



**YIMBY LAW**

Accurate Counting in the Latest  
Regional Housing Needs Assessment

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## Context

The Embarcadero Institute, a new organization, recently issued a report claiming that the California Department of Housing and Community Development (HCD) erred in calculating California's statewide housing need when doing its recent Regional Housing Needs Determinations (RHND). Specifically, they claim that the HCD estimates are too high.

The Embarcadero Institute report mistakenly characterizes a political disagreement as a technical disagreement.

- The Embarcadero Institute report is based on two major mistakes of their own:
- One, they looked at an adjustment meant to account for the fact that the 2010 census was taken during a recession, and thought that it was meant to account for the ongoing pathology of the California housing shortage.

Two, they incorrectly assume that HCD's overall vacancy rate target of 5% means that their target vacancy rate for owner-occupied housing is 5%.

The lawmakers who passed SB 828 understand perfectly well the RHND process. Lawmakers changed the process in an effort to help ameliorate the housing shortage. Please read more in our report below.

## **I. Quick Introduction to the Regional Housing Needs Allocation (RHNA) Process**

Every eight years, California undertakes the Regional Housing Needs Allocation (RHNA) process. During the RHNA process, every city across the state demonstrates it has enough land zoned for housing to accommodate its Regional Housing Need Allocation (RHNA).

First, California's department of Housing and Community Development (HCD) determines the total quantity of housing units that the state needs<sup>1</sup>. HCD also determines the number of units the state needs at four levels of affordability, from very low income to market-rate housing. Based on its findings, HCD generates a number called the Regional Housing Need Determination (RHND) for each of the 11 regions in California, including the Bay Area.

HCD distributes RHND numbers to California's Councils of Governments (COG). COGs cover the Bay Area, the Sacramento region, the LA region, and the San Diego region, as well as other smaller regions. The COGs then each divide up their RHND and distribute allocations to their constituent cities. The city-level allocations are referred to as the RHNA numbers. Cities outside of the Councils of Governments receive their RHNA numbers directly from HCD. Cities must then adjust their zoning codes to allow the quantity of housing development required by their RHNA numbers.

For the sixth RHNA cycle, currently underway, because of new laws like SB 828, HCD's RHND allocations are approximately twice as large as those made in prior years, leading to dramatic increases in RHNA numbers for most cities. Naturally, this dramatic change has led some California residents to attempt to refute the new projections and discredit the process. One such group of residents published a report attempting to frame their opposition to these higher targets as a set of technical objections.

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<sup>1</sup> HCD determines the state's housing need by using various inputs and methodologies that it is instructed to use by state law. More on this later!

## II. Addressing the Embarcadero Institute’s claims that “mistakes were made”

In response to the new, higher Regional Housing Need Determinations, an organization called “The Embarcadero Institute” (EI) authored a report. The report alleges serious mathematical errors in HCD’s allocations:

“Use of an incorrect vacancy rate and double counting, inspired by SB-828, caused the state’s Department of Housing and Community Development (HCD) to exaggerate by more than 900,000 the units needed in SoCal, the Bay Area and the Sacramento area.”<sup>2</sup>

These claims attribute the changes in allocations to mistakes, despite the fact that the sharp increases in RNHD numbers being the direct result of deliberate adjustments by HCD as required by the state legislature.

The Embarcadero Institute’s report makes two major claims, attempting to discredit the new, higher, Regional Housing Needs Determinations (RHND):

- EI claims that HCD “double counted” housing need;
- EI claims that HCD used an inappropriately high target vacancy rate of 5% for owner-occupied housing.

Neither of these claims are true.

### HCD Did Not Double Count

In the past, HCD calculated RHND targets by taking the number of households projected by the CA Department of Finance (DOF), adding small vacancy and replacement adjustments, and subtracting existing units. By 2018, the legislature determined that this approach has failed to produce enough housing in the state over the past few decades to keep up with job growth or to bring prices down. HCD’s prior approach was based on growth projections that assumed that rents, crowding and displacement remain higher in California than in the rest of the US.

