

From: Anthony Dedousis [mailto:anthony@abundanthousingla.org]

Sent: Wednesday, November 10, 2021 4:15 PM

To: Mayor <Mayor@longbeach.gov>; Daniel Brezenoff <Daniel.Brezenoff@longbeach.gov>; Tom Modica <Tom.Modica@longbeach.gov>; Linda Tatum <Linda.Tatum@longbeach.gov>; Patricia Diefenderfer <Patricia.Diefenderfer@longbeach.gov>; Christopher Koontz <Christopher.Koontz@longbeach.gov>; DV - Housing Element Update <HousingElementUpdate@longbeach.gov>; Alison Spindler-Ruiz <Alison.Spindler-Ruiz@longbeach.gov>

Cc: Leonora Camner <leonora@abundanthousingla.org>; Jon Wizard <jon@yimbylaw.org>; Jes McBride <jes@yimbylaw.org>; CityClerk <CityClerk@longbeach.gov>

Subject: Comment letter - Long Beach housing element

-EXTERNAL-

Dear Mayor Garcia, Councilmembers, and Planning staff:

I'm reaching out to share a letter from Abundant Housing LA and YIMBY Law commenting on Long Beach's proposed housing element. We have major concerns about the City's intended approach to updating the housing element. We believe that the City's intended approach does not satisfy the intent of state law, which is to expand housing availability at all income levels.

The attached letter contains a detailed explanation of where we view this effort as having fallen short of HCD's standards and state law. I've also included our past letter to the City Council from earlier this year, expressing concerns about many of the same issues.

We respectfully request the opportunity to discuss the issues raised in this letter. Thank you for your consideration.

Regards,

Anthony Dedousis

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Anthony Dedousis

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November 10, 2021

Long Beach City Council
Long Beach City Hall
411 W Ocean Blvd
Long Beach, CA 90802

Dear Councilmembers:

Thank you for the opportunity to comment on the process of updating the housing element of Long Beach's general plan. We are writing on behalf of **Abundant Housing LA** and **YIMBY Law** regarding the 6th Cycle housing element update. **Abundant Housing LA** is a pro-housing, nonprofit advocacy organization working to help solve Southern California's housing crisis, and **YIMBY Law**'s mission is to make housing in California more accessible and affordable through enforcement of state housing law.

We support more housing at all levels of affordability and reforms to land use and zoning codes, which are needed in order to make housing more affordable, improve access to jobs and transit, promote greater environmental sustainability, and advance racial and economic equity.

In July 2021, [we submitted a comment letter](#) regarding Long Beach's draft housing element update. In the letter, we highlighted significant inconsistencies with state housing element law, including the requirement that housing element updates affirmatively further fair housing (AFFH), as well as inconsistencies with the State Department of Housing and Community Development (HCD)'s instructions regarding housing element design and implementation.

We were encouraged that [HCD's September comment letter](#) on the City's draft housing element update directly addresses many of the same deficiencies that our letter highlighted, and also states that "revisions will be necessary to comply with State Housing Element Law."¹ As part of this letter, we have included Appendix A, a brief summary illustrating how HCD's comments on the City's draft housing element are largely congruent with our previous analysis.

Additionally, the City deserves credit for making several modest improvements to the proposed housing element update:

- Correcting the ADU production forecast in order to align with the HCD-recommended methodology (average annual permits between 2018 and 2020)
- Adding a handful of new sites to the sites inventory in northeast Long Beach, where the City's highest-resource neighborhoods are located
- Providing a more detailed explanation of the City's methodology for filtering out parcels where redevelopment is unlikely, though this methodology remains deficient since it doesn't accurately account for likelihood of development.

¹ [HCD, Review of the City of Long Beach's 6th Cycle \(2021-2029\) Draft Housing Element Update, 9/17/21, pg. 1](#)

Nevertheless, we are disappointed that the latest version of the City's housing element update does not meaningfully fix the deficiencies identified in our earlier comments or in HCD's review and comments. The City's housing element is inconsistent with HCD's instructions, does not comply with the requirement that housing element updates affirmatively further fair housing under Assembly Bill 686, and does not comply with Government Code Section 65583(c)'s requirement that housing elements include programs with concrete action steps to facilitate housing production.

The following issues that we raised earlier this year remain unaddressed:

1A. The housing element does not prioritize rezoning in transit-rich, job-rich, and high-resource neighborhoods, including single-family zoned areas. This is necessary to expand affordable housing opportunities while minimizing the impact on existing renters in multifamily-zoned areas.

1B. The housing element fails to institute local programs and funding sources for preservation of existing affordable housing.

2A. The housing element does not adequately identify funding sources, public resources, and density bonus programs to maximize the likelihood that projects with below-market-rate units are built.

2B. The housing element fails to streamline housing production.

3A. The housing element fails to estimate and report the likelihood of development, both vacant and nonvacant.

3B. The housing element does not report the proportion of sites from the previous housing element's inventory that were developed during the previous planning period, and HCD-recommended methodologies and data sources were not used in order to conduct a thorough "factors" analysis of sites' realistic development capacity.

3C. The housing element assigns more than 50% of the lower-income RHNA target to nonvacant sites, but fails to use statistical methods (e.g. surveying a random sample of owners of nonvacant sites) to determine that the sites' existing uses are likely to be discontinued during the planning period.

3D. A buffer of at least 15-30% extra capacity is not included in the housing element site inventory. This capacity buffer is especially necessary in order to accommodate the lower-income RHNA target.

3E. The housing element does not provide a quantitative estimate of the likelihood that in-pipeline projects will be completed, based on historical data, and does not adjust the number of in-pipeline units counted towards the 6th cycle RHNA target accordingly.

3F. The housing element does not commit to a mid-cycle review to verify the housing element's assumptions about development probabilities.

4A. The housing element fails to meaningfully increase the concentration of lower-income households in areas of the city where the existing concentration of lower-income households is low.

4B. The housing element fails to meaningfully reduce the concentration of lower-income households in areas with low environmental quality and significant exposure to noise/pollution.

4C. The housing element fails to meaningfully reduce the concentration of lower-income households and communities of color in R/ECAPs (Racially or Ethnically Concentrated Areas of Poverty).

4D. The housing element does not adequately prioritize high-opportunity census tracts and well-resourced areas (e.g. near transit, jobs, schools, parks, etc.) when selecting sites for lower-income housing opportunities.

4E. The jurisdiction did not adequately solicit public feedback and commentary on the housing element in a way that accurately reflects the jurisdiction's socioeconomic makeup.

5A. The housing element does not provide for mid-cycle adjustments if inventory sites are developed at lower rates, or lesser densities, than the housing element anticipated and if ADU production falls short of projections. Mid-cycle adjustments should automatically implement a by-right density bonus on inventory sites, starting mid-cycle, and be large enough to make up for an ADU shortfall.

5B. The housing element does not assess the affordability of forecasted ADUs using city-specific data; it instead uses a regional average.

We also wish to raise the following issues that are specific to this latest draft:

Fair Housing Issues and AFFH Compliance

HCD's review of Long Beach's draft housing element critiqued the City's failure to encourage greater access to higher-resource neighborhoods, and noted that few proposed sites inventory parcels were located in higher-resource neighborhoods.² The latest version of the housing element now includes a handful of additional sites along major corridors in CPAs G and J, eastern portions of the City where incomes and overall access to resources are high.

However, merely adding a small number of additional sites in higher-resource neighborhoods will not be enough to promote balanced housing growth in all of Long Beach's neighborhoods, and does not fundamentally change the neighborhood-level distribution of Long Beach's proposed sites inventory. The updated housing element fails to fundamentally tackle barriers to

² [HCD, Review of the City of Long Beach's 6th Cycle \(2021-2029\) Draft Housing Element Update, 9/17/21, pg. 4](#)

housing growth in high-resource neighborhoods, particularly the fact that apartments are banned in the overwhelming majority of these areas.

As a result, the City's proposed housing growth distribution still concentrates lower-income housing opportunities in less-resourced neighborhoods with lower environmental quality. This violates HCD's requirement that a housing element's site inventory and rezoning programs identify sites "throughout the community in a manner that affirmatively furthers fair housing."

AFFH Metric	Updated Housing Element	Draft Housing Element
Share of total RHNA units located in TCAC high or highest opportunity tract	14% ³	Not stated
Share of city's land located in TCAC high or highest opportunity tract	42% ⁴	
Share of lower-income RHNA units in tracts where racial/ethnic minorities are 80%+ of the population	66% ⁵	64% ⁶
Share of site inventory parcels located in a R/ECAP	15% ⁷	15% ⁸
Share of city's land located in a R/ECAP	9% ⁹	
Share of lower-income RHNA units in tracts with poor CalEnviroScreen scores (>80th %ile)	64% ¹⁰	Not stated
Share of city's land located in tracts with poor CalEnviroScreen scores (>80th %ile)	29% ¹¹	

Finally, it bears repeating that the City's proposed sites inventory still does not estimate sites' likelihood of development, does not provide evidence that the sites' owners are interested in

³ Long Beach Housing Element, November 2021, pg. F-46

⁴ Long Beach Housing Element, November 2021, pg. F-45

⁵ Long Beach Housing Element, November 2021, pg. F-49

⁶ Long Beach Housing Element, July 2021, pg. F-44

⁷ Long Beach Housing Element, November 2021, pg. F-41

⁸ Long Beach Housing Element, July 2021, pg. F-40

⁹ Long Beach Housing Element, November 2021, pg. F-41

¹⁰ Long Beach Housing Element, November 2021, pg. F-46

¹¹ Long Beach Housing Element, November 2021, pg. F-48

redevelopment, and includes commercially-zoned sites where residential redevelopment is far from a sure thing. The updated housing element also failed to include policies that would encourage denser development on R1-zoned parcels near jobs and transit.

The City must provide convincing evidence that redevelopment is likely on the parcels in the sites inventory, or must rezone additional sites, particularly in northeast Long Beach, to ensure that the City's RHNA target is achieved and that sufficient housing opportunities, available at all levels of income, are created citywide.

Quantified Objectives

Although the City's RHNA target is 26,502 homes, the City has defined its quantified objective as only 12,653 homes, without providing a justification as to why the RHNA target is not achievable.¹² The City has essentially implied that it has no other policy options available to accommodate the RHNA target for below-market-rate units, or to encourage the production of housing that is naturally affordable for moderate-income households. The City has also indicated that only 44% of the above moderate-income target will be built by 2029, suggesting that either the private market is not interested in building 11,156 homes (an unlikely scenario given extremely high rents and home prices in Long Beach), or that the City is unwilling to implement policies that would stimulate enough private-sector housing production to achieve the above moderate-income RHNA target.

Quantified Objectives

Table HE-6 presents the City's quantified objectives for construction, preservation, and rehabilitation for the 2021 – 2029 planning period that will be achieved through the policies and programs described above.

Table HE-6 Quantified Objectives

	Extremely Low Income	Very Low Income	Low Income	Moderate-Income	Above Moderate-Income	Total
RHNA	3,570	3,571	4,047	4,158	11,156	26,502
New Construction	200	600	800	1,500	4,000	7,100
ADU	191	108	1,204	168	952	2,800
Rehabilitation	166	166	332	0	0	664
Preservation	522	523	1,044	0	0	2,089
Total	1,079	1,397	3,380	1,668	4,952	12,653

Fortunately, the City does have additional policy options available. The City should strengthen the incentives in its new local density bonus program, and should rezone low-density residential parcels to make them eligible for density bonus incentives (we recommended this in Issue 2A in our July comment letter). This would encourage the production of more mid-rise and high-rise residential housing containing deed-restricted affordable units. Demand for housing in Long

¹² Long Beach Housing Element, November 2021, pg. 104

Beach is extremely strong, suggesting that a well-designed density bonus program would be likely to yield a large number of new affordable and market-rate units.

The City should also support this outcome by committing through its housing element to aggressive constraint removal programs (we recommended this in Issue 2B in our July comment letter), with the goal of further improving the economic feasibility of mixed-income redevelopment. Additionally, the City should implement policies that encourage the production of housing typologies that are affordable by design and available at moderate cost without subsidy, such as fourplexes, microunits, and buildings that do not have on-site parking garages.

Cities should not set quantified objectives below its RHNA targets without exhausting all practicable options for increasing housing production during the planning period. The City must increase its quantified objectives and implement policies that encourage additional housing production at all levels of income.

Once again, we remind you that the City of Long Beach has a legal obligation to sufficiently plan to meet current and future residents' housing needs, in a way that guarantees access to opportunity for Californians of all racial and ethnic backgrounds. Concerned residents and equity advocates have consistently highlighted the above issues, and we believe that Long Beach is not on a path to fulfilling its legal obligation.

We urge the City to swiftly adopt a legally compliant housing element that accommodates the City's RHNA target and provides a variety of attainable housing options for the City's residents and workers.

Thank you for your time and consideration.

