimates presented in Table 4.13-3 and a review of the project trip assignment from the project traffic study, the proposed project is expected to add more than 50 vehicles per hour under existing (year 2012) conditions to the following CMP locations during either weekday peak period, as shown in Table 4.13-9:

- *PCH & Malibu Canyon Road (study intersection #6)*
- *PCH & Las Flores Canyon Road (study intersection #9)*
- *PCH & Topanga Canyon Road (study intersection #10)*

Based on the methodology outlined in the CMP, the above locations were analyzed using ICU Level of Service methodology (described in Section 4.13.1[c]). Using the aforementioned impact criteria, the proposed project would not result in a significant impact at any of the analyzed CMP facilities under existing conditions.

As noted, there are no freeway monitoring stations proximate to the project site. As a result, no further CMP freeway analysis is required and CMP freeway impacts are considered to be less than significant.

Table 4.13-9
Congestion Management Plan Analysis – Existing Plus Project

Intersection	City	Peak Hour	Project Only Trips	Existing			Existing + Project			V/C Increase	Sig. Impact?
				V/C	Delay	V/C	Delay	V/C	Delay		
1. Decker Road and PCH	Malibu	AM	25	[1]							
		PM	31								
		SAT	26								
3. Kanan Dume Road and PCH	Malibu	AM	30	[1]							
		PM	37								
		SAT	32								
6. Malibu Canyon Road and PCH	Malibu	AM	63	0.674	n/a	B	0.687	n/a	B	0.013	NO
		PM	76	0.633	n/a	B	0.686	n/a	B	0.053	NO
		SAT	63	0.799	n/a	C	0.820	n/a	D	0.021	NO
9. Las Flores Canyon Road and PCH	Malibu	AM	70	0.581	n/a	A	0.598	n/a	A	0.017	NO
		PM	85	0.484	n/a	A	0.699	n/a	B	0.215	NO
		SAT	71	0.500	n/a	A	0.679	n/a	B	0.179	NO
10. Topanga Canyon Road and PCH	LA County	AM	70	0.998	n/a	E	1.015	n/a	F	0.017	NO
		PM	85	1.074	n/a	F	1.075	n/a	F	0.001	NO
		SAT	72	0.691	n/a	B	0.700	n/a	B	0.009	NO

1. Additional study is not required if the proposed project does not add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic at CMP arterial monitoring stations.

Opening Year Conditions. Based on the trip generation estimates presented in Table 4.13-2 and a review of the project trip assignment, the proposed project is expected to add more than 50 vehicle trips per hour to the following CMP locations during either weekday peak period, as shown in Table 4.13-10:

- *PCH & Malibu Canyon Road (study intersection #6)*
- *PCH & Las Flores Canyon Road (study intersection #9)*

- *PCH & Topanga Canyon Road (study intersection #10)*

Based on the methodology outlined in the CMP, the above locations were analyzed using ICU Level of Service methodology (described in Section 4.13.1[c]). Using the aforementioned impact criteria, the proposed project would not result in a significant impact at any of the analyzed CMP facilities under opening year conditions.

Table 4.13-10
Congestion Management Plan Analysis – Opening Year (2014) Plus Project

Intersection	City	Peak Hour	Project Only Trips	Existing			Existing + Project			V/C Increase	Sig. Impact?
				V/C	Delay	V/C	Delay	V/C	Delay		
1. Decker Road and PCH	Malibu	AM	25	[1]							
		PM	31								
		SAT	26								
3. Kanan Dume Road and PCH	Malibu	AM	30	[1]							
		PM	37								
		SAT	32								
6. Malibu Canyon Road and PCH	Malibu	AM	63	0.732	n/a	C	0.745	n/a	C	0.013	NO
		PM	76	0.705	n/a	C	0.760	n/a	C	0.055	NO
		SAT	63	0.870	n/a	D	0.918	n/a	E	0.048	NO
9. Las Flores Canyon Road and PCH	Malibu	AM	70	0.624	n/a	B	0.642	n/a	B	0.018	NO
		PM	85	0.551	n/a	A	0.767	n/a	C	0.216	NO
		SAT	71	0.578	n/a	A	0.780	n/a	C	0.202	NO
10. Topanga Canyon Road and PCH	LA County	AM	70	1.057	n/a	F	1.073	n/a	F	0.016	NO
		PM	85	1.106	n/a	F	1.107	n/a	F	0.001	NO
		SAT	72	0.771	n/a	C	0.781	n/a	C	0.010	NO

1. Additional study is not required if the proposed project does not add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic at CMP arterial monitoring stations.

As noted, there are no freeway monitoring stations proximate to the project site. As a result, no further CMP freeway analysis is required and CMP freeway impacts would be less than significant.

Cumulative Year Conditions. Based on the trip generation estimates presented in Table 4.13-2 and a review of the project trip assignment, the proposed project is expected to add more than 50 vehicles per hour under future (year 2030) conditions to the following CMP locations during either weekday peak period, as shown in Table 4.13-11:

- *PCH & Malibu Canyon Road (study intersection #6)*
- *PCH & Las Flores Canyon Road (study intersection #9)*
- *PCH & Topanga Canyon Road (study intersection #10)*

Based on the methodology outlined in the CMP, the above locations were analyzed using ICU methodology Level of Service methodology (described in Section 4.13.1[c]). Using the aforementioned impact criteria, the proposed project would not result in a significant impact at any of the analyzed CMP facilities under cumulative conditions.

Table 4.13-11
Congestion Management Plan Analysis – Future Year (2030) Plus Project

Intersection	City	Peak Hour	Project Only Trips	Existing			Existing + Project			V/C Increase	Sig. Impact?
				V/C	Delay	LOS	V/C	Delay	LOS		
1. Decker Road and PCH	Malibu	AM	25	[1]							
		PM	31								
		SAT	26								
3. Kanan Dume Road and PCH	Malibu	AM	30	[1]							
		PM	37								
		SAT	32								
6. Malibu Canyon Road and PCH	Malibu	AM	63	0.732	n/a	C	0.745	n/a	C	0.013	NO
		PM	76	0.705	n/a	C	0.760	n/a	C	0.055	NO
		SAT	63	0.870	n/a	D	0.918	n/a	E	0.048	NO
9. Las Flores Canyon Road and PCH	Malibu	AM	70	0.624	n/a	B	0.642	n/a	B	0.018	NO
		PM	85	0.551	n/a	A	0.767	n/a	C	0.216	NO
		SAT	71	0.578	n/a	A	0.780	n/a	C	0.202	NO
10. Topanga Canyon Road and PCH	LA County	AM	70	1.057	n/a	F	1.073	n/a	F	0.016	NO
		PM	85	1.106	n/a	F	1.107	n/a	F	0.001	NO
		SAT	72	0.771	n/a	C	0.781	n/a	C	0.010	NO

1. Additional study is not required if the proposed project does not add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic at CMP arterial monitoring stations.

As noted, there are no freeway monitoring stations proximate to the project site. As a result, no further CMP freeway analysis is required and CMP freeway impacts would be less than significant.

Regional Transit Impact Analysis. There is one fixed-route express transit line (Metro 534) within ¼ mile of the project area. Assuming an average bus seating capacity of 40 seats, the total number of seats during peak periods can range from 240 to 360, depending on transit headways. Multiplying the weekday AM and PM peak period trips, as presented in Table 4.15-2, by an AVR of 1.4 estimates that the proposed project could generate a total of 151 person trips during the AM peak hour, 187 person trips during the PM peak hour, and 153 person trips during the Saturday peak hour.

Based on parameters in the CMP, a factor of 3.5% was applied to person trips generated to estimate transit trips. Therefore, the project would be expected to generate approximately six transit trips or fewer in any of the analyzed peak hours.

The CMP does not have a threshold for determining the significance of impacts on the transit system; however, due to the low number of transit trips expected to result from the project, impacts on the regional transit system would not be significant.

Mitigation Measures. Impacts would be less than significant; therefore, no mitigation would be required.

Impact T-5 The proposed project would add new traffic to study area roadway segments under existing plus project, opening year plus project and cumulative plus project conditions. However, based on City of Malibu thresholds, impacts would be Class III, *less than significant.*

Existing, Opening Year, and Cumulative Year plus project roadway segment traffic volumes were analyzed to determine the projected future (year 2030) operating conditions with the addition of the proposed project traffic.

Existing Conditions. Existing plus project peak period traffic volumes were analyzed to determine the existing (year 2012) operating conditions with the addition of the proposed project traffic. Existing plus project peak period traffic volumes are illustrated in Figure 4.13-5. The results of the Existing plus Project analysis are presented in Table 4.13-12.

As indicated in Table 4.13-12, the following roadway segments are projected to operate at an unacceptable LOS D or worse during one or more days:

- *PCH east of Paradise Cove Road (Saturday mid-day and daily)*
- *PCH east of Corral Canyon Road (Weekday daily, Saturday mid-day and daily)*
- *PCH between Malibu Canyon Road and John Tyler Drive (Weekday PM and daily, Saturday mid-day and daily)*
- *PCH east of Cross Creek Road (Weekday PM and daily, Saturday mid-day and daily)*
- *Malibu Canyon Road north of Civic Center Way (Weekday AM, PM, and daily, and Saturday mid-day and daily)*

Table 4.13-12
Existing Roadway Segment Level of Service

Roadway Segment	Weekday AM									Weekday PM									Weekday Daily								
	Existing			Existing Plus Project						Existing			Existing Plus Project						Existing			Existing Plus Project					
	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?
PCH																											
east of Paradise Cove	1,020	0.273	A	31	1051	0.281	A	0.008	NO	2,627	0.702	C	37	2,664	0.712	C	0.010	NO	20,658	0.552	A	404	21,062	0.563	A	0.011	NO
east of Corral Canyon Road	1,978	0.529	A	31	2009	0.537	A	0.008	NO	2,878	0.770	C	37	2,915	0.779	C	0.010	NO	31,401	0.840	D	404	31,805	0.850	D	0.011	NO
Malibu Canyon Road to John Tyler Drive	2,037	0.545	A	63	2100	0.561	A	0.017	NO	2,969	0.794	C	76	3,045	0.814	D	0.020	NO	35,658	0.953	E	817	36,475	0.975	E	0.022	NO
east of Cross Creek Road	2,856	0.764	C	70	2926	0.782	C	0.019	NO	3,685	0.985	E	85	3,770	1.008	F	0.023	NO	46,392	1.240	F	247	46,639	1.247	F	0.007	NO
Malibu Canyon Road																											
north of Civic Center Way	1,861	0.995	E	4	1865	0.997	E	0.002	NO	2,073	1.109	F	7	2,080	1.112	F	0.004	NO	23,009	1.230	F	71	23,080	1.234	F	0.004	NO
Civic Center Way																											
Webb Way to Cross Creek Road	351	0.188	A	19	370	0.198	A	0.010	NO	449	0.240	A	23	472	0.252	A	0.012	NO	5,082	0.272	A	247	5,329	0.285	A	0.013	NO