In 2018, the state legislature passed [SB 828](#), which directed HCD to add additional adjustments to the housing targets to encourage healthier housing markets. To estimate

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<sup>2</sup> <https://embarcaderoinstitute.com/wp-content/uploads/2020/09/Double-counting-in-the-Latest-Housing-Needs-Assessment-Sept-2020.pdf>

how many homes would be necessary if the Bay Area had a functioning housing market, HCD now needs to use statistics about overcrowding, cost burdening and vacancies from other metro areas that are “comparable” to the Bay Area, but have better housing markets. These stats from other regions are supposed to be used as the goals when HCD is calculating its projections of housing needs.

In other words, instead of assuming that vacancy rates, crowding rates, commute times and rent burdening rates in California would be as bad in the future as they are today, the new process requires that HCD look to other regions, which have relatively healthier housing markets, to find target vacancy rates, crowding rates, commute times and rent burdening rates, then create a projection for housing growth that would bring California’s housing metrics in line with these healthier other regions.

SB 828 explicitly gives specific direction to HCD to adjust its RHNA methodology based on aggressive goals for housing development. The changes to HCD’s calculations and the resulting increases in RHNDs are the intended outcome of SB 828. What the Embarcadero Institute repeatedly classifies as an “accident” is in fact the explicit intent of recent state law.

Compared to the increase in RHND for the Southern California Association of Governments (SCAG), which includes the Los Angeles area, the increase in the allocation for the Association of Bay Area Governments (ABAG) was fairly [moderate](#). HCD effectively let ABAG off the hook in two major ways:

- First, HCD [agreed](#) to use the comparable regions that ABAG selected. ABAG chose metro areas like New York City and Washington with housing markets that are also supply-constrained and expensive. These choices resulted in smaller adjustments<sup>3</sup> for overcrowding and cost burdening than adjustments based on the national average would have been. When HCD calculated the RHND for the Southern California Association of Governments (SCAG), HCD used national cost burdening and crowding rates as the benchmark, and the change between the 5th and 6th cycle RHNDs was therefore much higher for SCAG than for ABAG.
- Second, despite clearly being instructed to do so in housing element law, HCD did not make any adjustments for regions’ jobs-housing balance. Both SB 828 and [SB 375](#), a 2008 law that aimed to reduce greenhouse gas emissions, required that the RHND provide for a “feasible” reduction in the jobs/ housing balance within each

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<sup>3</sup> ABAG overcrowding rates were [adjusted](#) based on a 3.60% overcrowding rate, a 66.00% cost burdening for low and very-low income households, and a 13.10% adjustment for moderate and above-moderate income families. For SCAG, these metrics were [adjusted](#) based on national levels of 3.35%, 59.01%, and 9.94%, respectively.

planning region. In the Bay Area, where job growth has significantly [outpaced](#) housing growth and rates of extreme commute times are among the [highest](#) in the country, this type of adjustment would have resulted in a significantly higher allocation for ABAG. State law requires HCD to make regionwide adjustments that they nonetheless chose not to make.

Given the unambitious goals set by ABAG and HCD for the Bay Area, and the resulting low allocations compared to what the law allows, pro-housing groups organized to advocate for ABAG to appeal their RHND. When that didn't work, YIMBY Law and YIMBY Action [filed suit](#) to force HCD to adjust the RHND for ABAG upwards, in compliance with the state requirement regarding the jobs/housing balance.

HCD's allocations for ABAG were moderate compared to other regions' allocations. Still, SB 828 is mostly working as intended. The RHNDs prepared by HCD are, therefore, much higher all over California this cycle than ever before.

Although SB 828 changed some things about HCD's process for predicting future need for housing units, as discussed, the fundamental process remains the same:

First, the CA Department of Finance (DOF) makes predictions about demand for housing units assuming that nothing changes in California housing policy.

By analogy, suppose you own a coffee shop. Every Monday you buy four gallons of milk, and by the end of every Thursday you run out of milk, so on Friday Saturday and Sunday customers make due with oat milk. In addition, you expect your business to increase by 10% in the coming year. The DoF would project that, given your 10% increase in business, that you need to buy 4.4 gallons of milk every Monday. This projection ensures that you have more milk, to accommodate the increase in customers, but it does not solve your problem of running out every week.

Next, the CA Department of Housing and Community Development (HCD) takes these DOF projections as a starting point and adjusts them assuming that the housing situation *does* improve in California.