Sincerely,

Leonora Camner
Executive Director
Abundant Housing LA

Sonja Trauss
Executive Director
YIMBY Law

CC: Megan Kirkeby, Deputy Director, Housing Policy Development, HCD
Melinda Coy, Land Use and Planning Manager, HCD
Tyrone Buckley, Assistant Deputy Director of Fair Housing, HCD
Paul McDougall, Housing Policy Development Manager, HCD

Appendix A: Comparison of HCD Comment Letter and AHLA/YIMBY Law Comment Letter and Policy Recommendations

Deficiency	HCD Comment Letter	AHLA/YIMBY Law Comment Letter	AHLA/YIMBY Law Policy Recommendations
Insufficient AFFH analysis and policy reforms to promote integrated neighborhoods	Page 4: The element contains an analysis of the site inventory that addresses some AFFH requirements. However, the analysis does not fully identify whether sites improve or exacerbate conditions or whether the sites are isolated by income group. Page 4: The element should also discuss how the sites strategy can increase opportunity in the identified areas, and how access to higher-resource areas might be created despite containing few identified sites and the exclusion of the Founding and Contemporary Neighborhood (FCN) PlaceType from consideration in the inventory. Page 5: The element must include other relevant factors that contribute to fair housing issues in the jurisdiction. For instance, the element can analyze historical land use and investment practices or other information and demographic trends. Page 5: The element must be revised to add or modify goals and actions based on the outcomes of a complete analysis. Goals and actions must [...] be significant and meaningful enough to overcome identified patterns and trends. Actions must have specific commitment, metrics,	Page 2: The City only proposed rezoning parcels that are already zoned for multifamily residential or mixed-use development, and has not proposed the legalization of apartments in R1-zoned areas, which today make up over 75% of the City's residentially-zoned land. Page 2: Single-family zoning is particularly prevalent in higher-income neighborhoods of eastern Long Beach, effectively blocking new housing opportunities, including housing that is affordable to lower- and moderate-income families, in these areas. Almost none of the site inventory parcels are located in CPAs G and J, eastern portions of the City where incomes and overall access to resources are high, and where apartments are typically banned. Page 6: Rezoning R1 parcels to legalize small apartment buildings, especially in high-resource, high-demand neighborhoods, would expand usage of the density bonus program and lead to greater production of subsidized housing units for lower-income households.	Rezone parcels located near transit, job centers, schools, and parks in order to expand the supply of housing in high- and highest-resource areas, including R1 parcels where single-family detached homes are currently mandated by law. Do more to reduce the concentration of lower-income households in neighborhoods with high concentrations of low- and moderate-income households. Identify new funding sources and public resources to encourage the production and preservation of affordable housing, such as a real estate transfer tax, an introduction of congestion pricing, creation of a local density bonus program, and active abatement of unhealthy facilities, such as pumping stations, incinerators, and other polluting infrastructure. Exempt parcels containing rent-restricted and de facto affordable housing units from rezoning to prevent displacement of vulnerable households.

	and milestones as appropriate and must address housing mobility enhancement, new housing choices and affordability in high opportunity areas, place-based strategies for community preservation and revitalization and displacement protection. Page 15: The element does not include a complete Assessment of Fair Housing (AFH). Depending on a complete analysis, the element may need to add or revise programs as appropriate. [...] In addition, the element's programs for anti-displacement and new housing in high-opportunity areas do not appear adequate to address the fair housing issues described in the element. Page 16: While important, the element's programs for new housing opportunities in high opportunity areas should consider additional actions. These modified program actions may also depend on the results of a complete AFH.	Page 15: The proposed site inventory does not reduce the concentration of lower-income households in lower-income neighborhoods. 38% of site inventory parcels are located in census tracts with TCAC definitions of "Low Resource" or "High Segregation & Poverty", even though these areas make up only 18% of the City's land area. Meanwhile, the City's "Highest Resource" and "High Resource" census tracts accommodate just 21% of site inventory parcels, despite making up 41% of the City's land area. Page 15: Additionally, 64% of lower-income RHNA units would be accommodated in census tracts where racial/ethnic minorities comprise more than 80% of the population. Most affordable units are proposed in Central and North Long Beach, which are areas where significant shares of the population have low to moderate incomes, with almost no affordable units proposed in higher-income areas in East Long Beach. Page 17: Although 39% of the City's land has a CalEnviroScreen score of 6 or above (i.e. lower environmental quality), 75% of the site inventory parcels are located in these areas of lower environmental quality.	Ensure that "no net loss" provisions apply to parcels in the site inventory and rezoning program with an annual and ongoing monitoring and implementation program. Prioritize the production of affordable housing on publicly-owned land, and offer that land to nonprofit developers at no cost as a lawful and bona fide concession through state density bonus law. Create a 100% affordable housing zoning overlay that encompasses high-opportunity neighborhoods, including R1 zoned parcels.
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		Page 18: Unfortunately, the City has not provided data indicating that its proposed site inventory would reduce the concentration of lower-income households in R/ECAPs. In fact, the proposed site inventory appears to increase the concentration of lower-income households in R/ECAPs. Although 9% of the City's land is located in a R/ECAP, 15% of the site inventory parcels are located in R/ECAPs.	
Lack of quantitative analysis for likelihood of nonvacant sites' existing use being discontinued	Page 6: The parcel listing should describe the existing use of each site sufficiently to facilitate analysis of the potential for additional development in the planning period. Page 7: Realistic Capacity: For most zones, the element assumes a realistic capacity of 75% of the maximum yield, given various development standards. The element should support this assumption with a listing of projects that have developed at such densities in those zones. Page 7: Additionally, the inventory relies on zones that allow nonresidential uses, such as the NSC PlaceTypes. The realistic capacity calculations for these zones should account for the possibility of nonresidential development on sites in those zones and adjust the estimates for the inventory if necessary. [...] To demonstrate the likelihood for residential development in nonresidential zones, the element could describe any performance	Page 9: The draft housing element provides reasonable estimates of the density of parcels if redeveloped, using data from recently completed projects. However, the analysis doesn't estimate a likelihood of development for the site inventory or rezoned parcels, effectively assuming that all parcels will be redeveloped during the 6th Cycle. Page 10: The proportion of 5th Cycle sites that were later developed is an important piece of evidence validating the 6th Cycle housing element's assumptions about redevelopment likelihood, which is why cities must report it. Unfortunately, the City does not report the proportion of 5th Cycle sites subsequently developed, nor does it undertake a quality "factors" analysis using any of the above suggested methodologies.	Provide a quantitative estimate of parcels' development probabilities, and incorporate this factor into the estimate of sites' realistic capacity. Valid methodologies include the Survey Method or the Historical Redevelopment Rate Method. Report the proportion of sites in the previous housing element's inventory that were developed during the planning period. Share letters from owners of the site inventory parcels, indicating their interest in selling or redeveloping these properties during the 6th Cycle. At a minimum, these letters would express interest, but, ideally, letters would describe plans in sufficient detail as to allow the City to quantify such interest into a likelihood of development. If the City lacks enough suitable sites to achieve the RHNA target,

	standards mandating a specified portion of residential and any factors increasing the potential for residential development such as incentives for residential use, and residential development trends in the same nonresidential zoning districts. Page 7: Suitability of Nonvacant Sites: The element must analyze the extent to which existing uses may impede additional residential development and include an analysis of any existing leases or other contracts that would perpetuate the existing use or prevent redevelopment of the site for additional residential development. Page 7: The housing element must demonstrate existing uses are not an impediment to additional residential development and will likely discontinue in the planning period (Gov. Code, § 65583.2, subd. (g)(2)). Absent findings (e.g., adoption resolution) based on substantial evidence, the existing uses will be presumed to impede additional residential development and will not be utilized toward demonstrating adequate sites to accommodate the RHNA.	Page 11: While the draft housing element describes a reasonable methodology for removing sites with a low likelihood of development from the site inventory and rezoning plan, this is not the same as undertaking a robust quantitative analysis to demonstrate that sites are likely to have their existing uses discontinued during the 6th Cycle. The City's draft housing element does not utilize either the Survey Method or the Historical Redevelopment Rate Method to provide evidence that redevelopment has a high likelihood of occurring on the parcels in the site inventory and rezoning plan. This appears to violate AB 1397.	rezone additional parcels where redevelopment is likely. Merely adding more theoretical units to existing multifamily does not fulfill the City's duty to AFFH (see above). Commit to a mid-cycle review to verify Planning's assumptions about development probabilities and make adjustments if necessary. Adjust Planning's estimate of "net new units if developed" to reflect typical FARs that developers have actually used within the last RHNA cycle.
Over-optimistic forecast of ADU production	Page 8: The element assumes an average of 350 ADUs per year will be constructed during the planning period, for a total of 2,800 ADUs. The element's analysis and programs do not support this assumption. For example, based on HCD records, the City is averaging about 159 ADU permits per year. To support assumptions for ADUs in the planning period, the element should	Page 21: The housing element significantly overstates the likely production of ADUs during the 6th cycle, possibly as a tactic to avoid rezoning. The City must correct its calculation of the ADU safe harbor, and simply apply the average of annual ADU permits issued between 2018 and 2020, per HCD's	Use HCD's Option 1 safe harbor and project that 1,275 ADUs will be permitted during the 6th Cycle, as required given that the City has annual permitting data. Follow HCD's recommendation to track ADU and JADU creation and affordability levels, and commit to

	reconcile trends with HCD records, reduce the number of ADUs assumed per year as appropriate and include additional information such as resources and incentives, other relevant factors and modify policies and programs as appropriate. The element should support its ADU assumptions based on the number of ADU permits issued.	guidelines.	annual, ongoing review to evaluate if production estimates are being achieved. Annually assess the affordability of forecasted ADUs using jurisdiction-specific data, rather than regional data.
Lack of concrete constraint removal and adequate rezoning program	Page 10: The element must identify and analyze all relevant land-use controls as potential constraints on a variety of housing types. Page 10: The element identifies all required planning fees but should also analyze their impact as potential constraints on housing supply and affordability. Page 11: The element identifies the City's Site Plan Review Committee (SPRC) as a potential constraint, citing stakeholder concern about the review process. This analysis should evaluate the SPRC in greater detail, including a discussion of the threshold for site plan review, the review process, and the SPRC's approval findings. Depending on the results of this analysis, the element should include programs as appropriate. Page 11: The element must describe the City's building and zoning code enforcement processes and procedures, including any local amendments to the building code, and analyze their impact	Page 7: While the housing element discusses governmental constraints in detail, including apartment bans on much of the City's residentially-zoned land, strict limits on building height and size, high construction costs, and a lack of local funding for affordable housing production, the report does not commit to a strong program to remove policy constraints that deter affordable housing production. Page 7: Government Code Section 65583(c) requires housing elements to include programs with concrete action steps to facilitate housing production.	Create a high-quality local density bonus program, which would also apply to low-density parcels where apartments are banned today. Establish a fast by-right review process for all new multifamily and mixed-use buildings that meet the zoning law and comply with the General Plan. Legalize by-right residential and mixed-use development on commercially-zoned parcels. Pre-approve standard accessory dwelling unit (ADU), small-scale "missing middle" multifamily and small lot subdivision housing plans, allowing developers to receive a permit quickly if they use a pre-approved design. Speed up the timeline for ministerial review, and expand ministerial review to apply to more projects. Eliminate on-site parking

	as potential constraints on housing supply and affordability. Page 12: The element must include [...] the length of time between receiving approval for a housing development and submittal of an application for building permits... Page 13: To have a beneficial impact in the planning period and address the goals of the housing element, programs must be revised with discrete timelines, objectives, and specific commitments... Page 15: The element requires a complete analysis of potential governmental and nongovernmental constraints. Depending upon the results of that analysis, the City may need to revise or add programs and address and remove or mitigate any identified constraints.		requirements, instead allowing property owners to decide how much on-site parking is necessary. Reduce restrictions on maximum height, floor-area ratio, unit size, setbacks, and lot coverage. Rezone parcels located near transit, job centers, schools, and parks in order to expand the supply of housing in high- and highest-resource areas, including R1 parcels where single-family detached homes are currently mandated by law.
Insufficient public review	Page 17: HCD understands the City made the housing element available to the public July 9, 2021, under two weeks before submittal to HCD. By not providing a sufficient opportunity for the public to review and comment on a draft of the element in advance of submission, the City has not yet complied with statutory mandates to make a diligent effort to encourage the public participation in the development of the element and it reduces HCD's ability to consider public comments in its review.	Page 19: While the City undertook a public comment outreach effort throughout the housing element update process that included focus groups, surveys, and engagement with a wide range of community organizations, housing advocates, and other nonprofits, these efforts did not go far enough. The City did not undertake statistically robust random polling or surveying of the population, nor did it reweight the results of surveys it did conduct in order to reflect the distribution of opinion among the City's population groups.	Survey or poll a statistical sample of the community, and elicit the respondents' preferences and priorities regarding zoning and residential development. If response rates favor privileged groups, the survey results should be reweighted accordingly so that they more accurately reflect the distribution of opinion within the community. Offer this survey mechanism in the top five languages spoken in the City, in both online and hardcopy formats.



July 30, 2021

Long Beach City Council
Long Beach City Hall
411 W Ocean Blvd
Long Beach, CA 90802

Dear Councilmembers:

Thank you for the opportunity to comment on the process of updating the housing element of Long Beach's general plan. We are writing on behalf of **Abundant Housing LA** and **YIMBY Law** regarding Long Beach's 6th Cycle housing element update. **Abundant Housing LA** is a pro-housing, nonprofit advocacy organization working to help solve Southern California's housing crisis, and **YIMBY Law's** mission is to make housing in California more accessible and affordable through enforcement of state housing law. We support more housing at all levels of affordability and reforms to land use and zoning codes, which are needed in order to make housing more affordable, improve access to jobs and transit, promote greater environmental sustainability, and advance racial and economic equity.

Last autumn, [AHLA shared a letter with the City of Long Beach](#), providing guidance on how the City should fulfill both the letter and the spirit of housing element law. We have reviewed the City's draft Housing Element, **and have major concerns about the City of Long Beach's ability to meet its state-mandated RHNA targets**. The staff report and draft site inventory are inconsistent with HCD's instructions, and the requirement that housing element updates affirmatively further fair housing under Assembly Bill 686.

The following issues are of particular concern to us:

1. Protections and preservation

A. The housing element does not prioritize rezoning in transit-rich, job-rich, and high-resource neighborhoods, including single-family zoned areas. This is necessary to expand affordable housing opportunities while minimizing the impact on existing renters in multifamily-zoned areas.

AB 686 (2018) requires housing element updates to "affirmatively further fair housing", which is defined as "taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and fosters inclusive communities free from barriers that restrict access to opportunity based on protected characteristics." The City must address the issue of residential segregation by accommodating the lower-income RHNA targets in a way that conforms with AFFH requirements.

HCD requires that a housing element's site inventory and rezoning programs must not concentrate opportunities for affordable housing development in areas of segregation or high poverty. Rather, "sites must be identified throughout the community in a manner that affirmatively furthers fair housing."¹ HCD recommends that jurisdictions distribute affordable housing opportunities throughout the jurisdiction, and first identify development potential for affordable housing in its best-resourced neighborhoods², [as defined in the TCAC/HCD Opportunity Map](#). Additionally, HCD's [AFFH Guidance Memo](#) defines "high-opportunity" holistically, defining areas with strong access to public transportation and job centers as being locations where affordable housing should be promoted through the housing element.³ These policies will create more affordable housing in well-resourced areas, promoting inclusion of people of all backgrounds and income levels in formerly exclusionary neighborhoods.

This is important because in our region, housing policy and land use perpetuate racist exclusion. [Redlining and restrictive covenants](#), which restricted where Black, Latino/a/x, Indigenous people, and Asian Americans could live, were once common in Los Angeles County. Discrimination in housing takes other forms today: even after *de jure* segregation was banned, opponents of neighborhood change in prosperous areas [weaponized zoning policy](#) to make apartment construction illegal in much of Los Angeles County, especially in high-income areas. Restrictive zoning has perpetuated historic patterns of segregation and exclusion, and continues to push affordable housing opportunities away from wealthy, high-opportunity cities and neighborhoods.

