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Residential Redevelopment of Commercially Zoned Land in California

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Introduction

As part of a broader effort to stem fifty years of rapid housing price appreciation in California by increasing the state's housing production, state lawmakers have proposed new laws that would require cities to allow residential development on commercially zoned land. While these efforts did not move forward in 2020, the idea of allowing homebuilding in commercial areas will most likely reemerge in the 2021-2022 legislative session. Indeed, new legislation has already been proposed—specifically Senate Bill 6—which aims to address this issue. Additionally, local governments are looking more critically than ever at incorporating residential development within their existing commercial land in order to satisfy forthcoming state-mandated housing targets.

Residential redevelopment of land zoned for retail and office presents an opportunity to achieve multiple policy goals. Throughout the state, retail properties have become underutilized as the sale of many goods and services have shifted towards e-commerce. This is evident throughout the state in the number of high-vacancy strip malls and large retail centers whose anchor tenants have closed. The COVID-19 pandemic and the resulting economic fallout is accelerating this decline, and is accelerating remote work trends that may influence the need for office space. Allowing new homes and mixed-use projects to be built on these sites can serve as a catalyst for new economic growth while at the same time addressing California's ongoing housing shortage. This form of redevelopment also advances infill development goals, bringing residents closer to jobs, amenities, and transit, thus reducing greenhouse gas emissions from personal automobile use.

This study examines the inventory of commercially zoned land in California's four largest metro areas to determine how much land is currently allocated to commercial uses, and where this land is concentrated. We also report findings from a manual inspection of commercial zoning designations in the 50 largest California cities, as well as a random sample of commercial parcels throughout the state. This study is the first of a two-part analysis, the second of which will focus on quantifying the potential of commercially zoned land for residential redevelopment.

Key Findings

California's four largest metros—Los Angeles, San Francisco Bay Area, San Diego, and Sacramento—have an abundance of land zoned for commercial uses, and allowing residential development in these areas could introduce new housing in virtually every neighborhood. In particular, commercial land is as prevalent in high-resource areas as it is in low-resource communities. Yet, the amount of commercial land per capita is higher in suburban communities than in urban core neighborhoods. Commercial land is concentrated along thoroughfares and in clusters, and housing that would emerge from its residential redevelopment may therefore be similarly concentrated.

Roughly 41 percent of commercial zones in the state's 50 largest cities currently prohibit residential development as determined by their base zoning designations. Of the commercial zones that do allow residential development, the entitlement process is inconsistent across cities, and in many cases, requires onerous approvals which limit what may actually be built.

This report offers two specific recommendations for any statewide legislation authorizing residential development on commercial property statewide:

- The creation of a ministerial statewide approval mechanism to give developers a baseline level of certainty as to their ability to develop housing on all commercial properties.
- The adoption of a broad definition of "commercial property" in order to capture all parcels suitable for residential property, rather than limiting these requirements to any one specific zoning designation.

This report also recommends that, independent of state action, localities reexamine their existing commercial zoning and land use regulations to leverage suitable commercial property for meeting forthcoming state-mandated housing production targets.

Methodology

This study derives primarily from 2019 and 2020 parcel and land use data from LandVision, and an analysis of city planning codes.

Commercial land was identified based on standardized land use codes available in the LandVision data, and was defined to include retail, office, and vacant commercial land, while excluding industrial land as well as mixed-use parcels whose uses include residential. Census data was also used for bounding the extent of metro areas' developed footprint in order to focus on infill areas. Additional details on data sources used for descriptive statistics and geographic considerations are provided in the Data and Methodology Appendix.

The identification of land zoned and used for commercial purposes is not straightforward, and the data sources used in this study required significant manual inspection to adjust for inconsistency across counties and outlier parcels. For example, data for commercial parcels in Orange, Riverside, and Marin counties lack specificity on commercial parcels' use (e.g., office, retail, or other).

Once identified, commercial land was mapped across four of the state's major metro areas—Los Angeles, San Francisco, San Diego, and Sacramento. We analyzed the amount of commercial land per capita, its distribution across the retail, office, and vacant categories, its distance from the metropolitan center, and its distribution over the city size spectrum and across communities with differing levels of socioeconomic opportunity.

To determine the extent to which commercial land is already available for residential development, we manually examined city planning codes for all commercial land use designations across the 50 largest California cities by population. Because land use and zoning designations in the 50 most populous California cities are not necessarily representative of the entire state, we also examined a random sample of 100 commercial parcels from cities statewide to gain insights into smaller cities and towns.

Findings

Significant amounts of land are dedicated to commercial uses throughout California.

Land designated for commercial use is ubiquitous throughout California. Although the amount of commercial land per capita varies between the state's metro areas and within them, commercial land is about as common in affluent areas as it is in poorer ones. At a far more local level, commercial land is distributed unevenly, concentrated along major roads and in retail-oriented neighborhoods.

The linked maps illustrate the distribution of commercial land in the state's four largest metropolitan areas:

- The five-county Los Angeles-Long Beach Combined Statistical Area (CSA)—"Greater Los Angeles"
- The twelve-county San Jose-San Francisco-Oakland CSA—"The Bay Area"
- The one-county San Diego-Carlsbad CBSA—"The San Diego Metro Area"
- The seven-county Sacramento-Roseville CSA—"The Sacramento Metro Area"

Table 1 reports the total acreage of commercial land in the four largest metros and the counties that comprise them, as well as the commercial land area per capita.[1]

Greater Los Angeles has about 191,000 acres of commercial land—the equivalent of double the total land area of the entire city of Bakersfield—the most among the four metros. The Bay Area has approximately 57,000 acres. The San Diego metro area has about 20,000 acres of commercial land while the Sacramento metro area has more than 29,000 acres, even though the latter has a smaller population. The discrepancy corresponds to differences in commercial land per capita.

The amount of commercial land per capita is lower in the San Diego metro area (342 sq. ft.) and in the Bay Area (385 sq. ft.) than it is in Greater Los Angeles (425 sq. ft) and the Sacramento metro area (759 sq. ft), and it varies even more substantially within the metro areas. These differences reflect a greater tendency toward present-day "sprawl" development in the eastern inland reaches of Greater Los Angeles and in the Sacramento metro areas.[2] This dynamic is evident in the variation across counties, with the dense core County of Los Angeles having the least square feet of commercial land per capita in aggregate feet of commercial land per capita, reflecting both the scarcity of land in the dense central city as well as the prevalence of land designated for residential and commercial mixed-use, which is excluded from the figures.

Retail makes up the majority of commercially zoned land.

In most counties, around two thirds of commercial land corresponds to retail, while the remainder is split in varying ways between office and vacant commercial (Table 2). Los Angeles, Ventura, and San Diego Counties have between about two thirds and three quarters of commercial land designated for retail. San Bernardino and Riverside counties, on the other hand, have much higher shares of vacant commercial land, which likely reflects areas in the process of greenfield development (see below).

These trends are similar in the Bay Area where almost every county has the majority of commercial land corresponding to retail, with relatively small shares that are vacant. Santa Clara County and San Mateo County have elevated shares of commercial land designated for office, aligning with their role as Silicon Valley's job centers. San Joaquin, Solano, and Sonoma Counties have elevated shares of vacant commercial land. The Sacramento metro area in its entirety has slightly elevated shares of vacant commercial land, but is otherwise similar to the other metro areas.

Commercial land is most prevalent in suburban locations.

On a per capita basis, commercially zoned land is most prevalent in areas farthest away from the major metro area cores. This signals opportunity through policy change to facilitate mixed-use, infill development not just in central locations, but in communities that may otherwise be resistant to planning for and approving greater housing densities.