Going back to our coffee shop analogy, HCD would project that you need to be buying 7.7 gallons of milk each Monday - one for each day you are open, plus another 10% because your business is slowly growing. HCD's projections both solve your current problem of running out of milk every Thursday and also accommodate projections of future growth.

Instead of assuming that California will continue to have overcrowding, for example, HCD says, ‘What if California had less crowding, how much housing would we need in that case? How much housing would we need for people to be spending less than 30% of their income on rent?’ Therefore, the HCD estimates of housing needs will always be higher than the DOF forecast.

The Embarcadero Institute’s “Double Counting” report alleges that HCD “inadvertently” double counted adjustments for overcrowding and cost burdening, and that this double count has artificially inflated the allocations by 734,000 units statewide. To the contrary, the Embarcadero Institute seems to be misunderstanding the different roles and purposes of the DoF and HCD projections.<sup>4</sup>

The Embarcadero Institute supports their “double counting” thesis by pointing to the fact that the DOF’s household growth forecast contains an upward adjustment, but that alone is not enough information to support their claim.

In preparing the household growth estimates for the current housing element cycle, the DOF corrected for the extreme conditions present in 2010. If you recall, the 2010 census occurred in the midst of a recession. Instead of taking the headship rates<sup>5</sup> during the great recession at face value, and assuming they represent typical headship rates, the DOF [recognized](#) that under healthy economic conditions, headship rates would be higher than those during the Great Recession, reflecting that adults prefer to run their own households.

In their Household Projections for California Counties, the DOF Demographic Research Unit comments:

The argument was that the Great Recession and the affordability crisis which impact recent trends in headship should not be allowed to solely dominate the projection, rather some return to underlying socio-cultural norms of homeownership/fewer roommates is a beneficial assumption that reflects that those conditions were temporary.<sup>6</sup>

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<sup>4</sup> The “second adjustment” is really two separate adjustments to overcrowding and cost burdening, but we find it easier to group them together.

<sup>5</sup> “Headship rate” is the number of adults divided by number of housing units. So a high headship rate means very few adults per household. A low headship rate means that on average, many households contain several adults. When adults move in with their parents, or adults have roommates, the headship rate goes down, fewer adults are running their own households.

<sup>6</sup> See [Table P-4](#) under “Household Projections for California Counties” for numbers and methodology. Link to the table is [here](#).

The Embarcadero Institute argues that HCD does not need to adjust for cost burdening or overcrowding because the DOF's headship rate adjustment already adjusts for these factors. They justify this claim by pointing to a single paraphrased quote from from a [July 2006 RHNA packet](#): "In response, Mr. Fassinger [referring to ABAG Research Director Paul Fassinger] noted that HCD uses these higher headship rates because the RHNA process is intended to alleviate the burdens of high housing cost and overcrowding."

The problem with this argument is that the headship rate referent that the DOF used was the average between the 2000 census headship rate and the 2010 census rate. For the DOF adjustment to have been sufficient under SB 828, the DOF would have had to use a comparison headship rate from a healthy housing market. For instance, the DOF would have had to have used the United States nationwide average headship rate. Or the headship rate in a city known for housing affordability, like Kansas City. Instead, the DOF used a recent average of California headship rates.

As prescribed in Housing Element law, HCD further adjusted the DOF estimates upwards to reflect California's goals for reductions in overcrowding and cost burdening. This second adjustment reflects the legislature's determination that prior allocations have failed to create a healthy housing market or reduce the housing shortage.

So, do these two adjustments qualify as "double counting?" ABAG doesn't think so. In ABAG's May 28th [consultation package](#) to HCD, ABAG Deputy Policy Director Alix Bockelman writes,

[The] DOF forecast per the State Administrative Manual is characterized as a 'baseline' forecast<sup>7</sup> that relies on demographic data. **Housing Element Law requires HCD to make adjustments to the baseline DOF forecast to integrate additional housing growth to ameliorate housing markets characterized by below-average vacancy rates and above average rates of overcrowding and cost-burdened households.** This way, the RHND consists of both the baseline need as well as additional or unmet need as identified through the adjustments. (emphasis added)

Ms. Bockelman even writes that HCD should use DOF's baseline rather than ABAG's larger Regional Forecast projections for determining its RHNA numbers specifically to *avoid* a double count: "we believe it is appropriate for HCD to use the DOF forecast as an input to the RHND calculation instead. Using the Regional Forecast as the basis for determining the