Unfortunately, the City only proposed rezoning parcels that are already zoned for multifamily residential or mixed-use development, and has not proposed the legalization of apartments in R1-zoned areas, which today make up [over 75% of the City's residentially-zoned land](#). The City's proposed site inventory and rezoning program doesn't do enough to create housing in high-resource neighborhoods, and is unlikely to advance the goal of socioeconomic integration or greater housing affordability.

Single-family zoning is particularly prevalent in higher-income neighborhoods of eastern Long Beach, effectively blocking new housing opportunities, including housing that is affordable to lower- and moderate-income families, in these areas. Almost none of the site inventory parcels are located in CPAs G and J, eastern portions of the City where incomes and overall access to resources are high, and where apartments are typically banned. An overreliance on parcels where multifamily housing already exists may lead to greater demolition of rent-controlled housing units, risking the loss of affordable homes and displacement of lower-income communities of color.

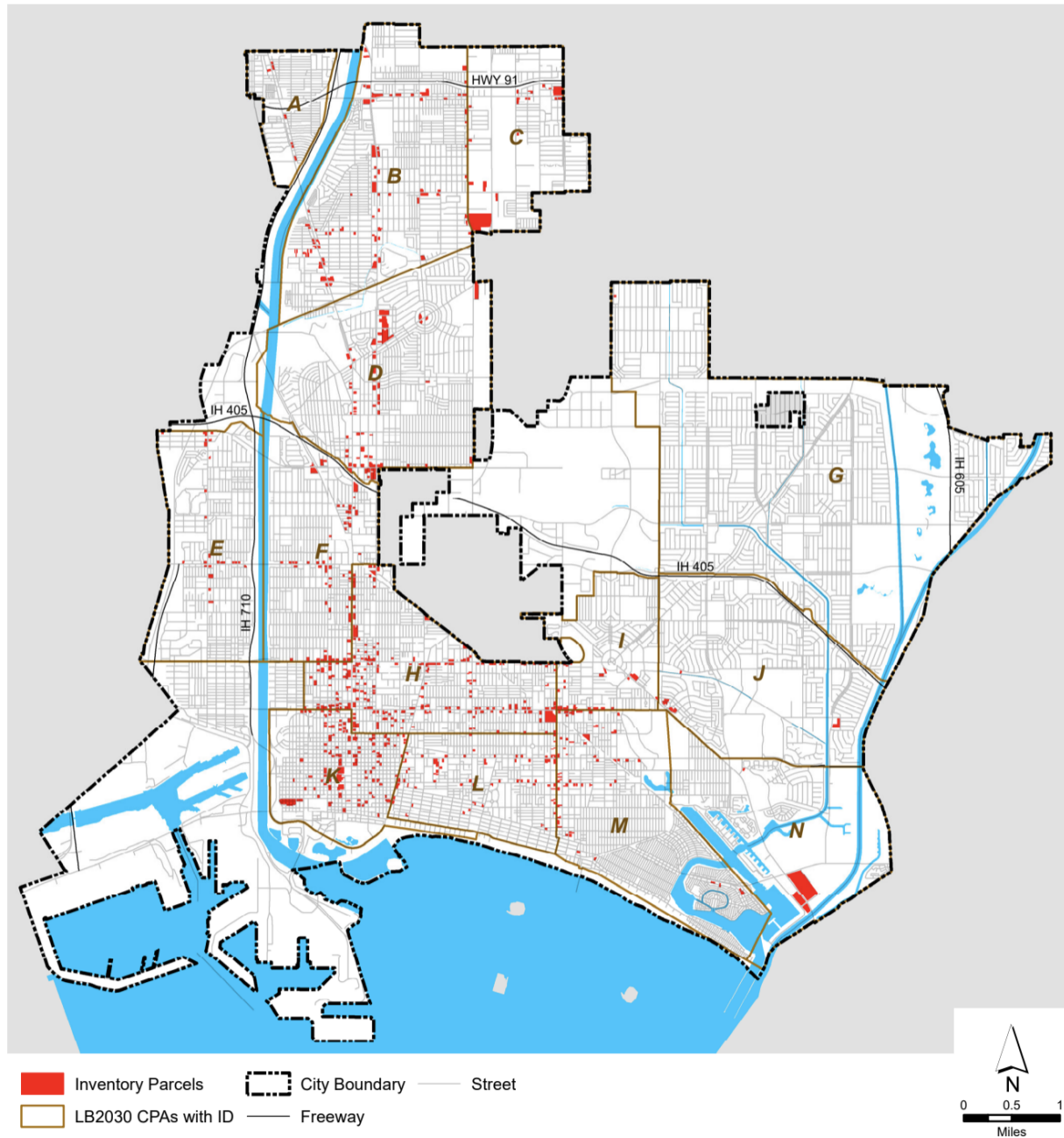
¹ HCD, Site Inventory Guidebook, pg. 9

² [HCD Site Inventory Guidebook, pg. 3](#)

³ HCD, AFFH Guidance Memo, pg. 48

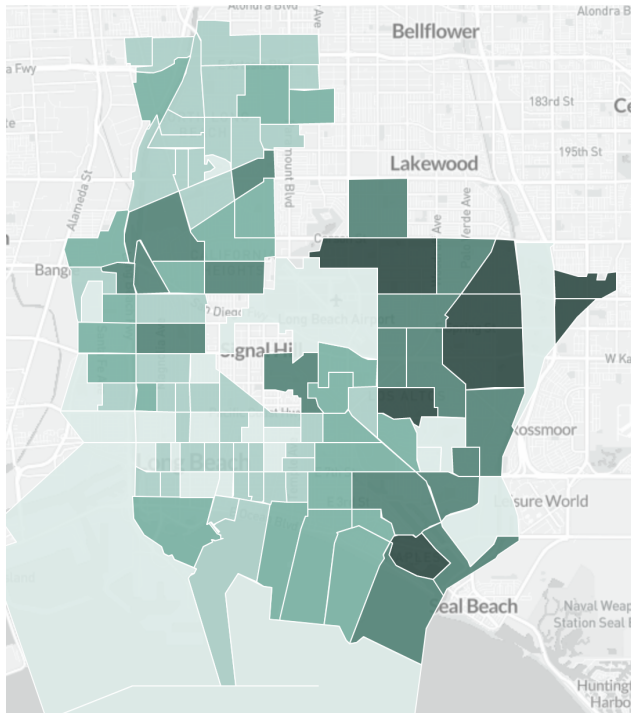
Map of Proposed Citywide Sites Inventory

Figure C-1: Sites Inventory - Citywide



Median Household Income by Census Tract, 2019

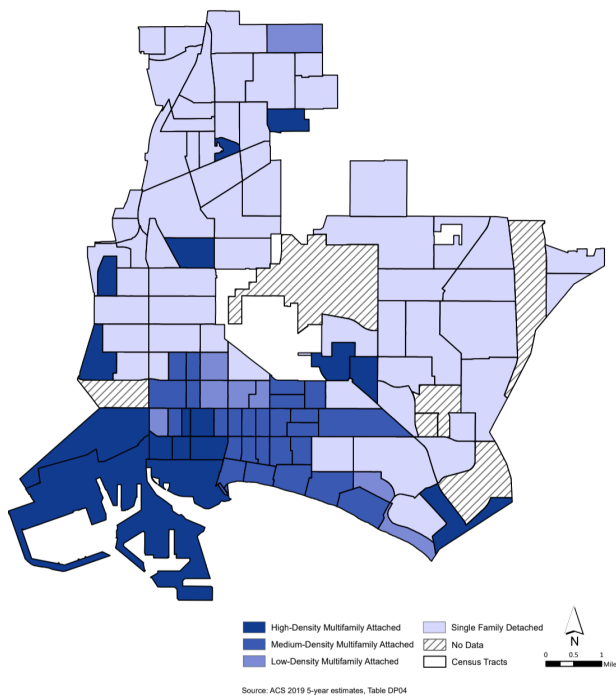
Light green areas have lower incomes; dark green areas have higher incomes



Predominant Housing Typology, 2019

Less dense areas in light blue; more dense areas in dark blue

Figure B-6: Predominant Housing Typology



While we applaud the City for proposing to “facilitate the development of medium density housing options...”⁴ (Policy 1.4) and “[amending] the Zoning Code to facilitate a variety of housing types in low density zones” by 2023 (Action 2.3.1), the City must provide specifics and commit to rapid implementation. **Ending exclusionary zoning is necessary for the housing element to advance socioeconomic integration and greater housing affordability**, especially given the heavy existing concentration of lower-income households in low-resource neighborhoods within Long Beach.

B. The housing element fails to institute local programs and funding sources for preservation of existing affordable housing.

Under state law, a housing element must affirmatively “[a]ssist in the development of adequate housing to meet the needs of extremely low, very low, low, and moderate-income households” (Gov’t Code 65583(c)(2)). Additionally, HCD’s AFFH Guidance Memo states that “The schedule of actions generally must (1) enhance the mobility of low-income and minority communities, (2) encourage the development of new affordable housing in high-opportunity areas, (3) protect existing residents from displacement, and (4) invest in disadvantaged places.”⁵

Housing elements should use available public resources, including real estate transfer taxes and publicly owned land, in order to fund and encourage the preservation of existing affordable housing, potentially through a local Tenant Opportunity to Purchase Act, community land trusts, land banks, or assisting mission-driven nonprofits with acquisition of housing whose affordability covenants are close to expiration. This is important to ensure that lower-income households are able to maintain access to quality affordable housing options.

While the draft housing element references new and ongoing programs that preserve or create affordable housing, such as an expansion of housing vouchers for lower-income households (Policy 3.2), financial assistance to nonprofits to purchase subsidized units whose affordability covenant is expiring (Policy 5.1), and funding for rehabilitation of older multifamily properties (Policy 5.3), the housing element anticipates that only 2,089 affordable homes will be preserved as a result of these programs⁶. This appears to assume that all 2,089 affordable units whose covenants will expire by 2031 will successfully be maintained as affordable, which is an unlikely outcome without firmer commitments to funding and action (the housing element’s proposal to “monitor” the status of these units and “seek to preserve” them is not sufficient). **This is far from adequate, and we urge the City to increase its commitment to funding and supporting affordable housing preservation and production.**

Recommendations - Protections and preservation:

- **Rezone parcels located near transit, job centers, schools, and parks in order to expand the supply of housing in high- and highest-resource areas, including R1 parcels where single-family detached homes are currently mandated by law.**

⁴ Draft Housing Element, p. 51

⁵ AFFH Guidance Memo, p. 54

⁶ Draft Housing Element, p. 84

- **Identify additional funding sources to support the preservation of existing affordable housing.**

2. Prioritization of affordable housing

A. The housing element does not adequately identify funding sources, public resources, and density bonus programs to maximize the likelihood that projects with below-market-rate units are built.

Under state law, a housing element must affirmatively “[a]ssist in the development of adequate housing to meet the needs of extremely low, very low, low, and moderate-income households” (Gov’t Code 65583(c)(2)). Additionally, HCD’s AFFH Guidance Memo makes clear that “The schedule of actions generally must (1) enhance the mobility of low-income and minority communities, (2) encourage the development of new affordable housing in high-opportunity areas, (3) protect existing residents from displacement, and (4) invest in disadvantaged places.”⁷

To accomplish these goals, housing elements should incorporate a program that creates affordable units, such as a density bonus program or base-bonus incentive system, that would apply to rezoned parcels. This will ensure that new housing development will directly create affordable units within mixed-income properties.

The City of Los Angeles’s Transit Oriented Communities program, which offers generous by-right density bonuses to developers who include affordable housing in new developments near mass transit, is worth emulating. Transit Oriented Communities has led to the [proposal of over 35,000 homes](#) (of which 20% are deed-restricted affordable units) in Los Angeles.

To Long Beach’s credit, the City is in the process of [adopting a high-quality local density bonus program](#), which would encourage mixed-income housing production near transit. However, the program only applies to parcels where the zoning code allows five or more homes, excluding many transit-adjacent neighborhoods where apartments are generally banned. This acts as a significant barrier to the production of mixed-income housing with subsidized units in many high-resource neighborhoods. **Rezoning R1 parcels to legalize small apartment buildings, especially in high-resource, high-demand neighborhoods, would expand usage of the density bonus program and lead to greater production of subsidized housing units for lower-income households.**

B. The housing element fails to streamline housing production.

Housing element law requires cities to provide an analysis of governmental constraints on housing development, as well as a program to mitigate or remove these governmental constraints. This is important because local governmental constraints are a major reason why affordable housing production in most California cities is low.

⁷ AFFH Guidance Memo, p. 54

Unfortunately, building housing in Long Beach is slow and difficult, due to the City's complex regulatory regime. By the City's own admission, "Existing development standards, including parking requirements, density limits, and height restrictions, constrain new development, especially when combined. The cumulative effect of existing standards is to significantly disincentivize housing production in most areas of Long Beach."⁸

Development timelines are long and unpredictable due to a discretionary approval process, with an average time of 9.5-14.5 months for multifamily project approval that requires Planning Commission approval.⁹ According to the draft housing element, "Most projects go through site plan review, and as reported in the Code Audit Report, there are concerns that the site plan review process, via the Site Plan Review Committee (SPRC), "is unnecessarily complicated, inconsistent, requires too many potentially duplicative review meetings, and exercises too much discretion regarding architecture and design."¹⁰

As a result of these constraints, the city's housing stock only grew 0.8% between 2015 and 2020¹¹ (putting it 42nd out of 89 jurisdictions in Los Angeles County). Since 1990, the population has increased by 10%, while the number of housing units has increased by only 4%.¹² Housing scarcity hurts Long Beach residents financially: the median rent is nearly \$1,900/month, and the City ranks fourth in the nation with the highest proportion of residents who are severely housing cost-burdened.¹³ Per Professor Chris Elmendorf of the University of California, Davis and his co-authors of [Superintending Local Constraints on Housing Development](#), the above data suggest that restrictive land use rules are making homebuilding difficult in Long Beach, leading to continued shortage and high costs.

While the housing element discusses governmental constraints in detail, including apartment bans on much of the City's residentially-zoned land, strict limits on building height and size, high construction costs, and a lack of local funding for affordable housing production, the report does not commit to a strong program to remove policy constraints that deter affordable housing production. While HE Policies 2.1-2.8 propose worthy ideas, no specific plan for implementation is included. These policies are described using words like "evaluate", "explore", and "support", instead of firm commitments to action and implementation.