Table 1: Commercial land per capita

		Commercial land					
					Within Census tracts, per resident (square feet)		
	Population	Total (acres)	Median parcel size (acres)	On average, per resident (square feet)	25th percentile	50th percentile	75th percentile
Los Angeles-Long Beach, CA CSA	**17,619,129**	**191,058**	**18.6**	**472**	**78**	**176**	**425**
Los Angeles County	9,723,337	50,359	12.1	226	59	124	253
Orange County	3,054,821	27,417	30.2	391	134	256	456
Riverside County	2,216,554	77,123	94.1	1,516	360	852	1,919
San Bernardino County	1,895,769	30,850	45.5	709	147	329	730
Ventura County	728,648	5,310	17.6	317	65	149	445
San Jose-San Francisco-Oakland, CA CSA	**7,977,263**	**57,333**	**15.2**	**313**	**50**	**135**	**385**
Santa Clara County	1,774,549	11,500	19.3	282	64	168	333
Alameda County	1,533,497	8,718	8.9	248	42	93	223
Contra Costa County	1,050,452	6,563	19.4	272	79	144	331
San Francisco County	817,620	1,192	2.9	64	11	31	70
San Mateo County	705,172	5,220	11.7	322	53	108	321
San Joaquin County	649,519	6,756	31.8	453	132	313	553
Sonoma County	416,836	5,570	40.2	582	178	377	820
Solano County	377,128	4,029	21.6	465	85	237	552
Marin County	251,693	3,152	34.7	546	173	394	786
Santa Cruz County	238,520	2,441	38.0	446	149	336	493
Napa County	116,727	1,937	45.4	723	324	549	912
San Benito County	45,550	254	32.9	243	109	201	352
San Diego-Carlsbad, CA Metro Area	**2,947,355**	**19,875**	**16.4**	**294**	**66**	**140**	**342**
San Diego County	2,947,355	19,875	16.4	294	66	140	342
Sacramento-Roseville, CA CSA	**2,229,309**	**29,415**	**35.9**	**575**	**167**	**350**	**759**
Sacramento County	1,388,159	15,031	32.0	472	142	307	567
Placer County	318,246	6,363	45.7	871	228	599	1,208
Yolo County	173,437	1,759	35.6	442	166	285	420
El Dorado County	141,228	2,817	79.0	869	276	757	1,289
Sutter County	79,713	936	37.7	512	240	323	816
Nevada County	73,789	1,919	63.9	1,133	564	969	1,577
Yuba County	54,737	590	44.9	470	165	368	527

Source: LandVision, U.S. Census; Terner Center analysis.
Notes: See Data and Methodology Appendix for details.

Table 2: Commercial land by type

		Commercial land						
			Share of total			On average, per resident (square feet)		
	Population	Total (acres)	Retail	Office	Vacant	Retail	Office	Vacant
Los Angeles-Long Beach, CA CSA	**17,619,129**	**191,058**	**71.9%***		**28.1%**		**339***	**133**
Los Angeles County	9,723,337	50,359	70.2%	21.2%	8.6%	158	48	19
Orange County	3,054,821	27,417	92.1%*		7.9%		360*	31
Riverside County	2,216,554	77,123	53.6%*		46.4%		813*	703
San Bernardino County	1,895,769	30,850	53.9%	10.6%	35.4%	382	75	251
Ventura County	728,648	5,310	67.0%	22.4%	10.6%	213	71	34
San Jose-San Francisco-Oakland, CA CSA	**7,977,263**	**57,333**	**62.5%**	**24.2%**	**13.3%**	**196**	**76**	**42**
Santa Clara County	1,774,549	11,500	59.1%	36.4%	4.5%	167	103	13
Alameda County	1,533,497	8,718	63.9%	26.1%	10.1%	158	65	25
Contra Costa County	1,050,452	6,563	65.7%	23.4%	10.8%	179	64	29
San Francisco County	817,620	1,192	61.8%	35.1%	3.1%	39	22	2
San Mateo County	705,172	5,220	46.4%	48.5%	5.1%	150	156	16
San Joaquin County	649,519	6,756	57.7%	13.3%	29.1%	261	60	132
Sonoma County	416,836	5,570	60.2%	19.0%	20.7%	351	111	121
Solano County	377,128	4,029	62.6%	9.2%	28.2%	292	43	131
Marin County	251,693	3,152	84.1%*		15.9%		459*	87
Santa Cruz County	238,520	2,441	74.5%	19.6%	5.9%	332	87	26
Napa County	116,727	1,937	82.2%	4.5%	13.3%	594	33	96
San Benito County	45,550	254	68.3%	13.9%	17.8%	166	34	43
San Diego-Carlsbad, CA Metro Area	**2,947,355**	**19,875**	**76.7%**	**8.0%**	**15.3%**	**225**	**24**	**45**
San Diego County	2,947,355	19,875	76.7%	8.0%	15.3%	225	24	45
Sacramento-Roseville, CA CSA	**2,229,309**	**29,415**	**54.3%**	**22.0%**	**23.7%**	**312**	**126**	**136**
Sacramento County	1,388,159	15,031	52.9%	28.2%	18.8%	250	133	89
Placer County	318,246	6,363	51.1%	17.6%	31.3%	445	153	273
Yolo County	173,437	1,759	67.4%	18.8%	13.8%	298	83	61
El Dorado County	141,228	2,817	72.4%	8.0%	19.6%	629	69	170
Sutter County	79,713	936	60.4%	23.2%	16.5%	309	118	84
Nevada County	73,789	1,919	37.0%	13.7%	49.3%	419	155	558
Yuba County	54,737	590	44.8%	12.1%	43.1%	211	57	203

Source: LandVision, U.S. Census; Terner Center analysis.
Notes: (*) The data for Marin, Orange, and Riverside counties do not distinguish retail and office—the figures reported for these counties combine both retail and office, as does the figure for Greater Los Angeles as a whole. Because Marin County is small relative to the Bay Area, overall figures for the Bay Area do separate retail and office, but slightly exaggerate the share corresponding to retail. See Data and Methodology Appendix for details.

Table 3: Commercial land by distance from CBD

			Commercial land			
	Distance to CBD (miles)	Population	Total (acres)	Share	Per resident, on average (square feet)	Floor to Area Ratio (FAR)
Los Angeles-Long Beach, CA CSA	0 to 5	1,218,473	3,794	2.0%	**136**	1.09
	5 to 10	2,262,018	9,387	4.9%	**181**	0.67
	10 to 25	6,104,848	33,802	17.7%	**241**	0.47
	25 to 50	4,878,170	62,357	32.6%	**557**	0.19
	50 to 100	2,755,959	59,916	31.4%	**947**	0.06
	More than 100	399,661	21,802	11.4%	**2,376**	0.01
San Jose-San Francisco-Oakland, CA CSA	0 to 5	666,009	1,069	1.9%	**70**	3.32
	5 to 10	738,010	3,167	5.5%	**187**	0.61
	10 to 25	2,032,722	13,255	23.1%	**284**	0.64
	25 to 50	3,334,982	27,262	47.5%	**356**	0.51
	50 to 100	1,205,540	12,580	21.9%	**455**	0.23
San Diego-Carlsbad, CA Metro Area	0 to 5	440,608	2,519	12.7%	**249**	0.48
	5 to 10	725,531	4,183	21.0%	**251**	0.33
	10 to 25	1,051,129	7,721	38.8%	**320**	0.28
	25 to 50	730,087	5,452	27.4%	**325**	0.26
Sacramento-Roseville, CA CSA	0 to 5	331,072	4,173	14.2%	**549**	0.45
	5 to 10	510,522	5,108	17.4%	**436**	0.23
	10 to 25	995,182	11,787	40.1%	**516**	0.27
	25 to 50	317,558	5,516	18.8%	**757**	0.24
	50 to 100	74,975	2,831	9.6%	**1,645**	0.23

Source: LandVision, U.S. Census; Terner Center analysis.
Notes: See Data and Methodology Appendix for details.

Table 3 shows that the amount of commercial land per capita in areas farther from the metropolitan center is higher. In Greater Los Angeles, for example, Census tracts within 5 miles of Downtown Los Angeles have an average of 136 square feet of commercial land per capita, while those 5 to 10 miles out have 181, and those 10 to 25, 25 to 50, and 50 to 100 miles out have 241, 557 and 947 square feet, respectively.[3] A similar pattern of increasing commercial land per capita with distance from the central business district (CBD) emerges in the Bay Area and in the San Diego metro area, and with the exception of its innermost 0 to 5 mile region the Sacramento metro area also exhibits the pattern as well.

The pattern of less commercial land per capita closer to the center is consistent with there being less land per capita in the center in general, irrespective of land use, as implied by a population density gradient that peaks at the center and falls as one shifts farther out. Commercial land closer to the center is also used more intensively, i.e. with higher floor-to-area ratios.[4]

The greater availability of commercial land farther from the center should *not* be misconstrued as an indication that potential residential redevelopment of commercial is likely to skew towards the periphery as the likelihood of such redevelopment is tied to the nature of parcels' existing use and its feasibility given the location (an area that will be examined in the next part of this two-part research series).

Smaller cities have a larger share of commercial land than larger ones.

Statewide, smaller cities account for a larger share of commercial land compared to larger ones.[5] As shown in Table 4, that result is largely driven by the Bay Area and Greater Los Angeles. In the Bay Area, the cities of San Jose, San Francisco, and Oakland, whose populations each exceed 500,000, jointly account for 24.6 percent of the population, but just 10.8 percent of commercial land. Similarly, the City of Los Angeles accounts for about 24.0 percent of the population of the Greater Los Angeles area, but only 10.5 percent of its commercial land. These results are mirrored by those central cities' relatively low commercial land per capita.

