Final Report:
Examining Entitlement in California to Inform Policy and Process: Advancing Social Equity in Housing Development Patterns

3900-19STC005

Written by
Principal Investigator: Moira O'Neill-Hutson, JD
Co-Principal Investigator: Eric Biber, JD, MS
Raine Robichaud, BA
Giulia Gualco-Nelson, JD*
University of California, Berkeley
Co-Principal Investigator: Nick Marantz, PhD, JD
University of California, Irvine

March 18, 2022

Prepared for the California Air Resources Board and the
California Environmental Protection Agency

Disclaimer: The statements and conclusions in this Report are those of the contractor and not necessarily those of the California Air Resources Board. The mention of commercial products, their source, or their use in connection with material reported herein is not to be construed as actual or implied endorsement of such products.

Acknowledgments

At UC Berkeley, Giulia Gualco-Nelson, JD, formerly a Research Fellow in Law & City Planning, collaborated with the PI and Co-PI on substantial data collection and writing that the team incorporated into this report. Kenneth Warner, MS, formerly research staff at UC Berkeley, provided research support with data collection and preliminary analysis. Graduate Student Researchers and law students, including Vince Young, Nina Lincoff, Julia Butts, Randall Winston, Sela Brown, Brendan Adams, Sean Kiernan, Heather Jones, Jeff Clare, Nathan Theobold, Jenny Chhea, Eric Prather, Bonnie Stender, and Kelly Frost, supported legal research and collecting court documents. Undergraduate Student Researchers Vivek Adury, Grace Jang, Brandon Jones, Nerine Ortiz Pon, Minh Hang Nguyen, Taewon Park, and Leon Ren supported data collection and transcription. Graduate Student Researchers Ivy Wang and Chris Hacnik supported finalizing this report. At UC Irvine, Graduate Student Researchers Narae Lee and Huixin Zheng supported data cleaning and quality checking all GIS coordinates. The Silicon Valley Community Foundation and Chan Zuckerberg Institute provided research grants to support data collection and analysis in 16 of the 20 study jurisdictions covered in this report.

The University of California, Berkeley submits this Final Report in partial fulfillment of contract #3900-19STC005, *Examining Entitlement to Inform Policy and Process in California: Advancing Social Equity in Housing Development Patterns* under the sponsorship of the California Air Resources Board.

List of Tables

Abstract

This report details findings and analysis from the ongoing Comprehensive Assessment of Land Use Entitlements Study (CALES). CALES examines how jurisdictions approve housing development that would produce five or more units, if built. CALES also analyzes how enforceable climate policies, such as the California Environmental Quality Act (CEQA), operate in relationship to the approval of new housing in urban and exurban areas and whether new housing development in both contexts faces opposition through lawsuits. All data points to local authority over land and local regulation as the most significant barrier to increasing the development of dense, infill housing and affordable housing in the study areas. Local governments could eliminate obstacles associated with state-level environmental regulation (and related litigation) by reforming their own local law. Though community opposition to housing through litigation varies across cities, less than 3% of all approvals in our data faced litigation—with no meaningful difference between litigation rates for housing in urban or exurban contexts. Both urban multi-family and exurban subdivision development used similar expedited environmental review pathways intended to promote infill development; this is true for exurban development sited in high fire hazard areas.

Executive Summary

Background

California faces a persistent housing crisis that challenges climate policy implementation, civil rights, and poverty alleviation. Inadequate housing supply in the state's high-cost coastal metropolitan areas contributes to this crisis. The California Air Resources Board has made clear that reducing automobile travel is critical to achieving the state's climate change goals. Increasing ***dense infill transit-oriented residential development (TOD)***[1] in the state's high-cost metro areas could address the housing crisis while also mitigating climate change. Some affordable housing advocates contend that infill residential TOD displaces lower income populations, disproportionately people of color, pushing them into adjacent ***exurban*** areas. These advocates caution against policy that promotes residential TOD unless it prioritizes affordable housing. Relatedly, some commentators argue that recent state policies unduly constrain housing development in exurban areas, also to the disadvantage of people of color. Though there is evidence that land use regulation, generally, constrains housing supply and increases housing costs in high-cost metros, there has been no research to date that provides granular local-level data on how land use regulation (both state and local) impacts specific types of housing development (such as TOD or exurban development). Many cities have also created housing affordability, equity, and climate goals, but lack the data to evaluate them. This data gap inhibits effective local and state policy development. Crafting regulation that advances housing affordability and tackles the impacts of climate change demands granular data about how land use regulation operates.

Objective and Methods

To understand the impact of land use regulation, including state-required environmental review and local planning and zoning, on the production of ***dense*** housing development (defined as five or more housing units), we conducted mixed method case study research in twenty jurisdictions in the State of California. We identified sixteen cities, including eight of the state's ten largest cities, that would likely approve TOD residential development and one city and three counties that would likely approve exurban development for study. We researched and summarized each jurisdiction's local planning and zoning. We then gathered data on how they approved all residential or mixed-use development that would produce five or more housing units from 2014-2017. We examined each jurisdiction's ***entitlement process*** and application of state-required environmental review. We interviewed stakeholders involved in the residential development process in all twenty jurisdictions.

We compared our study jurisdictions' local regulations, application of state-required environmental review, and use of state incentives to increase desired housing

[1]Terms in bold and italics are defined in the glossary section.

(such as TOD). We described the likely impact of different regulations on different types of housing supply. We used spatial analysis to examine whether the housing approvals we gathered would promote the goals of fair housing legislation and California climate policy.

Results

Our work suggests that the chief regulatory contributor to California's housing crisis is local governments hindering dense housing via zoning and development approval processes. Many cities we studied have zoned little land for dense (and thus affordable) housing, and even less so in higher opportunity neighborhoods (as identified by the ***California Fair Housing Task Force Opportunity Mapping Methodology***). For instance, only 3.19% of all zoned land in the City of San Diego allows for dense housing (Table 2). But even where cities zoned more land for dense development, local regulation creates lengthy housing development approval timelines that impact the development of individual projects. Across all jurisdictions, most development did not require intensive environmental review, and infill and exurban development used similar pathways to meet state environmental review requirements. Variation between median timeframes for approval of similar housing in neighboring urban cities with identical environmental review processes were extreme, differing by over 20 months (Table 14). This variability creates uncertainty for developers and may constrain infill development. Notably, infill development took far longer to approve in urban areas than exurban areas we studied in San Diego County and Los Angeles County. All of this may contribute to ***sprawl***.

Less than 3% of approved projects were litigated (about 6.9% of all approved units); they were more likely to face ***administrative appeals*** through the local land use regulatory process. Though most lawsuits included a claim brought under the ***California Environmental Quality Act (CEQA)***, ~70% of lawsuits also had claims based on local land use law. Most lawsuits settled and plaintiffs rarely succeeded in court. Many lawsuits had claims relating to greenhouse gas emissions or vehicle miles traveled, but these were not more likely to succeed than ones without these claims. There is no meaningful difference between rates of litigation for urban or exurban development, though interviews indicate that we should examine lawsuits challenging specific and general plans to understand how litigation might impact planning and rezoning for dense housing supply.

In some cities, entitlement included approving demolition of existing housing, often in neighborhoods with a history of disinvestment. Demolition of rental housing in these cities signals physical displacement. It may also risk economic displacement by eliminating existing rent stabilized housing in neighborhoods that have recently become more affluent. Very little of the entitled housing in these more affluent neighborhoods will include affordable housing if built.

Conclusion

Local regulation within infill areas we studied appears inadequate to support both climate and fair housing goals. Our urban study cities need to approve more housing. Cities approved few affordable units in higher opportunity areas, which is unsurprising given how little land area they zone for all incomes in those areas. State environmental review did not appear to play a dominant role in incentivizing or constraining either TOD or sprawl. Local law limits the impact of CEQA ***streamlining*** or exemptions on approval timelines. Single-family subdivision in exurban areas may also benefit from less intensive review. Litigation rates are low but can add years to overall timeframes.

I. Introduction

California, the nation's largest state by population and economy, is acutely impacted by a persistent housing crisis that is in part driven by high housing costs in its coastal metropolitan regions (Alamo, Uhler, & O'Malley, 2015). This housing crisis presents a complex problem that challenges climate policy implementation, fair housing goals, and anti-poverty policy agendas (O'Neill, Gualco-Nelson, & Biber, 2019). California's housing crisis is now the state's leading cause of poverty (Taylor et al., 2015). It contributes to racial residential segregation at a "megaregional" level and increases megacommutes as low- and moderate-income households are pushed into ***exurban***[2] areas (Verma et. al., 2019). Most scholars and researchers attribute California's high housing costs to inadequate housing supply (Alamo, Uhler, & O'Malley, 2015; Been, 2018; Been, Ellen, & O'Regan, 2019).

Running parallel to the issue of housing supply and affordability are statewide goals to reduce ***greenhouse gas emissions (GHG emissions)***.[3] The California Air Resources Board (the agency in charge of reducing the state's greenhouse gas emissions) has made clear that reducing emissions from transportation is critical to achieving the state's climate change goals and depends on reducing total ***vehicle miles***

[2] Exurbs and exurban refer to jurisdictions and unincorporated areas within specific counties that lie beyond the suburbs; these areas have economic ties to the urban core of the metro areas that we study. Typically, this is where a significant portion of the population commutes to work in an urban metro area, and where housing density is low and the population is rapidly growing. Exurbs frequently occupy urban-rural interfaces and require heavier car usage (Brookings Institute, "Finding Exurbia: America's Fast-Growing Communities at the Urban Fringe," October 1, 2006, available at https://www.brookings.edu/research/finding-exurbia-americas-fast-growing-communities-at-the-metropolitan-fringe/).

[3] The state legislature directed in 2006 that the CEQA guidelines mandate analysis of greenhouse gas emissions (GHG) from proposed projects (California Public Resources Code Section 21083.5). Several provisions of the CEQA guidelines provide for this analysis (14 California Code of Regulations Sections 15064.4, 15126.4(c), 15183.5,15364.5).

traveled (VMT)[4] (California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, 2017).

To address the housing crisis and meet GHG emissions reduction goals, state and cities should invest heavily to encourage dense housing in urban and suburban areas that are less car-centered and more oriented around mass-transit and walkable neighborhoods. Such development, referred to in this paper as ***dense residential infill transit-oriented development (dense residential infill TOD)***,[5] is defined as development that incorporates smart growth, new urbanism, and transit-oriented development (Salkin, 2009) in metro areas where the demand for housing outstrips supply (Elkind et al., 2017; Nasri & Zhang, 2014).

The state has attempted to spur such development in the past. In 2008, California enacted legislation requiring the development of sustainable, integrated regional transportation and community planning strategies (S.B. 375, 2007–2008 Leg., Reg. Sess. (Cal. 2008)). However, more than a decade later, there are still severe housing shortages in California's metro areas. Although many agree that increasing TOD within cities remains critical to combating climate change (Knox & McCarthy, 2012; Nolon, 2012; Owen, 2009), some advocates and scholars argue that TOD policy that does not encompass affordable development policy objectives may exacerbate displacement and exclusion of low-income households (Chapple & Loukaitou-Sideris, 2019; "Getting There Together: Tools to Advocate for Inclusive Development near Transit," 2012; Hutson, 2016; Kaswan, 2009; Rawson & Tawatao, 2012; Rice, Cohen, Long, & Jurjevich, 2020) and may even adversely impact climate goals (Kaswan, 2009). There is an abundance of writing on the need for more affordability within high-cost cities, but little consensus exists on how to increase affordable housing opportunities and meet fair housing goals while also addressing sustainability goals.

Some scholars within law, urban planning, and economics suggest relaxing regulation to support supply side strategies to address both issues. In California, these arguments take various forms. Practitioners argue that eliminating or expediting state-mandated environmental review is critical to increasing housing supply (Hernandez, 2018; Hernandez, Friedman, & DeHerrera, 2015). Others disagree and argue that

---

[4] The state legislature in 2013 directed amendments of the CEQA guidelines to require the use of vehicle miles traveled (VMT) to assess the transportation and GHG impacts of a proposed project (SB 743). Using VMT as the assessment of the impacts of a project encourages mitigation measures that decrease automobile use and therefore GHG emissions, and also can incentivize projects that are located in dense urban settings (projects that might otherwise increase traffic impacts). The CEQA guideline revisions were completed in 2018 (14 California Code of Regulations 15064.3).