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<sup>7</sup> Footnote included in letter: "See Cal. State Admin. Manual Section 1100), retrieved at [https://www.dgsapps.dgs.ca.gov/documents/sam/SamPrint/new/sam\\_master/sam\\_master\\_file/Chap1100/Chap1100\(Notebook\).pdf](https://www.dgsapps.dgs.ca.gov/documents/sam/SamPrint/new/sam_master/sam_master_file/Chap1100/Chap1100(Notebook).pdf)"



RHND would double count the effects of the adjustments for overcrowding and cost burdened households that HCD must subsequently apply when calculating the RHND.”

This consultation package and the resulting allocations show a consensus between HCD and ABAG to treat DOF’s projections as a baseline as described in the State Administrative Manual. These communications also indicate that HCD and ABAG were aware of the potential for a double count and agreed upon the lower projections of growth as an input to the RHND process specifically to avoid it.

Legislators made changes to the RHNA process because they deemed that prior RHNA cycles failed to alleviate California’s housing shortage. The legal context has changed as legislators have responded more aggressively to California’s worsening housing crisis over the past 14 years. Also, Mr. Fassinger is the first person HCD thanks for his collaboration on their 6th cycle RHNA<sup>8</sup>, and Ms. Bockelman lists his contact information at the end of ABAG’s consultation package. It’s hard to believe that Mr. Fassinger somehow misunderstood the process or forgot about DOF’s methodologies this time around.

The Embarcadero Institute report boldly concludes that DOF’s first model adjustment is “unknown to the authors of SB-828.” This is manifestly false. The authors of SB 828 understand well that the preexisting methodology has been ineffective given the current state of California’s housing markets, and they set out to fix it<sup>9</sup>. SB 828’s lack of reference to DOF’s methodology does not prove or even suggest that the authors are unaware that any DOF adjustment to headship rates exists. (See Appendix B for more discussion of this point.)

### Vacancy Rates

The other “correction” that the Embarcadero Institute’s report addresses is HCD’s use of a 5% ideal vacancy rate for all units, rental and homeownership<sup>10</sup>. HCD has discretion to choose target vacancy rates per SB 828—the only explicit requirement is that the vacancy rate for rental units be no less than 5%.

The Embarcadero Institute incorrectly writes that “Government Code 65584.01(b)(1)(E)... specifies that a 5% vacancy rate applies only to the rental housing market.” In fact,

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<sup>8</sup> [ABAG RHNA Determination Page 2](#)

<sup>9</sup> Annie Fryman, Policy Director for Scott Wiener, author of SB 828: “Housing advocates identified several ways that HCD and regional governments were underestimating the Regional Housing Needs Determinations, therefore allowing cities to under plan and under zone for housing. We wrote SB 828 to ensure that the Regional Housing Needs Assessments for individual cities would increase dramatically, fully aware that many Allocations would increase by at least twice as much, and in some cases by a factor of 10 or more.”

<sup>10</sup> Page A-5

Government Code 65584.01(b)(1)(E) specifies only that “the vacancy rate for a healthy rental housing market shall be considered no less than 5 percent.” This does not mean that HCD can *only* apply a 5% vacancy rate adjustment to rental units.

HCD [explains](#) their 5% metric as a “standard 5% maximum to **total** projected housing stock.” (emphasis added) The Embarcadero Institute’s concern seems to be that this 5% number is too high for owner-occupied units, but that’s not what HCD’s choice of 5% means. Instead of differentiating between rental and owner units, HCD grouped them together and selected one vacancy rate to apply to all units.

In effect, HCD is targeting a vacancy rate higher than 5% for rental, and lower than 5% for homeownership. For example, if the target vacancy rate for homeownership is 2%, HCD’s goal would be a rental vacancy rate of almost 9.5% vacancy rate for rentals (assuming that 60% of housing units are ownership, 40% are rental).

We know that HCD and at least one California region, SCAG, discussed this interpretation of an overall benchmark during consultations, before the allocations were determined. SCAG’s [challenge](#) of HCD’s methodology acknowledges that SCAG and HCD discussed vacancy rates during the consultation period:

SCAG discussed this matter with HCD staff and provided several points of comparison ... SCAG staff illustrated that given tenure shares in the SCAD region, **HCD’s suggestion of a 5 percent total vacancy rate is mathematically equivalent to an 8 percent rental market vacancy rate plus a 2.25 percent for-sale housing vacancy rate.** (emphasis added)

These rates and similar mathematically equivalent ABAG rates fit HCD’s previously stated criteria for acceptable ranges for vacancy<sup>11</sup>.