Roadway Segment	Saturday Mid-Day Peak									Saturday Daily								
	Existing			Existing Plus Project						Existing			Existing Plus Project					
	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?
PCH																		
east of Paradise Cove	3,135	0.838	D	32	3,167	0.847	D	0.009	NO	37,468	1.00	F	388	37,856	1.012	F	0.010	NO
east of Corral Canyon Road	3,280	0.877	D	32	3,312	0.886	D	0.009	NO	41,337	1.11	F	388	41,725	1.116	F	0.010	NO
Malibu Canyon Road to John Tyler Drive	3,423	0.915	E	60	3,483	0.931	E	0.016	NO	42,395	1.13	F	784	43,179	1.155	F	0.021	NO
east of Cross Creek Road	670	0.179	A	71	741	0.198	A	0.019	NO	46,790	1.25	F	643	47,433	1.268	F	0.017	NO
Malibu Canyon Road																		
north of Civic Center Way	1,678	0.897	D	6	1,684	0.901	E	0.003	NO	20,568	1.10	F	68	20,636	1.104	F	0.004	NO
Civic Center Way																		
Webb Way to Cross Creek Road	366	0.196	A	19	385	0.206	A	0.010	NO	4,862	0.26	A	236	5,098	0.273	A	0.013	NO

To determine whether significant impacts would occur at the study roadway segments, the Existing plus Project operating conditions were compared to the existing operating conditions. As shown in Table 4.13-12, using the City of Malibu criteria for determination of significant impacts, under Existing plus Project conditions, the proposed project would not result in impacts at any study roadway segments.

Opening Year (2014) Conditions. Opening Year (2014) base traffic projections presented in Figure 4.13-3 were analyzed to establish Opening Year (2014) base operating conditions without the project. The resulting 2014 opening year plus project daily traffic volumes, illustrated in Figure 4.13-6, were analyzed to determine the projected future operating conditions with the addition of the proposed project traffic. The results of the opening year plus project analysis are presented in Table 4.13-13.

As indicated in Table 4.13-13 the following intersections operate at an unacceptable LOS D or worse during one or more peak periods:

- *PCH east of Paradise Cove Road (weekday PM and daily, Saturday mid-day and daily)*
- *PCH east of Corral Canyon Road (Weekday PM and daily, Saturday mid-day and daily)*
- *PCH between Malibu Canyon Road and John Tyler Drive (Weekday PM and daily, Saturday mid-day and daily)*
- *PCH east of Cross Creek Road (Weekday AM, PM, and daily, Saturday mid-day and daily)*
- *Malibu Canyon Road north of Civic Center Way (Weekday AM, PM, and daily, Saturday mid-day and daily)*

To determine whether significant impacts would occur at the study roadway, the 2014 plus project operating conditions were compared to the 2014 base operating conditions. As shown in Table 4.3-13, using the City criteria for determination of significant impacts, under Cumulative plus Project conditions, the proposed project would not result in impacts at any study roadway segments.

Cumulative Year Conditions. Cumulative year plus project peak period traffic volumes, illustrated in Figure 4.13-7 were analyzed to determine the projected future operating conditions with the addition of the proposed project traffic. The results of the cumulative year plus project analysis are presented in Table 4.13-14.

As indicated in the table, the following intersections operate at an unacceptable LOS D or worse during one or more peak periods:

- *PCH east of Paradise Cove Road (Weekday PM and daily; Saturday mid-day and daily)*
- *PCH east of Corral Canyon Road (Weekday PM and daily, Saturday mid-day and daily)*
- *PCH between Malibu Canyon Road and John Tyler Drive (Weekday PM and daily, Saturday mid-day and daily)*
- *PCH east of Cross Creek Road (Weekday AM, PM, and daily, and Saturday mid-day and daily)*
- *Malibu Canyon Road north of Civic Center Way (Weekday AM, PM, and daily, Saturday mid-day and daily)*

To determine whether significant impacts would occur at the study intersections, the 2030 plus project operating conditions were compared to the 2030 base operating conditions. As shown in Table 14, using the City criteria for determination of significant impacts, under Cumulative plus Project conditions, the proposed project would not result in impacts at any study roadway segments.

Mitigation Measures. There are no significant impacts along study roadway segments. As such, no mitigation measures are necessary.

Impact T-6 The proposed project would not disrupt existing or planned transit facilities or conflict with applicable transit plans or policies. Further, the project would not create demand for transit services above capacity. Impacts to transit systems are Class III, *less than significant*.

Disruption to Existing or Planned Transit Service. Currently, there is one transit line that serves the project area, Metro 534, which travels along PCH within the vicinity of Candidate Sites #1, #2, and #7. Development of the project will not disrupt the existing transit services or facilities on PCH. No transit facilities are planned on or along the perimeter of the Candidate Sites #1, #2, or #7 in the future. Therefore, the project would not impact existing or future transit service and impacts are less than significant.

Consistency with Adopted Plans, Guidelines, Policies, or Standards. The Malibu General Plan Circulation and Infrastructure Element (C) includes the following policy statements regarding transit:

- *C Policy 1.2.2 – The City shall encourage the use of alternative modes of transportation*
- *C Policy 1.2.3 – The City shall develop year-round local and public transportation*

The development of Candidate Sites #1, #2, and #7 would not conflict with these policies or other policies related to transit. The impact is less than significant.

Transit Demand. Using the Los Angeles CMP methodology, 3.5% of person trips generated by the project were considered to be transit trips. Therefore, the project is expected to generate six transit trips during each peak hour. Given the existing transit service servicing Candidate Sites #1, #2, and #7, it is determined that the incremental transit trips produced by the project would not generate a demand beyond the capacity already provided. The impact would be less than significant.

Mitigation Measures. No mitigation measures are necessary.

Impact T-7 The proposed project would not disrupt existing or planned bicycle or pedestrian facilities or conflict with applicable bicycle or pedestrian plans or policies. This is a Class III, *less than significant*, impact.

Table 4.13-13
Opening Year (2014) Roadway Segment Level of Service

	Weekday AM									Weekday PM									Weekday Daily								
	Opening Year (2014)			Opening Year (2014) Plus Project						Opening Year (2014)			Opening Year (2014) Plus Project						Opening Year (2014)			Opening Year (2014) Plus Project					
Roadway Segment	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Volume	V/C	LOS	ΔV/C	Sig. Impact?
PCH																											
east of Paradise Cove	1,199	0.321	A	31	1,230	0.329	A	0.008	NO	3,015	0.806	D	37	3,052	0.816	D	0.010	NO	25,634	0.685	B	404	26,038	0.696	B	0.011	NO
east of Corral Canyon Road	2,186	0.584	A	31	2,217	0.593	A	0.008	NO	3,274	0.875	D	37	3,311	0.885	D	0.010	NO	36,701	0.981	E	404	37,105	0.992	E	0.011	NO
Malibu Canyon Road to John Tyler Drive	2,246	0.601	B	63	2,309	0.617	B	0.017	NO	3,360	0.898	D	76	3,436	0.919	E	0.020	NO	41,104	1.099	F	817	41,921	1.121	F	0.022	NO
east of Cross Creek Road	3,137	0.839	D	70	3,207	0.857	D	0.019	NO	4,197	1.122	F	85	4,282	1.145	F	0.023	NO	55,063	1.472	F	247	55,310	1.479	F	0.007	NO
Malibu Canyon Road																											
north of Civic Center Way	1,967	1.052	F	4	1,971	1.054	F	0.002	NO	2,240	1.198	F	7	2,247	1.202	F	0.004	NO	24,160	1.292	F	71	24,231	1.296	F	0.004	NO
Civic Center Way																											
Webb Way to Cross Creek Road	393	0.210	A	19	412	0.220	A	0.010	NO	587	0.314	A	23	610	0.326	A	0.012	NO	6,135	0.328	A	247	6,382	0.341	A	0.013	NO

	Saturday Mid-Day									Saturday Daily								
	Opening Year (2014)			Opening Year (2014) Plus Project						Opening Year (2014)			Opening Year (2014) Plus Project					
	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Volume	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?
PCH																		
east of Paradise Cove	3,602	0.963	E	32	3,634	0.972	E	0.009	NO	44,276	1.18	F	388	44,664	1.194	F	0.010	NO
east of Corral Canyon Road	3,751	1.003	F	32	3,783	1.011	F	0.009	NO	48,261	1.29	F	388	48,649	1.301	F	0.010	NO
Malibu Canyon Road to John Tyler Drive	3,988	1.066	F	60	4,048	1.082	F	0.016	NO	49,398	1.32	F	784	50,182	1.342	F	0.021	NO
east of Cross Creek Road	1,300	0.348	A	71	1,371	0.367	A	0.019	NO	57,999	1.55	F	643	58,642	1.568	F	0.017	NO
Malibu Canyon Road																		
north of Civic Center Way	1,906	1.019	F	6	1,912	1.022	F	0.003	NO	22,653	1.21	F	68	22,721	1.215	F	0.004	NO
Civic Center Way																		
Webb Way to Cross Creek Road	523	0.280	A	19	542	0.290	A	0.010	NO	6,055	0.32	A	236	6,291	0.336	A	0.013	NO