[5] We use the term **dense** development to refer to development of five or more units of housing. See discussion in Section IV.C, Materials and Methods. We use the term **infill** development to describe development in the urban and suburban jurisdictions that comprise the core of the metropolitan areas that we study. **TOD** is development placed near public transit that aims to reduce car traffic and greenhouse gas emission and multi-use neighborhoods, and often results in medium or high-density housing.

existing law that promotes TOD by ***streamlining***[6] environmental review but fails to require affordable housing development may displace low-income residents (Rawson & Tawatao, 2012). Proposals to limit local authority over residential infill development near transit have failed (S.B. 827, 2018; S.B. 50, 2019), but not without considerable debate about their likelihood of addressing fair housing and climate goals (Cashin et al., 2018; Eaken et al., 2018). Housing policy scholars disagree about whether market-based, supply-side strategies will address housing needs for moderate- income households or only benefit market-rate luxury development to the disadvantage of low-income communities already struggling to stay in place (Rodriguez-Pose & Storper, 2020).

In sum, California's housing crisis and its impact on climate goals, equity, and fair housing generate debates about the comparative role that local land use regulation and state-level environmental regulation each play in contributing to inadequate housing supply and inequitable outcomes—and which should be the focus of legal reform. These policy debates invoke a series of related research questions:

1. How does existing regulation operate to allow or constrain dense residential development, generally?
2. How does existing regulation operate to promote or constrain infill TOD, specifically?
3. How does existing regulation operate to promote or constrain ***sprawl***?[7]
4. How does existing land use regulation support or limit affordable development in different local contexts?
5. What is the relative influence, if any, of state law and policy promoting TOD and local law regulating land use in generating inequitable outcomes like displacement in high-cost cities?
6. Is opposition through ***administrative appeals***[8] or litigation common, and if so what types of claims dominate, and are they successful?

Prior studies that have examined some of these questions have looked at how the stringency of land use regulatory regimes impacts housing supply and costs. ***Stringency*** refers to the degree to which regulation is restrictive, often due to zoning

[6] Streamlining refers broadly to accelerating environmental review processes for proposed development on an individual project level. This includes "tiering," whereby cities develop an Environmental Impact Report for an area within the city where development is anticipated, from which individual projects can be 'tiered,' or to predetermined CEQA exemptions for classes and types of proposed development.

[7] Sprawl refers to low-density residential and commercial development that occurs at the outer edges of urban areas. As such, the concept overlaps significantly with exurban development. Sprawl can impose significant environmental and economic costs in the form of increased vehicle mileage, paving over agricultural or undeveloped land, placing greater strain on infrastructure and public services. Smart Growth America examined the impact of sprawl in its 2014 report, Measuring Sprawl 2014, available at https://smartgrowthamerica.org/resources/measuring-sprawl-2014/.

[8] Administrative appeals refer to the local government administrative process by which a party can appeal a determination made by the local government in a discretionary review process. Unlike litigation, administrative appeals are not decided by a court, but rather by a local agency. Projects can be appealed based on the decisions under local regulatory requirements or on CEQA determinations.

prohibitions, development costs, or other factors. There is evidence that stringent land use regulation constrains housing supply and increases housing costs in high-cost metros (Glaeser and Gyourko, 2018; Glaeser and Gyourko, 2002; Gyourko, J., Saiz, A., & Summers, A., 2008; Quigley, J. M., Rafael, S., & Rosenthal, L. A. 2008), but this research has methodological limitations that matter for the California housing policy debate. The heterogeneity and complexity of land use law, regulated at the local level, also makes it difficult for researchers to take analysis from one location and generalize across jurisdictions (Been, 2018; J. E. Gyourko & Molloy, 2014). To scale a land use study to larger geographic areas, much of the underlying data comes in whole or in part from survey tools that inventory regulations and their application. Survey responses, however, are not consistently reliable (Lewis and Marantz 2019), and the surveys do not identify which specific laws or regulations may contribute disproportionately to housing costs or which may influence development patterns and specific types of housing (O'Neill, Gualco-Nelson, & Biber, 2019; O'Neill, Gualco-Nelson, & Biber, 2021). Creating an inventory of the text of law and regulations across jurisdictions would address reliability concerns, but it would not answer questions about how law is applied in diverse contexts (Fischel, 1995; Gabbe, 2019).

Crafting regulatory reform that can achieve multiple policy aims, among them addressing affordability and fair housing goals while also addressing the impacts of climate change, requires understanding whether and how existing land use regulation fails to accomplish desired policy aims. This, in turn, requires granular, local-level data about both the presence of specific regulatory tools and how that land use regulation operates in practice within high-cost cities.

PI O'Neill, Co-PI Biber, along with former UC Berkeley researcher Gualco-Nelson (hereafter referred to as "UCB Team") responded to this gap in existing research by initiating phased, mixed method case study research on sixteen California high-cost cities, all municipal incorporations that prioritized infill development (hereafter referred to as "infill jurisdictions"). The UCB Team titled the work the Comprehensive Assessment of Land use Entitlements Study (CALES). CALES contributes data and analysis to multiple questions about how local and state land use regulation operate to promote or constrain dense housing production that meets fair housing, affordability, and climate policy goals.

CALES joins legal research and analysis of each city's land use regime—including spatial analysis of the city's ***base zoning***[9] (density and use restrictions)—with case study research (Yin, 2014) that gathers objective and precise project-level data on the process steps of approving residential development over a four-year period (2014 through 2017).[10] CALES allows for analysis of residential development approval processes, rates

[9] Base zoning refers to the underlying zoning district and use designations (residential, commercial, or industrial) provided for in the text of the ordinance and zoning map.

[10] Following standard usage in land use law, we define entitlement to include the regulatory approvals needed from a local government in order to be able to apply for a building permit or other permits for construction.

of litigation and administrative appeals, and rates of applications for building permits for entitled projects. The UCB Team's case studies reveal whether and how cities apply "law on the books" and specific points of regulatory stringency. All of the UCB Team's observations of law as it is applied in our study cities are geocoded, allowing researchers to map the application of law in the study cities in relationship to existing geographic information systems tools that identify ***high quality transit areas*** (HQTA), areas of opportunity, environmental conditions, and more.

In March 2020, with support from the California Air Resources Board, the UCB Team expanded CALES to incorporate data collection in four exurban jurisdictions where residential development of five or more units of housing would most likely be ***greenfield development***—that is, development in exurban areas that usually results in low-density housing product—rather than infill development. The UCB team selected three counties that approve housing development in unincorporated county areas and one incorporated suburban community located in the exurban areas of previously studied major metropolitan areas. To facilitate comparative analysis of how infill and greenfield residential development operates, this report draws on data and findings from all twenty jurisdictions within CALES and incorporates findings analysis from earlier UCB working papers and publications, as needed.

UC Irvine Professor Nick Marantz (hereafter "UCI Team") joined the UCB Team in March 2020 to support data cleaning, provide analysis of whether and how dense residential development sited in transit priority areas might proceed differently through approval pathways, and explore additional analysis with the CALES data.[11]

Because this analysis references various parts of California law, this report begins with a brief discussion of California's land use regulatory environment to provide key definitions that we use throughout the discussion of methods, findings, and analysis. The report then lays out the methods and research questions and details all findings from the CALES project to date, including relevant analysis and policy recommendations.

II. The Legal Background: Navigating California Law Applicable to Planning for and Approving Residential Development

Assessing how cities regulate the development of five or more units of housing in any California community involves understanding some of the basic regulatory tools

[11] The UCI Team is now leading research that joins CALES data with other datasets to answer several different additional research questions, including but not limited to: (1) whether and how planning and local regulatory processes respond to changes in housing prices using proprietary data; (2) what factors affect development decisions and construction delays in job-rich and transit-accessible areas in five incorporated cities in Los Angeles County and unincorporated areas in Los Angeles County; and (3) how the siting of new housing relates to statewide goals concerning reductions in vehicles miles traveled. The UCI Team's work is ongoing and extends beyond the scope and term of the contract associated with this report.

that cities use to control residential development. It also requires understanding state mandated procedural and substantive requirements on local government regulatory processes—such as the California Environmental Quality Act. We focus only on components of California land use law implicated in this research study and do not discuss the breadth and applicability of the larger, complex body of law that practitioners and academics describe as "land use law" within California. Instead, we focus on the approval process that local governments impose on project proponents before they are eligible to apply for a building permit. This first procedural step is generally called the ***entitlement process***. The entitlement process requires project proponents to gain local government approval *before* they are eligible to apply for a building permit, and thus is typically the first step towards constructing new development. It is central to land use approval processes because it is the primary mechanism by which local governments control whether and how development occurs on a parcel of land.

A. Pathways to Planning and Zoning Approvals[12]

California law allows cities to use a range of tools to review and approve housing development based on a hierarchical system of land use law. At the top of "the hierarchy of local government law regulating land use" is the General Plan[13]—likened to a "constitution" for long-term physical development of the city or county.[14] Each jurisdiction must have a General Plan, and the General Plan must include comprehensive language that describes the city's long-range vision, policies, and objectives for development. Although the General Plan always codifies the city's planning law, depending on the jurisdiction, it does so with varying degrees of specificity. Also, with one exception, California law does not require that jurisdictions update their General Plan according to a set schedule; the law only suggests "periodic" updates.[15]

Although not required by state law, some jurisdictions may also incorporate provisions within the General Plan for specific plans, or community plans, to address anticipated growth. Relevant for infill development, specific plans may direct development to particular locations. Specific plans may also be extremely detailed and

[12] Much of this content draws on "Developing Policy from the Ground Up: Examining Entitlement in the Bay Area to Inform California's Housing Policy Debates," "Part I: Background," "A. Navigating the law applicable to entitlement processes in California," "1. Local law governing infill development" at pp. 8 (O'Neill et al., 2019).

[13] CAL. GOV'T CODE §§ 65300, 65302(g)(7) (2010); *see also* MILLER & STARR CALIFORNIA REAL ESTATE DIGEST, *Zoning and Planning* § 10 (3d ed. 2018); *see* DeVita v. Cty. of Napa, 889 P.2d 1019, 1023–25 (Cal. 1995) (citing Lesher Commc'ns, Inc. v. City of Walnut Creek, 802 P.2d 317, 321–22 (Cal. 1990)).

[14] DeVita, 889 P.2d at 1023–25 (citing Neighborhood Action Grp. v. Cty. of Calaveras, 203 Cal. Rptr. 401, 406–07 (Ct. App. 1984)).

[15] The General Plan is comprised of seven elements: land use, open space, noise, circulation, housing, conservation, and safety. *See* CAL. GOV'T CODE § 65302. The Housing Element, which details how the jurisdiction will satisfy its allocation of the regional housing need, is the only element that must be updated according to a planning schedule.

may direct nearly every aspect of development by codifying acceptable land uses[16] and requiring review of proposed development for compliance with the specific plan. Community plans may offer policy goals and programs for a particular geographic area with the General Plan.

Next within this hierarchy are zoning ordinances. Zoning ordinances (defined generally) include maps and text that when combined provide specificity as to the type of development (type and intensity of use and form) permissible within specific neighborhoods. We refer to base zoning in this report to describe the underlying zoning district and use (residential, commercial, or industrial) provided for in the text of the ordinance and the zoning map. Base zoning might, for instance, regulate the height, density, and spacing of buildings, as well as control the use of the property. Zoning in California may restrict development while also incentivizing development proposed in the General Plan. Zoning may also mandate ***exactions***, which are defined under California law as a monetary fee or dedication of land to the public as a condition of development approval.[17]

State law also reserves some authority over housing development.[18] Two of the most important provisions under state law are Density Bonus law and laws related to Accessory Dwelling Units. ***Density bonuses*** are intended to incentivize and increase affordable housing production by allowing for a denser development than would otherwise be possible under the base zoning in return for provision of affordable or senior housing units.[19] ***Accessory Dwelling Units (ADUs)*** are additional, independent dwelling units constructed on a residential parcel that are generally smaller than the primary residential unit on the parcel; state law requires approval of ADUs by local governments in certain circumstances in order to increase housing production in

---

[16] *See* CAL. GOV'T CODE § 65451(a); *see also* Hafen v. County of Orange, 26 Cal. Rptr. 3d 584, 591 (Ct. App. 2005).