The report’s implication that HCD used a 5% ideal vacancy rate for owner-occupied units is an unsupported inference. In addition, HCD has the authority to determine vacancy rate adjustments, so it would be inaccurate to refer to HCD’s selected vacancy rate(s) as “incorrect” regardless of what they are. Again, the selected 5% overall ideal vacancy rate is reasonable by HCD’s own standards.

The Embarcadero Institute’s line of argument around the target vacancy rate for owner occupied housing is somewhat bizarre because it has no impact on the overall housing

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<sup>11</sup> Because approximately 60% of ABAG homes are owner-occupied, the 5% overall rate is equivalent to a 8% vacancy rate for rental units and a 3% vacancy rate for owner-occupied, or a 7% vacancy for rental and 3.67% for owner-occupied. For the 5th cycle, HCD [defined](#) healthy vacancy rates as “1 to 4% for owner units

allocation. The reason that HCD uses an aggregate vacancy rate, and does not disambiguate between renter and ownership housing, is that the RHN Allocations make no distinction between rental and ownership housing.

Assuming, again, 60% rental and 40% ownership, and seeing that HCD is using 5% as the overall vacancy rate, averaged over both rental and ownership housing, there are many different pairs of rental and ownership target rates that all average to the same 5% target.

	Target Rental Vacancy Rate	Target Ownership Vacancy Rate	Equivalent Overall Rate
Illegal per SB 828	1.0	11.0	5
Illegal per SB 828	2.0	9.5	5
Illegal per SB 828	3.0	8.0	5
Illegal per SB 828	4.0	6.5	5
Permitted per SB 828	5.0	5.0	5
Permitted per SB 828	6.0	3.5	5
Permitted per SB 828	7.0	2.0	5
Permitted per SB 828	8.0	0.5	5
Permitted per SB 828	8.3	0.0	5
Mathematically Impossible	9.0	-1.0	5

Perhaps the bureaucrats in HCD were imagining that the rental vacancy rate and the ownership vacancy rate were equal to one another when doing their calculations, or perhaps they were imagining that the rental vacancy rate should be 8% and the ownership rate should be 0.5% percent. We have no idea, and it doesn't matter, because the output is exactly the same either way.

### **III. Embarcadero Institute presents a political disagreement as a technical complaint**

The Embarcadero Institute claims that HCD overestimated housing need by 734,000 units via double counting (and another approximately 166,000 units by using an inappropriate vacancy rate). The EI evidently arrived at this number by simply adding up the entirety of HCD's overcrowding and cost burdening adjustments for the four regions and declaring them to be entirely redundant.

The Embarcadero Institute clearly thinks that the overcrowding and cost burdening adjustments are unnecessary or excessive, but this is politics, not math. The state legislature directed HCD to make adjustments beyond DOF's projections, because the DOF projections only aim to return headship rates to the 2000-2010 California state norm. These adjustments resulted in

**The Embarcadero Institute clearly thinks that the overcrowding and cost burdening adjustments are unnecessary or excessive, but this is politics, not math.**

larger RHND numbers, as intended by the legislature. It is inaccurate to repeatedly refer to the inclusion of targeted adjustments for overcrowding and cost burdening as some kind of oversight or a mathematical error.

To be clear, the DOF housing need projections assume that California's housing shortage continues unabated, that no public policy interventions are successful in reducing overcrowding, increasing vacancy rates, reducing commute times or distances, reducing rent burdens or reducing displacement. The Embarcadero Institute's position is that the DOF projections are sufficient, and any projected housing need beyond them is 'extra.'

This is not an argument about math or methodology but about policy. By characterizing the projections of housing need that will ameliorate the housing shortage as 'extra', the members of the Embarcadero Institute are making the statement that the housing shortage is not a problem that needs to be solved.