Table 4.13-14
Cumulative Year (2030) Roadway Segment Level of Service

Roadway Segment	Weekday AM									Weekday PM									Weekday Daily								
	Cumulative Year (2030)			Cumulative Year (2030) Plus Project						Cumulative Year (2030)			Cumulative Year (2030) Plus Project						Cumulative Year (2030)			Cumulative Year (2030) Plus Project					
	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?
PCH																											
east of Paradise Cove	1,260	0.337	A	31	1,291	0.345	A	0.008	NO	3172	0.848	D	37	3,209	0.858	D	0.010	NO	26,869	0.718	C	404	27,273	0.729	C	0.011	NO
east of Corral Canyon Road	2,304	0.616	B	31	2,335	0.624	B	0.008	NO	3446	0.921	E	37	3,483	0.931	E	0.010	NO	38,579	1.032	F	404	38,983	1.042	F	0.011	NO
Malibu Canyon Road to John Tyler Drive	2,367	0.633	B	63	2,430	0.650	B	0.017	NO	3537	0.946	E	76	3,613	0.966	E	0.020	NO	43,236	1.156	F	817	44,053	1.178	F	0.022	NO
east of Cross Creek Road	3,308	0.884	D	70	3,378	0.903	E	0.019	NO	4418	1.181	F	85	4,503	1.204	F	0.023	NO	57,837	1.546	F	247	58,084	1.553	F	0.007	NO
Malibu Canyon Road																											
north of Civic Center Way	2,078	1.111	F	4	2,082	1.113	F	0.002	NO	2364	1.264	F	7	2,371	1.268	F	0.004	NO	25,536	1.366	F	71	25,607	1.369	F	0.004	NO
Civic Center Way																											
Webb Way to Cross Creek Road	414	0.221	A	19	433	0.232	A	0.010	NO	613	0.328	A	23	636	0.340	A	0.012	NO	6,439	0.344	A	247	6,686	0.358	A	0.013	NO

	Saturday Mid-Day Peak									Saturday Daily								
	Cumulative Year (2030)			Cumulative Year (2030) Plus Project						Cumulative Year (2030)			Cumulative Year (2030) Plus Project					
	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?	Vol.	V/C	LOS	Proj. Trips	Vol.	V/C	LOS	ΔV/C	Sig. Impact?
PCH																		
east of Paradise Cove	3,789	1.013	F	32	3,821	1.022	F	0.009	NO	46,516	1.24	F	388	46,904	1.254	F	0.010	NO
east of Corral Canyon Road	3,947	1.055	F	32	3,979	1.064	F	0.009	NO	50,733	1.36	F	388	51,121	1.367	F	0.010	NO
Malibu Canyon Road to John Tyler Drive	4,193	1.121	F	60	4,253	1.137	F	0.016	NO	51,934	1.39	F	784	52,718	1.410	F	0.021	NO
east of Cross Creek Road	1,340	0.358	A	71	1,411	0.377	A	0.019	NO	60,797	1.63	F	643	61,440	1.643	F	0.017	NO
Malibu Canyon Road																		
north of Civic Center Way	2,006	1.073	F	6	2,012	1.076	F	0.003	NO	23,883	1.28	F	68	23,951	1.281	F	0.004	NO
Civic Center Way																		
Webb Way to Cross Creek Road	545	0.291	A	19	564	0.302	A	0.010	NO	6,346	0.34	A	236	6,582	0.352	A	0.013	NO

Disruption to Existing or Planned Facilities. There are no identified on- or off-street bicycle facilities at the candidate sites and no planned bicycle facilities were identified along the project frontage. There are sidewalks along the north side of Civic Center Way between Cross Creek Road and Webb Way. Additionally, the intersection of Civic Center Way & La Paz Lane (a private drive) has two marked crosswalks, and one marked crosswalk mid-block. However, the Project does not propose any changes to the existing pedestrian facilities. No planned pedestrian facilities were identified along the project frontage. Therefore, impacts to existing and planned bicycle and pedestrian facilities would be less than significant.

Consistency with Adopted Plans, Guidelines, Policies, or Standards. The Malibu General Plan Circulation and Infrastructure Element (C) provides the following two policy statements related to bicycles and pedestrians:

- *C Policy 1.2.2 – The City shall encourage the use of alternative modes of transportation.*
- *C Policy 1.2.4 – The City shall develop bikeways, pedestrian walkways and equestrian paths in areas that can safely accommodate them.*

While the project is not proposing any new bicycle facilities, it is also does not interfere with any planned or proposed facilities. Existing sidewalks along the north side of Civic Center Way would be maintained. Therefore, the proposed project does not conflict with the above policy statements and impacts are less than significant.

Mitigation Measures. No mitigation measures are necessary.

Impact T-8 The proposed development on Candidate Sites #1, 2, and 7 would not create hazards related to on-site circulation and would not impede emergency access. This is a Class III, *less than significant*, impact.

Candidate Sites #1 and #2 would provide vehicular access from Ramirez Mesa Drive, along the eastern extent of Candidate Site # 2. Candidate Site # 7 would provide vehicular access from Civic Center Way. Ramirez Mesa Drive and La Paz Lane (a private drive) carry less vehicular traffic when compared to other roadways fronting the Candidate Sites (PCH and Civic Center Way, respectively) and are expected to operate at an acceptable level with the addition of project-generated traffic.

To determine the adequacy of emergency vehicle access, both the external and internal accessibility of the site were considered. The external accessibility is defined as the ease by which emergency vehicles can travel to the site on the external roadway system. It is determined that both site locations have major roadways that can be used to travel to/from the site. The main route for emergency vehicles accessing Candidate Sites #1 and #2 would likely be via PCH, which can be used to access the site from the south. The main route for emergency vehicles accessing Candidate Site #7 would likely be via PCH to either Cross Creek Road or Civic Center Way.

The internal accessibility reflects the ability of an emergency vehicle to travel through the site to reach the various buildings through the internal roadway network. The internal roadway for

the proposed project sites was not finalized at the time of the traffic study. However, the proposed project would be required to adhere to all applicable regulations and standards regarding emergency access.

Mitigation Measures. No mitigation measures are necessary.

c. Cumulative Impacts. The analysis of traffic impacts under T-3, T4, and T-5 include cumulative development in the area through 2030. As discussed therein, the proposed project in combination with cumulative development would result in significant but mitigable impacts.

This page intentionally left blank.

4.14 UTILITIES and SERVICE SYSTEMS

4.14.1 Setting

a. Water. The City of Malibu receives water through the Los Angeles County Water District 29 (District 29). District 29 imports its water supply from the West Basin Municipal Water District (WBMWD). The reliability of District 29 water supply is dependent upon the availability of water from WBMWD. WBMWD pumps approximately 21% of its water from the West Coast Groundwater Basin, imports approximately 63% of its water supply from the Metropolitan Water District (MWD), obtains approximately 8% from recycled water, and approximately 8% is conserved from water efficiency measures (WBMWD, 2011). MWD imports water from the Sacrament River/San Joaquin Delta through the State Water Project and also from the Colorado River Aqueduct.

District 29's interconnection to WBMWD occurs in Culver City and water is conveyed via a 35-mile transmission watermain along Pacific Coast Highway (PCH). The water is pumped from the transmission watermain into various gravity storage tanks in Malibu and Topanga. According to District 29 and the Marina Del Rey Water System 2010 Urban Water Management Plan (LADPW, 2011), District 29's system facilities include approximately 200 miles of watermain, 32 pump stations, and 52 tanks with a storage capacity of 20 million gallons. District 29 has storage capacity for approximately three days and also maintains two emergency interconnections with both the City of Los Angeles Department of Water and Power and Las Virgenes Municipal Water District, for a total of four emergency interconnections.

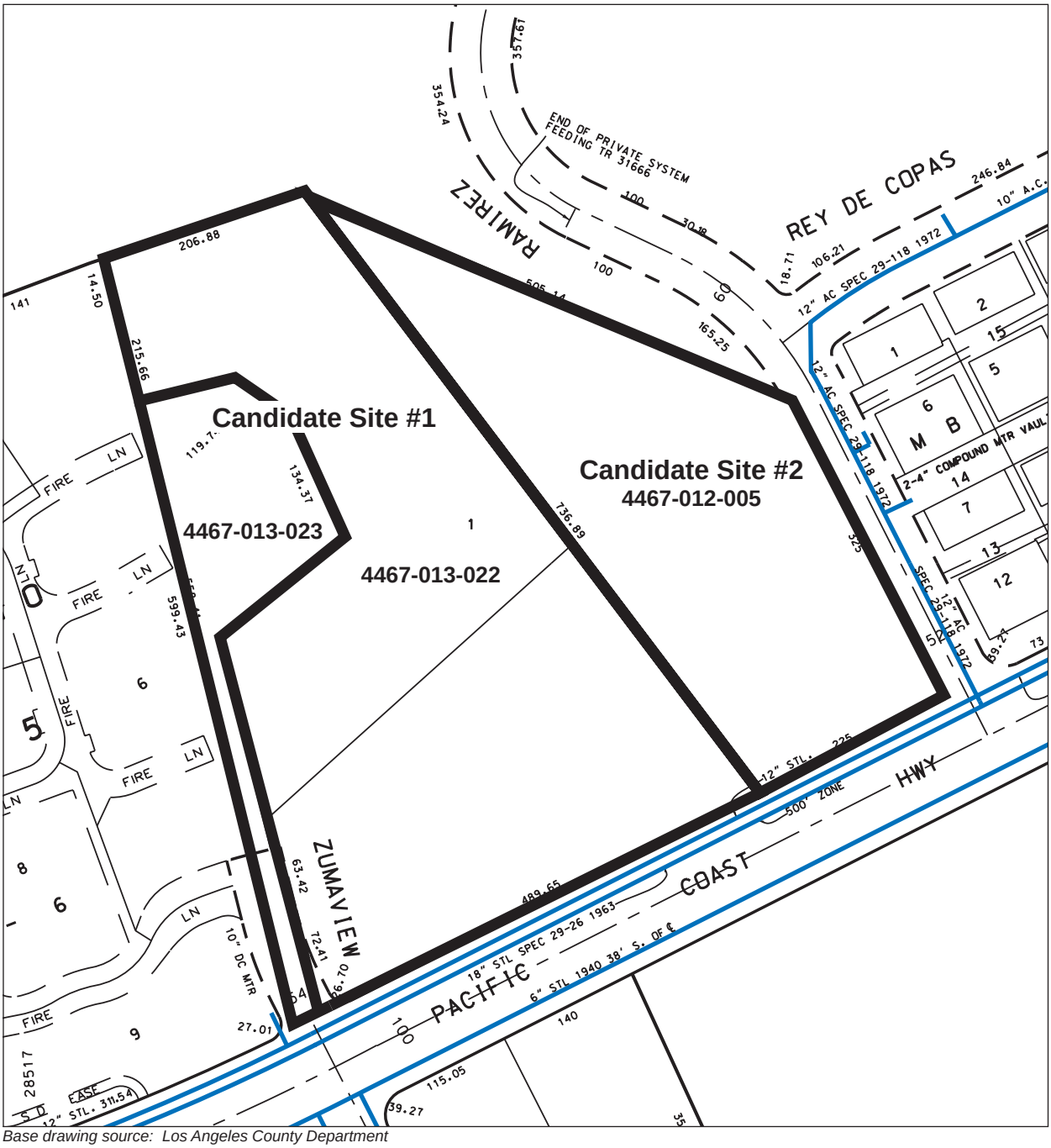
There are two water mains along PCH adjacent to the southern border of Candidate Sites #1 and #2, which are shown in Figures 4.14-1a and 4.14-1b. The water mains along PCH have diameters of 12 inches and 18 inches. Another 12-inch diameter water main exists along Zumirez Drive west of Candidate Site #1. There is also a 12-inch diameter water main along Ramirez Mesa Drive, adjacent to the eastern border of Candidate Site #2. Candidate Site #7 has access to a 10-inch diameter water main along Civic Center Way, adjacent to the southern border of the site.