[17] *See generally* CAL. GOV'T. CODE §§ 66000–66025; Williams Commc'ns, LLC v. City of Riverside, 8 Cal. Rptr. 3d 96, 107–08 (Ct. App. 2003). The value of the exaction cannot exceed "the estimated reasonable cost of providing the service or facility for which the fee or exaction is imposed" if it is a condition of development approval. *See* CAL. GOV'T. CODE § 66005(a); KOSTKA, *supra* note 19, §§ 18.7, 18.51. The definition of "public facilities" is also broad, encompassing "public improvements, public services and community amenities." *See* CAL. GOV'T. CODE § 66000(d). In short, exactions are a response to the limits on a California city's ability to generate revenue and offer a "nontax" way for local governments to get money or land from developers to support needed infrastructure and services. *See* KOSTKA, *supra* note 19, § 18.7.

[18] For a list of state laws limiting local authority in zoning, *see* KOSTKA, *supra* note 19, § 4.28.

[19] *See* CAL. GOV'T CODE §§ 65915–65918. Specifically, the incentive operates by allowing the developer a "density increase over the maximum allowable gross residential density" where the proposed new development provides for senior or affordable housing. *See id.* § 65915(f). It also operates to provide waivers from specific development standards (detailed within the local or state law—often referred to as "on menu") in exchange for the developer providing specific types (and percentages) of senior housing or affordable housing.

otherwise low-density residential neighborhoods.[20] We do not include ADU analysis in our study.

State law generally allows local jurisdictions considerable flexibility in how to regulate land use within this broad framework. Sometimes a city's General Plan provides specific language that not only guides development policy, but also closely regulates the form of development and land use through planning designations.[21] Similarly, a specific plan may be very general—or it may closely regulate development. California also treats the two kinds of cities within California (charter and general law cities)[22] differently with respect to whether the city's zoning ordinances must be consistent with the city's General Plan.[23] A charter city's zoning may be inconsistent with its General Plan, or more specifically, the city may have outdated zoning ordinances that do not reflect changes to city policy on specific types of development.[24] General law cities must maintain consistency between the zoning ordinance and the General Plan.

To enable comparative analysis across our jurisdictions, we describe planning designations and zoning that regulate use (e.g., residential, mixed, commercial, industrial) and density as one dimension of regulation—what we will refer to later as "base zoning." Another aspect of regulation involves how proposed housing moves through the entitlement processes—what we will refer to throughout this report as "process requirements" or "process."

---

[20] State law defines ADUs as "an attached or a detached residential dwelling unit which provides complete independent living facilities for one or more persons" that is an accessory to an existing residential use on the parcel. See Cal. Gov't Code § 65852.2. State law grants local governments authority to enact local laws to permit ADUs that comply with a set of criteria (addressing form) even within zoning districts that are limited to single-family dwellings. More significantly, it imposes a requirement on local governments to provide a streamlined development process for proposed ADUs that meet specified criteria. See id. § 65852.2(a)(3).

[21] The General Plan of the City of San Jose is illustrative. *See e.g.,* City of San Jose, *Envision San Jose 2040 General Plan* Chapter 5 at 9, http://www.sanjoseca.gov/DocumentCenter/View/474 (prescribing use districts, density and Floor Area Ratio (FAR) ranges, and height limits).

[22] Charter cities have generally broader autonomy under the California state constitution than general law cities. Charter cities within California enjoy freedom to legislate at the local level over "municipal affairs" even if a conflict with State law may exist under Article XI, section 5 of the California Constitution. This directly impacts zoning in California charter cities. Although the California Constitution does not expressly define "municipal affair," land use and zoning are consistently classified as exempt from the planning and zoning provisions of the California Government Code, unless the city's charter indicates otherwise. See City of Irvine v. Irvine Citizens Against Overdevelopment, 30 Cal. Rptr. 2d 797, 799–800 (Ct. App. 1994).

[23] Zoning ordinances within general law cities must be consistent with the general plan, but these same consistency requirements do not apply to charter cities unless the city's charter requires consistency with the general plan. *See* CAL. GOV'T. CODE §§ 65803; 65860(d). However, the provisions of a general plan within every city must be internally consistent. *See* CAL. GOV'T. CODE §§ 65302, 65300.5.

[24] The City of San Jose is illustrative. Within the City of San Jose, many involved wholesale changes in use district—for example from Light Industrial to a residential designation—and many others involved more intensive escalations in residential density, but they did not routinely require a general plan amendment because the General Plan permitted the desired use and intensity of the development. This suggests that the base zoning in some locations had not been updated after the most recent General Plan enactment.

In understanding the entitlement process, a key distinction is between discretionary and ministerial review. ***Discretionary review*** refers to a local government's authority to impose subjective standards when deciding whether to approve proposed development. ***Ministerial review*** employs an objective standard that requires a local government to approve a proposed development, so long as it conforms to the objective standards. Discretionary review grants the local government the power to reject proposed development for subjective reasons and ministerial review does not. Ministerial review is often referred to as ***"by-right"*** or ***"as of right"*** development and involves approvals in which a government agency applies law to fact without using subjective judgment. Proposed housing that is subject to ministerial review is also not subject to environmental review under the California Environmental Quality Act (O'Neill et al., 2019).

California cities have substantial latitude in what type of processes they use to approve residential development, including whether they use discretionary or ministerial reviews. We group land use approval processes into four general categories. First, cities can allow for a ministerial or "by-right" process when proposed development conforms to the underlying base zoning district's use and density requirements. Second, cities can impose requirements for subjective discretionary review for categories of projects that are still built within the framework of the zoning ordinance—in other words, the zoning ordinance itself contemplates that at least some property owners would propose these projects, but they must meet a certain set of conditions to obtain one of these types of permits. Examples include conditional use permits.[25] Third, cities also impose discretionary review when the proposed project would not comply with the base zoning in the applicable zoning ordinance; this includes when the developer is seeking an exemption from the zoning ordinance (***variance***) or asking the city to zone the project site differently (rezoning), or to change or update the General Plan to allow for the proposed project (general plan amendment).

Finally, cities in California can also impose discretionary review even when a proposed project is consistent with the underlying base zoning district's use and development controls; in other words, cities can provide for development standards (including density and use), while also imposing (for instance) aesthetic controls that may impose discretionary review that is particularly subjective in nature (Blaesser, 2005). Examples of this include design review, architectural review, site development review, and historical preservation review/certificate of appropriateness.[26] We refer to this type

[25] *See e.g.,* S.F. MUNI. CODE § 329 (describing Large Project Authorizations for Eastern Neighborhoods Plan Area); S.F. MUNI. CODE § 303 (describing Conditional Use Authorization requirements applicable across all zones); REDWOOD CITY MUNI. CODE § 47.1–47.5 (describing Planned Community permits for areas with a Precise Plan in place).

[26] For design review-related provisions, *see* REDWOOD CITY MUNI. CODE § 45.2(A); PALO ALTO MUNI. CODE § 18.76.020(b)(2)(D); OAKLAND MUNI. CODE §§ 17.136.040(3)–(4). For a historic preservation-related provision, *see* S.F. MUNI. CODE § 1006. For site development review, see SAN JOSE MUNI. CODE § 20.100.010.

of proposed development in our analysis as "code compliant but requiring discretionary review."

Another key step in the entitlement process is the regulation of subdivision, or the process of dividing land into two or more parcels for the purpose of sale, lease, or financing (Cal. Gov't Code § 66424). Subdivision can be horizontal—dividing a single parcel of land into two or more units—or vertical—dividing the airspace above the land into two or more units.[27] Although the California Subdivision Map Act sets the framework and minimum requirements for the approval of subdivisions, local governments implement that regulatory process through the enactment of a local subdivision ordinance (Cal. Gov't Code § 66411). The process begins when a developer seeking to create five or more units of land files a Tentative Map application (Cal. Gov't Code § 66428(b)). After the approval of the Tentative Map, the developer must comply with any imposed conditions before filing for Final Map approval (Cal. Gov.'t Code § 66457). The Tentative Map is a discretionary review process—Final Maps are not typically discretionary actions (Cal. Gov't Code § 66474.1). In our work, we track Tentative Map approvals, not Final Map approvals. State and local law also governs the consolidation or merger of lots into a single lot, termed a lot line adjustment (Cal. Gov't Code § 66412(d)), but certain lot line adjustments do not require tentative maps (Cal. Gov't Code § 66412(d)).

Development Agreements are also important for our analysis. Development Agreements allow for cities to enter into agreements with developers through a local legislative act that "freezes" the applicable land use regulations (including zoning) for the property to protect the developer from any adverse impacts imposed by changes to the development standards during the development process (Cal. Gov't. Code § 65867). Development Agreements are relevant to large, phased development projects in our study jurisdictions.

B. Moving through Environmental Review (California Environmental Quality Act, or CEQA)

Modeled after the ***National Environmental Policy Act (NEPA)***,[28] CEQA combines mandatory information disclosure with public participation. CEQA's focus is on government projects and approvals that produce significant environmental impacts (Cal. Pub. Res. Code § 21002). CEQA applies to any residential development project that requires a public agency's discretionary approval (Cal. Pub. Res. Code § 21080).

[27] Vertical subdivision allows for the creation of condominiums.

[28] NEPA mandates environmental review for all projects managed by federal agencies or sited on federal land. NEPA imposes notice and information requirements involving documentation around potential environmental impacts, and mitigation of potentially significant environmental impacts below a significant level where feasible. Projects must either complete a NEPA Environmental Assessment, Environmental Impact Statement, or can be issued a Categorical Exclusion if the project fulfills certain criteria. California provides a joint CEQA/NEPA process for some projects.

CEQA review for a project is directed by a ***lead agency***;[29] in the context of residential development, the lead public agency is usually the local Planning Department (Cal. Gov't Code §§ 65100, 65101) as planning agencies generally enforce the local zoning ordinances and make land use determinations. With some exceptions, it is the lead agency that determines whether the required approval is discretionary or ministerial (14 C.C.R. § 15369). Though building permits are presumptively ministerial (or "by-right"), local agencies can specify otherwise in their laws (14 C.C.R. § 15268(b).) (San Francisco does this). Conditional or special use permits, variances, Development Agreements, subdivision maps, or zoning changes are typically discretionary approvals (Cal. Gov't Code § 65583.2) because planning departments are not legally obligated to grant these types of approvals; instead, they use judgment to evaluate the project based on subjective criteria (14 C.C.R. §15357).

Discretionary projects may still be exempt from CEQA. The legislature has carved out statutory exemptions in the Public Resources Code, and thirty-three categorical exemptions have been developed in the California Code of Regulations, which are more commonly referred to as the CEQA Guidelines (14 C.C.R. §§ 15300–15333). In our research, we focus primarily on the exemptions most relevant to infill development. For example, a lead agency can use the Class 32 infill exemption for infill development; if an urban infill project satisfies five conditions, it can bypass CEQA review (14 C.C.R. § 15332). Other common forms of exemptions are the Class 3 exemption for new construction or conversion of small structures and the Class 1 exemption for existing facilities (14 C.C.R. §§ 15303, 15301). In addition to these statutory and categorical exemptions, a project may be exempt when there has already been a prior ***Environmental Impact Report (EIR)*** made on it. An EIR is a document created pursuant to CEQA to inform stakeholders and community of the potential environmental impacts of a new project and possible mitigation strategies and substitutes for the project.

When a project is not categorically exempt or exempt based on prior EIR analysis, the lead agency conducts an Initial Study (14 C.C.R. § 15063(a)) to assess whether there is substantial evidence that a project may have a significant effect on the environment. If not, the agency issues a ***Negative Declaration (ND)*** (14 C.C.R. 15070(a)).[30] If there is substantial evidence that a project may have a significant effect on the environment, but the developer can incorporate mitigation that reduce impacts below the threshold of significance, then the agency issues a ***Mitigated Negative Declaration (MND)***[31] (14 C.C.R. § 15070(b)(22)). A lead agency must prepare an EIR where there is substantial

[29] In environmental review, the lead agency is the public body that gives final discretionary approval for the project.

[30] An ND is a California Environmental Quality Act (CEQA) document created to inform stakeholders and community that the proposed project will not have a significant effect on the environment.