## Appendix A: Improving HCD’s Methodology and Addressing the Housing Crisis

The Embarcadero Institute distinguishes between HCD’s current and past methodologies by referring to the older, more conservative model as the “conventional economist approach.” In fact, a “conventional economist approach” would measure the extent of California’s housing crisis by considering prices as indicators of market efficiency. To calculate housing need, HCD constructs a model that depends on assumptions about “natural” vacancy rates and “ideal” headship rates. Despite the words “natural” and “ideal,” these benchmarks are arbitrary. Prices are a signal that arises organically based on the interaction between available supply and level of demand; in other words, prices are a truly natural benchmark.

Models already exist for measuring housing shortages using economic techniques. Harvard economist Edward Glaeser and Wharton economist Joseph Gyourko pioneered a widely used [economic model for measuring undersupply in housing markets](#) in 2002 by comparing the difference between housing prices and the costs of development. If supply efficiently meets housing demand, so the model suggests, then housing prices will be close to the cost of housing production.

In their foundational study, “The Impact of Zoning on Housing Affordability,” Glaeser and Gyourko analyze data of housing prices from across the United States. In most parts of the country, housing prices were similar to the cost of development. However, in a few places such as coastal, urban California and New York, housing prices were much higher than construction costs. Glaeser and Gyourko present evidence suggesting that restrictive local zoning rules are the primary factor driving housing prices above the cost of development by artificially decreasing supply. Their results have been supported over the past two decades by further work from Glaeser as well as [other influential economists](#).

There are many models an economist could reasonably use to measure a mismatch between housing supply and demand, but all rely on prices. A book published by the World Bank in 2009, [Urban Land Markets](#), explores Glaeser’s studies into housing as well as econometric models devised by other researchers; all of them consider prices. Economic research shared in the 2019 book [Hot Property: The Housing Market in Major Cities](#), which also features Glaeser, also emphasizes prices.

The origins of the RHNA process explain why HCD uses its current methodologies. When HCD first began calculating housing need in 1969, data, computing power and statistical techniques were all lacking to estimate housing shortages. Furthermore, the parameters

used in econometric models cannot easily be enshrined in law, unlike the clearly defined metrics for overcrowding, cost burdening, and vacancy currently used by HCD.

Nonetheless, the nonpartisan Legislative Analyst's Office (LAO) used econometric techniques to estimate California's housing shortage in a 2015 paper, "[California's High Housing Costs: Causes and Consequences](#)." The LAO's analysts estimated how much housing California would need to build in order for our housing prices to resemble average housing prices across the US<sup>12</sup>. They find that California's coastal metropolitan areas would have needed to build between 70,000 and 110,000 units annually from 1980-2010 for California's prices to resemble the average across U.S. metropolitan areas. That means that, as of 2010, California needed to build between 2.8 and 3.3 million homes for prices across the state to resemble those of the average metropolitan area around the country.

These numbers are similar to HCD's estimate of housing need for the 6th cycle Regional Housing Needs Allocation, but the difference in methodology has large implications. HCD's formula can be adjusted significantly by legislation, much like HCD's model was adjusted by SB 828 in 2018. Economic models, though never perfect, are influenced more by the laws of statistics than the political tailwinds. While we believe that HCD's model for estimating housing need post-SB 828 is more accurate than prior models, we also believe that future legislation grounding HCD's methodology for estimating housing need in econometrics will maximize accuracy. Research by the LAO and Glaeser offers a blueprint for measuring housing need by estimating the quantity of housing necessary to reduce prices. Future legislation could empower HCD and LAO analysts to collaborate on devising econometric models for measuring housing while also creating systems to seek input from academics and the public.

Unrelated to HCD methodology, another issue raised by the Embarcadero Institute merits acknowledgement and clarification: While demanding that cities meet quotas for affordable housing development, the state government offers little assistance to cities. A [November 2020 report](#) from the State Auditor found that the state's agencies do not coordinate effectively to allocate funding for affordable developments. In a shocking example of mismanagement, the state's Debt Limit Committee allowed \$2.7 billion in bond resources available for subsidizing the construction of more income-restricted units to expire.

However, unlike the Embarcadero Institute, the State Auditor recommends that the state continue to limit local jurisdictions' control over restrictive zoning and extensive review processes. While the Embarcadero Institute emphasizes local control over development,

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<sup>12</sup> See page 36 of the LAO report for a description of their methodology.

the State Auditor recognizes that some cities' abuse their discretionary authority, exacerbating the affordable housing shortage and leading to inequitable outcomes.