District 29 currently has a purchase agreement with WBMWD for a maximum of 10,506 acre-feet per year (AFY). Water supply and demand projections were determined using Southern California Association of Governments (SCAG) population projections through the year 2035. Table 4.14-1 shows the current and projected water supply for District 29.

Table 4.14-1
Current and Projected Wholesale Water Supply
Purchases from wholesaler (AFY)

Water Supply Source	2010	2015	2020	2025	2030	2035
West Basin MWD	8,289	11,293	11,220	11,922	12,608	13,266
City of Los Angeles DWP	Emergency Interconnections Only					
Las Virgenes MWD	Emergency Interconnections Only					

Source: LADPW 2010 UWMP District 29 and Marina Del Rey Water System, 2011.



Base drawing source: Los Angeles County Department of Public Works Waterworks Division, July 2007.

Water Main

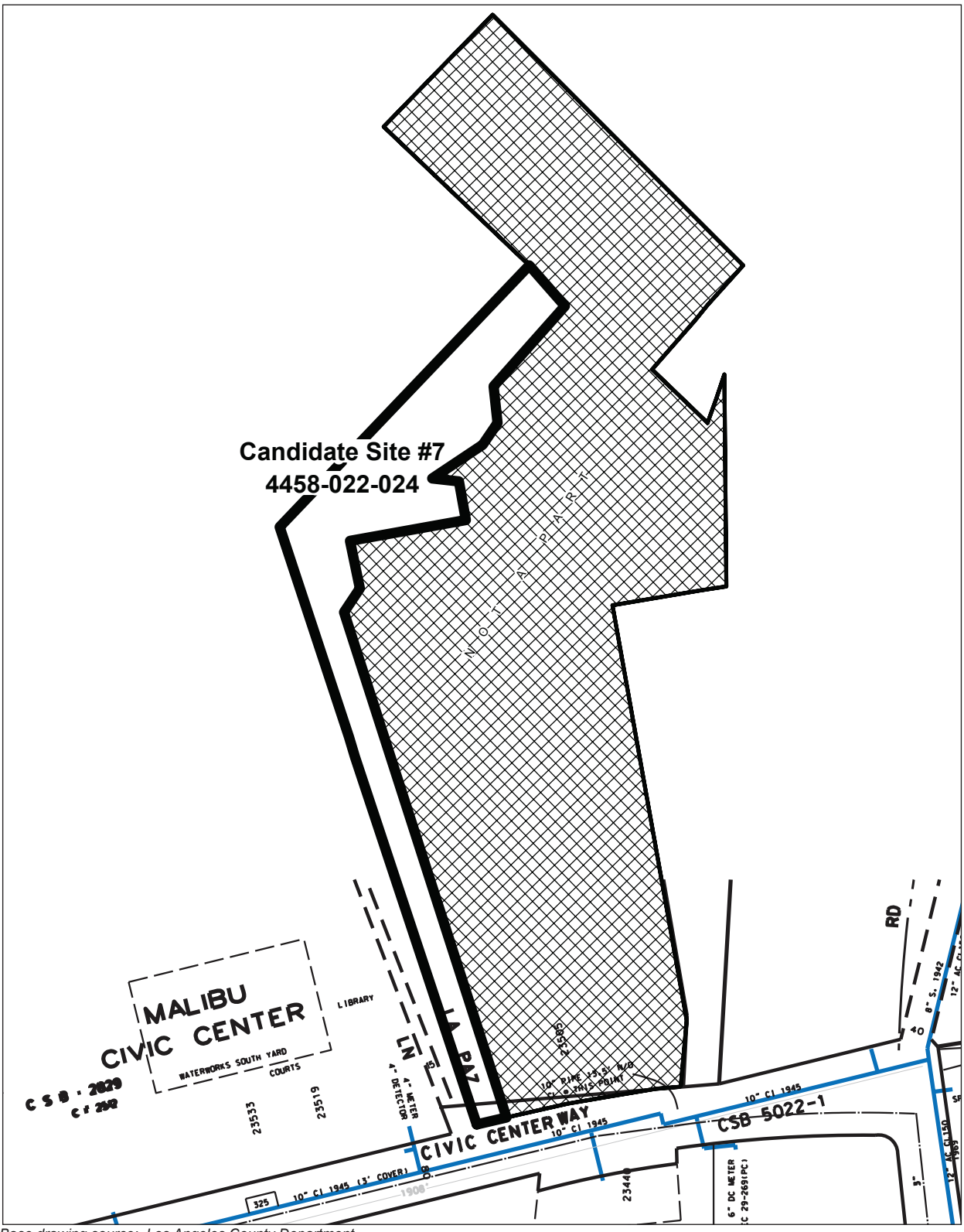
N

0 80 160

Scale in Feet

Candidate Sites #1 and Site #2
Existing Water Mains

Figure 4.14-1a



Base drawing source: Los Angeles County Department of Public Works Waterworks Division, July 2007.

Water Main

0 110 220
Scale in Feet

N

Candidate Site #7
Existing Water Mains

Figure 4.14-1b

Tables 4.14-2 through 4.14-4 show the supply and demand comparison for projected normal water year, single-dry year, and multiple-dry year scenarios.

Table 4.14-2
Projected Normal Water Year

	2010	2015	2020	2025	2030	2035
Supply total	8,289	11,293	11,220	11,922	12,608	13,266
Demand total	7,620	10,266	10,200	10,838	11,462	12,060
Difference	669	1,027	1,020	1,084	1,206	1,206
Difference as a % of Supply	8.1%	9.1%	9.1%	9.1%	9.1%	9.1%
Difference as a % of Demand	8.8%	10.0%	10.0%	10.0%	10.0%	10.0%

Source: LADPW 2010 UWMP District 29 and Marina Del Rey Water System, 2011.

Table 4.14-3
Projected Single-Dry Water Year

	2010	2015	2020	2025	2030	2035
Supply total	8,621	11,745	11,669	12,399	13,112	13,797
Demand total	7,923	10,677	10,608	11,272	11,920	12,542
% of Normal Year Demand	104%	104%	104%	104%	104%	104%
Difference	697	1,068	1,061	1,127	1,192	1,254
Difference as a % of Supply	8.1%	9.1%	9.1%	9.1%	9.1%	9.1%
Difference as a % of Demand	8.8%	10.0%	10.0%	10.0%	10.0%	10.0%

Source: LADPW 2010 UWMP District 29 and Marina Del Rey Water System, 2011.

Table 4.14-4
Projected Multiple-Dry Water Years*

	2015	2020	2025	2030	2035
Supply total	11,858	11,781	12,518	13,238	13,929
Demand total	10,780	10,710	11,380	12,035	12,663
% of Normal Year Demand	105%	105%	105%	105%	105%
Difference	1,078	1,071	1,138	1,203	1,266
Difference as a % of Supply	9.1%	9.1%	9.1%	9.1%	9.1%
Difference as a % of Demand	10.0%	10.0%	10.0%	10.0%	10.0%

**Each year shows the final year of a three year period. Years one and two of each three year period were calculated at 104% and 104.5% of Normal Year Demand, respectively.*
Source: LADPW 2010 UWMP District 29 and Marina Del Rey Water System, 2011.

As shown, in each reliability scenario, District 29 has sufficient supply to meet projected water demands through the year 2035 based on current and projected demand, not including the Housing Element Update.

b. Wastewater. Wastewater in the City of Malibu is primarily treated through decentralized onsite wastewater treatment systems (OWTS). OWTS include individual systems serving single-family residences, as well as shared onsite systems serving small groups of homes, multi-family residences, and businesses. All new development is required to obtain an

OWTS permit through the City of Malibu. Through Resolution R4-2009-007, the Los Angeles Regional Water Quality Control Board (RWQCB) has issued a ban on new and existing onsite wastewater disposal system discharges in the City of Malibu Civic Center area. The RWQCB ban excludes certain properties that have already been identified for development within the Civic Center Area, including Candidate Site #7, which is referred to in the resolution as "3700 La Paz Lane" (RWQCB, 2009). This ban allows OWTS to remain or be constructed on certain properties, but only until the City's centralized sewer system is completed in the future.

There are five small private and publicly owned onsite wastewater treatment plants serving individual developments in the City of Malibu. These private systems serve the residences at the Malibu Country Estates (Pepperdine Wastewater Treatment Plant), Point Dume Club Mobile Home Park (Marble Head Wastewater Treatment Plant), Latigo Bay Shores (Tivoli Cove Wastewater Treatment Plant), Malibu West (Malibu West Trancas Wastewater Treatment Plant) and the condominium complexes in Winter Canyon (Maison DeVille Wastewater Treatment Plant).