[31] An MND is a California Environmental Quality Act (CEQA) document created to inform stakeholders and community that the proposed project's potential impacts to the environment can be mitigated by certain strategies and describes how the developer will implement these strategies.

evidence that the project may have a significant effect on the environment[32] and where it is not clear from the Initial Study that these impacts can be mitigated below a significance threshold.[33]

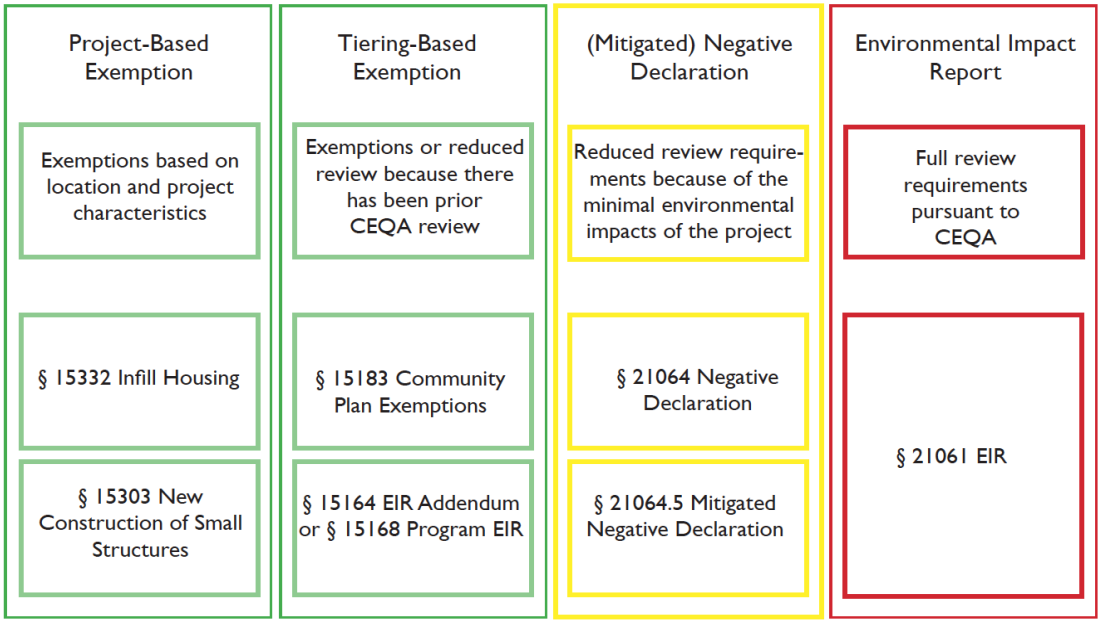
Tiering allows proposed development to go through a streamlined environmental review process under CEQA; environmental review of a proposed project can focus on a narrow set of issues that have not already been evaluated in a prior EIR that covers the proposed project. If all the issues have been evaluated in a previous EIR, then no further study is required. Tiering necessarily requires a prior environmental review document (generally an EIR) that is usually connected to a prior and large-scale planning approval; however, the source of the document can vary. A Community Plan Exemption, for example, is a tiering-based exemption available to projects consistent with a community plan, General Plan, or zoning.[34] Another form of tiering is the Program EIR, which can exempt future development activity from environmental review, provided that underlying conditions have not changed since the preparation of the Program EIR.[35] An EIR Addendum is commonly used for projects that will be built out in phases under a master plan and a master EIR where the underlying conditions of approval have not changed.[36] If some of the relevant environmental conditions have changed since the prior EIR, then the lead agency can prepare a Supplemental EIR, which only needs to contain information necessary to make the original EIR adequate.[37]

When proposed development satisfies environmental review through tiering, this can allow project-level review to occur at the MND or Categorical Exemption level—substantially reducing project-level costs for the developer, because cities generally pay the costs of the relevant plan- or program-level CEQA review. Financially under-resourced jurisdictions may determine that the project-specific EIR presents a more economically feasible way of considering environmental effects than an update to the General Plan because it effectively shifts the costs of CEQA compliance to individual developers (Olshansky, 1996). The cost of a project-specific EIR, for example, is significantly lower than the cost of a General Plan update (typically financed from the city's general fund), and the project applicant bears most of the cost.

---

[32] *Id.* § 15063(b)(1), § 15060 (indicating a project may also bypass the Initial Study to proceed directly to the EIR)
[33] *See* CAL. PUB. RES. CODE § 21064.5; CEQA GUIDELINES § 15070.
[34] *See* CEQA GUIDELINES § 15183.
[35] *See id.* § 15168.
[36] *See id.* § 15162.
[37] *See id.* § 15163.

Figure 1: Types of Environmental Review



1. Mitigating Potentially Significant Environmental Impacts

When applied at the project level, CEQA's information mandate operates to require cities to "identify and confront the environmental consequences" of a proposed development (Karkkainen, 2002). These procedural requirements can facilitate the development of feasible project-specific mitigation actions—CEQA generally requires lead agencies to mitigate significant environmental impacts where feasible (Cal. Public Resource Section 21002.1(a), 21100(b)(3); Barbour & Teitz, 2005). Mitigating project-specific environmental problems can also address environmental problems that more general laws are slower to address (Gualco-Nelson, 2017). A project-specific EIR, however, cannot inform a long-term perspective or mitigate the regional and cumulative effects of development that are better suited to the General Plan process (Olshansky, 1996). Also, project-level review can impose more costs on the developer—prior research has found the differences between a Categorical Exemption, MND, and EIR, in time and cost, can be great.

Critics attacked the way agencies unpredictably apply CEQA both within the same jurisdiction and across the state, an inconsistency that critics say increases not only the time and money spent on CEQA review, but also the risk of litigation (Barbour & Teitz, 2005; Shigley, 2010). Some also question whether or not CEQA actually leads to meaningful mitigation of harm (Barbour & Teitz, 2005) Because CEQA leaves implementation entirely to local control, agencies can weigh environmental harms and social or economic benefits differently (Barbour & Teitz, 2005).

2. "Reverse CEQA" – The Limitations of Environmental Review in Measuring the Impact of the Environment on a Project

At least three of the metro areas that we studied include high wildfire hazard areas. We observed some entitlement sited in high wildfire hazard areas did not undergo more intensive environmental review. Although environmental review through CEQA is one of the legal tools California offers to protect against harm from wildfire, it is not without limitations. We discuss those limitations here.

CEQA requires analysis of how a project impacts the environment, but it does not generally require lead agencies to analyze how existing environmental conditions impact a project (California Building Industry Association v. Bay Area Air Quality Management, 62 Cal.4th 369 (2015)). In the context of residential development, that means that environmental review of proposed residential development may not require analysis of whether the surrounding environmental conditions will impact the residential development. We refer to this as the "reverse CEQA"[38] issue.

The California Supreme Court has identified one important exception to this limitation within CEQA—when a project would exacerbate an existing environmental hazard or condition, then a lead agency must analyze the potential impact of that exacerbated hazard or condition on the project (*California Building Industry Association v. Bay Area Air Quality Management*, 62 Cal.4th 369 (2015)). Consistent with this, CEQA Guidelines provide that an EIR "shall also analyze any significant environmental effects the project might cause *or risk exacerbating by bringing development and people into the area affected*. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of *locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas*), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans, addressing such hazards areas" (14 Cal. Code Regs. § 15126.2, emphasis added). This is important for residential development that may be sited in locations that face high wildfire hazards or are prone to flooding.

Statute and the State CEQA Guidelines also limit the ability of jurisdictions to use CEQA exemptions when infill (14 Cal Code Regs § 21159.24), affordable housing (14 Cal Code Regs § 21159.23), transit priority projects (14 Cal Code Regs § 21155.1) or housing development is sited in a location that could expose future occupants to certain hazards and risks associated with, for example, wildfire, earthquakes, landslides, or flooding.[39]

---

[38] The term "reverse CEQA" does not come from court rulings but is widely used by academics whose work involves CEQA. Accordingly, we employ the term here.

[39] Though not the focus of this report, proposed development that involves the purchase of a school site or the construction of an elementary or secondary school is also subject to additional review requirements regarding exposure to hazardous waste. (14 Cal. Code Regs. § 21151.8)

The 2020 fire season demonstrated the severity of wildfire risk in California and underscored the importance of the reverse CEQA concept analysis in the wildfire context. Lower courts' application of the reverse CEQA concept, however, does not make clear whether siting proposed residential development in an area with high wildfire hazards, for example, will require environmental review. In *California Clean Energy Committee v. County of Placer*, an unpublished non-citable opinion, the Third District Court of Appeal found an EIR associated with a ski resort expansion in a high fire risk area deficient because it "largely focuses on fire *prevention, suppression,* and *access* for emergency responders, and […] says nothing substantive about emergency *evacuations* of residents, workers and visitors or the impact of such evacuations on access for emergency personnel, vehicles, and equipment (2015 WL 9412772). The court reversed approval of the EIR. But in *Clews Land & Livestock, LLC v. City of San Diego,* 19 Cal.App.5th 161 (2017), the Fourth District Court of Appeal upheld the use of an MND with a siting of a secondary school in a very high fire risk zone. There the court determined that the project's location in a very high fire risk zone did not create "potentially significant exacerbating impacts on existing environmental hazards," because the environmental hazard was "unchanged" by the project—the inherent difficulty of evacuating animals and personnel already existed (at 194).

The state legislature partially responded to the potential lack of CEQA analysis in the wildfire context by incorporating assessment of whether placing projects in high fire risk areas would exacerbate fire risks during the planning process, specifically in the Safety Element (SB 1241, 2012). Appendix G of the 2019 updates to CEQA guidelines reflect this change, and where a proposed development is sited in or near a very high ***fire hazard severity zone (FHSZ)***,[40] then the lead agency may use a checklist to examine whether a project would exacerbate fire risk, and "[e]xpose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands."[41]

3. CEQA and Climate Goals

The state legislature has determined that California is vulnerable to the effects of climate change. Despite its global nature, that State has taken early action to curb greenhouse gas (GHG) emissions on a statewide level. California is a global economic force but also a major global GHG emitter.[42] Due to the state's vulnerability and range

[40] Fire hazard severity zones are defined by CalFire to describe the fire risk in each area in California. Broken into federal, state, and local responsibility areas, they are categorized as: Very High Fire Hazard, High Fire Hazard, Moderate Fire Hazard, and not categorized (not in a fire risk area).

[41] The California Attorney General has also urged lead agencies to consider proposed projects' impact on evacuation in the event of wildfire and how development interfaces with wildland vegetation. (Letter from Andrew Contreiras, Deputy Attorney General, regarding Guenoc Valley Mixed-Use Planned Development Project Final Environmental Impact Report, 2020).

[42] California ranks second only to Texas in states with the most GHG emissions according to the Environmental Protection Agency's State Inventory and Projection Tool 2020, (Friedrich et al, 2021).

of GHG emission sources within its borders, the State committed to a leadership role in reducing climate pollution.

CEQA has become a core component of California's broader efforts to reduce GHG emissions and mitigate climate change. Following advocacy and litigation by non-profit organizations, coalitions, and the California Attorney General's Office (Waite, 2010), the state legislature directed in 2006 that the CEQA guidelines be amended to address the analysis and mitigation of GHG emissions from proposed projects (California Public Resources Code Section 21083.5). Several provisions of the CEQA guidelines, in relevant part, provide for this analysis and appropriate methods to mitigate GHG emissions (14 California Code of Regulations Sections 15064.4, 15126.4(c), 15183.5, 15364.5, Appendix G: Initial Study Checklist, and Appendix F: Energy Conservation). The practice of analyzing and mitigating GHG emissions continues to evolve but the CEQA profession has taken substantial strides since the CEQA guidelines amendments took effect in 2009. However, that area of CEQA review continues to be a subject of litigation in the state courts, indicating the potential for caselaw to clarify unresolved areas of interpretation in the statute and application of the CEQA guidelines.