Exclusionary zoning, regulatory burdens and distorted tax incentives from laws like CEQA and Prop 13 have long been [identified](#) as obstacles to housing growth in the state, both for income-restricted and market-rate units. Claims from the Embarcadero Institute like "the market will take care of itself. The state's responsibility is to take care of those left behind in the market's wake" ignore the impact of zoning and regulatory burdens on the existing housing shortage. Modern housing markets, in the context of restrictive zoning and long review processes, are clearly failing to keep up with demand in cities like Palo Alto in Santa Clara county, where job growth [outpaced](#) housing growth by a factor of ten from 2011 to 2017.

The problem of housing affordability in California is multifaceted. California needs more income-restricted units designated affordable to those who need them the most, but the state's housing problems go deeper than a lack of income-restricted, designated affordable units. Even if you take the Embarcadero Institute's evidence at face value, their evidence does not support arguments that California no longer needs more market-rate housing. For ordinary goods like housing, high prices always result when supply is not large enough to meet demand; therefore, market-rate housing will remain exorbitantly expensive unless housing supply increases. In fact, [a large body of economic evidence](#) suggests providing subsidies for affordable housing without increasing supply of all housing causes prices to rise for market-rate buyers.

## Appendix B: Estimating “Redundancy”

The Embarcadero Institute argues that DOF’s adjustment of headship rates corrects for overcrowding already, so the second adjustment of about 734,000 units across the four regions is entirely redundant. Again, we don’t believe that HCD’s methodology is a “double count” or redundant at all. For the sake of argument, though, we can use DOF’s data to estimate what their numbers would have looked like with no projected change in household size between 2020 and 2030, and then compare the results to estimate how much of the second adjustment is “redundant.”

On a statewide level, DOF’s projections bring the average household size down from 2.96 in 2020 to 2.88 in 2030. If we instead assume that the statewide rate doesn’t change and stays at 2.96 with the same population increase, we can very roughly approximate the difference that the adjustment down to 2.88 made.

This isn’t a perfect estimate, but it likely overestimates the “redundancy.” DOF’s projection for 2020 (2.96) shows household density decreasing by 0.01 from a peak in 2015 (2.97). Housing development [accelerated](#) over the past decade, and the 2017 slate of housing laws aside from SB 828 will likely encourage building trends to accelerate even more. With that in mind, it would be reasonable to assume a reduction in average household size over the next decade regardless of any intentional DOF adjustment to increase headship rates.

### California Household Data Comparisons

	2020	2030 (DOF)	2030 (No change to household density from 2020 projection)
Household Population	39,276,278	41,341,395	41,341,395
Household Density	2.96	2.88	2.96
Number of Households	13,272,939	14,370,880	13,966,688

$$14,370,880 - 13,966,688 = \mathbf{404,212}$$



So, the difference made by this adjustment is about 404,000 households statewide. Embarcadero Institute's claim that 734,000 units can be attributed to incorrect adjustments for just the four regions included in the report is significantly exaggerated, even if we accept their questionable premise that there is some double count and use this pretty generous estimate<sup>13</sup>.

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<sup>13</sup> Frustratingly, the Embarcadero Institute even seems to acknowledge their own overcount. In their [response](#) to an earlier rebuttal of their report from UC Davis Law Professor Chris Elmendorf, who also [pointed out](#) that DOF's adjustments alone are not intended to achieve the same effect as the adjustments called for in SB 828, the Embarcadero Institute writes: "Our larger point about double counting was that SB-828 did not mention the DOF adjustment for overcrowding and cost-burdening. It wasn't clear anyone drafting the legislation realized that the DOF had already made some accommodation for overcrowding and cost-burdening. Any adjustment for these factors should be done just one time in the model. Even if Elmendorf believes the DOF adjustment isn't enough, it doesn't make logical sense to have two separate adjustments for the same variable in one model."

It's not just Professor Elmendorf's belief that the DOF adjustment isn't enough. HCD and ABAG agreed on more ambitious new direct adjustments, as SB 828 calls for. The passage of SB 828 indicates that the state government found the status quo approach to be inadequate. If the Embarcadero Institute disagrees, again, that's a political disagreement, not a correction.