Los Angeles County Department of Public Works (LADPW) operates and maintains the collection and treatment systems of three publicly owned treatment plants (LADPW, 2011). The three treatment plants are Malibu Mesa Water Reclamation Plant, Malibu Water Pollution Control Plant, and Trancas Water Pollution Control Plant. The Malibu Mesa Water Reclamation Plant is a tertiary wastewater treatment plant and the capacity is 200,000 gallons per day (gpd). As a tertiary treatment facility, Malibu Mesa Water Reclamation Plant generates recycled water for irrigation use on the campus of Pepperdine University. The Malibu Water Pollution Control Plant is a secondary wastewater treatment facility and the capacity is 51,000 gpd. Trancas Water Pollution Control Plant is also a secondary wastewater treatment facility and the capacity of the plant is 150,000 gpd.

c. Solid Waste. The City of Malibu requires solid waste haulers to obtain a permit to operate within the city limits. Residents and businesses must contract with a permitted hauler for solid waste services. The County of Los Angeles also operates a Garbage Disposal District within the City of Malibu. The City currently has 19 permitted haulers. The two primary haulers that provide residential and commercial solid waste collection are G.I. Industries/Waste Management and Universal Waste Systems. Universal Waste Systems is the hauler for the County Garbage Disposal District. The remaining haulers provide roll-off and temporary bin services within the City.

Non-recyclable waste materials are transported directly to the Calabasas and Simi Valley landfills. Recyclable materials are transported to sorting facilities, after which point the sorted recyclables are transported by different parties to various recycling destinations. Construction and demolition sites collect solid waste in three-yard bins or large roll-off dumpsters. The solid waste is then hauled to a materials recovery facility, where recyclable materials are sorted and recovered. The recovered material is then transported to various recycling destinations while non-recoverable material is transported to either the Simi Valley Landfill or the Calabasas Sanitary Landfill.

The Simi Valley Landfill and Recycling Center is owned and operated by Waste Management of California and is located at 2801 Madera Road in Simi Valley, in Ventura County and currently

serves Malibu. The Simi Valley Landfill has a maximum permitted throughput of 9,250 tons per day total, which includes 6,000 tons per day of refuse (CalRecycle, 2012, and Personal Communication, Scott Tignac, 2012). The current average daily throughput is approximately 2,300 tons per day (Personal Communication, Scott Tignac, 2012). The maximum permitted capacity is 119,600,000 cubic yards (CalRecycle, 2012). As of April 3, 2012, the remaining capacity is 119,600,000 cubic yards. The facility's cease to operate date is currently set for January 31, 2052. The facility is inspected on a monthly basis by the County of Ventura Resource Management Agency, Environmental Health Division.

The Calabasas Sanitary Landfill, located at 5300 Lost Hills Road in unincorporated Los Angeles County, also serves Malibu. The landfill is owned and operated by the County of Los Angeles Sanitation Districts. The Calabasas Landfill has a maximum permitted throughput of 3,500 tons of solid waste per day and a maximum permitted capacity of 69,300,000 cubic yards of solid waste. The current average daily throughput is approximately 600-700 tons per day (Personal Communication, Gwen Tantoco, 2012). On March 31, 2008, CalRecycle estimated the remaining capacity of the landfill to be 18,100,000 cubic yards (CalRecycle, 2012), which was also confirmed by the landfill's Site Engineer, Gwen Tantoco, on May 16, 2012 (Personal Communication, Gwen Tantoco, 2012). The landfill's cease to operate date has recently been extended from 2025 to approximately 2046, due to lower daily throughputs (Personal Communication, Gwen Tantoco, 2012). The Calabasas Sanitary Landfill is subject to monthly inspections by the County of Los Angeles Department of Health Services.

With limited capacity in existing landfills, and difficulty establishing new landfills in California the anticipated increases in solid waste generation due to population increases and economic growth led to the enactment of the California Integrated Waste Management Act (AB 939) in 1989 to promote and require the reduction, recycling, and ruse of solid waste generated in the State to the maximum amount feasible. Under AB 939, each city and county is required to promote source reduction, recycling, and safe disposal or transformation. Each city and county jurisdiction is also required to identify an implementation schedule to divert 25% of their total solid waste stream from landfill disposal by 1995, and by 2000 at least 50% of the total waste stream from landfill disposal. The legislation mandates that jurisdictions achieve 50% diversion each year.

As of 2010, the annual per resident disposal rate for Malibu was 12.8 pounds per person per day and 34.1 pounds per employee per day (CalRecycle, 2012). CalRecycle has established an 18.4 pound per day per resident target and a 52.2 pound per employee per day target for the City of Malibu, which is consistent with the 50% diversion rate target of AB 939 (CalRecycle, 2012). Because the City of Malibu meets the applicable per capita disposal targets, the City currently meets the State mandated 50% diversion rate (CalRecycle, 2012).

d. Storm Water Conveyance.

Candidate Sites #1, #2, and #7. The City of Malibu primarily relies on natural drainages to carry storm water flows. The natural drainages release to the Pacific Ocean. The Civic Center Storm Water Treatment Facility also treats runoff flows from the Civic Center storm drain, as well as the Malibu Road and Cross Creek Road storm drains. The City's facility provides filtration and disinfection of dry-weather flows and first flush runoff. The runoff flow from the

Civic Center storm drain is approximately 1,000 gallons per minute (gpm) and the runoff flow from the Malibu Road and Cross Creek Road storm drains is approximately 200 gpm. Candidate Sites #1 and #2 are primarily undeveloped, with the exception of two single-family residential units. These sites do not contain any storm water conveyance facilities, other than the natural drainage that runs between the two sites. Candidate Site #7 is also undeveloped and does not contain any storm water conveyance facilities.

e. Regulatory Setting.

Regional Water Quality Control Board, Region 4, Los Angeles. The City of Malibu falls within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB). The RWQCB regulates wastewater discharges to surface water (rivers, ocean, etc.) and to groundwater (via land). The RWQCB adopted policies and resolutions are contained within the Water Quality Control Plan for Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan). The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters.

On November 5, 2009, the Regional Board adopted a resolution to prohibit onsite wastewater disposal systems (septic systems) in the Malibu Civic Center area. The prohibition applies to all existing and new dischargers in the Civic Center area, including commercial and industrial facilities, public facilities, and residences. New septic discharges are no longer allowed and existing commercial and industrial dischargers and public facilities must cease discharge by November 2015 while residences must cease discharges by November 2019. The State Water Resource Control Board reviewed the Los Angeles Regional Board's (LARWQCB) Resolution R4-2009-007 "Amendment to the Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) to Prohibit Onsite Wastewater Disposal Systems in the Malibu Civic Center Area" (Prohibition) on September 21, 2010 and approved it unanimously. The Prohibition was submitted to the California Office of Administrative Law and was approved for incorporation into the LARWQCB's Basin Plan on December 23, 2010. As indicated in Table 4-zz of the adopted resolution, Candidate Site #7 is exempt from this prohibition as it was part of the La Paz development project which is on the Table 4-zz list (RWQCB, 2009). Candidate Sites #1 and #2 are outside of the prohibition area and therefore are not impacted.

California Department of Resources Recycling and Recovery (CalRecyle). As discussed above, the California Integrated Waste Management Act (IWMA) of 1989 (State Assembly Bill 939) requires cities to have developed a source reduction element to provide strategies for diverting at least 50% of all solid waste from County landfills by the year 2000. CalRecycle oversees and provides assistance to local governments as they develop and implement plans to meet the mandates of the IWMA and subsequent legislation.

City of Malibu. The City of Malibu General Plan includes the following goals and objectives pertaining to utilities within the city:

- *Conservation Goal 4: Water Conserved*
- *Conservation Objective 4.1: 10% Reduction in the amount of water for residential and commercial uses by the year 2001 and a three day emergency water supply in all areas.*

- *Conservation Goal 5: Solid Waste Reduced and Recycled*
- *Conservation Objective 5.1: 50% Reduction in the amount of solid waste generated by the community and disposed of in landfills by the year 2000.*

Chapter 18 of the LIP includes the Onsite Wastewater Treatment System Ordinance and discusses siting, design and performance requirements; alternative systems; maintenance, operation and monitoring; and water systems / wastewater management.

The Malibu Municipal Code (M.M.C.) also includes the following regulations regarding utilities:

- *Section 15.14.030 Onsite Wastewater Treatment System Operating Permit Requirement.*

  B. Properties not Currently Served by an OWTS. Any applicant proposing a development project that includes the construction of a new OWTS on real property not currently served by OWTS shall be required to apply for and obtain an operating permit for the OWTS.F. All onsite wastewater treatment systems serving commercial and multi-family uses are subject to specific or general wastewater discharge requirements/permits as established and issued by the Los Angeles Regional Water Quality Control Board.

- *Section 8.32.030 Collection Permit Required*.

  No person shall collect and/or dispose of solid waste or recyclables in the city without having first been issued an annual solid waste collection permit or a franchise pursuant to M.M.C. Sections 8.32.160 through 8.32.290.

In addition, the City of Malibu has adopted the Uniform Plumbing Code, 1997 Edition, as amended, Ordinance 194 of the Malibu Municipal Code, which constitutes the City of Malibu Uniform Plumbing Code (UPC). UPC Appendix K, Section K1(j) States, "Commercial building and multiple family dwellings to be constructed, or remodeled, after the effective date of this section shall have a private sewage disposal system which provides secondary sewage effluent treatment, as defined by the Administrative Authority, prior to final sewage effluent disposal, unless otherwise approved by the Administrative Authority." The Los Angeles Regional Water Quality Control Board (LARWQCB) retains jurisdiction over private sewage disposal systems serving, or proposed to serve, commercial buildings and multiple family dwellings.

4.14.2 Impact Analysis

a. Methodology and Significance Thresholds.

Significance Thresholds. The following questions from Appendix G of the *CEQA Guidelines* are used to assess the potential for significant environmental impacts related to utilities and service systems. Significant impacts would occur if the project would:

1. *Exceed wastewater treatment requirements of the applicable Water Quality Control Board;*

2. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
3. *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
4. *Not have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;*
5. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;*
6. *Not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or*
7. *Not comply with federal, state, and local statutes and regulations related to solid waste.*

There would be no impact to wastewater treatment provider capacity as no wastewater treatment providers would serve the candidate sites, as such items #1 and #2 are not addressed herein. Please see Section 4.15, *Effects Found Not to be Significant,* for further discussion. Wastewater treatment requirements are addressed in Section 4.8, *Hydrology and Water Quality*, under Impact HWQ-4.