Government Code Section 65583(c) requires housing elements to include programs with concrete action steps to facilitate housing production.¹⁴ This is hardly an impossible target; other cities in California have successfully implemented process reforms that streamline housing

⁸ Draft Housing Element, p. 43

⁹ Draft Housing Element, Appendix, D-31

¹⁰ Draft Housing Element, Appendix, D-31

¹¹ California Department of Finance, Report E-5, 2020

¹² Draft Housing Element, p. 19

¹³ Draft Housing Element, p. 21

¹⁴ "The element shall contain all of the following: A program [or programs] that sets forth a schedule of actions during the planning period, each with a timeline for implementation, that may recognize that certain programs are ongoing, such that there will be beneficial impacts of the programs within the planning period, that the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the housing element through the administration of land use and development controls, the provision of regulatory concessions and incentives..."

production. For example, the City of Los Angeles' Transit Oriented Communities program approves qualifying mixed-income and 100% affordable projects by-right, leading to an average approval time of 6 months for these projects. This would dramatically streamline the process of building new affordable housing. **We urge Long Beach to commit to major constraint removal policies in order to streamline affordable housing growth.**

Recommendations - Prioritization of Affordable Housing:

- **Include all parcels near transit, including those zoned R1, in Long Beach's enhanced density bonus program.**
- **Establish a fast by-right review process for all new multifamily and mixed-use buildings which meet the zoning law and the General Plan.** Sacramento's Ministerial Housing Ordinance is an excellent model to follow.
- **Pre-approve standard ADU, small-scale "missing middle" multifamily and small lot subdivision housing plans, allowing developers to receive a permit quickly if they use a pre-approved design.**
- **Eliminate on-site parking requirements, instead allowing property owners to decide how much on-site parking is necessary.**
- **Reduce restrictions on maximum height, floor-area ratio, unit size, and lot coverage.**

3. Site Capacity Assessment

A. The housing element fails to estimate and report the likelihood of development, both vacant and nonvacant.

Assembly Bill 1397 (2017) requires cities to provide an accurate assessment of realistic site capacity, including "the city's or county's past experience with converting existing uses to higher density residential development, the current demand for the existing use, and an analysis of existing leases or other contracts that would perpetuate the existing use or prevent redevelopment."

While the Housing Element Law does not expressly use the term "likelihood of development," [legal scholars from across the state have shown](#) that AB 1397 (2017), read together with other recent laws, requires cities to discount sites' capacity by the sites' probability of development during the planning period. The Legislature has also put HCD in the driver's seat for purposes of resolving any ambiguities about the definition or calculation of site capacity. Specifically, SB 6 (2019) authorizes HCD to promulgate "standards, forms, and definitions" for the site inventory and associated assessment of site capacity and constraints. An accurate assessment of the site inventory's housing capacity is necessary in order for the housing element to achieve sufficient housing production.

The site capacity estimate should account for the following **two factors**:

- What is the likelihood that the site will be developed during the planning period?

- If the site were to be developed during the planning period, how many net new units of housing are likely to be built on it?

These are the **likelihood of development**¹⁵ and **net new units if developed**¹⁶ factors, as required by HCD guidelines. The portion of the jurisdiction's RHNA target that a site will realistically accommodate during the planning period is:

(likelihood of development) x (net new units if developed) = realistic capacity.

The draft housing element provides reasonable estimates of the density of parcels *if redeveloped*, using data from recently completed projects. However, the analysis doesn't estimate a likelihood of development for the site inventory or rezoned parcels, effectively assuming that all parcels will be redeveloped during the 6th Cycle.

Data from the 5th cycle illustrates that this is a very unlikely outcome. At the outset of the 5th cycle, Long Beach claimed a theoretical capacity of 9,800 more housing units, or 40% more than the 5th cycle RHNA target. However, through 2019, Long Beach permitted only 3,180 housing units¹⁷, which equates to roughly 4,240 housing units by the end of the 5th cycle (assuming that the same annual permitting pace continues through 2021). This implies that in Long Beach, excess zoned capacity has a **43% likelihood of being developed** (4,240 actual units divided by 9,800 theoretical units), **suggesting that the City's plan to provide 28,212 units of theoretical capacity is not sufficient to yield 26,502 actual housing units by 2029.**

The City must *fairly* estimate the likelihood of development for all parcels on the suitable sites inventory. There are multiple acceptable approaches: the City of Los Angeles' draft housing element includes a sophisticated parcel-level regression model that uses recent development trend data to estimate parcels' likelihood of redevelopment during the 6th Cycle. The City of Sacramento's [draft site inventory](#) provided a high-quality, numerical analysis of the likelihood of their sites' development through a "tiered classification system to classify the non-vacant underutilized sites".¹⁸ Either of these approaches offers a good model for the City to build on.

B. The housing element does not report the proportion of sites from the previous housing element's inventory that were developed during the previous planning period, and HCD-recommended methodologies and data sources were not used in order to conduct a thorough "factors" analysis of sites' realistic development capacity.

Assembly Bill 1397 (2017) requires cities to provide an accurate assessment of realistic site capacity, including "the city's or county's past experience with converting existing uses to higher density residential development, the current demand for the existing use, and an analysis of

¹⁵ [HCD Site Inventory Guidebook, pg. 20](#)

¹⁶ [HCD Site Inventory Guidebook, pg. 21](#)

¹⁷ [HCD Annual Progress Report dataset, 2020](#)

¹⁸ [Public Review Draft, City of Sacramento Housing Element 2021-2029, p. H-2-15](#)

existing leases or other contracts that would perpetuate the existing use or prevent redevelopment.”

To assess the likelihood of development, a city can calculate a citywide discount factor, using the proportion of 5th Cycle sites subsequently developed as a starting point. One approach could be to create a citywide estimate of a site’s redevelopment likelihood during the 6th Cycle, and apply that discount factor to all housing element sites. The Site Inventory Guidebook states, “if no information about the rate of development of similar parcels is available, report the proportion of parcels in the previous housing element’s site inventory that were developed during the previous planning period”.¹⁹

Alternatively, cities could estimate a citywide discount factor by comparing citywide unbuilt capacity at the beginning of the 5th Cycle to the number of homes permitted citywide during the 5th Cycle. Cities could also make reasonable neighborhood-specific estimates of redevelopment likelihood, based on recent development trends and market conditions.

The proportion of 5th Cycle sites that were later developed is an important piece of evidence validating the 6th Cycle housing element’s assumptions about redevelopment likelihood, which is why cities must report it. **Unfortunately, the City does not report the proportion of 5th Cycle sites subsequently developed, nor does it undertake a quality “factors” analysis using any of the above suggested methodologies.**

C. The housing element assigns more than 50% of the lower-income RHNA target to nonvacant sites, but fails to use statistical methods (e.g. surveying a random sample of owners of nonvacant sites) to determine that the sites’ existing uses are likely to be discontinued during the planning period.

Assembly Bill 1397 (2017) requires cities to provide an accurate assessment of realistic site capacity, including “the city’s or county’s past experience with converting existing uses to higher density residential development, the current demand for the existing use, and an analysis of existing leases or other contracts that would perpetuate the existing use or prevent redevelopment.”

When cities allocate over 50% of their lower-income RHNA targets to nonvacant sites, they must demonstrate through *substantial evidence* that the current use of these sites is likely to be discontinued during the planning period. This is necessary in order to ensure that enough parcels for affordable housing production are identified, and that the lower-income RHNA targets are ultimately achieved.

HCD requires housing elements to describe the methodology used to estimate sites’ realistic development capacity²⁰, while also giving cities leeway on how to arrive at these estimates²¹. One option we recommend is the Survey Method; the city would survey the owners of each

¹⁹ HCD Site Inventory Guidebook, pg. 21

²⁰ HCD, Site Inventory Guidebook, pg. 19

²¹ HCD, Site Inventory Guidebook, pg. 20-21

lower-income sample site and ask whether they intend to discontinue the site's current use and sell or redevelop the site during the next eight years. Another option is the Historical Redevelopment Rate Method; the city would calculate the share of owners in each category who filed permits for demolition, change of use, or redevelopment during the previous planning period.

While the draft housing element describes a reasonable methodology for removing sites with a low likelihood of development from the site inventory and rezoning plan²², this is not the same as undertaking a robust quantitative analysis to demonstrate that sites are likely to have their existing uses discontinued during the 6th Cycle. The City's draft housing element does not utilize either the Survey Method or the Historical Redevelopment Rate Method to provide evidence that redevelopment has a high likelihood of occurring on the parcels in the site inventory and rezoning plan. **This appears to violate AB 1397.**

D. A buffer of at least 15-30% extra capacity is not included in the housing element site inventory. This capacity buffer is especially necessary in order to accommodate the lower-income RHNA target.

The No Net Loss law established by SB 166 (2017) requires adequate sites to be maintained at all times throughout the planning period to accommodate the remaining RHNA target **by each income category**.²³ If a jurisdiction approves a development on a parcel listed in the site inventory that will have fewer units (either in total or at a given income level) than the number of units (either in total or at a given income level) anticipated in the site inventory, then the jurisdiction must identify and make available enough sites to accommodate the remaining unmet RHNA target for each income category.²⁴

If additional sites with adequate zoned capacity don't exist, then the jurisdiction must rezone enough sites to accommodate the remaining unmet RHNA target within 180 days. If the jurisdiction fails to accomplish this rezoning in the required period, then the consequences will include decertification of the housing element and potential state legal action. HCD recommends that "the jurisdiction create a buffer in the housing element inventory of at least 15-30% more capacity than required, especially for capacity to accommodate the lower income RHNA."²⁵ **This is important because it ensures that adequate affordable housing capacity exists in the housing element through the 6th Cycle.**

The City's draft housing element claims to provide capacity for 28,212 housing units, 6% higher than the City's RHNA goal of 26,502 homes.²⁶ **This does not fulfill HCD's recommendation to maintain a 15-30% capacity buffer at each income level,** giving the City little margin if a site intended for affordable housing is developed with market-rate housing. Additionally, the City did not break out "affordable" (lower-income) and "market-rate" (moderate-income and above

²² Draft Housing Element, Appendix, C-3 and C-4

²³ HCD [No Net Loss Law Memo](#), pg. 1

²⁴ [HCD Site Inventory Guidebook, pg. 22](#)

²⁵ [HCD Site Inventory Guidebook, pg. 22](#)

²⁶ Draft Housing Element, p. 31-33

moderate-income) into their component categories, making it impossible to verify that adequate capacity buffers were included **for each RHNA income category**.

Income Category	RHNA Target	Claimed PlaceTypes Capacity	Buffer
Very Low Income	7,141	13,701	22%
Low Income	4,047		
Moderate Income	4,158	14,511	<1%
Above Moderate Income	11,156		
Total	26,502	28,212	6%

The City should ensure that enough housing capacity is created to provide 15-30% capacity buffers at each level of income, to avoid violating the No Net Loss requirement. Otherwise, the City risks falling afoul of the No Net Loss requirement, making it vulnerable to mid-cycle rezoning, a costly process in terms of time, money, and political will.

E. The housing element does not provide a quantitative estimate of the likelihood that in-pipeline projects will be completed, based on historical data, and does not adjust the number of in-pipeline units counted towards the 6th cycle RHNA target accordingly.

HCD allows cities to count permitted or entitled units towards its 6th Cycle RHNA goals, on the grounds that some of these projects will be built during the 6th Cycle. However, the city must **realistically** estimate how many of these units will ultimately be built during the 6th Cycle, based on recent historical data. This is necessary because not every pending project gets approved, and not every approved project gets built. Assuming that all permitted or entitled projects will ultimately be built is a faulty assumption, and would make it likelier that the city does not achieve its 6th Cycle RHNA goals.

Unfortunately, the City has made this faulty assumption, counting towards the 6th Cycle RHNA target 88 units in projects that have been approved but not yet permitted, and 460 units that have been proposed but not yet approved.²⁷ The City has therefore assumed that all 548 units will ultimately be built, without adjusting for the likelihood that some will not.

Long Beach should instead emulate the approach taken by the City of Los Angeles. Their [Initial Study](#) counted active planning entitlements, approved planning entitlements with no building permit, and permitted projects that have not yet been completed towards its 6th Cycle RHNA goals, but discounted each category based on the share of proposed units expected to be built, using the City's historical data.

²⁷ Draft Housing Element, p. 33

The City must incorporate a similar estimate into its Inventory Analysis. Using data from recent projects, the City of Los Angeles estimated that 37% of projects with pending entitlements, 45% of projects with approved entitlements, and 79% of permitted projects, are ultimately completed.²⁸ Long Beach should discount the number of pending and approved entitlements counted toward its RHNA target by *at least* the same factors:

460 units pending entitlement x 37% chance of completion = 170 units

88 units approved x 45% chance of completion = 40 units

Thus, the City might reasonably claim 240 units from pending and entitled projects towards the RHNA target. Alternatively, Planning could use local data from recent projects to estimate these percentages. **But the City should certainly not count 548 units towards its 6th cycle RHNA goal.**

F. The housing element does not commit to a mid-cycle review to verify the housing element's assumptions about development probabilities.

No city can perfectly forecast future redevelopment trends, and it is entirely possible that despite best efforts, a city's 6th Cycle housing production falls short of the RHNA target due to less redevelopment than expected.

For this reason, **the City should commit to a mid-cycle review of all housing production relative to the RHNA target**, perhaps by comparing the proportion of sites that were developed by midcycle to the housing element's assumed likelihood of development at the start of the cycle. The housing element should provide for by-right density bonuses on inventory sites and/or implement a fallback rezoning plan, which would automatically take effect mid-cycle in the event of a production shortfall. This is necessary in order to ensure that the City remains on track to achieve its RHNA target by the end of the 6th Cycle.

Recommendations - Site Capacity Assessment:

- **Provide a quantitative estimate of parcels' development probabilities, and incorporate this factor into the estimate of sites' realistic capacity.**
- **Report the proportion of sites in the previous housing element's inventory that were developed during the planning period.**
- **Share letters from owners of the site inventory parcels, indicating their interest in selling or redeveloping these properties during the 6th Cycle.**
- **Remove parcels from the site inventory where redevelopment is unlikely to occur during the 6th Cycle.**
- **Commit to a mid-cycle review to verify Planning's assumptions about development probabilities.** If it turns out that sites within a tier, or category, were developed at a lower-than-expected rate during the first half of the cycle, then the city should rezone for additional capacity or make other appropriate adjustments for the second half of the planning period.