One key component for CEQA analysis of transportation impacts is the extent to which a project may substantially increase automobile use, and therefore increase GHG emissions from internal-combustion engines and fossil fuel consumption. The traditional CEQA analysis had focused transportation analysis, for projects and plans alike, on the potential to increase traffic congestion and degrade level-of-service —i.e., whether a project would cause increased delays for automobiles thereby necessitate roadway expansions – principally, new lane miles - to improve automotive circulation. The focus resulted largely in lead agencies to require subsequently project proponents increase roadway capacity for automobile use when mitigating transportation impacts—but this form of mitigation leads to an overall increase in automobile use. Accordingly, the state legislature in 2013 directed the Office of Planning and Research (OPR) to prepare amendments to the CEQA guidelines that proposed alternative metrics for use in the transportation analysis (SB 743). Following extensive outreach with affected stakeholders and the public, OPR recommended the use of vehicle miles traveled (VMT) to assess the transportation impacts of a proposed project, and by extension, can serve as a proxy for use in the GHG emissions analysis as well as other analyses for air quality, energy, noise, and water quality impacts.[43] Using VMT as the metric to assess the impacts of a project helps to reorient mitigation measures that decrease automobile use, and therefore, GHG emissions. Using VMT can also provide multiple co-benefits and better characterize potential impacts of development in dense urban settings (projects that might otherwise increase traffic impacts when measured in terms of

[43] While SB 743 and its implementing guidelines eliminates level of service (LOS) as an environmental impact that must be evaluated under CEQA, it does not prohibit LOS consideration outside of the CEQA process. Thus, jurisdictions can retain LOS standards in other ways, for instance by keeping LOS targets in their general plans or exacting impact fees. Indeed, LOS policies are ensconced in the General Plans of many California cities. (Barbour et al, 2019)

vehicle delay). OPR prepared and transmitted the relevant CEQA guideline amendments to the Natural Resources Agency, which then conducted a rulemaking and adopted the guideline amendments in 2018 (14 California Code of Regulations 15064.3).

C. Achieving Equity in Housing Opportunity through California's Fair Housing and Housing Element Law

Also relevant to our research is California's recent enactment of AB 686 in 2017 to Affirmatively Further Fair Housing. Under AB 686, all cities and counties must analyze segregation and concentrated poverty and identify goals to address housing discrimination in their General Plan and take "meaningful action" to ***affirmatively further fair housing (AFFH)***[44] (Housing Discrimination: affirmatively furthering fair housing, AB-686 Chapter 958 "Bill Analysis" and "Text," 2017-2018 Reg. Ses.; Bill Analysis, Housing Discrimination: affirmatively furthering fair housing, AB-686 Chapter 958, 2017-2018 Reg. Ses.; Housing Discrimination: affirmatively furthering fair housing, AB-686 Chapter 958, 2017-2018 Reg. Ses.). AB 686 requires that local governments use local, state, and federal data in this process. This builds on California's signature fair housing legislation, the Housing Element of the General Plan. Housing Element law requires jurisdictions to plan and zone for density to accommodate their portion of their regional housing need, though the affirmative rezoning obligation only applies if a jurisdiction has failed to meet certain obligations—for example, by failing to zone for sufficient sites to meet its share of the ***Regional Housing Needs Assessment (RHNA)***[45] for the prior planning period (Cal. Gov't. Code § 65583 et seq.). Housing Element law specifically requires each city and county to 1) engage in a multi-year planning process to accommodate housing needs determined by the state, (2) demonstrate enough parcels are zoned to accommodate low-income housing, and (3) identify and correct for regulatory constraints on housing production (Cal. Gov. Code Sections 65580 to 65889.11). Inadequate Housing Elements risk loss of funding and local power over permitting, though historically these enforcement provisions proved ineffectual at supporting housing production overall to accommodate population growth (Elmendorf, Biber, Monkkonen, & O'Neill, 2020a, 2020b).

---

[44] California Government Code § 8899.50 defines Affirmatively Furthering Fair Housing as 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; address significant disparities in housing needs and in access to opportunity; replace segregated living patterns with truly integrated and balanced living patterns; transform racially and ethnically concentrated areas of poverty into areas of opportunity; foster and maintain compliance with civil rights and fair housing laws.

[45] The RHNA is the total amount of housing a metropolitan area is required to provide under state law in order to meet housing needs over the next reporting cycle (usually eight years). The RHNA is determined by the California Department of Housing and Community Development (HCD). The RHNA is then allocated to individual local governments within the metropolitan area by councils of governments (COGs), which represent the local governments within the metropolitan area.

While it may require rezoning, Housing Element law places no affirmative production requirement on the jurisdiction (Lewis, 2003). Housing Element law also uses density as a proxy for affordability of housing for low-income residents. In urban jurisdictions, the default standard for density to allow for all income levels is 30 dwelling units per acre (Cal. Gov. Code Section 65852.2). We use this standard in our own analysis of individual regulatory environments, referring to this density and use default as "***permissive density***" and to areas with zoning that allows for 30 or more dwelling units per acre as being "***zoned for all income levels***." This individual proxy for affordability does not offer a complete picture of the feasibility of developing affordable housing; development also depends on the availability of land and financial subsidies. Still, the amount of land zoned for all income levels is a key indicator of whether a jurisdiction is creating or eliminating a fundamental regulatory barrier to affordable housing.

During our study years, California's legislature also passed several housing reform legislative packages that improve Housing Element law. This legislation corrects past failings in the regional planning process that determines each local government's housing needs, and strengthens state review and enforcement mechanisms with respect to local Housing Elements (Elmendorf et al., 2020a). California's new AFFH rule and recent legislative reforms to the Housing Element law may operate together to require local governments to identify and correct for local regulatory constraints on housing development that would otherwise obstruct fair housing goals—and to improve how local governments engage with community around fair housing goals during the Housing Element planning process itself.

Regulatory obstacles can include more than inadequate land zoned for permissive density, such as approval processes that are burdensome for affordable or multi-family housing. Accordingly, our analysis includes both base zoning and process in order to understand whether our study jurisdictions appear to have regulatory obstacles to affordable housing and multi-family housing, and most importantly, whether cities are creating regulatory constraints that would obstruct fair housing goals.

We can also connect our assessment of regulatory obstacles with mapping of where providing more housing would facilitate greater access to job, educational, and other opportunities for low-income residents. For this, we draw on state-level spatial data from the ***California Fair Housing Task Force*** that sort census tracts into five categories of opportunity, ranging from highest opportunity to high poverty and high segregation. The Task Force using demographic data across educational attainment and economic status, and environmental indicators to identify areas of opportunity, including job proximity, adult education attainment, exposure to pollutants, graduation rates, and reading proficiency rates. (California Fair Housing Task Force Opportunity Mapping Methodology, 2018). We use this tool to explore how base zoning and housing development patterns during our study years may be supporting or potentially obstructing fair housing goals.

III. Measuring Law: What prior research tells us about how regulation impacts affordability and access to opportunity.

Having covered some of the relevant areas of California law that we will engage with in our analysis, we now describe relevant empirical work examining land use regulation that informed our own methods.

A. There is indirect evidence that land use regulations limit housing supply and increase housing costs in coastal cities.

Multiple studies examine the relationship between land use regulation and its specific impacts on housing supply and housing costs as well as its impacts on spatial equality. We summarize the findings and methods of two research areas: (1) studies that explore the influence of land use regulation on housing supply and costs (indirect or direct impact on housing costs), and (2) studies that explore the influence of land use regulation on spatial equality (indirect or direct impact on segregation/exclusion). The below review is not intended to be exhaustive although it does cover the most significant work; our review also focuses on studies critical to shaping the policy debates about land use regulation within California, specifically.

1. Indirect evidence of regulation **as** a constraint on housing supply.

Using basic supply and demand economics, urban economists argue that a sharp decline in supply beginning in the 1970s has led to the affordability crisis in many of the nation's coastal cities, like those in California, where the labor market is strong and demand for housing is high (Alamo et al., 2015; Glaeser, Gyourko, & Saks, 2003). They argue that supply constraints are the primary cost of land use regulation. These studies reach this result by measuring the gap between the physical costs of producing the housing unit and the sales price for the housing unit. If the gap between production costs and sales price is narrow, the market is efficient and affordable; where the gap between sale price and production costs is wider, housing is unaffordable. Large disparities between price and production cost are generally understood as indirect evidence of the costs of land use regulation. Because of the difficulty of measuring the impact of particular land use policies, urban economists use proxies such as declining permitting levels, declining heights and densities, and increasing sale prices, which together provide indirect evidence for a "regulatory tax."

In 2002, Glaeser and Gyourko found that generally home sale prices are within forty percent of hard construction costs nationwide, but California's housing prices were substantially higher than construction costs (Glaeser & Gyourko, 2002). They concluded the gap between hard costs and sale price is not a function of higher land costs and found that stringent land use regulation which imposes longer than average (defined as six months) lag times between permit application and approval creates an "implicit zoning tax." One limitation of this research is that it does not isolate which land use

regulations might impose the lag time in development, and it uses national averages (such as RS Means Construction data for hard construction costs) which may not accurately describe local labor and equipment costs in high-cost cities in California. Still, it offers an important indicator of regulatory stringency that intuitively would increase housing development costs—time lags to approval. We use this in our own work as one metric of regulatory stringency.

2. Describing regulatory environments through indices.

To understand how regulations might shape housing costs, in the 2000's two groups of researchers completed two national surveys that both contributed to the analysis of the financial cost of land use regulation. This work also produced important datasets that other researchers would rely on. In 2006, Pendall, Puentes, and Martin published the results of their survey of land use in 1,844 jurisdictions from the fifty largest metropolitan areas. Important for our work is that the survey asked planning staff about their perceptions of the jurisdiction's use of zoning, comprehensive planning, growth containment measures, impact fees, building permit caps, or affordable housing incentives, and for perceptions of regulation (more or less) from the 1970s to 1990s. Pendall et al. then coded these results to create "regulatory clusters" (groups of jurisdictions with similar land use typologies) on a spectrum—traditional, exclusion, reform, and "Wild Wild Texas"—or deregulated jurisdictions (Pendall, Puentes, & Martin, 2006). To gauge the level of exclusionary land use regulation, the survey also asked whether a jurisdiction would allow construction "by-right" or by special permit of a forty-unit two-story apartment building sitting on five acres. The Pendall study does not examine whether the jurisdiction requires environmental review, which is an important component of land use regulation in California.

Notably, for the Pendall study the researchers used the lack of permissive base zoning to help define whether a jurisdiction was exclusionary. Based on their methodology, the researchers concluded that the most exclusionary jurisdictions were in the Northeast, whereas San Francisco, San Diego, and other western metro areas were ranked as the least exclusionary. Nearly two-thirds of the Western metro regions surveyed had affordable housing incentive programs and nearly half had dedicated affordable housing funds. Although zoning in Western metro regions might have been the most permissive in terms of density and variety of housing stock (in some cases even rivaling New York), these Western jurisdictions also used other regulatory tools that Pendall et al. concluded made it more expensive and difficult to develop housing. Pendall and colleagues issued the same survey again in 2018 (Gallagher et al., 2019).

Relevant to our own methods, this study sorted regulatory environments by typologies, and defined the restrictiveness of the regulatory environment by a range of regulatory tools. Also, important for our work is Pendall et. al's findings that suggest some metro regions committed to constructing affordable housing may be employing regulatory tools that decrease supply. This indicates it is important to look carefully at

how regulatory tools within cities interact to support or constrain housing development—particularly affordable development.

At around the same time as the Pendall survey, Gyourko, Saiz, and Summers conducted another major national survey of land use practices to build the ***Wharton Residential Land Use Regulatory Index (WRLURI)***. The WRLURI measures restrictiveness and determines the "average" degree of land use regulation in the nation by focusing on process and outcomes, rather than just the presence of regulatory constraints (Joseph Gyourko, Albert Saiz, & Summers, 2008). The WRULRI distributed a fifteen-question survey to planning officials in 2,649 jurisdictions. Participants ranked their perception of the importance of certain factors that influence local government decisions on how to regulate the rate of residential development on a 1-5 scale. They also ranked the involvement of certain organizations—including local councils, communities, state legislature, and local courts—in the land use regulation process. The survey asked respondents to (a) identify how much the cost of land development has increased in the last ten years as well as the average length of the entitlement process as compared to ten years ago; (b) provide the number of board and commission approvals required to approve projects with zoning changes versus projects without zoning changes; (c) identify whether the community has permit caps, minimum lot size requirements, and open space or affordable housing or infrastructure exactions; and (d) identify the number of applications for zoning changes filed and approved in the last year. To assess each state legislature's involvement in the planning process and the involvement of the state courts, Gyourko, Saiz, and Summers used Foster and Summers's fifty state survey that determined the features typical of judicial review for exactions, fair share development requirements, building moratoria, and spot zoning. They also used data on ballot box planning measures from a database that tracks initiatives nationwide. The authors then created an index of eleven land use stringency indicators: local political pressure, state political involvement, state court involvement, local zoning approval (includes environmental review), local project approval, local assembly (democracy), supply restrictions, density restrictions, open space, exactions, and approval delay. The WRLURI was reissued in 2018, so we also reference findings from the most recent survey tool labeled the WRLURI18.