In the Bay Area, the differences by city size are gradual: cities with fewer than 100,000 residents have 432 square feet of commercial land per capita, while those with 100,000 to 500,000 residents have only 284, and those with more than 500,000 residents (i.e. San Jose, San Francisco and Oakland) have just 136. In Greater Los Angeles, the difference between Los Angeles and all other cities is sharper: those with fewer than 500,000

Table 4: Commercial land by city size

				Commercial land		
	City size bin	Population	Share	Total (acres)	Share	Per resident, on average (square feet)
California	Less than 100,000	12,802,494	39.4%	169,285	50.4%	576
	100,000 to 500,000	11,887,440	36.6%	131,242	39.1%	481
	More than 500,000	7,780,568	24.0%	35,239	10.5%	197
Los Angeles-Long Beach, CA CSA	Less than 100,000	6,098,461	36.6%	87,534	47.6%	625
	100,000 to 500,000	6,600,318	39.6%	82,361	44.8%	544
	More than 500,000	3,959,657	23.8%	13,956	7.6%	154
San Jose-San Francisco-Oakland, CA CSA	Less than 100,000	3,304,190	42.9%	32,775	59.6%	432
	100,000 to 500,000	2,493,724	32.4%	16,250	29.6%	284
	More than 500,000	1,896,702	24.6%	5,934	10.8%	136
San Diego-Carlsbad, CA Metro Area	Less than 100,000	480,724	17.2%	3,547	19.2%	321
	100,000 to 500,000	910,035	32.6%	6,581	35.7%	315
	More than 500,000	1,401,932	50.2%	8,324	45.1%	259
Sacramento-Roseville, CA CSA	Less than 100,000	733,439	47.9%	12,254	50.4%	728
	100,000 to 500,000	796,563	52.1%	12,052	49.6%	659

Source: LandVision, U.S. Census; Terner Center analysis.
Notes: See Data and Methodology Appendix for details.

residents have more than 500 square feet of commercial land per capita, while those over 500,000 (i.e. the City of Los Angeles) have only 154. Commercial land per capita is slightly higher for smaller cities than large ones in the San Diego and Sacramento metro areas as well, but the magnitude of those relationships is not as meaningful as it is in Greater Los Angeles and the Bay Area.[6]

Commercial land is distributed equally between high- and low-resource communities.

The amount of commercial land per capita is roughly similar between poorer areas and more affluent ones, as measured against the state Tax Credit Allocation Committee Opportunity Area Maps. These maps assign each census tract in the state to one of five opportunity categories based on an index of economic, educational, and environmental characteristics that research has shown to be important for improving outcomes for low-income children and adults. In our analysis, we find that the distribution of commercial land across opportunity categories for each metro area varies slightly, as shown in Table 5. In Greater Los Angeles, for example, "high segregation and poverty" areas have slightly less commercial land per capita (380 square feet) than more resource-rich areas (all above 400). In the Bay Area, areas in all but the "high resource" level (distinct from "highest resource") have roughly the same amount of commercial land per capita.

Table 5: Commercial land by opportunity category

			Commercial land		
	Opportunity category	Population	Total (acres)	Share	Per resident, on average (square feet)
California	High Segregation & Poverty	3,846,054	36,006	10.1%	408
	Low Resource	8,842,023	90,372	25.4%	445
	Moderate Resource	8,577,749	90,423	25.4%	459
	High Resource	6,983,097	69,610	19.6%	434
	Highest Resource	6,976,969	69,183	19.5%	432
Los Angeles-Long Beach, CA CSA	High Segregation & Poverty	2,181,920	19,044	10.1%	380
	Low Resource	4,316,845	44,027	23.3%	444
	Moderate Resource	4,156,859	50,572	26.8%	530
	High Resource	3,458,595	37,330	19.8%	470
	Highest Resource	3,470,985	37,978	20.1%	477
San Jose-San Francisco-Oakland, CA CSA	High Segregation & Poverty	282,189	2,090	3.6%	323
	Low Resource	2,325,458	18,260	31.9%	342
	Moderate Resource	2,231,272	16,619	29.0%	324
	High Resource	1,620,592	9,775	17.1%	263
	Highest Resource	1,517,030	10,578	18.5%	304
San Diego-Carlsbad, CA Metro Area	High Segregation & Poverty	230,942	982	4.9%	185
	Low Resource	782,461	5,909	29.7%	329
	Moderate Resource	793,986	4,551	22.9%	250
	High Resource	536,595	4,431	22.3%	360
	Highest Resource	603,371	4,002	20.1%	289
Sacramento-Roseville, CA CSA	High Segregation & Poverty	236,349	3,511	12.0%	647
	Low Resource	557,081	8,679	29.6%	679
	Moderate Resource	509,205	6,600	22.5%	565
	High Resource	459,661	4,438	15.1%	421
	Highest Resource	459,027	6,131	20.9%	582

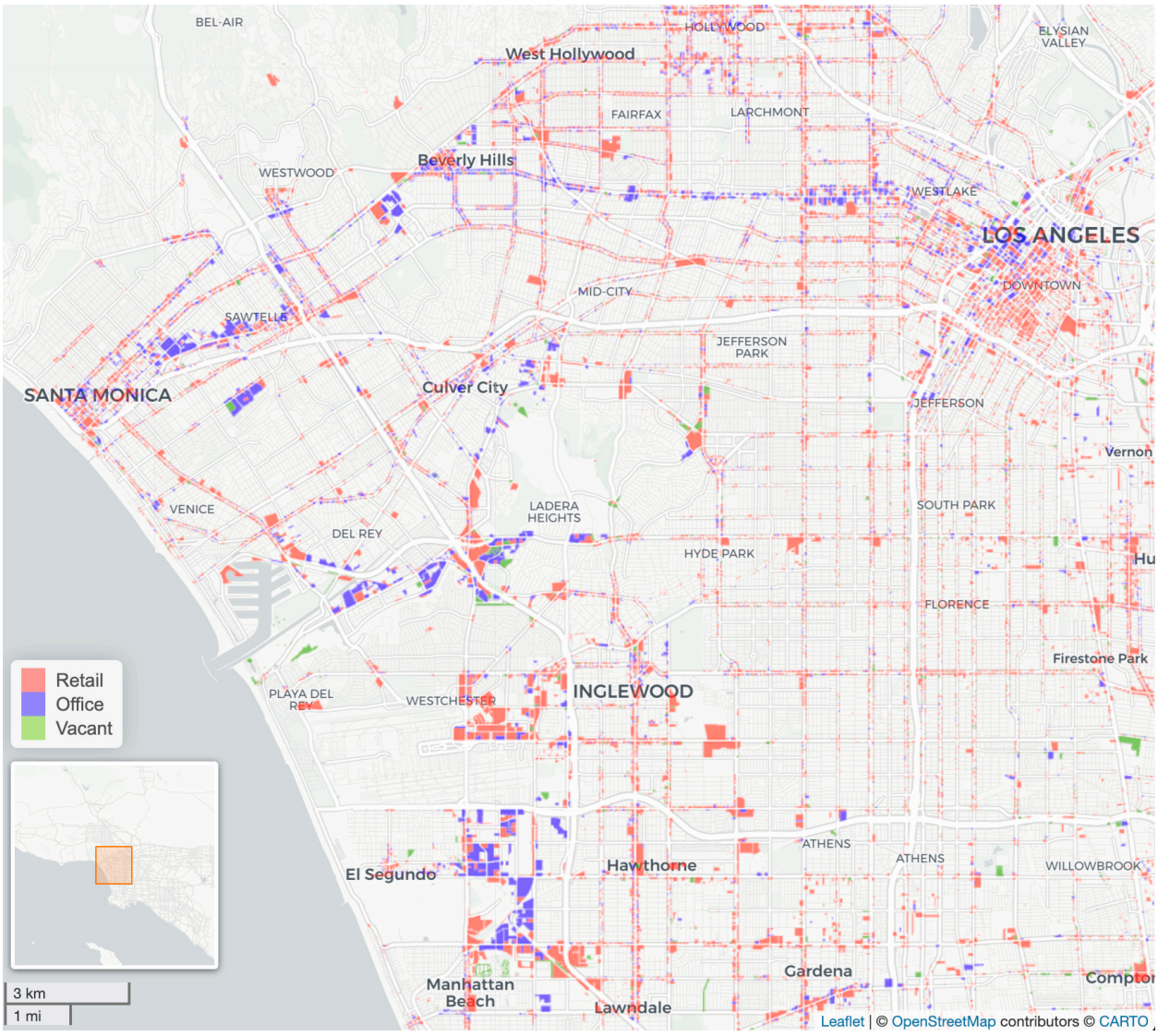
Source: LandVision, U.S. Census; Terner Center analysis.
Notes: See Data and Methodology Appendix for details.