²⁸ [Initial Study, City of Los Angeles, pg. 21](#)

- If the City lacks enough suitable sites to achieve the RHNA target, rezone additional parcels where redevelopment is likely.
- Provide a quantitative estimate of the likelihood that in-pipeline projects will be completed, based on historical data, and adjust the number of in-pipeline units counted towards the 6th cycle RHNA target accordingly.
- Identify sufficient sites to provide a 15-30% No Net Loss buffer, especially for the VLI, LI, and MI categories, and rezone if there aren't enough suitable sites to provide this buffer.

4. Affirmatively Furthering Fair Housing

A. The housing element fails to meaningfully increase the concentration of lower-income households in areas of the city where the existing concentration of lower-income households is low.

AB 686 (2018) requires housing element updates to “affirmatively further fair housing”, which is defined as “taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and fosters inclusive communities free from barriers that restrict access to opportunity based on protected characteristics.” The City must address the issue of residential segregation by accommodating the lower-income RHNA targets in a way that conforms with AFFH requirements.

HCD’s [AFFH Guidance Memo](#) establishes a number of important principles for promoting fair housing, including that the distribution of housing-element inventory sites with lower or moderate income capacity must not be skewed toward lower-income neighborhoods. This is necessary in order to reverse the concentration of lower-income households and communities of color in high-poverty neighborhoods that lack economic and educational opportunities.

The guidance memo requires cities to calculate the percentage of households at lower, moderate, and above-moderate income levels in each census tract or “block group” in the city, and then do the same for the lower, moderate, and above-moderate-income RHNA units assigned to the tract or block group. The share of lower-income RHNA units assigned to tracts (or block groups) with a higher-than-average share of lower-income households should be less than the current share of lower-income households in those tracts.²⁹

A history of “long-standing discriminatory practices in education, housing, employment, local political representation, and access to resources” in Long Beach has contributed to the racial and economic segregation residents experience today, with the City having “high to very high levels of segregation” according to the Racial/Ethnic Dissimilarity Index, a common metric for assessing segregation levels.³⁰ Higher-density areas where the majority population is lower-income persons of color are heavily concentrated in Central, West, and North Long Beach, while neighborhoods in East Long Beach are predominantly white, single-family zoned,

²⁹ AFFH Guidance Memo, p. 47

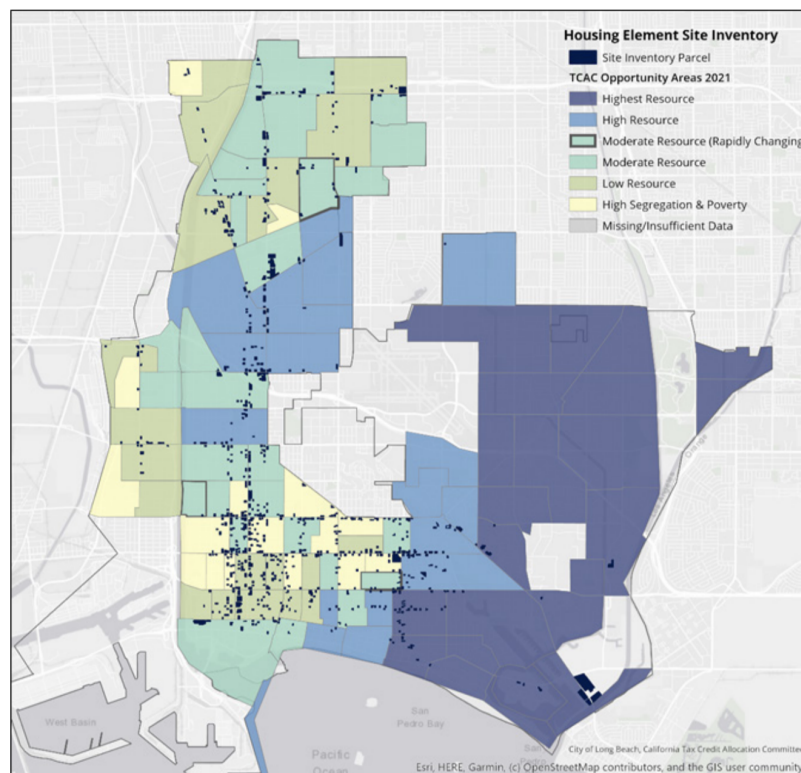
³⁰ Draft Housing Element Appendix, p. B-53

and higher-resource, with superior access to quality education, employment, and a clean environment. In order to comply with state law and affirmatively further fair housing, Long Beach must rezone higher-resource neighborhoods in East Long Beach to create more affordable opportunities. **The housing element does not do this.**

The proposed site inventory does not reduce the concentration of lower-income households in lower-income neighborhoods. 38% of site inventory parcels are located in census tracts with TCAC definitions of “Low Resource” or “High Segregation & Poverty”, even though these areas make up only 18% of the City’s land area. Meanwhile, the City’s “Highest Resource” and “High Resource” census tracts accommodate just 21% of site inventory parcels, despite making up 41% of the City’s land area.³¹

Proposed Citywide Sites Inventory and TCAC Census Tract Classification

Figure F-21: Sites Inventory and TCAC Opportunity Areas



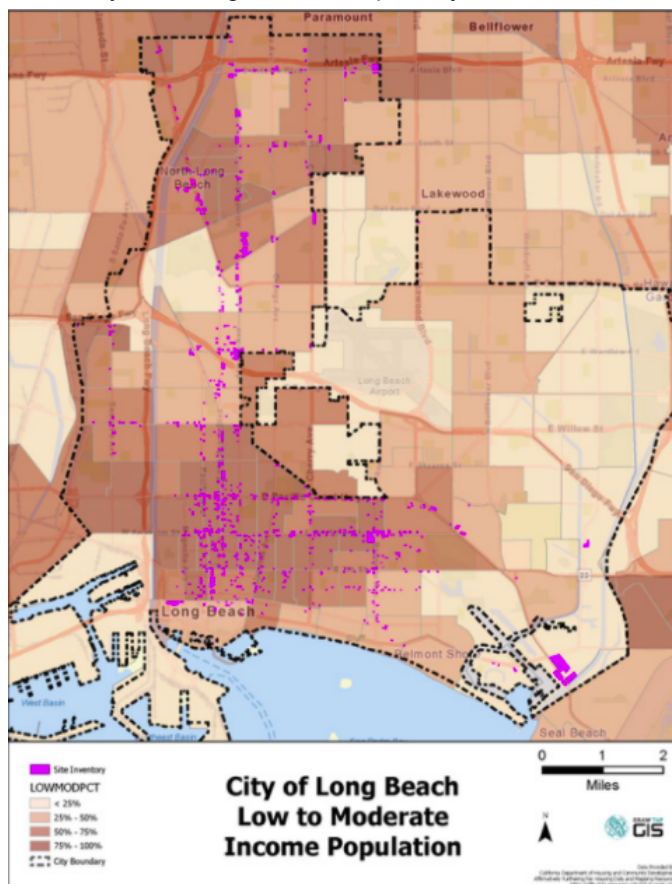
Additionally, 64% of lower-income RHNA units would be accommodated in census tracts where racial/ethnic minorities comprise more than 80% of the population. Most affordable units are proposed in Central and North Long Beach, which are areas where significant shares of the population have low to moderate incomes, with almost no affordable units proposed in higher-income areas in East Long Beach. Although Policy 6.2 and Policy 6.7 in the draft housing element state that the City will work to avoid overconcentration of lower-income units in low-resource areas and increase production of affordable housing in high-resource areas, it fails to outline specific strategies and programs to fulfill this requirement.

³¹ Draft Housing Element, Appendix, p. F-40

The final housing element must make a stronger effort to affirmatively further fair housing and rezone sites in high resource areas of East Long Beach to increase affordable and lower income units in these areas, as well as commit to detailed programs that help reduce the overconcentration of lower income units in West Long Beach.

Proposed Citywide Sites Inventory and Census Tracts by LMI Share of Population

Areas in yellow/beige have low poverty; areas in brown have high poverty



B. The housing element fails to meaningfully reduce the concentration of lower-income households in areas with low environmental quality and significant exposure to noise/pollution.

HCD's AFFH guidance memo also requires cities to consider locations' environmental quality when developing a housing element's site inventory and rezoning program. "The analysis should not only address an overall score value of access to opportunity, but must also individually address access to...environmentally healthy neighborhoods and other important opportunities."³²

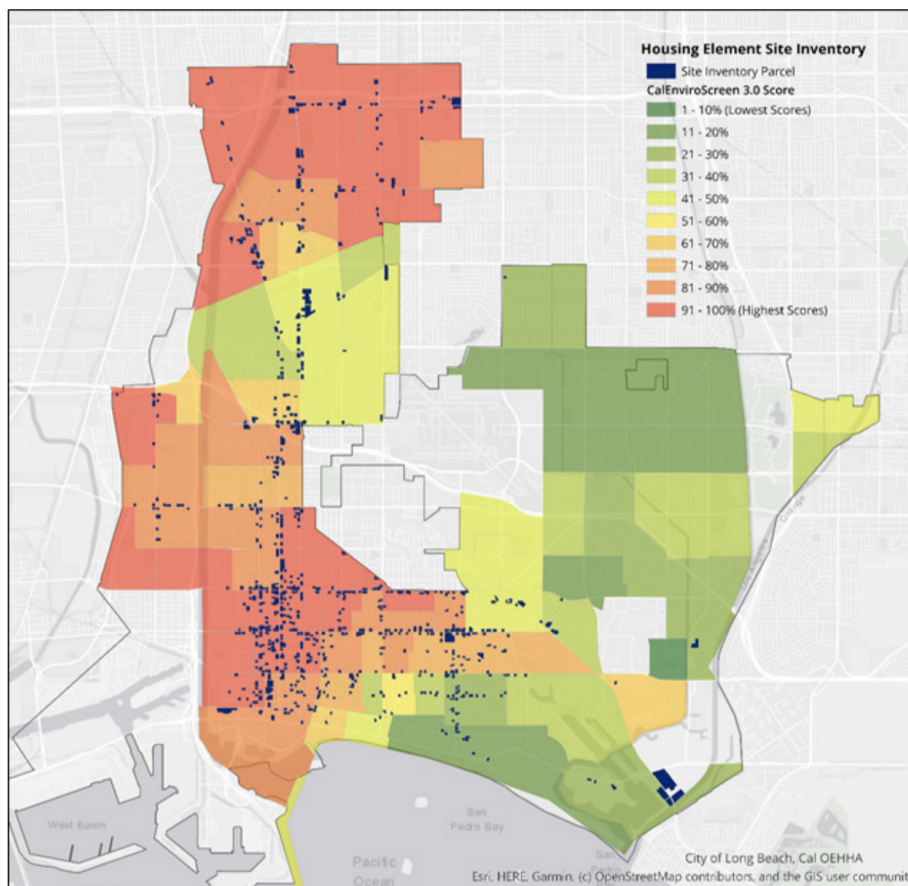
This is important because access to safe and affordable housing has a direct impact on public health. The very communities facing the highest rent burden are often the same frontline

³² AFFH Guidance Memo, p. 48

communities who bear the brunt of the negative impacts of pollution, noise, and low overall environmental quality, worsening health disparities by income and race. Cities must therefore promote affordable housing opportunities in locations with high environmental quality.

While the draft housing element acknowledges that a high share of lower-income households live in neighborhoods with poor environmental quality, the proposed site inventory would not reduce the concentration of lower-income households in locations with lower environmental quality or significant exposure to pollution and noise. Although 39% of the City's land has a CalEnviroScreen score of 6 or above (i.e. lower environmental quality), 75% of the site inventory parcels are located in these areas of lower environmental quality. **The City must reduce the concentration of lower-income households in areas with low environmental quality by rezoning additional parcels where environmental quality is relatively high.**

Figure F-23: Sites Inventory and CalEnviroScreen Score



C. The housing element fails to meaningfully reduce the concentration of lower-income households and communities of color in R/ECAPs (Racially or Ethnically Concentrated Areas of Poverty).

HCD requires that a housing element's site inventory and rezoning programs must not concentrate opportunities for affordable housing development in areas of segregation or high poverty. Rather, "sites must be identified throughout the community in a manner that affirmatively furthers fair housing."³³ Additionally, the site inventory must not only include an analysis of site capacity to accommodate the RHNA target for each income level, "but also whether the identified sites serve the purpose of replacing segregated living patterns with truly integrated and balanced living patterns, transforming racially and ethnically concentrated areas of poverty into areas of opportunity".³⁴ This is necessary to ensure that patterns of racial and income segregation are reversed, and that people of all backgrounds and walks of life are able to access economic and educational opportunities.

Unfortunately, the City has not provided data indicating that its proposed site inventory would reduce the concentration of lower-income households in R/ECAPs. In fact, the proposed site inventory appears to **increase** the concentration of lower-income households in R/ECAPs. Although 9% of the City's land is located in a R/ECAP, 15% of the site inventory parcels are located in R/ECAPs. This statistic may understate the true extent to which the proposed site inventory would increase the concentration of lower-income households in R/ECAPs, since it doesn't indicate what percentage of new lower-income **housing units** would be created in R/ECAPs.

The draft housing element points out that this distribution reflects the fact that many transit-adjacent parcels are located in R/ECAPs, and that the City seeks to encourage denser housing development near transit. Nevertheless, the City could promote transit-oriented development and simultaneously reduce the overall concentration of lower-income households in R/ECAPs **by also rezoning additional parcels outside of R/ECAPs.**

D. The housing element does not adequately prioritize high-opportunity census tracts and well-resourced areas (e.g. near transit, jobs, schools, parks, etc.) when selecting sites for lower-income housing opportunities.

High-income neighborhoods with good access to jobs, transit, schools, and parks tend to have very high housing costs. Racially motivated zoning [created many of these neighborhoods](#), and today's single-family zoning reinforces historical patterns of racial and income segregation, disproportionately harming BIPOC communities.