Water. The following formula was used to determine the water demand for the proposed project:

(# of people) x (333 gallons/capita/day) = Residential gallons/day

The water demand factor of 333 gallons/capita/day was obtained from the 2010 Urban Water Management Plan for District 29 and is based on a 5-year period from 2003-2007.

Wastewater. Information regarding OWTS and area wastewater treatment facilities was obtained from the City and LADPW. The wastewater generation factor for the candidate sites was obtained from the Sanitation Districts of Los Angeles County and is listed below:

- *156 gallons/day/unit for Multi-Family Residential (based on duty factors for Multi-Family Residential, which is 5 units or more)*

Solid Waste. Information on solid waste was compiled through the CalRecycle Solid Waste Information System database and personal communication with staff of the Simi Valley Landfill and Recycling Center and the Calabasas Sanitary Landfill.

The following formulas were used to calculate solid waste generation for residential uses and waste generation factors were obtained from CalRecycle's Jurisdiction Diversion/Disposal Rate Detail report for the City of Malibu (CalRecycle, 2011).

- *(# of units) x (12.8 lbs/household/day) = Residential lbs/day*
- *(1,000 square feet of commercial space) x (13 lbs/1,000 square feet/day) = Commercial lbs/day*

Storm Water Conveyance. Existing storm water infrastructure was mapped and qualitatively analyzed to determine whether new or expanded facilities would be required. Information on storm water drainage was obtained from the City of Malibu.

b. Impacts and Mitigation Measures.

Impact U-1 Development facilitated by the Housing Element Update would generate demand for an estimated 188 acre-feet per year of water. The existing agreement with WBMWD would ensure that adequate water supplies are available to serve future development under the Housing Element Update and no new entitlements are required. No addition or expansion of off-site infrastructure would be required. Impacts associated with increased water demand would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Development of the proposed candidate sites would add up to 212 new residential units, which would result in increased demand for water. The 212 units would increase the City's population by an estimated 505 people. Using the generation factor of 333 gallons per capita per day, total potential water demand at the three candidate sites would be 168,165 gallons per day (gpd), which is equivalent to approximately 188 acre-feet per year (AFY). As shown in Table 4.14-5, full build-out of Candidate Site #1 would demand an additional 103 AFY, Candidate Site #2 would demand an additional 58 AFY, and Candidate Site #7 would demand an additional 41 AFY.

Table 4.14-5 Housing Element Water Demand

Site	Persons Per Site	Generation Rate	Water Demand (gallons per day)
Candidate Site #1 (91 units)	217	333 gallons per person per day	72,261 (90 AFY)
Candidate Site #2 (64 units)	153	333 gallons per person per day	50,949 (57 AFY)
Candidate Site #7 (57 units)	135	333 gallons per person per day	44,955 (50 AFY)
Total	505	N/A	168,165 (188AFY)

Note: The water demand factor of 333 gallons/capita/day was obtained from the 2010 Urban Water Management Plan for District 29 and Marina Del Rey Water System and is based on a 5-year period from 2003-2007

Currently, District 29 has a purchase agreement with West Basin Municipal Water District (WBMWD) for 10,506 acre-feet per year. According to the District 29 2010 UWMP, 2010 water demand was 8,289 AFY. District 29 would be able to purchase an additional 2,217 AFY as needed (District 29 2010 UWMP). Therefore, District 29 would have access to sufficient water supply to serve the additional 188 AFY required by Candidate Sites #1, #2, and #7. The 202 AFY required to serve potential development at the three candidate sites would be approximately 9% of the additional water available for purchase from WBMWD in 2010. Furthermore, as described in the *Setting* above, WBMWD would have sufficient supply to meet projected District 29 water demands in a normal year, a single-dry year, and multiple-dry years. In each

dry year scenario, District 29 is also projected to have an annual surplus of approximately 1,000 AFY or more through the year 2035.

District 29 (and WBMWD) water supply projections were estimated using SCAG population growth estimates from the 2008 Regional Transportation Plan. The population growth estimates assumed that the City of Malibu population would be 15,598 people in 2020 and 17,310 people in 2035. The 2010 UWMP anticipates having sufficient water to serve the future population growth anticipated in the 2008 Regional Transportation Plan. The new residents at the three candidate sites represent 19% of the anticipated population growth through 2020 and 12% of the anticipated population growth through 2035, compared to the current 2012 population of 12,699. SCAG has since adopted the 2012 Regional Transportation Plan, which has updated population growth estimates. These estimates are lower than the 2008 population growth estimates used in the 2010 UWMP. Specifically, the new projected populations are 13,800 people by 2020 and 14,800 people by 2035. According to the new population estimates, District 29 would be expected to have less demand for water than anticipated in the 2010 UWMP, and therefore may have more available water.

The proposed candidate sites would primarily utilize existing water mains to convey water to the sites. The available capacity of the existing water mains that would serve the proposed candidate sites is dependent upon whether adequate fire flow can be maintained within the system (Personal Communication, Kirk Allen, County of Los Angeles Department of Public Works, June 4, 2012). According to a letter submitted by the County of Los Angeles Fire Department, high-density/multi-family residential units may require a flow of up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to five hours. Each candidate site would be sized based on the size of buildings, their relationship to other structures, property lines, and types of construction material used. County of Los Angeles Fire Department requirements are reviewed and addressed during the coastal development permit stage as a required step in the development process. Potential developers would be required to consult with Los Angeles County Waterworks Districts and County of Los Angeles Fire Department to determine if adequate capacity exists in the adjacent water mains.

The proposed candidate sites are located in developed areas, with Candidate Sites #1 and #2 located between existing multi-family residences and Candidate Site #7 located near commercial uses, such as the Los Angeles County Courthouse, Malibu Library and a shopping center. The existing multi-family residences and commercial properties would require similar fire flows as the proposed multi-family residences. Therefore, it is anticipated that existing water mains would have sufficient capacity to provide adequate fire flows for the proposed candidate sites. Should any new connections or upgrades be required, such upgrades would likely occur within existing utility easements along PCH and Civic Center Way, and would not result in new areas of disturbance. Therefore, adequate water supply and water conveyance infrastructure would be available to serve the candidate sites. Impacts would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned Multi-Family Residential (MF) and Multi-Family Beachfront (MFBF). The proposed programs and policies would not directly result in a

population increase that would require additional water services or conveyance infrastructure; however, the programs and policies would allow for increased development potential of multi-family zoned sites throughout the City, which could increase demand for water services or conveyance infrastructure. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Future development within the City that would increase demand for water service would be speculative in nature and would be subject to individual project review and approval by the City of Malibu, wherein any project-specific impacts would be addressed.

Adequate water supply is available and compliance with existing fire department regulations would reduce impacts related to water supply to a less than significant level. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact U-2 Development facilitated by the Housing Element Update would generate an estimated 33,072 gallons of wastewater per day. Each candidate site would be required to install a new onsite wastewater treatment system (OWTS) with capacity specific to the development size based on existing City requirements set forth in LIP Chapter 18 and Appendix K of the Plumbing Code. Each OWTS would be required to obtain an operating permit from the City of Malibu, which would ensure the proper design, operation, and maintenance of each system. Thus, impacts would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Wastewater generation was calculated using a generalized factor of 156 gallons of wastewater per day per unit for multi-family residential uses. As shown in Table 4.14-6, Candidate Site #1 would accommodate up to 91 units, which would require an OWTS with a capacity of at least 14,196 gallons of wastewater per day. Candidate Site #2 would accommodate up to 64 units, which would require an OWTS with a capacity of at least 9,984 gallons of wastewater per day. Candidate Site #7 would accommodate up to 57 units, which would require an OWTS with a capacity of at least 8,892 gallons of wastewater per day. It should be noted that per the RWQCB ban on OWTSs, Candidate Site #7 would be permitted to construct an OWTS, but the system could only remain in operation until the City has completed its centralized sewer system. At that time, Candidate Site #7 would need to connect to the centralized sewer system. The total wastewater generated by full buildout of all three candidate sites would be 33,072 gallons per day. The actual size of each OWTS would be specific to the size of each development project as determined by the City through development review, but the estimates provided represent reasonable build-out scenario for each candidate site.

Table 4.14-6 Housing Element Wastewater Generation

Site	Units	Generation Rate	Water Demand (gallons per day)
Candidate Site #1	91	156 gallons per unit per day	14,196
Candidate Site #2	64	156 gallons per unit per day	9,984
Candidate Site #7	57	156 gallons per unit per day	8,892
Total	212	N/A	33,072

The City of Malibu does not have city-wide wastewater conveyance and treatment infrastructure. Therefore, all new development must install an OWTS. The installation and operation of OWTSs could result in impacts related to geological instability or seepage that could result in soil contamination and/or water quality impacts.

The soils present on Candidate Sites #1 and #2 primarily consist of Cropley, coastal-Urban land-Haploxererts complex, 0 to 30 percent slopes and Pachic Argixerolls, coastal, 30 to 75 percent slopes. The soils present on Candidate Site #7 primarily consist of Elder fine sandy loam, coastal, 0 to 2 percent slopes. All of these soils are considered to have limitations for the use of septic tanks (NRCS, Web Soil Survey, 2012). On a scale of 0.01 to 1.00, with 0.01 having the least limitations and 1.00 having the greatest limitations for septic suitability, the soils present on the candidate sites are rated as 1.00 (NRCS, Web Soil Survey). However, limitations can be overcome or minimized by special planning, design, or installation.

Per M.M.C. Section 15.14.03, any new development would be required to apply for a Coastal Development Permit and receive approval from the City Environmental Health Administrator, and subsequently receive a construction permit for installation. The permit to operate an OWTS requires system inspection by a City-registered inspector, and, for multi-family developments, a RWCQB waste discharge permit. Through the OWTS permit process, the City of Malibu, in coordination with the RWQCB, regulates the construction and operation of OWTSs to prevent environmental impacts that could occur, such as spills or leaks. The RWQCB waste discharge requirements include general provisions, such as no discharges in excess of the maximum design and disposal capacity of the OWTS, odors shall not be detectable, only authorized service providers can pump septic tanks, no disposal system can be placed at a depth where it would pollute groundwater, and dischargers must allow the RWQCB access to premises for inspection, sampling, or monitoring. Compliance with the existing City and RWQCB policies and regulations would ensure that impacts resulting from the construction of new wastewater treatment systems would be less than significant.