The WRLURI18's stringency index provides a general assessment and comparative analysis of whether a jurisdiction's land use system is restrictive, or "stringent," in the aggregate, and it also provides information about each stringency measurement. Accordingly, this survey defined the concept of "stringency" based on the perceptions of planners nationwide as to how their regulatory systems operated to restrict development. Lightly regulated cities, for example, took approximately 3.7 months to approve proposed housing whereas highly regulated cities took approximately 8.4 months (J. Gyourko, Hartley, & Krimmel, 2019). A moderately regulated city would require two levels of approvals to grant an approval that did not involve a zoning change whereas a highly regulated city would require three levels of approval. Stringently regulated cities tend to have consistently high stringency values

across all the land use indicators. The responses to the WRLURI18 did not indicate that stringently regulated metros became less so over time compared to the first WRLURI.

The first WRLURI remains highly influential in California's housing policy debates, because of the finding that stringency is associated with higher housing costs. SB 35, for example, requires local jurisdictions not in compliance with Regional Housing Needs Assessment (RHINA) obligations to approve certain residential developments containing ten to fifty percent affordable housing through a ministerial process (S.B. 35, 2017–2018 Reg., Leg. Sess. (Cal. 2017)). The index also has been used in subsequent studies (Turner Matthew, Haughwout, & van der Klaauw, 2014) and informs survey design for related research (Jackson, 2018; Quigley, Raphael, & Rosenthal, 2008; Mawhorter & Reid, 2018).

The WRLURI study has its limitations in terms of how it can inform legal reform. The authors assign stringency variables to ***metropolitan statistical areas (MSAs)***.[46] In the WRLURI, the San Francisco MSA is ranked as more highly regulated than the national average, and in WRLURI18 the San Francisco MSA is ranked as the most stringently regulated MSA. The WRLURI18 determines a stringency level for the San Francisco MSA based on observations from 22 cities from five counties—and the largest cities are missing. San Francisco, Oakland, Hayward, Fremont, San Ramon or Richmond, for example, are not included in the observations. Even if the survey responses are reliable, the San Francisco MSA stringency value cannot describe the regulatory process across many cities within those five counties. California law allows so much variation in how cities regulate land at the local level, so this limits the usefulness of the underlying data for legal reform. But the WRLURI and WRLURI18 offers us insight into how planners from the responding jurisdictions perceive the regulatory environment—or housing approval processes—should operate in theory. The survey's subindices also provide us guidance on relevant indicators of stringency, such as time lags to approval and court involvement through litigation.

California land use law is also the subject of at least five regional and statewide studies.[47] Quigley, Raphael & Rosenthal 2009 used a method similar to WRLURI to create a regulatory stringency index for the San Francisco Bay Area. The authors surveyed building officials in eighty-six jurisdictions in 2007, and then supplemented their data with surveys of land use officials conducted between 1992–1999 (Quigley et al., 2008). This research also asked about inclusionary zoning and "perceived level of controversy"

[46] Defined by the U.S. Census Bureau, a metropolitan statistical area (MSA) is "a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core." United States Census Bureau, https://www.census.gov/programs-surveys/metro-micro/about.html.

[47] We omit discussion of several earlier California focused surveys conducted in 1989 (MADELYN GLICKFELD AND NED LEVINE, REGIONAL GROWTH AND LOCAL REACTION: THE ENACTMENT AND EFFECTS OF LOCAL GROWTH CONTROL AND MANAGEMENT MEASURES IN CALIFORNIA (Cambridge, MA: Lincoln Institute of Land Policy ed., 1992)) and 1992 (Ned Levine, Madelyn Glickfeld & William Fulton, *Home Rule: Local Growth Control. Regional Consequences*, (Report to the Metro. Water Dist. of S. Cal. & the S. Cal. Ass'n of Gov'ts 1996) (unpublished)).

associated with certain project types, "regulatory reasonableness," "transparency," and "estimates [of] the all-inclusive cost of the entire entitlement process." Indexing the results of both surveys, the authors created the ***Berkeley Land Use Regulation Index (BLURI)***. We used these questions to help guide our own interview questions with stakeholders in our study jurisdictions.

The BLURI does not contradict the findings of the WRLURI but provides more local information. The average approval lag between application and permit was 2 years for a multi-family development and 2.5 years for a single-family home development. Within this time frame, environmental approvals took 1.9 years for multi-family and 2.3 years for single-family homes. Regulatory stringency was consistently associated with higher costs for construction, longer delays in completing projects, and greater uncertainty about the elapsed time to completion of residential developments. We used these findings to help inform how we summarized the relevant planning law applicable to our study jurisdictions and our proposed development data collection methods. Specifically, our planning code summaries identify the nuances of discretionary approval pathways within our study cities and our data collection crosses several years to capture information about approval pathways.

Another study that relies on a California-focused survey is the ***California Land Use Regulatory Index (CaLURI)***,[48] which provides insight into the geographic variability of land use stringency across California (Jackson, 2018). Jackson sent surveys to planning staff in 540 cities and counties, and 420 jurisdictions responded. The survey asked questions about the land use process and policies, including specific residential development standards like bulk, height, setback requirements, and floor area ratio restrictions. The survey also asked whether the jurisdiction permitted low-cost housing alternatives, like mobile homes, and whether the jurisdiction restricts growth through its General Plan. Relevant for our work, this survey asked about affordable housing requirements, and planners' perceptions as to which groups wield the most political influence and as to the main drivers of development regulation. Jackson aggregated the sub-indices in his work to create a stringency measure for each responding jurisdiction and found that the San Francisco Bay Area is the most stringently regulated region in California. Jackson concluded that while Southern California is more likely to restrict the form of new development, the Bay Area tends to prohibit development outright. We use Jackson's findings as to regional differences to structure our own analysis. Also, like the CaLURI, we analyzed the planning and zoning codes in each study city to understand the impact of height, bulk, setback requirements and FAR when calculating base zoning. We also included mobile homes in our definition of housing and looked carefully at whether cities had affordable housing mandates.

[48] The CaLURI is distinguishable from the CALURI. The CALURI, authored by Desen Lin and Susan Wachter, is a working paper and a more recent Index that relies on the survey data responses from California jurisdictions to the WRLURI.

3. Exploring supply constraints through the case study approach.

Although local surveys are limited in how they evaluate how local governments implement land use regulation at a project level, case studies can offer insight into how cities treat individual proposed developments, as a report for the Department of Housing and Community Development (HCD Landis Report) in 2000 illustrates. The HCD Landis Report analyzed 46 housing developments approved between 1995-1997 in 31 cities and counties (Landis & Smith-Heimer, 2000). The authors selected the jurisdictions based on shared strong demand for housing, policies that were not anti-growth, and extensive experience processing high volumes of development applications. The authors sent surveys to these pre-selected jurisdictions asking planners to identify a "typical" development in their community. The authors next traveled to the community, reviewed and copied the case file for the typical development, sent the case file to the developer to make any needed corrections, and conducted in-person interviews to supplement any gaps in information.

Landis found that the average approval time for the 24 single-family home case studies was 11 months, with each project subject to an average of 3.3 reviews. For multi-family units, this timeline shrunk to 6.7 months, with only 2.3 separate reviews. One of these reviews was typically non-legislative—meaning the approval did not require a rezoning or a general plan amendment—such as design review or approval by a neighborhood group. This work also explored the role of CEQA on lag times. The type of CEQA review directly coincided with approval timeline, with average delays of three years and twelve continuances for EIRs—but EIRs were uncommon. Landis also found that the use of specific plans can significantly cut down on approval delays, and that certain jurisdictions were not complying with the California Permit Streamlining Act (Cal. Gov. Code § 65950 et seq.), which requires all jurisdictions—including charter cities (Cal. Gov't Code § 65921)—to approve projects within certain time windows. All of these findings were important for our work, leading us to investigate the importance of specific plans and timeframes.

The authors of this work selected the jurisdictions they studied based on the jurisdictions' openness to new development, and local planners within those jurisdictions selected the individual project case studies. That approach to choosing cities and projects for study limits what we can learn from the findings, largely because it does not provide us insight into what happens in cities that may not be open to development or how the study cities that are open to development treat different types of proposed development. Still, this study informed our own methods because the case study research approach offered a more comprehensive look into the regulatory regime within each study city, including how CEQA influences development approval timelines and burdens. In our own methods, we opted to look at all projects within study jurisdictions that received approvals during a study period to address the limits of this work.

B. There is evidence that cities use land use regulation as a tool of exclusion.

Whether proposed housing will advance fair housing goals is also critical to our work. We therefore also briefly highlight some of the prior research and writing that analyzes whether stringency in land use regulation is associated with racial and/or economic exclusion, which in turn can contribute to spatial inequality (Rothwell Jonathan & Massey Douglas, 2010). For example, using income and racial segregation data and the Pendall 2006 land use survey, Rothwell and Massey found a strong relationship between density and income segregation. The higher a metropolitan area's zoning density score, the lower the degree of class segregation. These findings support the exclusionary suburb paradigm, in which wealthy suburbs use zoning to maintain low-density development to exclude low-income people and minorities. It also reinforces that despite the contemporary complexity of land use regulation, density within base zoning still matters a great deal.

Related research also helps distinguish the concepts of stringency, and restrictiveness, from exclusion (Lens & Monkkonen, 2016). Comparing land use stringency data from the WRLURI survey with a segregation index, Lens and Monkkonen found that the overall WRLURI score as a measurement of local regulatory stringency did not correlate with income segregation; this suggests that not all dimensions of stringency in land use regulation contribute to class segregation. They did find that density restrictions are strongly correlated with income segregation and seclusion of the super elite, however. Also, they found that income segregation is higher where local governments are more involved in entitlement approvals and communities put more pressure on the government to control growth, and that income segregation is lower in places with a higher degree of state involvement in local planning decisions. Jurisdictions that required multiple levels of government approvals to build also tended to be more segregated. Finally, the authors observed higher levels of income segregation in MSAs with central cities that regulate land use more stringently than surrounding suburbs. The authors concluded that inclusionary incentives and reduced local control might be the most effective at reducing segregation.

Lens and Monkkonen's conclusions suggest that not all stringent regulation will be exclusionary and obstruct affordable housing supply. This is important to consider in the context of the limits on California's local governments' powers in the area of taxing and revenue collection. Consider the perspective of a California city trying to increase affordability to reduce barriers to housing for low-income residents with limited fiscal means to subsidize the affordable housing itself: regulatory stringency may provide an effective tool to increase deal making with market-rate developers who can provide affordable units. Even jurisdictions with affluent populations (measured by median area household income) in California may not always have the revenue to directly subsidize required (or desired) affordable development. Still, Lens and Monkkonen's work also calls attention to how land use regulation might contribute to gentrification and

displacement[49] pressures in cities that in turn produce segregation, exclusion, and discrimination (powell, 2002; Wyly & Hammel, 2004).

One theory about how land use regulation operates within cities in an exclusionary manner suggests that demand for development controls increases as cities become denser and richer, evidenced by the tightening of development controls as affluent individuals return to cities, reversing decades of urban flight (Mangin, 2014). This assumes regulation changes to reflect the preferences of newly arrived affluent urban workers. This class of residents prefer wealthier established neighborhoods that disallow new development, so the newly arrived affluent workers move into the lower-income neighborhoods adjacent to these wealthy anti-development areas and that drives up neighborhood rents. This dynamic can disrupt normal filtering processes, in which the construction of middle- to upper-quality housing stock can open opportunities for lower-quality housing stock as middle to upper-income households occupy better housing (Baer & Williamson, 1988).

Based on this theoretical framework, market-rate development would offer a supply-side solution to the gentrification problem, and proponents of this approach argue that anti-gentrification advocates, community development, and affordable housing practitioners that oppose market rate development may be working against their own interests (Been, Ellen, & O'Regan, 2019). This approach argues for easing local control over land use and supporting a supply-side solution for market-rate development, coupled with more subsidized housing, to address segregation, gentrification and displacement. A supply-side solution coupled with subsidized development for affordability is now a dominant theme in California's public policy debate and public discourse about potential solutions to the housing crisis (Dillon, 2018; Doughtery, 2020; Manville, Monkkonen & Lends, 2020; Taylor, 2016). For instance, Senator Weiner introduced SB 50 to require large-scale state-wide upzoning for residential development, but not without controversy (Dillon, 2019; Khouri, 2019).