AB 686 requires jurisdictions to analyze fair housing issues and to affirmatively further fair housing (AFFH) through their housing element. It's no longer permissible to allow relatively affordable housing to be built only in areas of socioeconomic disadvantage. HCD recommends that jurisdictions distribute affordable housing opportunities throughout the jurisdiction, and first identify development potential for affordable housing in its best-resourced neighborhoods³⁵, [as defined in the TCAC/HCD Opportunity Map](#). Additionally, HCD's AFFH Guidance Memo defines "high-opportunity" holistically, defining areas with strong access to education, transportation,

³³ HCD, Site Inventory Guidebook, pg. 9

³⁴ HCD, Summary of AB 686, pg. 6

³⁵ [HCD Site Inventory Guidebook, pg. 3](#)

economic prosperity, safety, parks and recreation areas, and environmental quality as being locations where affordable housing should be promoted through the housing element.³⁶

As described in Sections 1A, 2A, and 4A, the draft housing element does not take meaningful steps towards legalizing affordable housing in exclusionary neighborhoods where apartments are today banned, despite the heavy prevalence of R1 zoning in the City's best-resourced, highest-income neighborhoods. By failing to reform exclusionary zoning and encourage strong housing growth citywide, the draft housing element will continue to steer housing opportunities for lower-income households away from high-income neighborhoods where apartments are currently banned, and will fail to achieve the lower-income RHNA target. **It is very hard to see how such a policy affirmatively furthers fair housing.**

E. The jurisdiction did not adequately solicit public feedback and commentary on the housing element in a way that accurately reflects the jurisdiction's socioeconomic makeup.

Under state law, cities are required to "make a diligent effort to achieve public participation of all economic segments of the community in the development of the housing element, and the program shall describe this effort." (Gov't Code 65583(c)(7)). This is necessary in order to ensure that all segments of the community, including those who are frequently excluded from decision-making, have a seat at the table in determining the future of their city. Housing element outreach and public feedback should not cater to the predominantly [wealthy, white, and homeownership populations that customarily dominate land-use policy forums](#).

To overcome bias in patterns of public participation, jurisdictions should sample a random cross-section of the community (e.g., using postal service addresses), and elicit the respondents' preferences and priorities regarding zoning and residential development. If response rates favor privileged groups, the survey results should be reweighted accordingly so that they more accurately reflect the distribution of opinion within the community. Additionally, the City should consider giving increased weight to members of groups disproportionately affected by high housing costs and housing discrimination.

Additionally, when the jurisdiction takes public comment on its draft housing element, it should determine whether public comments accurately reflect the diversity of the community. If the pattern of participation proves to be demographically skewed, the jurisdiction should not include these comments as a valid representation of community input.

While the City undertook a public comment outreach effort throughout the housing element update process that included focus groups, surveys, and engagement with a wide range of community organizations, housing advocates, and other nonprofits, these efforts did not go far enough. The City did not undertake statistically robust random polling or surveying of the population, nor did it reweight the results of surveys it did conduct in order to reflect the distribution of opinion among the City's population groups.

³⁶ HCD, AFFH Guidance Memo, pg. 48

Recommendations - Affirmatively Furthering Fair Housing:

- Upzone parcels located near transit, job centers, schools, and parks in order to expand the supply of housing in the City’s highest-opportunity areas. This should include R1 zoned parcels where single-family detached homes are currently mandated by law.
- Ensure that housing opportunities for lower-income households are not concentrated in neighborhoods with high concentrations of low and moderate income households, or in neighborhoods with significant exposure to noise or air pollution, or in R/ECAPs.
- Identify new funding sources and public resources to encourage the production of affordable housing, such as reform of the City’s real estate transfer tax, an introduction of congestion pricing.
- Exempt parcels containing rent-restricted and de facto affordable housing units from rezoning.
- Ensure that “no net loss” provisions apply to parcels in the site inventory and rezoning program with a monitoring and implementation program.
- Prioritize the production of affordable housing on publicly-owned land.
- Create a 100% affordable housing zoning overlay that encompasses high-opportunity neighborhoods, including R1 zoned parcels.

5. Forecasts of ADU Development

A. The housing element appears to triple-count past ADU production in order to support an overly optimistic forecast of future ADU production. The City did not use an HCD-recommended safe harbor methodology for forecasting future ADU production.

Local jurisdictions frequently use overly optimistic estimates of ADU capacity and future production to avoid necessary housing reform and rezoning. This is why HCD has established two safe harbors for forecasting ADU production during the 6th Cycle³⁷. One option (“Option #1”) is to project forward the local trend in ADU construction since January 2018. The other, for use when no other data is available (“Option #2”), assumes ADU production at five times the local rate of production prior to 2018.

HCD’s guidelines ensure that ADU development estimates reflect actual on-the-ground conditions so that they are realistic. This will maximize the likelihood that ADUs will be built to the level forecasted in the housing element update.

According to HCD, Long Beach issued permits for 59 ADUs in 2018, 151 ADUs in 2019, and 268 ADUs in 2020.³⁸ Under a correct calculation of HCD’s “Option #1”, Long Beach would take the average of the ADU permitting trend between 2018 and 2020, and forecast that 159 ADUs

³⁷ [HCD Site Inventory Guidebook, pg. 31](#)

³⁸ [Housing Element Implementation and APR Data Dashboard, HCD, 2020](#)

will be permitted per year during the 6th Cycle. **This would allow for a total 6th cycle forecast of 1,275 ADUs.**

However, the City counts 2,800 ADUs, or 350 ADUs per year, towards the City's RHNA target. This is because the draft housing element claims higher annual ADU production numbers: 144 ADUs in 2018, 219 ADUs in 2019, and 485 ADUs in 2020, for an annual average of 283 units. We suspect that these "production" numbers lump together all ADUs permitted, in progress, and completed during these years. **Thus, an ADU permitted in 2017, under construction in 2018, and completed in 2019 would be triple-counted. If this is the case, then these numbers are calculated in error and must be revised to count annual permits only.**

Additionally, the City assumes that 350 ADUs will be permitted per year throughout the 6th Cycle, under the logic that recent state reforms that encourage ADU production and a resultant upward trend in ADU production will lead to a permanent annual increase in the number of ADUs permitted going forward.³⁹ But these policy changes are largely baked into the 2018-20 permitting trend, which the City should simply carry forward, as HCD recommends.

The housing element significantly overstates the likely production of ADUs during the 6th cycle, possibly as a tactic to avoid rezoning. **The City must correct its calculation of the ADU safe harbor, and simply apply the average of annual ADU permits issued between 2018 and 2020, per HCD's guidelines.**

B. The housing element does not provide for mid-cycle adjustments if inventory sites are developed at lower rates, or lesser densities, than the housing element anticipated and if ADU production falls short of projections. Mid-cycle adjustments should automatically implement a by-right density bonus on inventory sites, starting mid-cycle, and be large enough to make up for an ADU shortfall.

No city can perfectly forecast future redevelopment trends, and it is entirely possible that despite best efforts, a city's 6th Cycle housing production falls short of the RHNA target due to less redevelopment than expected.

Anticipating this issue for ADUs, HCD's Site Inventory Guidebook states that cities' housing elements "should also include a monitoring program that a) tracks ADU and JADU creation and affordability levels, and b) commits to a review at the planning cycle midpoint to evaluate if production estimates are being achieved."⁴⁰ "Depending on the finding of that review, amendments to the housing element may be necessary, including rezoning pursuant to Government Code 65583.2 (h) and (i)."⁴¹ This wisely provides a fail-safe in the event that ADU development falls short of forecasted production by the midpoint of the planning cycle.

A housing element's provision for mid-cycle adjustment should be feasible to implement at the midpoint of the cycle. Rezoning is generally a multiyear process, often involving extensive

³⁹ Draft Housing Element Appendix, C-1 to C-2

⁴⁰ [HCD Site Inventory Guidebook, pg. 31](#)

⁴¹ [HCD Site Inventory Guidebook, pg. 31](#)

CEQA review and litigation. Rezoning initiated at the midpoint may result in little (if any) new zoned capacity during the planning period. For this reason, we recommend that jurisdictions proactively plan for the possibility of an ADU shortfall by providing in the housing element for by-right density bonuses on inventory sites, which would become automatically available mid-cycle if the ADU target is not met.

Unfortunately, while the draft housing element's Action 1.7.3, "Monitor ADU development trends to determine if increased efforts are necessary to promote ADU development" references a willingness to "revise strategy in 2025" (i.e. mid-cycle) if ADU production falls short of forecasted levels, it does not include a firm commitment to a mid-cycle adjustment.⁴² We recommend that the final housing element be amended to include by-right density bonuses on inventory sites that become automatically available at mid-cycle in the event of an ADU shortfall; this is necessary in order to ensure that the City remains on track to achieve its RHNA target by the end of the 6th Cycle.

C. The housing element does not assess the affordability of forecasted ADUs using city-specific data; it instead uses a regional average.

HCD requires cities to estimate the affordability of forecasted ADUs⁴³, and provides the following examples for methodologies:

- Surveying existing ADUs and JADUs for their current market rents, considering factors like square footage, number of bedrooms, amenities, age of the structure and general location, including proximity to public transportation.
- Examining current market rents for comparable rental properties to determine an average price per square foot in the community. This price can be applied to anticipated sizes of these units to estimate the anticipated affordability of ADUs and JADUs.
- Available regional studies and methodology on ADU affordability can also be a resource to determine the likely affordability mix for ADUs and JADUs.

However, many local jurisdictions' housing elements contain overly optimistic forecasts of production of ADUs that are rented at below-market rates; some cities do this to claim that it can meet its VLI and LI RHNA goals without additional rezoning. As with forecasts of total ADU production, forecasts of affordable ADU production must reflect actual on-the-ground conditions to ensure that they are realistic. This will help ensure that the housing element update accommodates affordable housing production commensurate with the VLI and LI RHNA targets.

However, the draft housing element assumes that 68% of new ADUs in Long Beach will be affordable to extremely low-income, very low-income, and low-income households.⁴⁴ This assumption is based on SCAG's [ADU Affordability Analysis](#), which makes the following estimates of ADU affordability in the "Los Angeles II" region (a disparate group of 20 Los Angeles County jurisdictions, including unincorporated areas):

- 15.0% affordable to ELI households

⁴² Draft Housing Element, p. 61

⁴³ [HCD Site Inventory Guidebook, pg. 30](#)

⁴⁴ Draft Housing Element, Appendix, C-2

- 8.5% affordable to VLI households
- 44.6% affordable to LI households
- 2.1% affordable to MI households
- 29.8% affordable to AMI households

The City should not rely on SCAG's analysis because it is inconsistent with local data; simply applying the "Los Angeles II" affordability assumptions to Long Beach overestimates the number of new ADUs that will be affordable to lower-income households, and will set the city up for failure in meeting its lower-income RHNA obligations.

Instead, the City should use current market rents in Long Beach to assess the likely affordability of new ADUs, and should supplement this analysis with a survey of the owners of recently-constructed ADUs (to determine average rent, as well as the number of ADUs that are rented for free or at a low cost to family members). This would provide a more accurate forecast of the number of ADUs that will be built at each level of income during the 6th Cycle.

Recommendations - Forecasts of ADU Development:

- **The City must use HCD's Option 1 safe harbor, and project that 1,275 ADUs will be permitted during the 6th Cycle.** High-quality data is available on the local trend in ADU construction since January 2018, so this is the appropriate safe harbor to use. If the City believes that higher ADU production forecasts are warranted, it must provide well-grounded estimates, based on the pace of ADU production in neighboring jurisdictions, and must explain what programs or policy efforts it will adopt that would lead to higher ADU production than it currently observes.
- **Follow HCD's recommendation to track ADU and JADU creation and affordability levels, and commit to a review at the planning cycle midpoint to evaluate if production estimates are being achieved.**⁴⁵ The housing element should commit to mid-cycle rezoning if ADU production is lower than forecasted, and its midpoint review should be linked with immediate and automatic programs to increase housing production in the second half of the RHNA cycle. Our recommended approach is to incorporate by-right density bonuses on inventory sites, which would automatically take effect mid-cycle if the ADU target is not met. The density bonus should be large enough, and apply to enough parcels, to fully make up for any ADU production shortfall.
- **The City must follow HCD's guidance, which clearly demonstrates a preference for assessing the affordability of forecasted ADUs using city-specific data, rather than regional data.**
- **Follow HCD's recommendation to track ADU and JADU creation and affordability levels, and commit to a review at the planning cycle midpoint to evaluate if affordability estimates are being achieved.**⁴⁶

⁴⁵ [HCD Site Inventory Guidebook, pg. 31](#)

⁴⁶ [HCD Site Inventory Guidebook, pg. 31](#)

The City of Long Beach has a legal obligation to sufficiently plan to meet current and future residents' housing needs, in a way that guarantees access to opportunity for Californians of all racial and ethnic backgrounds. The issues that we've highlighted above suggest that Long Beach is not on a path to fulfilling this legal obligation. We urge you to change course and actively embrace this opportunity to provide a variety of attainable housing options for the residents and workers of Long Beach.

Finally, state law imposes penalties on jurisdictions that fail to adopt a compliant 6th Cycle housing element update by October 15, 2021. On that date, noncompliant jurisdictions will forfeit the right to deny residential projects on the basis of local zoning, so long as projects include at least a 20% set-aside for below market-rate units or are 100% moderate-rate projects⁴⁷. Noncompliant jurisdictions may also lose the ability to issue building permits, including permits for kitchen and bath renovations. Jurisdictions that want to maintain local control over new development and maintain the ability to permit kitchen and bath renovations should therefore plan to adopt a compliant housing element update on time.

In May, HCD [declined to certify San Diego's 6th Cycle housing element](#), on the grounds that it did not adequately meet the legal requirements to affirmatively further fair housing, and to demonstrate the likelihood of redevelopment of non-vacant sites. If San Diego does not meet these requirements by June 16, 2021, HCD will find the housing element out of compliance. This suggests that HCD will be bold in enforcing housing element law, and that Long Beach risks rejection of its 6th Cycle housing element and decertification if it continues down this path.

We request the opportunity to meet with you and your colleagues to address the concerns raised in this letter. Thank you for your time and consideration.