Commercial land patterns vary significantly at the local level.

Commercial use is ubiquitous throughout California but, at a fine geographic level, commercial land is distributed unevenly, concentrated mostly along thoroughfares and in clusters, and away from residential backstreets.

Figure 1 shows the areas to the south and west of downtown Los Angeles. Red indicates retail, blue indicates office, and green indicates vacant commercial lots. Linear concentrations of small commercial parcels are evident along main streets and thoroughfares, including mostly retail, as well as some land dedicated to offices. Small clusters of commercial land are evident as well, involving small parcels as in downtown Los Angeles and Santa Monica, or larger ones as in the clusters near Inglewood (LAX) and El Segundo. Vacant commercial lots are present, but are relatively small and scarce in this area.

Figure 1: West Los Angeles



Similar patterns appear in Silicon Valley in the Bay Area (Figure 2). Commercial land tends to concentrate along thoroughfares and away from residential backstreets. Clusters appear as well. They consist of smaller lots, e.g. in downtown San Jose in the southeast, or of large retail lots. Other clusters, mostly in the northern half of the map, are more diffuse and consist mainly of offices. Vacant commercial lots are relatively small and scarce in this area.

Both areas in Los Angeles and Silicon Valley featured in the maps are older ones, developed many decades ago. More recently developed areas are more likely to contain clusters of large commercial parcels, as well as greater amounts of vacant commercial land. This tendency is demonstrated in Figure 3, which shows a stretch of the Bay Area's East Bay spanning the cities of San Ramon, Dublin and Pleasanton in Alameda County.

The San Diego metro area, whose northern section is shown in Figure 4, and the Sacramento metro area whose central portion is shown in Figure 5, both have smaller commercial parcels clustered in older areas. In the former, these include downtown San Diego and La Jolla, as well as smaller commercial parcels lining thoroughfares in the City of San Diego and its innermost suburbs. In the latter, they include downtown Sacramento. In both, commercial parcels tend to be larger farther from the center, where they comprise numerous relatively large clusters such as the elongated one along I-8 in San Diego, and the Rancho Cordova area east of Sacramento. Whereas the San Diego metro area has relatively few vacant commercial lots, such lots are more common in the Sacramento region.

Figure 6 presents the Inland Empire including its far inland reaches. Figure 7 focuses on the broadly-defined Palm Springs area far inland.[7]

The areas in Figures 6 and 7 contain clusters of commercial land which are especially large, as is visually apparent in contrast to the visible parts of Orange and Los Angeles Counties to the west. Moreover, these areas

Figure 2: Silicon Valley

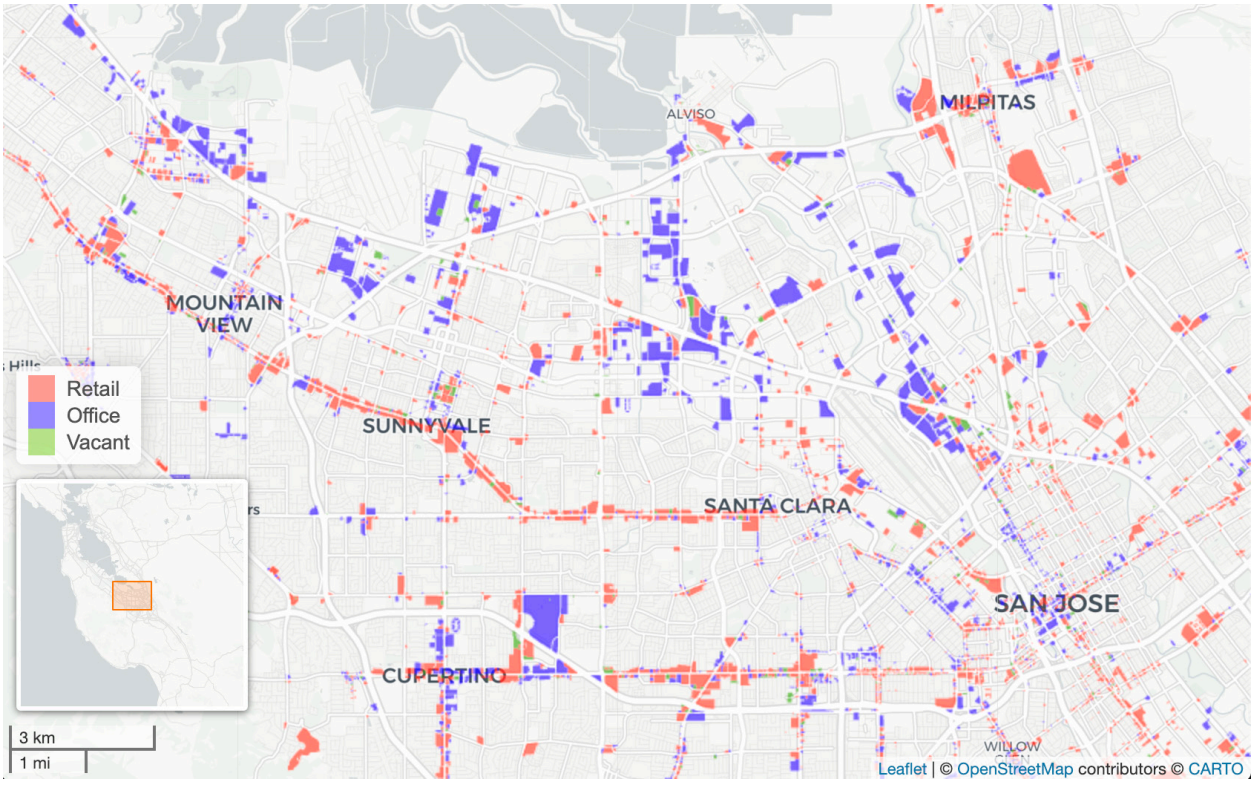
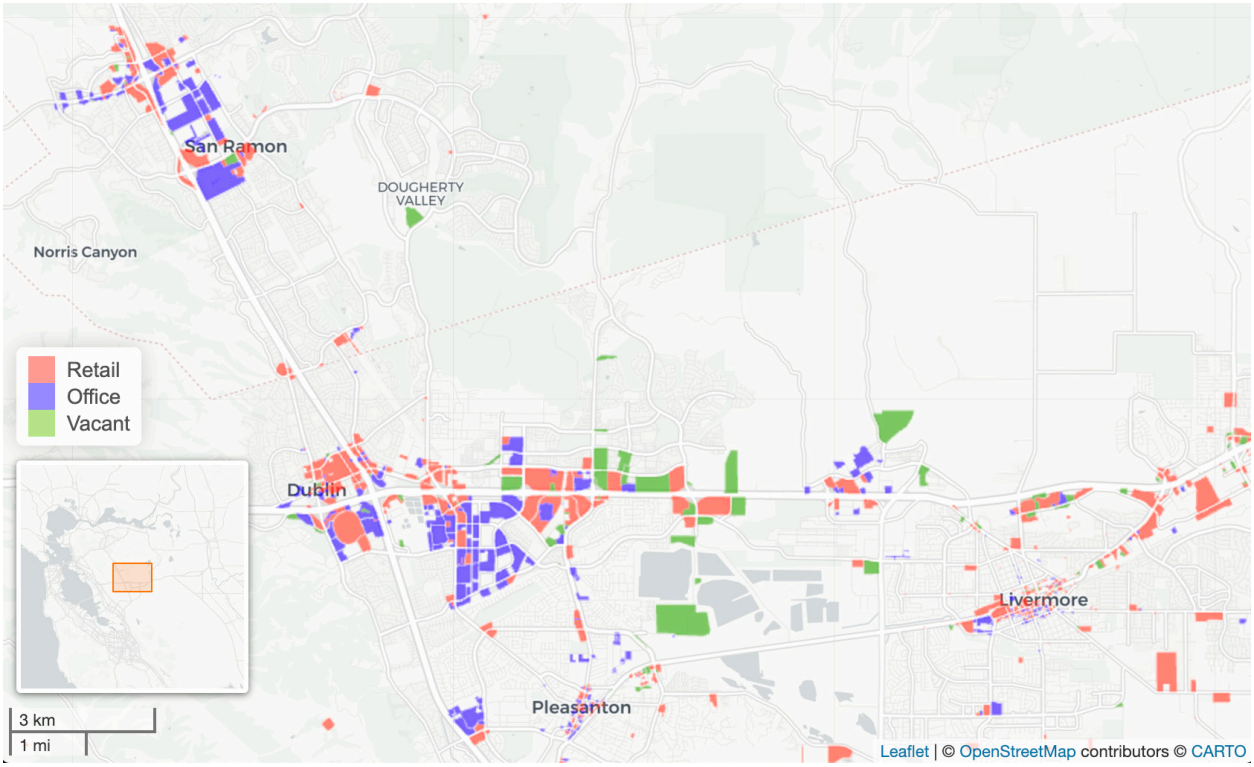


Figure 3: San Ramon, Dublin, and Pleasanton in the Bay Area's East Bay



contain unusually large amounts of vacant commercial land as well, which helps explain Riverside County's high commercial land per capita figure in Table 1 (as well as the even higher figure for tracts over 100 miles from the center of Greater Los Angeles, which primarily captures the broader Palm Springs area). Manual inspection suggests that much of the vacant commercial land in these areas reflects two types of land use: golf courses and parks as well as previously undeveloped land that is in the process of development—for commercial use or otherwise.