As discussed in the *Setting*, the RWQCB has issued a ban on OWTSs in the Malibu Civic Center Area, which encompasses Candidate Site #7. However, the adopted resolution banning new OWTS includes a list of properties that have already received entitlements for OWTSs for future planned development. Candidate Site #7 is included on the list of properties that have already received approval to install an OWTS, and is therefore not included in the ban. Candidate Site #7 would be permitted to construct an OWTS, but the system could only remain in operation

until the City completes its centralized Civic Center sewer system. At that time, Candidate Site #7 would be required to connect to the centralized system.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. The proposed policies would allow for increased development potential of multi-family zoned sites throughout the City, which could increase demand for OWTS. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. However, future development within the City would be subject to individual project review and approval by the City, wherein any project-specific impacts would be addressed. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. No mitigation measures are required.

Impact U-3 Development facilitated by the Housing Element Update would generate approximately 1.35 tons of solid waste per day. Area landfills have sufficient permitted capacity to process an additional 6,500 tons of solid waste per day. Therefore, area landfills have sufficient capacity to serve potential development on the proposed candidate sites. Solid waste service and capacity impacts would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Development of the three candidate sites would generate solid waste and therefore increase demand for solid waste services. Solid waste generated by of the 212 residences that could be developed on the candidate sites is estimated to be 1.35 tons per day. Waste generated was determined using the waste generation factor of 12.8 lbs per household per day multiplied by the proposed 212 new units. As shown in Table 4.14-7, potential development (91 units) on Candidate Site #1 would result in an estimated 0.58 tons per day; Candidate Site #2 (64 units) would result in an estimated 0.42 tons per day; and Candidate Site #7 (57 units) would result in an estimated 0.35tons per day.

Table 4.14-7 Housing Element Solid Waste Generation

Site	Number of Units	Generation Rate	Solid Waste Services Demand (tons per day)
Candidate Site #1	91	12.8 lbs per household per day	0.58
Candidate Site #2	64	12.8 lbs per household per day	0.41
Candidate Site #7	57	12.8 lbs per household per day	0.36
Total	212	N/A	1.35

Note: The solid waste demand factor of 12.8 lbs/household/day was obtained from CalRecycle's Jurisdiction Diversion/Disposal Rate Detail report for the City of Malibu (CalRecycle, 2011).

As discussed under *Setting*, the candidate sites would be served by Simi Valley Landfill and Recycling Center, as well as Calabasas Sanitary Landfill. Simi Valley Landfill has the permitted capacity to accept 6,000 tons per day of solid waste and is currently only processing approximately 2,300 tons per day. Simi Valley Landfill has capacity to accept 3,700 additional tons of solid waste per day. Furthermore, Simi Valley Landfill is currently expected to operate until the year 2052. Calabasas Sanitary Landfill has the permitted capacity to accept 3,500 tons per day of solid waste and is currently only processing approximately 600-700 tons per day. Calabasas Sanitary Landfill has capacity to accept approximately 2,800 additional tons of solid waste per day and is currently expected to operate until the year 2046. In total, area landfills could accept approximately 6,500 additional tons of solid waste per day. Therefore, area landfills have sufficient capacity to serve the solid waste generation associated with development of the candidate sites, which totals 1.35 tons per day. Impacts related to landfill capacity would be less than significant.

Proposed Programs and Policies. The Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. The proposed policies would not directly result in a population increase that would require additional solid waste services; however, the programs and policies would allow for increased development potential of multi-family zoned sites throughout the City, which could increase demand for solid waste services. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Future development within the City that would require new solid waste services is speculative in nature and would be subject to individual project review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Impacts to the capacity of local solid waste service providers would be less than significant. Therefore, impacts associated with the proposed programs and policies of the proposed Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact U-4 **Area landfills serving future development of the candidate sites are subject to oversight and inspection by local enforcement agencies that ensure compliance with existing federal, state, and local regulations regarding solid waste. Local solid waste haulers are required to obtain operating permits from the City of Malibu, which ensures compliance with existing federal, state, and local regulations regarding solid waste. Therefore, all area landfills and haulers would be in compliance with federal, state, and local laws regarding solid waste disposal. Impacts would be Class III, *less than significant*.**

Candidate Sites #1, #2, and #7. The landfills that serve the City are subject to the regulations of CalRecycle and are assigned to a local enforcement agency (LEA) that performs

monthly inspections of the landfill sites. The LEA for Simi Valley Landfill is the County of Ventura Resource Management Agency, Environmental Health Division. The LEA for Calabasas Landfill is County of Los Angeles, Department of Public Health. Oversight by the LEAs for each landfill ensures that the landfills are in compliance with federal, state, and local regulations regarding waste disposal. If a violation is cited, the LEA will work with the landfill and CalRecycle to determine the appropriate corrective action.

Solid waste haulers within the City are required to obtain a permit from the City of Malibu. The City of Malibu hauler permit conditions require service companies to comply with all city ordinances and regulations regarding waste collection and diversion. In addition, all haulers are required to submit monthly diversion reports to the City. The haulers serving any future construction or operational needs of the candidate sites would be subject to the City of Malibu regulations. Impacts related to compliance with federal, state, and local regulations regarding solid waste would be less than significant.

Proposed Programs and Policies. The proposed Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. The proposed policies would not directly result in a population increase that would require additional solid waste services; however, the programs and policies would allow for increased development potential of multi-family zoned sites throughout the City, which could increase demand for solid waste services. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Furthermore, future development would be required to participate in City waste diversion programs and would be subject to individual project review and approval by the City of Malibu, wherein any project specific impacts would be addressed. As discussed above, solid waste haulers within the City are required to obtain a permit from the City of Malibu. The City of Malibu hauler permit conditions require service companies to comply with all city ordinances and regulations regarding waste collection and diversion. In addition, all haulers are required to submit monthly diversion reports to the City. The haulers serving any future construction or operational needs of the candidate sites would be subject to the City of Malibu regulations. As discussed above, solid waste haulers within the City are required to obtain a permit from the City of Malibu. The City of Malibu hauler permit conditions require service companies to comply with all city ordinances and regulations regarding waste collection and diversion. In addition, all haulers are required to submit monthly diversion reports to the City. Impacts related to compliance with federal, state, and local regulations regarding solid waste would be less than significant. Existing oversight agencies would reduce impacts related to compliance with federal, state, and local regulations to a less than significant. Therefore, impacts associated with the proposed programs and policies of the proposed Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

Impact U-5 Development facilitated by the Housing Element Update would be subject to the LCP and M.M.C. storm water management requirements, which stipulate that post-development runoff flows do not exceed pre-development runoff flows. Therefore, storm water flows would be managed on each candidate site such that peak flows to off-site storm water drainage facilities would not change. Impacts to storm water drainage facilities would be Class III, *less than significant*.

Candidate Sites #1, #2, and #7. Residential development on the three candidate sites would increase impervious surfaces on each site, which could result in increased storm water runoff flows that would warrant the need for new or expanded drainage facilities. However, per M.M.C. Section 13.040.100(B), all new development is required to reduce storm water runoff rates to pre-development runoff rates during a 100-year storm event through onsite detention. Because post-development storm water runoff rates would be less than or equal to existing storm water runoff rates, no new or expanded storm water facilities would be needed to convey runoff. In addition, the City of Malibu has standard conditions of approval pertaining to storm water runoff. Future development projects on Candidates Sites #1, #2 and #7 would be subject to these standard conditions, which would further ensure that storm water impacts are minimized. The existing natural drainages and Civic Center storm drains would be adequate to maintain runoff flows. Compliance with existing Municipal Code regulations would ensure that impacts to storm drain facilities would be less than significant.

Refer to Section 4.8, *Hydrology and Water Quality,* for further discussion on storm water runoff and storm water facilities.

Proposed Programs and Policies. The proposed Housing Element Update includes various new programs and policies, as described in Section 2.0, *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. The proposed policies would not directly result in a population increase that would require additional storm drain facilities; however, the programs and policies would allow for increased development potential of multi-family zoned sites throughout the City, which could result in the construction or expansion of storm drain facilities. In addition to Candidate Sites #1, #2, and #7, there are currently 6.72 acres of vacant land on 27 difference parcels zoned MF in the city. If these vacant parcels were made subject to the AHO, it is possible that an additional 168 affordable housing units could be developed (refer to City of Malibu Zoning Map for precise locations of MF sites). There is no proposed action at this time to utilize the AHO on these other parcels and therefore a detailed analysis of associated impacts is not possible. Future development within the City that would incrementally increase impermeable surfaces and contribute storm water runoff would be required to comply with existing Municipal Code regulations regarding storm water runoff flows and onsite detention. Furthermore, future development would be subject to individual project review and approval by the City of Malibu, wherein any project-specific impacts would be addressed. Compliance with existing storm water-related regulations, as discussed above, would reduce impacts to a less than significant level. Therefore, impacts associated with the proposed programs and policies of the Housing Element Update would be less than significant.

Mitigation Measures. Mitigation measures are not required.

c. Cumulative Impacts.

Candidate Sites. As described in Section 3.0, *Environmental Setting*, the potential development of 212 units facilitated under the Housing Element Update, along with 84 residential dwelling units and 748,460 square feet of non-residential development, account for the anticipated cumulative development through the year 2014 for the City of Malibu. The discussion below considers the cumulative effect of the Housing Element Update and the approved/pending development within Malibu.

Water. Development of the proposed candidate sites would generate demand for an estimated 188 AFY. The cumulative residential projects identified in Section 3.0, *Environmental Setting*, would generate demand for an additional 74 AFY. Therefore, the cumulative increase in water demand would be approximately 262 AFY. According to the 2010 UWMP, District 29 currently has the capacity to purchase an additional 2,217 AFY from WBMWD. Therefore, District 29 currently has sufficient water supply to provide water service to cumulative projects within Malibu. Furthermore, District 29 would have adequate supply in a normal year, a single-dry year, and multiple-dry years to serve anticipated population growth. Therefore, cumulative growth would be within the projected population growth used to determine water supply and water reliability estimates. Cumulative impacts to water supply would be less than significant.