Sincerely,

Leonora Camner
Executive Director
Abundant Housing LA

Sonja Trauss
Executive Director
YIMBY Law

CC: Jason Elliott, Senior Counselor to Governor Gavin Newsom
Megan Kirkeby, Deputy Director, Housing Policy Development, HCD
Melinda Coy, Land Use and Planning Manager, HCD
Tyrone Buckley, Assistant Deputy Director of Fair Housing, HCD
Paul McDougall, Housing Policy Development Manager, HCD

⁴⁷ [California Government Code 65589.5\(d\)\(5\)](#)



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VIA EMAIL

Re: Additional Comments Regarding the City of Long Beach's Revised Draft 6th Cycle (2021-2029) Housing Element

To Whom It May Concern:

Legal Aid Foundation of Los Angeles (LAFLA) is the frontline law firm for low-income people throughout Los Angeles County. LAFLA seeks to achieve equal justice through direct representation, systems change, and community education. One of our substantive priority areas is housing, which includes but is not limited to affirmative litigation; national, state, and local policy work regarding the preservation and production of affordable housing; and eviction defense. LAFLA has five community offices throughout Los Angeles County, including in Long Beach. We also run clinics in the Long Beach Courthouse and throughout the city in partnership with local community-based organizations. LAFLA is also a member of the Long Beach Housing Justice Coalition and provides technical assistance and legal support to Long Beach tenants and community organizers. As such, we take a great deal of interest in the City of Long Beach's Housing Element and its impact on residents.

We previously submitted comments and recommendations regarding Long Beach's Draft 6th Cycle Housing Element directly to the California Department of Housing and Community Development (HCD) on August 12, 2021. As you are aware, HCD considered those comments in its

Other Office Locations:

East Los Angeles Office, 5228 Whittier Blvd., Los Angeles, CA 90022; 213-640-3883
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South Los Angeles Office, 7000 S. Broadway, Los Angeles, CA 90003; 213-640-3950
Ron Olson Justice Center, 1550 W. 8th Street, Los Angeles, CA 90017; 323-801-7989

September 17, 2021 review of the Draft Housing Element. We also made oral comments at the October 7, 2021 City of Long Beach Planning Commission meeting where the Draft Housing Element was considered and recommended to the City Council for approval. We continue to have numerous concerns with Long Beach's Draft 6th Cycle Housing Element. We do not believe that the City is meeting its obligations under state law to affirmatively further fair housing because the sites inventory still lacks significant information. We request additional programmatic commitments to achieve your legal obligations and goals.

I. Sites Inventory

a. Without additional detail, it is impossible to adequately analyze development potential, especially for the development of affordable units.

As HCD noted, the sites inventory in Appendix C of the July 2021 draft did not describe the existing use of each site, nor did it break down the development potential by Regional Housing Needs Assessment (RHNA) affordability level, simply stating the potential "Market Rate" and "Below Market Rate" units.¹

The November 2021 Draft does not remedy these defects. It appears to identify additional sites, but existing uses are only described broadly in Appendix C-3. Without knowing the actual business or use of a site, it is impractical to identify or verify the suitability of these sites' development potential, in violation of state law.² For example, APN 7261007028 is simply described as a "Store"—without more detail, such as the name or type of business, it is impossible to determine from reading the Housing Element whether this site is an actual or realistic candidate for redevelopment. In addition, the potential affordability in Appendix C-3 does not include sites' development potential for Very Low Income units.

Additionally, as HCD also pointed out, Long Beach is relying on nonvacant sites to accommodate more than 50% of its RHNA for lower income households.³ We recognize that Long Beach is a highly developed city with little vacant land suitable for residential development, but the Draft Housing Element still does not contain the legally-required analysis demonstrating that each existing use is not an impediment to additional residential development.⁴

b. Recycled sites must be subject to a 20% inclusionary requirement under state law.

Housing Element Law requires that any sites already identified in prior Housing Elements must be treated differently. Nonvacant sites identified in at least one previous element, and vacant sites identified in at least two previous elements, must be zoned at specific minimum densities, and must be rezoned to allow residential use by right if the proposed development provides at least 20% of the units for lower income households.⁵ Such a rezoning program exists in the Draft Housing Element as Program 1.2, but it is impossible to know which sites are subject to that program, because the sites inventory does not identify reused sites in Appendix C (despite a statement to the contrary).

c. The incorporation of Accessory Dwelling Units does not consider their actual potential as housing.

¹ HCD Review Letter, Appendix, B.4.

² Gov. Code §§ 65583(a)(3); 65583.2(b)(3); 65583.2(c).

³ HCD Review Letter, Appendix, B.4.

⁴ Gov. Code § 65583(g)(2).

⁵ Gov. Code § 65583.2(c).

The City also intends to rely on Accessory Dwelling Units (ADUs) to meet its housing production goals. In response to HCD, the City has revised its ADU projections in Appendix C, reducing the total predicted ADUs during the planning period from 350 to 159 yearly.⁶ However, the quantified objectives in Table HE-6 of the Draft Housing Element still contains the projection of 2,800 units over the planning period, rather than 1,272.⁷ While these projections are based on the actual production of ADUs in Long Beach over the past three years, there is no analysis of how many will be used as housing stock, rather than guest houses or offices.⁸

d. The distribution of sites in the sites inventory fails to affirmatively further fair housing.

Sites identified for potential development must, according to state law, be located “throughout the community, consistent with [the obligation to affirmatively further fair housing in] paragraph (10) of subdivision (c) of Section 65583”.⁹ This language was added by AB 686 (2018), which created an express obligation for government entities to affirmatively further fair housing (AFFH) in accordance with the federal Fair Housing Law statute and rule and requiring an AFFH program in all Housing Elements due beginning in 2021. As further detailed in Section II of this letter, the sites inventory fails to affirmatively further fair housing and, in fact, actively perpetuates the segregation the Housing Element correctly identifies and seeks to overcome.

II. Affirmatively Furthering Fair Housing

a. The Draft Housing Element does not meet the state law obligation to affirmatively further fair housing.

“Affirmatively furthering fair housing” means taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics. Specifically, affirmatively furthering fair housing means taking meaningful actions that, taken together, address significant disparities in housing needs and in access to opportunity, replacing segregated living patterns with truly integrated and balanced living patterns, transforming racially and ethnically concentrated areas of poverty into areas of opportunity, and fostering and maintaining compliance with civil rights and fair housing laws.¹⁰

While the November 2021 Draft Housing Element expanded its assessment of fair housing in Appendix F, it's current listed goals and priorities, metrics and milestones do not match the results of the City's 2017 Assessment of Fair Housing (AFH) nor the community input on the obligation to AFFH. The HCD letter demanded that the Housing Element be

“revised to add or modify goals and actions based on the outcomes of a complete analysis.
Goals and actions must specifically respond to the analysis and to the identified and prioritized contributing factors to fair housing issues and must be significant and

⁶ November 2021 Draft 6th Cycle Housing Element, Appendix, C-2, <https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/housing-element-update/housing-element-technical-appendices-november-2021>.

⁷ November 2021 Draft 6th Cycle Housing Element, Page 104, <https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/housing-element-update/proposed-2021-2029-housing-element--6th-cycle---released-11-5-21>.

⁸ HCD Building Blocks, “Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADUs)”, <https://www.hcd.ca.gov/community-development/building-blocks/site-inventory-analysis/accessory-dwelling-units.shtml>.

⁹ Gov. Code § 65583.2(a).

¹⁰ Gov. Code § 8899.50(a)(1).

meaningful enough to overcome identified patterns and trends. Actions must have specific commitment, metrics, and milestones as appropriate and must address housing mobility enhancement, new housing choices and affordability in high opportunity areas, place-based strategies for community preservation and revitalization and displacement protection.”¹¹

The HCD letter is requiring the City to follow the state AFFH rules that the City **must identify goals to address the barriers to fair housing and include strategies for implementation.**¹²

i. The Draft Housing Element does not provide programs for new housing choices and affordability in high opportunity areas.

The current Draft Housing Element attempts to address requirements for AFFH in the new summary in Appendix F on page F-56. However, the efforts listed are inadequate to overcome the patterns and trends identified in the AFH. For example, “Housing is not available for residents of color in higher opportunity areas of the City”¹³ is listed as one of the major themes and concerns of the AFH and community, but none of the programs listed even come close to addressing this problem. The majority of the programs listed are focused on the low-opportunity areas of the City. In “Location and type of affordable housing”, the City lists the new “Inclusionary Housing program under Program 6.7”. That program only applies to downtown and midtown, which are not high opportunity areas.

The only addition to the Housing Element's policies that touches on the discrepancies of access to high opportunity areas is the Action 6.3.1, which **encourages** “the use of vouchers in high opportunity neighborhoods, including by providing priority points for voucher use in high-opportunity areas through the City's NOFA processes for both project based and individual vouchers.”¹⁴ This in no way satisfies the requirement from the HCD for a “significant and meaningful” action to “overcome identified patterns and trends.”¹⁵ This is especially true in light of voucher discrimination now being illegal in the state of California—significant and meaningful action would require enforcement of fair housing law, not encouragement to follow it.

ii. The Draft Housing Element does not address environmental racism nor the history of inequitable development and further exacerbates the problem.

Another major concern from the AFH is environmental racism and history of inequitable development in the City. The only listed program under “Location of environmental health hazards” is Program 6.6: Unpermitted Dwelling Unit Amnesty. The City provides no explanation how this program relates to or even comes close to being a significant or meaningful program to address environmental racism and the City's history of inequitable development.

Rather than provide programs to address this issue, the City's sites inventory exacerbates this issue. As evidenced on page F-45 of the Appendix F, the City acknowledges that “most units are in tracts with poor EnviroScreenScores in the 81st percentile or above, including 64.1 percent of lower income units.” It further acknowledges that “a smaller percentage of lower income units fall into the 40th percentile or below (4.8%).” The City then attempts to justify this inequity by stating the “areas well served by transit and jobs...are in the high CalEnviroScreen areas.” Essentially, the City is using the history of inequitable development (building transit in areas with low opportunity and resources)

¹¹ HCD Review Letter, Appendix, B.1 (emphasis added).

¹² See Gov. Code § 65583(c)(10)(A)(i)-(v).

¹³ November 2021 Draft 6th Cycle Housing Element, Appendix, F-56.

¹⁴ November 2021 Draft 6th Cycle Housing Element, Page 96.

¹⁵ HCD Review Letter, Appendix, B.1.

Housing Element Law also contains a separate obligation to “[p]romote and affirmatively further fair housing opportunities and promote housing throughout the community for all persons regardless of . . . [any] characteristics protected by” state or federal fair housing laws.¹⁶ This covers both actions that intentionally or actively discriminate, as well as facially neutral actions that have a discriminatory effect or impact on protected groups.

Figure F-7: White Predominant Areas

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City/Town Boundaries

(R) Predominant Population - White Majority Tracts

- Stim (gap < 10%)
- Sizeable (gap 10% - 50%)
- Predominant (gap > 50%)

City of Long Beach, County of Los Angeles, Bureau of Land Management, Esri, HERE, Garmin, USGS, EPA, NPS | Placeholders 2021, HUD 2019 | Placeholders 2021, ESRI, U.S. Census | Placeholders 2021

Source: HCD Data Viewer, 2021.



²² November 2021 Draft 6th Cycle Housing Element, Appendix, Figures F-17-18.

The comparison of Figures F-7: White Predominant Areas, and Figure F-21: Sites Inventory and TCAC Opportunity Areas highlight that the City is not only failing in their duty to promote and affirmatively further fair housing, but instead their proposed site inventory further segregation and lack of access to high opportunity areas for people of color. As shown in the figure F-21, the Site Inventory is still concentrated in lower resource areas almost completely ignoring the high resource and opportunity areas of the City, which are shown to be prominently white majority tracks in figure F-7. “Despite the City’s diversity, the historic racial segregation of neighborhoods still persists today. The formerly redlined areas of the City, particularly in Central and West Long Beach, are still disproportionately represented by communities of color today.”²³

The Draft Housing Element argues that the units identified by the sites inventory are justified because they are distributed across various resource tracts. The City admits that “a substantial proportion of lower income units are in low resource and high segregation and poverty tracts,” but hand-waives this away by arguing that such a disparity is not “disproportionate.”²⁴ The disparity is still wrong and reinscribes segregation rather than affirmatively furthering fair housing. Even if the sites in the lower resource areas proportionally represent more market rate units, at an absolute level, the City has planned to develop more housing in the admittedly lower-resourced, poorer, areas of racially and ethnically concentrated poverty, at the expense of identifying sites in the higher-resourced, richer, whiter areas of Long Beach. In addition, adding moderate income housing to lower income areas will accelerate gentrification, especially without strong anti-displacement policies like rent stabilization (see below). **The best way to affirmatively further fair housing is to identify sites that will locate more housing on the east side of Long Beach.**

III. Programs and Actions

a. **Rent stabilization should be a separate policy that meets the City’s goal to retain and improve the quality of existing housing and neighborhoods**

Currently, the City is contemplating a rent stabilization program as part of Action 7.2.2, which is an action related to the program of a dedicated rental housing staff. This location makes little logical sense, as rent stabilization is an independent policy that could be administered by a rental housing staff, just like the myriad other policies that receive dedicated programs and actions in the Draft Housing Element.

The City should add a Program to Goal 5 of the Draft Housing Element looking into the adoption of a rent stabilization ordinance. Rent stabilization belongs as a program under “Housing Preservation and Neighborhood Improvements” because it is a tried and tested policy to prevent displacement of families, especially lower income families. Many jurisdictions in Southern California have recently adopted rent stabilization ordinances to preserve neighborhood stability, knowing that lower income tenants have more difficulty finding affordable housing after being displaced.²⁵ The Draft Housing Element is creating additional displacement pressure on families by siting market rate and moderate income housing in lower income parts of Long Beach, making this policy even more essential.

In addition, the current timeline in the Draft Housing Element is inadequate. The reference to rent stabilization in Action 7.2.2 only commits the City to producing a report about programs in nearby

²³ November 2021 Draft 6th Cycle Housing Element, Appendix F-4.

²⁴ November 2021 Draft 6th Cycle Housing Element, Appendix F-43.

²⁵ See, e.g., Los Angeles County Code § 8.52.020; see also Inglewood Municipal Code § 8-125 *et. seq.*

jurisdictions by the end of 2023.²⁶ This is not good enough—a basic report should not take two years and will only delay any eventual adoption of the policy. This new program should call for a report, specific to rent stabilization and specific to the Long Beach market, by the end of 2022, along with adoption by the end of 2023. Tenants are facing extraordinary displacement pressures due to the economic impacts of the COVID-19 pandemic and policy options to prevent this must be explored and put into place as quickly as possible.

b. A code amendment related to substantial remodels (Action 5.2.2) should be adopted more quickly.