The inland expansion of Greater Los Angeles is reflected in a large amount of land being designated in the data as vacant commercial, at least temporarily, as illustrated by the following example from Moreno Valley (Figure 8. The top right panel of Figure 8 shows in green a large stretch of land in eastern Moreno Valley is designated as vacant commercial. In a current Google Maps image of the same territory on the lower left, most if not all of the land appears to be undeveloped. At the same time, a current version of the city's General Plan on the lower right indicates that, despite the vacant commercial designation, the land is planned for a variety of uses, including "Business Park/Light Industrial" (BP) in purple, as well as residential use up to 5 units per acre (R5) in yellow, and "open space" (OS) in light green.[8]

The last example serves as a reminder that this study is concerned primarily with infill, i.e. the redevelopment of commercial land *in developed areas* for residential use, as opposed to greenfield development.

Figure 4: San Diego, North of Downtown

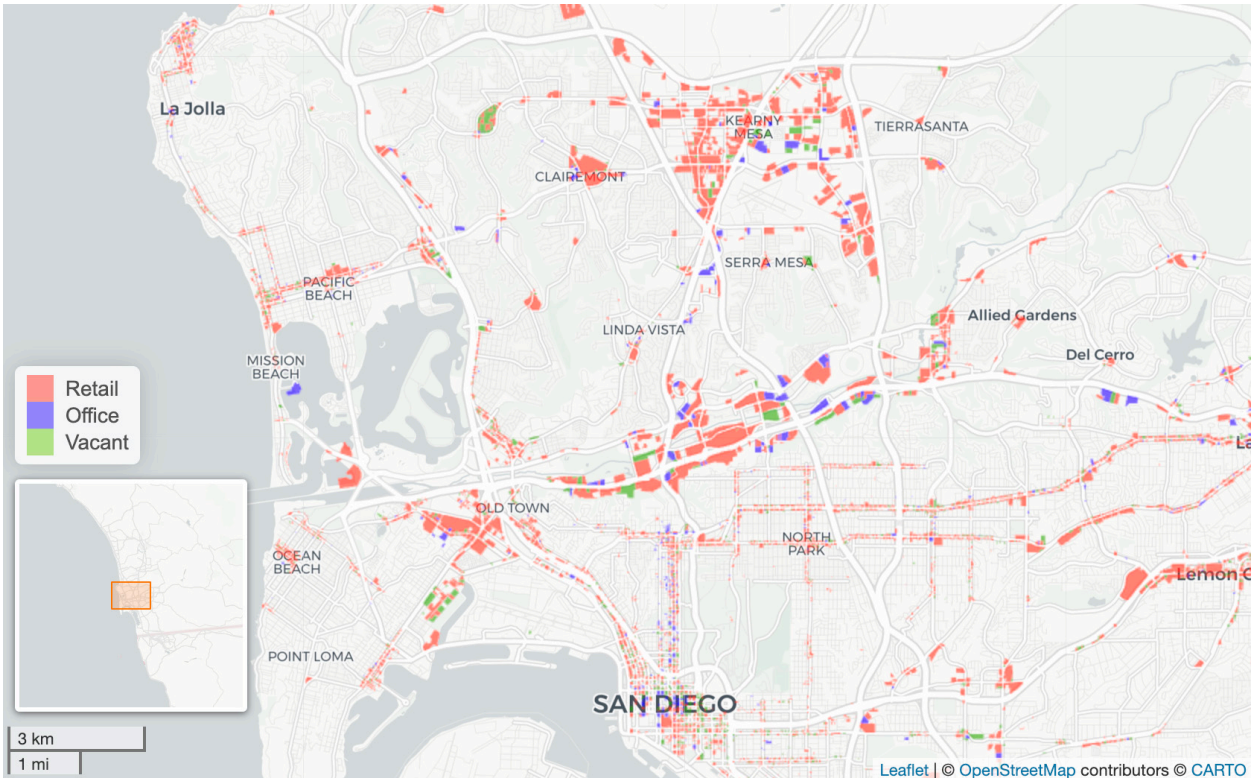


Figure 5: Sacramento, East of Downtown

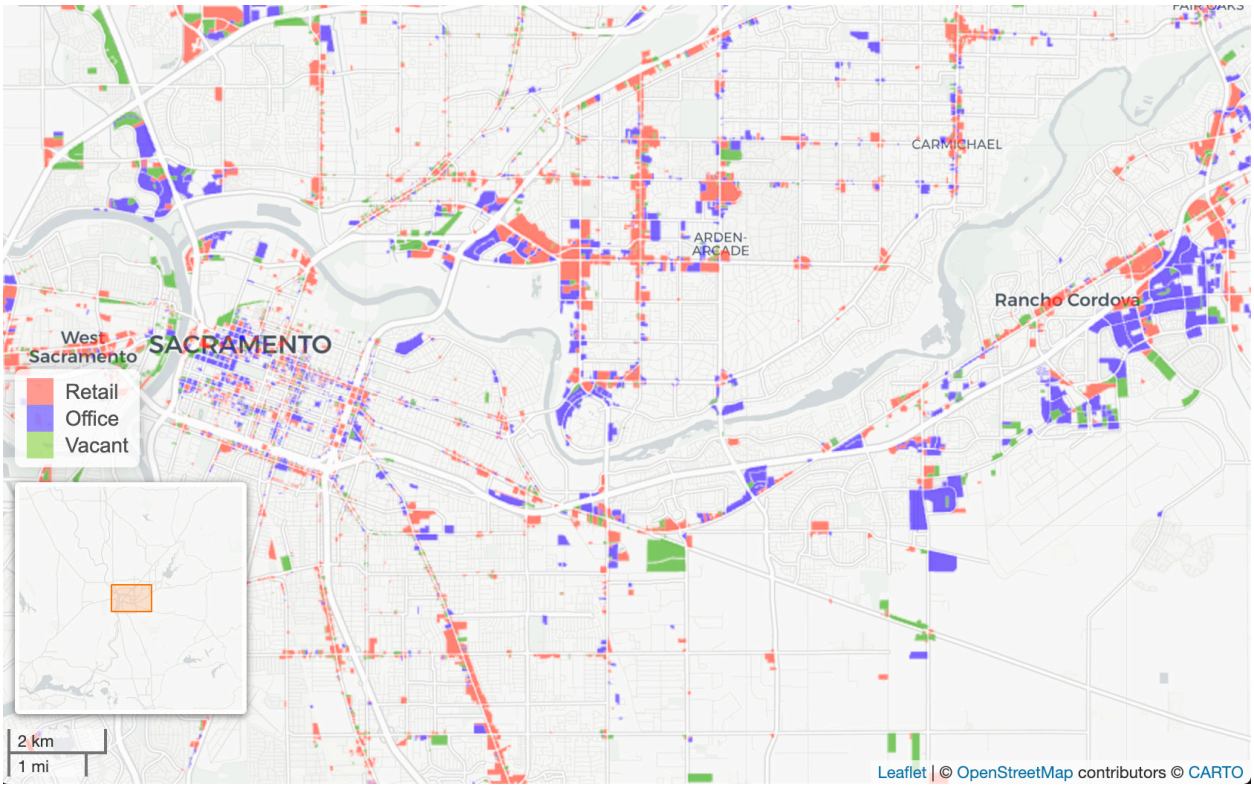


Figure 6: Orange County and the Inland Empire

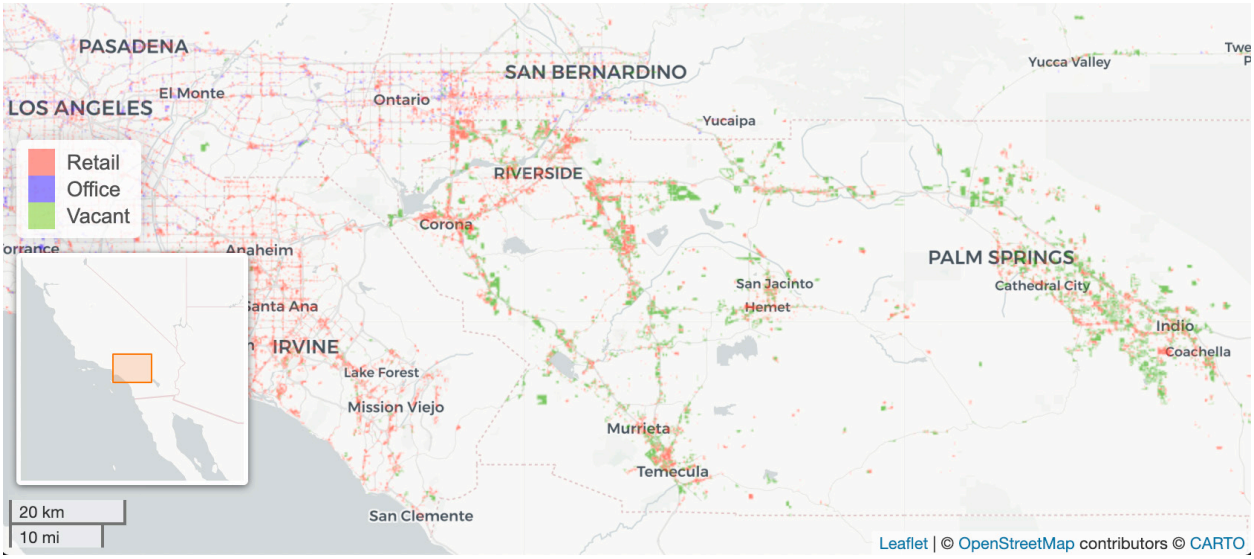


Figure 7: The Palm Springs Area

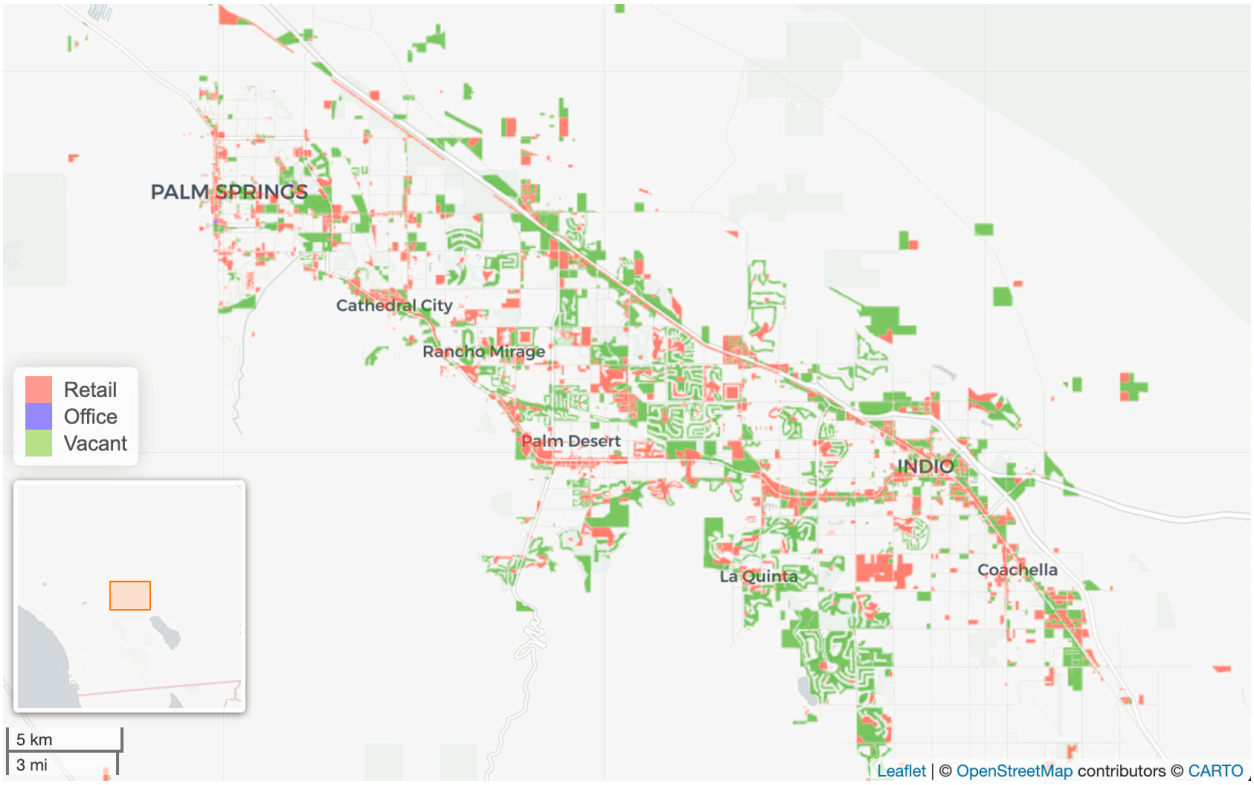
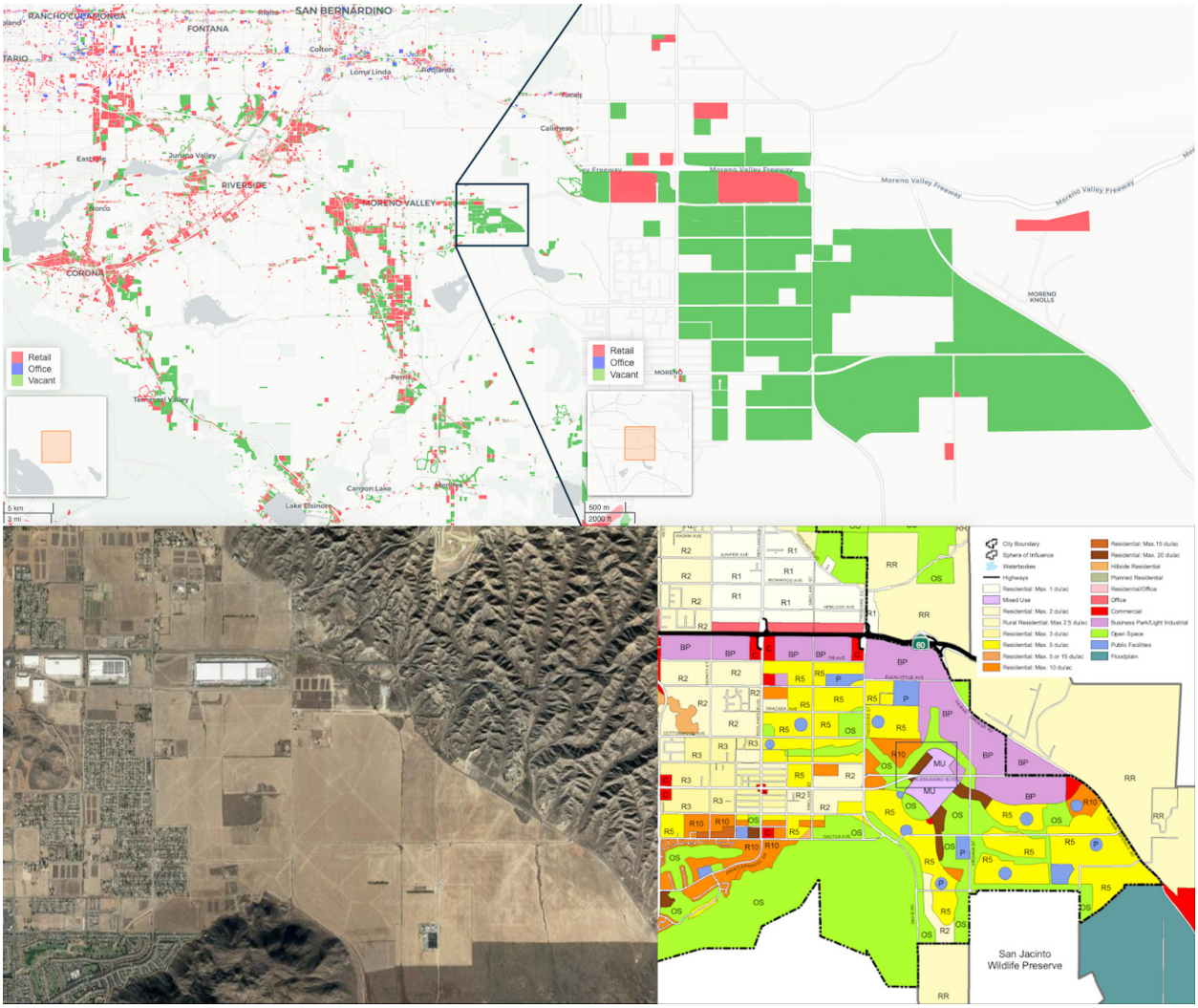


Figure 8: Eastern Moreno Valley, in the Inland Empire



Many communities prohibit residential development in areas zoned for commercial use.