C. Advocates argue that CEQA litigation and environmental regulation is not promoting equitable infill TOD—creating problems for fair housing and climate goals

Although no research in California has identified *which* land use regulations may be contributing to exclusion within cities generally, there is an active debate about the

[49] Varying definitions of displacement inform legal reform debates. We typically refer to four different definitions of displacement that are in the urban planning literature: (1) exclusionary displacement (the inability to move into a neighborhood because of reasons outside of a household's control—like high housing costs); (2) direct physical displacement (eviction or demolition); (3) direct economic displacement (when price increases force an individual or a family's departure from home); and (4) symbolic or cultural displacement (when transitions in the physical and social environment of gentrifying neighborhoods cause a once familiar place to become unfamiliar, resulting in long-term residents feeling politically/socially marginalized or unsafe).

role of CEQA litigation as a tool to block infill development. In 2015, the law firm Holland & Knight produced a widely circulated report analyzing all CEQA lawsuits filed within a fifteen-year period and found that eighty percent of CEQA litigation in the past fifteen years targeted infill development (Hecht, 2015; Hernandez et al., 2015). Scholars criticized this report for its overly inclusive definition of infill development (Hecht, 2015). The Holland & Knight team updated their 2015 report with two follow-up studies with similar results in 2018 and 2019 (Hernandez, 2018, 2019) that specifically tied CEQA litigation (including over GHG EMISSIONS and VMT impacts from proposed projects) as a contributor to rising housing prices in California, and as excluding housing from high-opportunity neighborhoods. In contrast, a 2016 report from BAE Economics, found low rates of litigation and infrequent use of EIRs (Smith-Heimer, Hitchcock, Roosa, & Guerrero, 2016.)

More generally, scholars and others frequently identify litigation overall as a primary obstacle to housing production (Einstein, 2019; Hernandez et al., 2015). Policymakers have put forward multiple proposals to change California's state law to reduce litigation challenging various housing projects by narrowing the scope of CEQA (SB 902, 2020; AB 1907, 2020; SB 995, 2020; Koseff, 2020). There is too little research, however, on the topic of whether litigation significantly curtails housing development. The research that does exist has significant limitations. Professional reports analyze counts of the number of lawsuits against projects (Hernandez et al., 2015; Smith-Heimer et al., 2016) but neither offer insight into how many housing developments that received approvals were or were not litigated. A California state legislative study of CEQA litigation against state-approved projects found a CEQA litigation rate of less than one percent of all state-approved projects (California Environmental Quality Act (CEQA) Survey FY 2011/12 to FY2015/16, 2017), but this, too, offers little information about how CEQA litigation impacts housing development; the subject of the study is state-approved projects that generally include projects like highway construction and natural resource management projects and not housing. Political scientists and economists have used measures of litigation – such as the number of reported judicial opinions (Einstein, 2019)– but that also does not provide accurate assessments of litigation. Many lawsuits do not produce reported opinions, and some lawsuits may produce multiple reported opinions, so the number of reported judicial opinions can be a misleading measure of overall litigation. Prior studies in California that focused only on litigation filed under CEQA (Hernandez et al., 2015) rather than on the broader range of statutes that might be relevant for litigation, can also be misleading.

Finally, whether the threat of litigation, alone, acts as a constraint on housing development is a hotly debated topic in housing policy circles. No research to date has assessed the impact of the risk of litigation in deterring projects from ever being proposed. Because research on this issue presents major methodological challenges, it is likely that the question of whether the threat of CEQA litigation has a chilling effect on potential development will remain unanswered. Testing whether this statement is true requires identifying research participants that would have proposed development in a jurisdiction of interest, but for a perceived threat of litigation. Identifying this

participant group presents a range of reliability issues. Testing whether litigation caused approved projects to change to reduce the risk of litigation also presents feasibility and validity issues.

Still, these debates about CEQA litigation informed our research design in three ways. First, we collected data on litigation for approved housing projects in our study jurisdictions, allowing us to examine the rates of litigation for approved projects—the Holland & Knight studies only examine lawsuits, rather than the full universe of approved projects whether litigated or not. Thus, they cannot provide an assessment of the risk of litigation for projects. We then can connect our data with project and approval characteristics to determine which kinds of projects might be more at risk for litigation, and potentially also assess whether the risk of litigation varies by neighborhood.

Second, we expanded our study to include the four exurban jurisdictions funded by CARB. Incorporating study of exurban jurisdictions, and approved developments, in relationship to infill developments allows us to compare rates of development approvals and litigation in each category to determine if infill development litigation rates are comparatively higher than exurban development in the same metro areas. We do this to assess the claim that litigation is disproportionately focusing on infill development and driving development to exurban areas, although not all aspects of that argument can be fully tested with approval and litigation data. We supplement these data with interviews to better understand what factors might drive more or less infill or exurban development in specific metros. It also allows us to assess whether housing projects in exurban areas face more stringent CEQA review processes or take longer to approve than infill projects. Overall, this comparison will let us analyze whether changes in CEQA, such as streamlining review processes or eliminating litigation, might differentially advance exurban or infill development. Third, we collected data on the nature of the legal claims raised in lawsuits—whether claims are based on CEQA or other laws, and whether claims drew on GHG or VMT impacts—to assess arguments that CEQA and GHG/VMT analysis is the primary driver of litigation. In addition, we are currently analyzing local regulatory definitions related to CEQA streamlining for infill development to understand whether qualifying projects contribute to the goal of GHG reduction.

Evaluating whether environmental review obstructs infill development that might otherwise support climate policy is only one dimension of this work. There is also the issue of whether state law to promote infill development, such as streamlining and other incentives, creates unintended displacement of low-income communities. Legal advocates and urban planning scholars warn that TOD without intentional affordability policy might displace residents as it might focus development into neighborhoods that have been historically subject to disinvestment (Chapple & Loukaitou-Sideris, 2019; Rawson & Tawatao, 2012; Hutson 2016, O'Neill, Gualco-Nelson, & Biber, 2020). This dynamic might not only have significant equity impacts, but also could undermine efforts to reduce VMT. The displacement of poorer residents who disproportionately use public transit more by higher income residents who are more likely to use automobiles

could increase VMT overall (Kallerman & Weinberg, 2016; Manville & Taylor, 2018) (Billingham, Bluestone, & Pollack, 2010; Chava, Newman, & Tiwari, 2018; Kaswan, 2009; Robert, 2007; Chatman, Xu, Park, & Spevack, 2019)..

D. Legal scholars and economists suggest that exclusionary regulation might also contribute to sprawl.

Relatedly, just as restrictive land use regulation might constrain supply in urban infill areas, or operate to exclude, there is also a question of whether restrictive land use regulation directly contributes to sprawling development in exurban areas. In this way, assessing the stringency of regulation is important to both fair housing and climate goals. Just as restrictive regulation that limits development to single-family homes, particularly with large minimum lot sizes and large setbacks, can be indicative of exclusionary zoning, these same regulatory tools can serve as an important indicator that local regulation might generate sprawl within the metro area (Lewyn, 2017).

Theoretically, when jurisdictions prohibit growth through restrictive low-density zoning, this can force development into neighboring jurisdictions if those jurisdictions welcome more residential development (Fischel, 1999; Carruthers, 2003; Esparza et al., 2000; Byun et al., 2005; Kim et al., 2015). Economist William Fischel theorized that as development proceeds, homeowners typically aim to lock in low-density zoning to protect their property values—what Fischel calls the "homevoter hypothesis"—which makes new development difficult. When enough jurisdictions within a single metro restrict development, this can in time facilitate sprawl into once rural jurisdictions through leap-frog development (Fischel, 2001; Marble et al., 2020).

Assessing whether local regulation may likely promote sprawl also requires examining the regulation in context—in some contexts, low-density zoning represents a "holding zone," where the local government uses the low-density zoning as an initial bargaining tool (Hills & Schleicher, 2015; Mandelker, 1976; Porter et al., 1988). Potential indicators of a jurisdiction in California using low-density zoning as a holding zone might be frequency and ease of general plan amendments and rezoning approvals.

IV. Materials and Methods

We used a case study approach (John W. Creswell & Creswell, 2018; Yin, 2014) that uses mixed methods (John W. Creswell, 2013), legal research, and overlapping phases of data collection and analysis (Berg & Lune, 2012).

A. Case Study Jurisdiction Selection Process

To answer questions about the presence and potential impact of specific regulatory and planning tools on residential development patterns in high-cost

California cities, we first selected cities that could ostensibly approve infill development in high-cost metros given their size and location within strong regional economies where demand for infill housing appears high. We first chose charter cities of various sizes within California major metropolitan areas (specifically, urban core cities and some first ring suburban communities) as they have the most discretion over land use among California's cities. We used a 2015 California Legislative Analyst's Office report that identified the metro areas with the highest housing costs in the state and where demand has outpaced supply (Alamo et al., 2015) to select our first group of study cities and regions. Using American Community Survey data and California Department of Housing and Community Development's State Income Limits for 2017 (Memorandum from Jennifer Seeger, Assistant Deputy Director Division of Housing Policy Development to Interested Parties, 2017), we further selected cities within each of these major metropolitan areas for study to include both the largest cities in those metro areas, while also selecting smaller neighboring cities to obtain a study group within each metro that could provide a range of socioeconomic characteristics. To be considered for the study, each urban city needed to meet minimum size thresholds defined by population and land area: the city needed to have a minimum population of 50,000 people and a minimum land area of 5 square miles to provide sufficient data for meaningful analysis. We examined demographic criteria (population size, average household income, percentage of the population living in poverty, and area median income), land area, and population density using Fact Finder.

Table 1 below lists the demographic criteria associated with the first group ofcities we studied: Folsom, Fresno, Inglewood, Long Beach, Los Angeles, Mountain View, Oakland, Palo Alto, Pasadena, Redondo Beach, Redwood City, Sacramento, San Diego, San Francisco, San Jose, and Santa Monica. To allow for comparative analysis with jurisdictions that would likely approve greenfield or exurban development in the same metros, we examined annual progress reports[50] for rates of approved development in exurban jurisdictions within our study metros to identify potential jurisdictions that approved enough housing to allow for meaningful analysis. We then selected three counties, Los Angeles County, Placer County, and San Diego County, and one additional jurisdiction within the Sacramento metro area, Roseville, to compare our findings with the infill jurisdictions in the same metros.

Table 1: Infill Study Jurisdictions (Data pulled from American Community Survey 2015 5-year estimates)

	Population	Density (pop./sq. mi.)	Land Area (sq. mi.)	Median Household Income	% in Poverty	4 Person A.M.I.

[50] Every jurisdiction must prepare an annual progress report to the Department of Housing and Community Development (HCD) on the jurisdiction's progress in implementing its housing element (Gov. Code § 65400).

Folsom	74,156	3,379	28	$100,978	4.7	$76,100
Fresno	510,451	4,559	114	$41,531	29.8	$59,900
Inglewood	111,411	12,286	9	$42,044	22.4	$64,800
Long Beach	470,237	9,350	50	$52,783	20.6	$64,800
Los Angeles	3,900,794	8,323	469	$50,205	22.1	$64,800
Mountain View	77,973	6,500	12	$103,488	7.8	$113,300
Oakland	408,073	7,315	56	$54,618	20.4	$97,400
Palo Alto	66,478	2,783	24	$136,519	5.4	$106,300
Pasadena	139,899	6,090	23	$72,402	15.3	$64,800
Redondo Beach	67,695	10,922	6	$105,145	4.7	$64,800
Redwood City	81,342	4,189	19	$84,934	9.4	$115,300
Sacramento	480,566	4,908	98	$50,739	22	$76,100
San Diego	1,359,791	4,182	325	$66,116	15.4	$79,300
San Francisco	840,763	17,937	47	$81,294	13.2	$115,300
San Jose	1,000,860	5,670	178	$84,647	11.3	$113,300
Santa Monica	92,169	10,953	8	$76,580	11.3	$64,800

B. Summarizing and Analyzing Base Zoning and Approvals

Our work begins with understanding what law is applicable to proposed residential or mixed-use development within our study jurisdictions. For each study jurisdiction, we created a summary of the jurisdiction's planning code. We analyzed code provisions most relevant to residential/mixed use development approvals, starting with the largest-scale planning tools (the General Plan) and then drilling down to the smallest-scale level (use and development controls). We reviewed permitted and restricted uses, height limitations within specific neighborhoods, maximum commercial and residential density and lot coverage, minimum parking requirements (if applicable), and rules governing appeals in each jurisdiction. We cataloged all characteristics of local processes that appear to be intended to increase affordable housing supply within the city, or preserve existing affordable housing, including inclusionary housing ordinances, local referenda to generate affordable housing supply, rent stabilization ordinances, anti-demolition ordinances, and neighborhood planning that taps into state-level streamlining initiatives.