Action 5.2.2 commits the City to establishing a program to minimize displacement caused by substantial remodel evictions. This is welcome and a much-needed policy in Long Beach. However, under the Draft Housing Element, the relevant code amendment is only required to be adopted by the end of 2023. This is not soon enough. The City has already begun this process and is well underway, having already convened stakeholders for a series of meetings and held many public hearings on the issue. This policy is close to being adopted and the Housing Element should not be an excuse to delay it. Action 5.2.2 should be revised to require the code amendment to be adopted in the first half of 2022, in order to continue the momentum already in place for this ordinance.

c. The Rental Housing Division must be in place sooner than planned, in order to implement these policies and actions.

Action 7.2.1 requires the City to develop a budget for a Rental Housing Division by 2024 and propose recommendations for establishing the division by 2025. We are extremely supportive of the creation of a Rental Housing Division in the City of Long Beach. A Rental Housing Division, as the Draft Housing Element notes, is necessary for the successful adoption and execution of many of the Programs contemplated by the Housing Element. This is why the current timeline, with a Division being in place in 2025 at the earliest, is unacceptable. Many of the Programs, including some that the Draft Housing Element references as complex enough to require a Rental Housing Division, are scheduled to be in place well before 2025.²⁷ A functioning Rental Housing Division would also be available to provide valuable insights in the development of these rental housing policies. Therefore, the City should ensure the creation of a Rental Housing Division in the next City budget cycle.

IV. Positive Additions

There were positive additions to the Draft Housing Element including Action 1.1.8 (additionally listed as 2.4.3), which would be a “pilot program through the Consolidated Plan update... to pursue deed restriction of housing for low income households in high resource areas in exchange for a lump-sum grant or loan.”²⁸ Another positive addition was Action 2.4.2, which would “Evaluate the effectiveness of current City policy on facilitating developments that include large units (with three or more bedrooms) and update City policy if appropriate. A potential policy update may be requiring a mix of unit sizes (number of bedrooms) for projects above a certain size.” Both actions are encouraging steps towards AFFH and adding affordable housing to the City. We look forward to the results of the programs.

²⁶ November 2021 Draft 6th Cycle Housing Element, Page 103.

²⁷ See, e.g., Action 5.4.2, connecting City housing rehabilitation programs with code enforcement, scheduled to be in place by 2023.

²⁸ November 2021 Draft 6th Cycle Housing Element, Page 73

V. Conclusion

Thank you for your consideration of our comments. Please feel free to contact LAFLA if you have any questions. We can be reached via email at JJager@lafla.org or via telephone at (213) 640-3835.

Sincerely,

THE LEGAL AID FOUNDATION OF LOS ANGELES

Angela McNair Turner, Managing Attorney

Jonathan Jager, Staff Attorney

Melody Osuna, Staff Attorney

Cc: Charles Parkin, City Attorney, cityattorney@longbeach.gov
Tom Modica, City Manager, citymanager@longbeach.gov
Mark Christoffels, Chair, Planning Commission
Dr. Joni Ricks-Oddie, Vice Chair, Planning Commission
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VIA E-MAIL

November 15, 2021

Monique De La Garza, City Clerk
City of Long Beach
411 W. Ocean Blvd.
Long Beach, CA 90802
Em: cityclerk@longbeach.gov

RE: City of Long Beach's 6th Cycle Housing Element Update.

Dear Monique De La Garza,

On behalf of the Southwest Regional Council of Carpenters (“**Southwest Carpenter**” or “**SWRCC**”), my Office is submitting these comments for the City of Long Beach’s (“**City**”) November 16, 2021 City Council Meeting for its draft 2021-2029 update to the City’s General Plan Housing Element (“**Project**”).

The Southwest Carpenters is a labor union representing 50,000 union carpenters in six states, including California, and has a strong interest in well ordered land use planning and addressing the environmental impacts of development projects.

Individual members of the Southwest Carpenters live, work and recreate in the City and surrounding communities and would be directly affected by the Project’s environmental impacts.

SWRCC expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

SWRCC incorporates by reference all comments raising issues regarding the EIR and the accompanying Addendum. *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal. App. 4th 173, 191 (finding that any party who has objected to the Project’s environmental documentation may assert any issue timely raised by other parties).

Moreover, SWRCC requests that the City provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act (“**CEQA**”), Cal Public Resources Code (“**PRC**”) § 21000 *et seq*, and the California Planning and Zoning Law (“**Planning and Zoning Law**”), Cal. Gov’t Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency’s governing body.

The City should require the use of a local skilled and trained workforce to benefit the community’s economic development and environment. The City should require the use of workers who have graduated from a Joint Labor Management apprenticeship training program approved by the State of California, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state approved apprenticeship training program or who are registered apprentices in an apprenticeship training program approved by the State of California.

Community benefits such as local hire and skilled and trained workforce requirements can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note:

[A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Skilled and trained workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce

Development Board and the UC Berkeley Center for Labor Research and Education concluded:

. . . labor should be considered an investment rather than a cost – and investments in growing, diversifying, and upskilling California’s workforce can positively affect returns on climate mitigation efforts. In other words, well trained workers are key to delivering emissions reductions and moving California closer to its climate targets.¹

Local skilled and trained workforce requirements and policies have significant environmental benefits since they improve an area’s jobs-housing balance, decreasing the amount of and length of job commutes and their associated greenhouse gas emissions. Recently, on May 7, 2021, the South Coast Air Quality Management District found that that the “[u]se of a local state-certified apprenticeship program or a skilled and trained workforce with a local hire component” can result in air pollutant reductions.²

Cities are increasingly adopting local skilled and trained workforce policies and requirements into general plans and municipal codes. For example, the City of Hayward 2040 General Plan requires the City to “promote local hiring . . . to help achieve a more positive jobs-housing balance, and reduce regional commuting, gas consumption, and greenhouse gas emissions.”³

In fact, the City of Hayward has gone as far as to adopt a Skilled Labor Force policy into its Downtown Specific Plan and municipal code, requiring developments in its Downtown area to requiring that the City “c]ontribute to the stabilization of regional construction markets by spurring applicants of housing and nonresidential developments to require contractors to utilize apprentices from state-approved, joint

¹ California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at* <https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf>.

² South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, *available at* <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10>.

³ City of Hayward (2014) Hayward 2040 General Plan Policy Document at p. 3-99, *available at* https://www.hayward-ca.gov/sites/default/files/documents/General_Plan_FINAL.pdf.

labor-management training programs, . . .”⁴ In addition, the City of Hayward requires all projects 30,000 square feet or larger to “utilize apprentices from state-approved, joint labor-management training programs.”⁵

Locating jobs closer to residential areas can have significant environmental benefits. . . As the California Planning Roundtable noted in 2008:

People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.⁶

In addition, local hire mandates as well as skill training are critical facets of a strategy to reduce vehicle miles traveled. As planning experts Robert Cervero and Michael Duncan noted, simply placing jobs near housing stock is insufficient to achieve VMT reductions since the skill requirements of available local jobs must be matched to those held by local residents.⁷ Some municipalities have tied local hire and skilled and trained workforce policies to local development permits to address transportation issues. As Cervero and Duncan note:

In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing.” The city’s First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than 3,000 city residents in local jobs since it was launched in 1986. When needed, these carrots are matched by sticks, since the city is not shy about

⁴ City of Hayward (2019) Hayward Downtown Specific Plan at p. 5-24, *available at* <https://www.hayward-ca.gov/sites/default/files/Hayward%20Downtown%20Specific%20Plan.pdf>.

⁵ City of Hayward Municipal Code, Chapter 10, § 28.5.3.020(C).

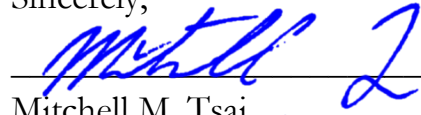
⁶ California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, *available at* <https://cprroundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf>.

⁷ Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? *Journal of the American Planning Association* 72 (4), 475-490, 482, *available at* <http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf>.

negotiating corporate participation in First Source as a condition of approval for development permits.

The City should consider utilizing skilled and trained workforce policies and requirements to benefit the local area economically and mitigate greenhouse gas, air quality and transportation impacts.

Sincerely,



Mitchell M. Tsai

Attorneys for Southwest Regional
Council of Carpenters

Attached:

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling (Exhibit A);

Air Quality and GHG Expert Paul Rosenfeld CV (Exhibit B); and

Air Quality and GHG Expert Matt Hagemann CV (Exhibit C).

EXHIBIT A



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March 8, 2021

Mitchell M. Tsai
155 South El Molino, Suite 104
Pasadena, CA 91101

Subject: Local Hire Requirements and Considerations for Greenhouse Gas Modeling

Dear Mr. Tsai,

Soil Water Air Protection Enterprise ("SWAPE") is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas ("GHG") emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Worker Trips and Greenhouse Gas Calculations

The California Emissions Estimator Model ("CalEEMod") is a "statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects."¹ CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.²

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.³

¹ "California Emissions Estimator Model." CAPCOA, 2017, available at: <http://www.aqmd.gov/caleemod/home>.

² "California Emissions Estimator Model." CAPCOA, 2017, available at: <http://www.aqmd.gov/caleemod/home>.

³ "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled (“VMT”) associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.⁴

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

$$\text{“VMT}_d = \Sigma(\text{Average Daily Trip Rate}_i * \text{Average Overall Trip Length}_i) _n$$

Where:

n = Number of land uses being modeled.”⁵

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

$$\text{“Emissions}_{\text{pollutant}} = \text{VMT} * \text{EF}_{\text{running,pollutant}}$$

Where:

$\text{Emissions}_{\text{pollutant}}$ = emissions from vehicle running for each pollutant

VMT = vehicle miles traveled

$\text{EF}_{\text{running,pollutant}}$ = emission factor for running emissions.”⁶

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, the number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.⁷ In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (“CEQA”) requires that such changes be justified by substantial evidence.⁸ The default number of construction-related worker trips is calculated by multiplying the

⁴ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14-15.

⁵ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 23.

⁶ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.

⁷ “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

⁸ CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 1, 9.

number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.⁹ Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively.”¹⁰ Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.¹¹ The operational home-to-work vehicle trip lengths are:

“[B]ased on the location and urbanization selected on the project characteristic screen. These values were supplied by the air districts or use a default average for the state. Each district (or county) also assigns trip lengths for urban and rural settings” (emphasis added).¹²

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).¹³

Worker Trip Length by Air Basin		
Air Basin	Rural (miles)	Urban (miles)
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	16.47	11.17
Minimum	10.80	10.80
Maximum	19.80	14.70
Range	9.00	3.90

⁹ “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

¹⁰ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.

¹¹ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14.

¹² “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.

¹³ “Appendix D Default Data Tables.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8- miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7- miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan (“Project”) located in the City of Claremont (“City”). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.¹⁴ In an effort to evaluate the potential for a local hire provision to reduce the Project’s construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO ₂ e)	3,623
Amortized Construction GHG Emissions (MT CO ₂ e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO ₂ e)	3,024
Amortized Construction GHG Emissions (MT CO ₂ e/year)	100.80
% Decrease in Construction-related GHG Emissions	17%

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire requirement depends on the worker trip length enforced and the default worker trip length for the project’s urbanization level and location.

¹⁴ “Appendix D Default Data Tables.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

A handwritten signature in blue ink, appearing to read "M Hagemann".

Matt Hagemann, P.G., C.Hg.

A handwritten signature in blue ink, appearing to read "Paul Rosenfeld".

Paul E. Rosenfeld, Ph.D.

EXHIBIT B



Paul Rosenfeld, Ph.D.

Principal Environmental Chemist

Chemical Fate and Transport & Air Dispersion Modeling

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H₂O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health*. 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P.**, (2015) Modeling the Effect of Refinery Emission On Residential Property Value. *Journal of Real Estate Research*. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.**, Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermol and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution*, 123 (17), 319-327.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities*. Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004*. New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellev, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS-6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality*. 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld**. (1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society*. Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States” Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The 23rd Annual International Conferences on Soils Sediment and Water. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants..* Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference*. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation*. Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest*. Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell*. Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest*. Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. \$41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: \$10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. \$100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. \$20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: \$10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: \$15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. \$500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the United States District Court For The District of New Jersey

Duarte et al, *Plaintiffs*, vs. United States Metals Refining Company et. al. *Defendant*.

Case No.: 2:17-cv-01624-ES-SCM

Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division

M/T Carla Maersk, *Plaintiffs*, vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS “Conti Perdido”
Defendant.

Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237

Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica

Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants

Case No.: No. BC615636

Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica

The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants

Case No.: No. BC646857

Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado

Bells et al. Plaintiff vs. The 3M Company et al., Defendants

Case: No 1:16-cv-02531-RBJ

Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District

Phillip Bales et al., Plaintiff vs. Dow Agrosiences, LLC, et al., Defendants

Cause No 1923

Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa

Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants

Cause No C12-01481

Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois

Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants

Case No.: No. 0i9-L-2295

Rosenfeld Deposition, 8-23-2017

In The Superior Court of the State of California, For The County of Los Angeles

Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC

Case No.: LC102019 (c/w BC582154)

Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division

Brenda J. Cooper, et al., *Plaintiffs*, vs. Meritor Inc., et al., *Defendants*

Case Number: 4:16-cv-52-DMB-JVM

Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants
Law No.: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Doug Pauls, et al., et al., Plaintiffs vs. Richard Warren, et al., Defendants
Law No.: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action NO. 14-C-30000
Rosenfeld Deposition, June 2015

In The Third Judicial District County of Dona Ana, New Mexico
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward
DeRuyter, Defendants
Rosenfeld Deposition: July 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the United States District Court Western District of Oklahoma
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City
Landfill, et al. Defendants.
Case No. 5:12-cv-01152-C
Rosenfeld Deposition: July 2014

In the County Court of Dallas County Texas

Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant*.

Case Number cc-11-01650-E

Rosenfeld Deposition: March and September 2013

Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio

John Michael Abicht, et al., *Plaintiffs*, vs. Republic Services, Inc., et al., *Defendants*

Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)

Rosenfeld Deposition: October 2012

In the United States District Court of Southern District of Texas Galveston Division

Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs*, vs. BP Products North America, Inc., *Defendant*.

Case 3:10-cv-00622

Rosenfeld Deposition: February 2012

Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland

Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants

Case Number: 03-C-12-012487 OT

Rosenfeld Deposition: September 2013

EXHIBIT C



Technical Consultation, Data Analysis and
Litigation Support for the Environment

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

**Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
CEQA Review**

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt’s responsibilities have included:

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt’s duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, *Oxygenates in Water: Critical Information and Research Needs*.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.