While the preceding analysis finds that a significant share of land is zoned commercial, and that there are opportunities to build more housing in commercial areas, not all cities currently allow residential development in these areas. Our analysis of planning codes throughout the state finds that a significant share of cities whose planning codes do not permit homes built in areas zoned for commercial use. And of the cities that do allow residential development, the entitlement process varies widely across jurisdiction, with many cities imposing strict approval requirements that discourage homebuilding.

In our scan of the 50 largest cities, we identified 367 commercial land use designations. Of these designations, 58.6 percent allow some degree of residential development, whereas 41.4 percent do not. Among those that allow residential development:

- Single-family housing is potentially allowed in 35.8 percent, and in another 31.1 percent it is unclear.
- Multifamily housing is potentially allowed in 53.5 percent, and in another 27.4 percent it is unclear. Mixed-use development is potentially allowed in 29.8 percent, and in another 31.6 percent it is unclear.

It should also be noted that some of the codes we examined may also be subject to zoning overlays or specific plans that may allow residential development, superseding the base zoning code.

The results from our 100 parcel sample from jurisdictions statewide differ slightly from the land use practices we observed in our 50-city analysis. We find that 71 percent of these parcels potentially allow some degree of residential development, whereas 29 percent do not.

Several factors make it challenging to determine what types of development are allowed.

The analysis above suggests that some cities allow residential development on commercial land, but planning codes are subject to significant variability and openness to interpretation, meaning that a developer could face the risk that their project is not approved. Moreover, even when some degree of residential development is allowed, it is almost always subject to a variety of additional qualifications such as conditional use special development permits, and planning commission or site plan reviews. In addition, the amount of the residential development that can take place once permission is received may be limited.

Determining what residential development, if any, may be undertaken on a commercial parcel without consulting the city can be difficult. Oceanside, for example, has a Transit Overlay District that allows a mix of commercial retail, professional office, and residential uses within a half-mile of the Oceanside Transit Center. However, there is no easily accessible map to show exactly what zoning districts/parcels this overlay impacts. In addition, residential development is only allowed within the overlay district if it receives a Conditional Use Permit and a Mixed Use Development Plan is submitted for it.

Another example is from Vallejo, which allows "family residential" in some commercial districts with a Major Use Permit, but provides no clarification regarding what type of residential buildings are allowed. The ambiguity of the zoning code suggests that whether residential housing is allowed ultimately depends on how the Planning Department interprets the code.

The City of San Francisco has one of the most complicated planning codes in the state. There is a special plan area for nearly every

commercial corridor in the city, making it particularly challenging to ascertain what is or is not allowed in a given commercial zone without delving into each special plan in detail. Nor does the planning code go into detail about the types of residential development allowed.

There are several distinct sources of complexity in determining whether and what residential development is currently allowed on commercial land:

- **Conditional use:** Many cities, for example San Jose, allow residential development in commercial areas with conditional use permits only. The uncertainty around the issuance of conditional use permits—which ultimately depends on officials' discretion—makes it inherently difficult to know what will actually be allowed.
- **Overlays:** Many cities have overlays such as mixed-use or transit overlays that allow more types of land use on a parcel than those permitted in the base designation. In addition, cities often also have multiple overlays such as historic preservation overlays that restrict what may be built. It can be challenging to understand which land use designations such overlays apply to and how they affect the potential for residential development on commercial land.
- **Assignment of policies to parcels:** In some cases, it is not clear which parcels a specific land use policy applies to. Sometimes the only way of assessing whether an overlay or a special district applies to a parcel is to rely on a map whose scale and quality do not lend themselves to the task.
- **What is commercial?** As noted earlier, the naming of land use designations is city-specific and can make it difficult to ascertain whether a parcel is considered commercial.

These challenges create a significant lack of clarity and a substantial degree of uncertainty around whether and what residential development may take place on commercial land, and they underscore the importance of drafting legislation that is unambiguous.

Recommendations

Allowing residential development on commercially zoned land has the potential to achieve multiple policy goals. The development of new homes and mixed-use projects on underutilized retail and office property can serve as a catalyst for economic growth while at the same time addressing California's ongoing housing shortage. Moreover, this form of redevelopment advances infill development goals, bringing residents closer to jobs, amenities, and transit, thus reducing per capita greenhouse gas emissions from personal automobile use.[9] However, significant policy change is needed at the state level in order to realize this potential.

Despite the fact that many cities permit some degree of residential development on commercial land, statewide legislation could provide greater clarity and dispel uncertainty around entitlement. Specifically, policymakers should create a baseline set of rules and guidelines across the state to provide some clarity and stability to the approval process for this form of housing development. For example, while some cities allow residential development on commercially zoned parcels, the approval of such projects is often determined by the issuance of a Conditional Use Permit, which can be difficult and time-consuming to obtain and therefore increase the risk to the developer, potentially making a project infeasible. New legislation should require that residential projects proposed on commercially zoned land that meet a specified list of requirements be subject to ministerial approval.

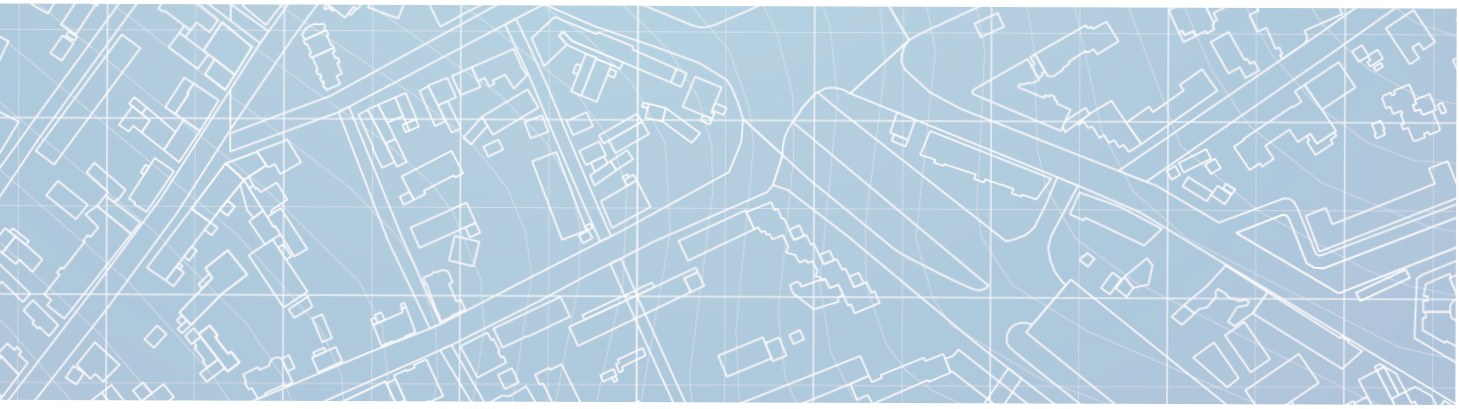
New legislation should also be clear about what constitutes commercial land. As we have found, commercial land has no single definition. For example, we found several instances where land was not explicitly zoned "commercial" but may nonetheless function similar to commercial property and be well-positioned for housing development (e.g., "Employment Center" zoning). On the other hand, some land can be zoned as commercial, but may not be well-suited for residential development, such as greenfield commercial areas or isolated golf courses. Given the large variation across and within cities, new legislation should be clear in how new zoning rules apply in scenarios where zoning designations are unclear.

Conclusion

As California continues to grapple with a critical shortage of housing—against the backdrop of a global pandemic—all options to expand housing supply must be explored. This includes land that has been zoned exclusively for commercial purposes. Given the uncertainty in the retail and office markets in the wake of the pandemic, loosening restrictions on the creation of new homes on commercial land is a unique opportunity to catalyze infill housing while reimagining underutilized space. As our work shows, there is an abundance of commercial parcels throughout the state in communities large and small. And while some cities already allow for homebuilding on these sites, we found that the rules governing the approval process vary greatly across jurisdictions.