The available capacity of the existing water mains that would serve cumulative development in Malibu is dependent upon whether adequate fire flow can be maintained within the system. Each new development would be sized based on the size of buildings, their relationship to other structures, property lines, and types of construction material used. County of Los Angeles Fire Department requirements are reviewed and addressed during the subdivision tentative map stage as a required step in the development process. Potential developers would be required to consult with Los Angeles County Waterworks Districts and County of Los Angeles Fire Department to determine if adequate capacity exists in the adjacent water mains. Each cumulative project would be subject to individual project review and approval by the City of Malibu, wherein any project specific impacts would be addressed. Therefore, cumulative fire flow impacts would be less than significant.

Wastewater. Development of the three candidate sites would generate an estimated 33,072 gallons of wastewater per day. The cumulative projects identified in Section 3.0, *Environmental Setting*, would generate an additional 256,353.5 gallons of wastewater per day. Per M.M.C. Section 15.14.03, any new development would be required to apply for a Coastal Development Permit and receive approval from the City Environmental Health Administrator, and subsequently receive a construction permit for installation. The permit to operate an OWTS requires system inspection by a City-registered inspector, and, for commercial or multi-family developments, a RWCQB waste discharge permit. Through the OWTS permit process, the City of Malibu, in coordination with the RWQCB, regulates the construction and operation of OWTSs pursuant to the regulations discussed in this section to prevent environmental impacts that could occur. Compliance with existing City of Malibu and RWQCB policies and regulations would reduce cumulative impacts associated with the provision of wastewater treatment to a less than significant level.

Solid Waste. Development on the proposed candidate sites would generate an estimated 1.35 tons of solid waste per day. The cumulative projects identified in Section 3.0, *Environmental Setting*, would generate an additional 5.4 tons of solid waste per day, for a total of 6.75 tons per day when combined with the candidate sites. As previously mentioned, area landfills have the capacity to accept an additional 6,500 tons per day of solid waste. Therefore, area landfills would have sufficient capacity to serve the candidate sites, as well as the approved/pending projects within Malibu. Cumulative solid waste impacts would be less than significant.

Storm Water Conveyance. Development of the proposed candidate sites, along with cumulative development within the City, would result in an increase in impervious surfaces, which could incrementally increase storm water runoff flows that would warrant the need for additional drainage facilities. However, per the City of Malibu Municipal Code (13.040.100 B), all new development would be required to reduce storm water runoff rates to pre-development runoff rates during a 100-year storm event through onsite detention. Because post-development storm water runoff rates would be less than or equal to existing storm water runoff rates, no new or expanded storm water facilities would be needed to convey runoff. The existing natural drainages and Civic Center storm drains would be adequate to maintain runoff flows. Therefore, cumulative storm water impacts would be less than significant.

*City-wide Programs and Policies***.** The Housing Element Update includes various new programs and policies, as described in Section 2.0 *Project Description*, which would apply to parcels throughout the City that are zoned MF and MFBF. These proposed programs and policies, including the Second Unit Amnesty Program and the Remove Barriers to Affordable Housing and Housing for Persons with Special Needs Program, would have no cumulative impact, as these programs would not result in the development of additional structures. However, Housing Element Update Program 2.2.B would amend the LCP and M.M.C. to increase the impermeable coverage and total development square footage maximums for parcels zoned MF (parcels in the MFBF zone do not have a limit on the total amount of impermeable coverage and total development square footage allowed per parcel), which may allow some multi-family zoned parcels within the City to be developed with larger/more buildings or other structures than would be allowed under current development standards. This program, in addition to the provisions of the AHO which would allow a density of 25 units per acre and could support up to an addition 168 units throughout the City, could have the potential to result in cumulative utility impacts when combined with the 84 residential units and 748,460 square feet of non-residential development throughout the City. For the same reasons as described in the cumulative impact analysis above, impacts would not be considerable. Therefore, cumulative impacts would be less than significant.

This page intentionally left blank.

4.15 EFFECTS FOUND NOT TO BE SIGNIFICANT

During the initial analysis of the impacts of the Housing Element Update, the following issues were found to be less than significant. No further environmental review of these issues is necessary for the reasons summarized in the following discussion.

A. AGRICULTURE AND FORESTRY

1. Potential Environmental Effects

If the project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use, or conflict with existing zoning for agricultural use, or a Williamson Act contract, or conflict with existing zoning for, or cause rezoning of, forest land, or timberland zoned Timberland Production, or result in the loss of forest land or conversion of forest land to non-forest use, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural uses or conversion of forest land to non-forest use, significant impacts could result.

2. Reasons Why Effects Were Not Found Significant

The programs and policies contained in the Housing Element as well as Candidates Sites #1, #2 and #7 would not impact farmland, agricultural resources, forest land or timberland. Currently, Candidate Sites #1 and #2 are zoned Multi-Family Residential (MF) and Candidate Site #7 is within the Town Center Overlay District (TCO). In addition, other sites that may be subject to programs and policies in the Housing Element update are zoned MF and Multi-Family Beachfront (MFBF).

B. HAZARDS AND HAZARDOUS MATERIALS

1. Potential Environmental Effects

If the project would involve the routine transport, use, or disposal of hazardous materials or emit or handle hazardous materials within one-quarter mile of a school, significant impacts could result.

2. Reasons Why Effects Were Not Found Significant

Candidate Sites #1, #2, and #7 would be zoned to allow multi-family residential development up to 25 units/acre. Policies and programs of the Housing Element Update would apply to MF and MFBF areas only. Residential uses or mixed uses on Candidate Site #7 would not involve the transport, use, or disposal of hazardous materials that would result in a significant hazard to the public or the environment. Potential hazardous materials associated with daily operation of the proposed candidate sites would be limited to small quantities of typical household cleaners, paint, or domestic landscape materials, such as fertilizers. Because no hazardous

materials would be emitted, the proposed project would not result in impacts to any nearby schools.

1. Potential Environmental Effects

If the project would result in airport safety hazards, significant impacts could result.

2. Reasons Why Effects Were Not Found Significant

There are no airports in Malibu. Therefore, there would be no airport safety hazards associated with development of the proposed candidate sites or policies and programs of the Housing Element Update.

C. HYDROLOGY AND WATER QUALITY

1. Potential Environmental Effects

If the project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted), significant impacts could occur.

2. Reasons Why Effects Were Not Found Significant

Groundwater is not used as a source of water supply in the City of Malibu due to the steep and impervious nature of the small watersheds and the rapid runoff of low and variable rainfall. Therefore, future development on Candidate Sites #1, #2, and #7 or the policies and programs contained in the Housing Element Update would not result in a substantial depletion of groundwater.

1. Potential Environmental Effects

If the project would expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, significant impacts could occur.

2. Reasons Why Effects Were Not Found Significant

Candidate Sites #1, #2, and #7 are not located within the vicinity of a levee or dam as there are no levees or dams in the City, and therefore would not expose people or structures to risks involving flooding. Policies and programs of the Housing Element Update would not expose people or structures to flooding risks.

D. LAND USE AND PLANNING

1. Potential Environmental Effects

If the project would physically divide an established community, or conflict with any applicable habitat conservation plan or natural community conservation plan, significant impacts could result.

2. Reasons Why Effects Were Not Found Significant

Candidate Sites #1, #2, and #7 are located in developed areas of the City. They are surrounded by existing residential, institutional and commercial land uses, making future development on the sites contiguous with the surrounding community. Therefore, future development on Candidate Sites #1, #2, and #7 would not physically divide an established community. Policies and programs of the Housing Element Update would apply to MF and MFBF zoned parcels only. Future residential development in these areas would not divide communities, instead they would support the City's housing supply.

There are no adopted habitat conservation plans or natural community conservation plans applicable to Candidate Sites #1, #2, or #7. Policies and programs of the Housing Element Update would apply to MF and MFBF zoned parcels only, which are not designated for habitat conservation plans. It should be noted that Local Coastal Program (LCP) Local Implementation Plan (LIP) Chapter 4 includes various habitat protection measures.

E. MINERAL RESOURCES

1. Potential Environmental Effects

If the project would result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state, or result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan, significant impacts could result.

2. Reasons Why Effects Were Not Found Significant

Candidate Sites #1, #2, and #7 are currently vacant with the exception of one single-family residence on both Candidate Sites #1 and #2. Policies and programs of the Housing Element Update would apply to existing MF and MFBF zoned parcels only. None of the sites contain any known mineral resources.

F. NOISE

1. Potential Environmental Effects

If the project would be located within the vicinity (two miles) of an airport or private airstrip and expose people to excessive noise, significant impacts could result.

2. Reasons Why Effects Were Not Found Significant

Malibu is not located within two miles of an airport or private airstrip. Therefore, the Housing Element Update would not expose people to airport noise.

G. RECREATION

1. Potential Environmental Effects

If the project would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, significant impacts could occur.

2. Reasons Why Effect Was Not Found Significant

The City of Malibu has a wide range of recreational facilities including public beaches to the south and the hillsides of the Santa Monica Mountains to the north. According to the Land Use Element of the General Plan (November 1995), open space makes up 14.9% of the total land area in the City. This includes regional and local parks, wildlife preserves, beach parks, and open space/recreation. Due to the large supply of recreational facilities in the City, future development on Candidate Sites #1, #2, and #7 or other development pursuant to the programs and policies of the Housing Element Update would not increase the use of these facilities to a level that would result in substantial physical deterioration. In addition, the City collects fees to mitigate parkland impacts that result from new residential development.

The proposed project does not include recreational facilities or require construction or expansion of recreational facilities.

H. UTILITIES

1. Potential Environmental Effects

If a project would require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities which might have an adverse physical effect on the environment, significant impacts could occur.

2. Reasons Why Effect Was Not Found Significant

There are no wastewater treatment providers that would serve the candidate sites. The existing wastewater treatment facilities within the City of Malibu serve the designated developments for which they were specifically designed and they are not intended to serve additional new residences. All new development is required to use on-site wastewater treatment systems. The Housing Element Update would not use existing wastewater treatment facilities. Therefore, there would be no impacts to the capacity or conveyance of existing wastewater treatment facilities.

This page intentionally left blank.