This study is the first of two analyses on the topic of building housing on commercially zoned land. In a future report, we will quantify the potential impact of statewide policy allowing residential development on commercial property. This work will include empirical estimates of the relative redevelopment likelihood of commercial land across the state in recent years, given its attributes. By coupling those estimates with a spectrum of assumptions on the extent to which future legislation could raise past redevelopment rates—ranging from conservative to aggressive—the analysis will shed light on the magnitude of the potential housing yield from redeveloping commercial land.

At the local level, our forthcoming work will help jurisdictions determine exactly how the redevelopment of existing commercial land fits into meeting future housing goals. Identifying the likelihood of housing development on commercial property is a complex exercise for local planning departments, but most likely will be a necessary one given that local planners may be turning to commercial property as a means to meet Housing Elements requirements in accordance with sixth-cycle RHNA allocations. A robust model that can predict development patterns on existing retail and office parcels will be a critical tool for planners to accurately incorporate existing commercial land into their upcoming planning cycles.



ENDNOTES

1. Note that despite being stated in terms of square feet, the figures refer to land areas, not floor areas.

2. Across all metro areas and counties, the average amounts of commercial land per capita tend to be substantially higher than those of the median tract. That is because Census tracts which are mostly developed non-residentially tend to harbor particularly large amounts of commercial land, causing the distribution of commercial land per capita across tracts to skew to the right.

3. The figure rises sharply in those parts of Greater Los Angeles which are more than 100 miles away from Downtown L.A., primarily reflecting the broader Palm Springs area up to the Salton Sea in the eastern reaches of the Inland Empire.

4. In addition, land designated for residential-commercial mixed-use is more common towards the center, and its exclusion from the commercial land inventory in this study accentuates the observed pattern (see Data and Methodology Appendix).

5. See Data and Methodology Appendix regarding city name reconciliation.

6. The data reported include the City of Sacramento in the 100,000 to 500,000 resident category (the data are drawn from the 2014-2018 5-year ACS, and Sacramento only more recently crossed the 500,000 threshold). However, separating the City of Sacramento into its own category would not change the results, as it has 728 square feet of commercial land per capita (coincidentally the same as cities in the metro with fewer than 100,000 residents).

7. As mentioned in the Methodology section, the apparent absence of commercial land devoted to offices in Orange and Riverside Counties is an artifact of the data used for this study, which does not adequately distinguish between most commercial land uses in those counties (as well as in Marin County in the Bay Area).

8. Downloaded from http://www.moreno -valley.ca.us/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf on Aug 1, 2020.

9. Building more housing and thereby allowing more people to live in California's metros is generally likely to raise emissions, not lower them. This is probably true *even* if the marginal new residents would be housed in dense, infill locations. However, housing the marginal new residents in dense infill locations does reduce emissions *per capita* (it also creates the potential for gains from more efficient commute patterns). As a result, it reduces global emissions--as opposed to California emissions--inasmuch as the marginal new residents would otherwise live a more emission-heavy lifestyle elsewhere (e.g. Texas) in the absence of the new housing.

APPENDIX: DATA AND METHODOLOGY

Data

Property level data for the relevant counties were obtained from LandVision, and include parcel geometry, acreage, and standardized land use classifications, as well as building square footage,which is necessary for constructing floor to area ratio (FAR). The data include a single snapshot in time of each county, dating from different times between February 2019 and August 2020.

Additional data on populations and housing unit counts for counties were obtained from the 2013 and 2018 1-year ACS, and similar information as well as land area and geometry information for Census tracts were obtained from the 2014-2018 5-year ACS and from 2019 TIGER shapefiles. Populations for places (cities and towns) are from the 2014-2018 5-year ACS.

Information on state-defined opportunity areas as of 2019 was drawn from the California State Treasurer.

Latitude and longitude coordinates for metropolitan centers were obtained from Fee, K., and Hartley, D. (2013). "The Relationship Between City Center Density and Urban Growth or Decline," in S. Wachter and K. Zeuli, eds., Revitalizing American Cities. The center of the San Francisco-Oakland-Hayward, CA CBSA was applied to the Bay Area CSA in its entirety, similarly, the center of the Los Angeles-Long Beach-Anaheim, CA CBSA was applied to the Greater Los Angeles CSA in its entirety.

Methodology Notes

Identification of commercial parcels: Commercial parcels were identified using LPS (Black Knight) standardized use codes provided with the LandVision data. Commercial land was defined to include all use codes in the "Commercial (Retail)" and "Commercial (Office)" categories, except for the "retail/residential (mixed use)" and the "commercial/office/residential (mixed use)" use codes, which already include residential use, and the "funeral home, mortuary (commercial)" use code which includes cemeteries. The distinction between the "Commercial (Retail)" and "Commercial (Office)" categories was used for distinguishing retail and office. In addition, the "commercial - vacant land" use code in the "Vacant Land" category was used to identify commercial vacant land. Note that the hotels, motels and resorts fall within the retail category.

Parcels with acreage greater than 100 acres were omitted from the inventory of commercial land, as a manual inspection suggested the majority were either data errors, rural properties (also excluded by the approximation of metro areas' developed footprint, described below), or otherwise parcels which did not generally appear to be opportunities for residential infill. Notable examples include 2,000 acres referred to as Skywalker Properties in an otherwise undeveloped area in Marin County, and a parcel containing the San Diego Zoo.

The LandVision data consist of records at the address level, such that a single parcel is often reflected in multiple observations. In cases in which land uses conflicted between observations corresponding to the same parcel, only parcels with exclusively commercial land uses were considered commercial. The distinction between retail, office, and vacant was inferred at random from among the addresses corresponding to each parcel (the only exception being a small number of cases in which address level records for the same parcel disagreed with respect to the parcel's acreage, in which cases information from the record with the highest acreage prevailed).

Approximation of the metro areas' developed footprint: In order to avoid including rural parcels, and in order to minimize the unintended inclusion of parcels corresponding to ongoing greenfield development, the sample of parcels considered was limited to those in qualified Census tracts. Census tracts were qualified if they met at least one of the following conditions: (i) their population density was above a threshold of 200 residents per square mile, or (ii) their land area was less than 25 square miles. Condition (i) was motivated by a histogram of tract-level population densities in California, in which a density of 200 residents per square mile roughly bounds the mass of rural tracts at zero from the right, suggesting that higher population densities are not entirely rural. Condition (ii) is intended to capture areas that are urban or suburban but whose population density is low because they are primarily developed non-residentially. Examples include employment centers such as ports and airports, as well as industrial and commercial clusters, such as the Otay Mesa on the Mexican border south of San Diego. Commercial parcels in such tracts may pose infill opportunities, and therefore ought to be included in the set of commercial land considered in the study. The 25 square mile threshold was set ad hoc, based on manual inspection.

Metro and county level populations are the sum of tract-level populations located within the approximated developed footprints.

Reconciling of city names: In order to break out the amount of commercial land per capita by city size it was necessary to assign a city population to each parcel. Unfortunately, the city names included in the site address information often had no corresponding record in the Census list of California places (cities) from which population data were drawn. In cases in which no clear city name match could be obtained, the geographic coordinates of parcel centroids were used in conjunction with place geometry files to assign cities to parcels.

Manual inspection of cities' planning code: The planning code in the 50 largest cities in California was examined manually to identify commercially-designated land uses, and to see if they allow any degree of residential development. 368 land uses clearly labelled as commercial were identified, and an additional 5 that were unclear as to whether or not their cities categorized them as commercial. Of these, 367 appeared also to be clearly commercial in nature.

In addition to these 367 clearly commercial land use designations, another 208 designations were identified that cities did not label explicitly as commercial,

but which seemed potentially commercial in nature. Examples include a large number of mixed-use designations such as the “RMX - residential mixed use” and “EMX - employment mixed use” designations in San Diego, as well as the “CIC - combined industrial commercial” designation in San Jose (categorized by the city as industrial) and the “(LI/FX) Light Industrial/Flex” designation in Elk Grove. Other examples are unrelated to mixed use, and include the “EC - employment center” designation in Sacramento, the “UO - urban office” designation in Fremont, the “business park” designations in Fresno, Santa Rosa, Simi Valley and elsewhere, the “RT - research and tech district” in Huntington Beach, as well as a large variety of specifically named districts such as “Base code - route 66 gateway” in Fontana, the “WSI - Warm Springs innovation area” in Fremont, and the D-CO1 through D-CO6 “Coliseum area districts” in Oakland.

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