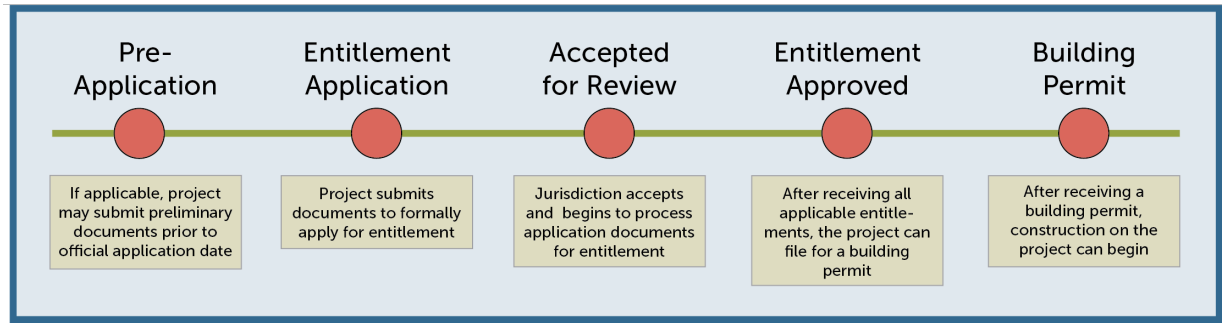
Where cities made zoning shapefiles publicly accessible (Inglewood and Folsom did not), we also conducted base zoning analysis using mapping. This allowed us to group zones based on density and use, and then calculate the amount of zoned land

area that could accommodate multi-family housing for all income levels (using a density default standard under Government Code 65583.2(c)(3)). The base zoning analysis will identify the amount of land area within the jurisdiction that meets that state-determined density default standard and allows residential development of 30 dwelling units per acre (urban default standard) or 20 dwelling units per acre (suburban default standard), as one important indicator of the potential for affordable housing development.

C. Building the Project Observation Database

We then used these planning code summaries to aid our construction of data collection methods to collect ***residential entitlement***[51] and permitting data for all residential developments of five units or more approved by our study jurisdictions in 2014, 2015, 2016, or 2017. For developments subject to discretionary review processes, we identified and coded the final approval conferring entitlement (see Figure 2 below). For development subject only to a ministerial process, we identified and coded the building permit issuance only to provide an accurate count of approvals within our study years. We did not obtain building permit data for out to OIS for CommonLook all entitlement observations, as that was outside of the scope of this study.

Figure 2: Capturing Approval Process Observations



We chose our study years to study development patterns post-Great Recession. While we identify observations by the year that jurisdictions entitled a proposed development, each observation's study period extends as far back as the earliest application date, as other scholars have found approval timelines in highly regulated communities can take a year or more (Joseph Gyourko et al., 2008). We selected the five-unit threshold as a level of development more likely to be substantial in both the number of units produced and the impacts that development might have on the broader community; these larger projects are also more likely to produce dense development in infill communities that can support transit-oriented development. These rationales are reflected in state law, which uses the five-unit threshold to require more substantial review for the subdivision of parcels for development and defines "housing

[51] Residential entitlement refers to a final approval for a proposed development subject to discretionary review that precedes the application for a building permit. Entitlement typically requires a series of approvals and documentation to proceed to apply for a building permit application.

development" as "five or more residential units" in the state Density Bonus law (Cal. Gov't. Code § 65915(i)). We include both single-family and multi-family housing developments creating five or more residential units. We defined residential units broadly, encompassing live-work spaces, single room occupancy hotels, ***deed-restricted***[52] affordable housing, and student apartments (what RHNA would allow to be counted as a housing unit, which does not include dorm rooms). We did not include facilities for the elderly dedicated to providing medical care, hospice care or residential facilities constructed by hospitals to house patients' families.

We gathered project approval data through online permitting and public access portals for each jurisdiction, searching for project approval documents, geographic information systems zoning shapefiles and project site information, tax assessor records, and city council and planning commission meeting minutes. To collect this data, we first reviewed the jurisdiction's website to find public notices for all environmental review documents, lists of approved developments, parcel information maps, and administrative appeals. We searched property addresses within cities' databases to identify applicable zoning ordinances. We quality checked data pulled from public portals by cross-referencing project data against all available documentation to ensure accuracy. Where data gaps existed because documents were not publicly available, we requested additional required documentation from planning department staff, or filed a public records request for required documentation. Once we had a preliminary compilation of projects for a jurisdiction, we reached out to planning staff to review the data with planning department personnel to test for accuracy. Not all departments responded to this request.

For each process observation we also gathered data on administrative appeals challenging the approvals, and litigation data. For the latter, we searched court records for lawsuits against the approving jurisdiction to identify lawsuits that challenged approved projects. For each lawsuit, we collected the petition or complaint filed by the objecting party, as well as the final judgment by the trial or appeals court that resolved the lawsuit. We used qualitative data analysis software (MaxQDA) to code petitions and complaints to determine what claims (CEQA or non-CEQA, GHG/VMT or not) were raised by the objecting party and which (if any) claims were successful.

We also geocoded the observations using the Texas A&M Geoservices resource for projects with postal addresses or a postal address range. Because some parcels may not be assigned addresses at the time of application, we used the project location information detailed in the project staff report (such as a metes-and-bounds property description) to identify a location in Google Maps, and used the coordinates provided by Google Maps.

We implemented Quality Control procedures throughout data collection to ensure accuracy and to revise data collection methods as needed. Because we

[52] Deed restricted housing maintains affordability by setting income requirements for renters or by restricting the resale price. These limitations are set forth in the deed itself.

generated a new dataset from documents typically managed by planning departments, we began with creating a separate database for each study jurisdiction. Each jurisdiction database went through quality control before being coded and merged into a master dataset. The UCB PI and CO-PI and UCB research staff created a "project list" that was typically overinclusive for the first round of data collection. The UCB Team determined data collection processes for each jurisdiction, generated a Project Manual, templates for data collection, and trained students on jurisdiction-specific planning and project level public portals. The UCB Team then assigned a small batch of data collection to graduate and undergraduate student researchers. After students completed the first batch of data collection, the UCB Team reviewed their work and met one-on-one with students to go over the first data set. After that stage, student researchers gathered additional data.

Once a student researcher demonstrated understanding of how to collect data, the student researchers submitted batches of data of no more than forty projects for UCB Team review for obvious flaws or errors. Where feasible given the ease of data access, research staff double-checked all entries. Where the city system did not make that feasible, the UCB Team randomly selected 10 percent of the projects to double-check data entry. If there were more than 1 percent errors, or any mistakes signaled potential systemic issues with data collection/accuracy, the UCB Team conducted a more thorough review of up to 25 percent of the overall projects based on the nature of problems identified in the random sample. The research staff corrected the data entry directly or in coordination with the student researcher. Where questions about whether a proposed development qualified for entry in the master database, the PI and CO-PI reviewed the project details and made the decision about whether the proposed development met the study criteria for inclusion.

To ensure accuracy, the UCB Team did not rely on jurisdiction reports of approvals over the study period (such as pipeline reports or other housing data in online public portals). Instead, the UCB Team collected the underlying project approval documents that would confirm approvals, such as public meeting agendas and minutes. Where possible, student researchers pasted directly from the approval documents into the project database. Also, when the UCB Team coded the data from each study jurisdiction, the UCB Team provided a second review of the data entry and corrected any inconsistencies or errors at that stage.

A final stage of data cleaning involved the UCB PI and research staff working with the UCI Co-PI to run individual variables through data analysis software (Stata) to identify readily apparent coding errors in the master dataset, and then UCB staff cleaning data through Stata. The UCI Team also reviewed geographic coordinates for potential inaccuracy using the ArcGIS geocoding engine. The UCI Team then passed a list of potentially inaccurate geographic coordinates (a total of ~130 in all observations) to the UCB Team. UCB student researchers, with supervision, used project characteristics sourced from documents including Planning Areas, Assessor Parcel numbers, and prior use descriptions, along with Google Maps satellite imagery and historic Street View

photos to identify more precise geographic coordinates. Students, with research staff supervision, looked for agreement between planning areas, prior use description (particularly if construction activity occurred at the site as well) and planning area before confirming an address.[53]

In total, after data cleaning, the observation data includes 2,001 observations of city or county approvals of proposed developments of five or more units during our study period.

We briefly also elaborate on what we do not analyze in this report. Although we collected building permit data for proposed developments of five or more units in jurisdictions with ministerial processes for this development, we did not collect all building permit data for all entitlement observations in this study. We completed a first effort at data collection for all building permits associated with our entitlement observations issued on or before December 31, 2019, for fifteen of our study jurisdictions. We found that several of our study cities inconsistently record building permit filing dates and issuance dates in online public access portals. We do not provide analysis of building permit data associated with our entitlement observations in this report as substantially more data collection is needed.

When examining proposed development, we also did not collect data on, or code for, development fees (defined here to broadly include impact fees and service fees). Development fees are a critical dimension of regulatory stringency, relevant to assess as a control on supply, particularly affordable development, and to assess as a tool of exclusion and growth control measure. In the California context analyzing development fees demands constructing a parallel study. California constrains how local governments collect revenue necessary for infrastructure and public services. Thus, teasing out whether impact and development fees operate to exclude growth or operate as essential mechanisms to pay for necessary infrastructure to support growth, demands its own study. This would begin with analysis of state law that governs development fees, local regulations and fee schedules, and then collection of project observations just to explore this topic. We were not resourced to incorporate this additional work into our own study—but we also would direct policymakers to the Terner Center for analysis of existing development fees in California (Mawhorter et al., 2018; Raetz et al., 2019).

D. Interviews

We conducted semi-structured, in-depth interviews with key informants from each jurisdiction we chose to study. We used three strategies to generate a list of potential participants across four stakeholder groups in all jurisdictions: (1) public agency staff (including local planning staff, housing and community development staff,

[53] At the time of writing this report, the UCB Team has completed confirmation of precise coordinates for 30 of all geographic coordinates requiring review—those located in Los Angeles County.

and city attorneys that work on land use), (2) housing developers (market-rate and non-profit affordable), (3) community-based organizations and advocates, and (4) consultants (design, legal, and entitlement). We examined the study jurisdictions' websites to identify public agency personnel, and the public data access portals for market rate developers, consultants, and private counsel associated with project applications. We used our professional networks to identify additional stakeholders in both the public, private, and nonprofit sectors and to identify affordable developers and community-based organizations involved with residential development processes. We also identified potential participants from newspaper articles, blogs, and other media that described stakeholders associated with notable residential developments within our study jurisdictions.

In sum, we identified hundreds of potential interview participants through examination of websites, professional reports, and project-level data. We reached out to all potential candidates by email and telephone. 85 key informants agreed to participate in in-depth interviews. We were able to interview at least one participant within each stakeholder group and within each jurisdiction. Some participants represented more than one stakeholder group or more than one jurisdiction, and some participants allowed us to interview them twice or for more than an hour. We used open-ended questions to collect perceptions of: the jurisdiction's approval process, land use taxonomies that contribute most to delays and cost, the role of community in the public approvals process, social-economic-political factors that shape development patterns (such as the local political climate and community tensions at play), and technical details not immediately obvious in the development data. We concluded interviews by sharing preliminary findings from our datasets with participants to gather feedback and impressions.

E. Coding

We created our coding structure for our process observation data using a deductive-inductive approach. We first coded project observations for approval events we identified as potential indicators of stringency if analyzed based on what existing legal, urban planning and urban studies scholarship determined to be stringency measures. These variables include current site usage, proposed project characteristics, earliest application date, final entitlement approval date, required discretionary review milestones, environmental review milestones, opposition through an administrative appeal or litigation event. We then reviewed the observations for idiosyncrasies in the approval events, and cross-referenced our planning code summaries and interview data, to inform and modify our coding structure to code for the function of approval or process milestones within our study jurisdictions. There are 172 variables in the coding structure to capture how approved development navigated processes, inclusive of project characteristics (in terms of product type, number of units, and whether any units are deed-restricted to be below market rate units) not including the geographic coordinates for observations.

We have completed coding our interviews using qualitative data analysis software (MaxQDA) using an inductive-deductive approach, first identifying themes that stakeholders prioritized in their discussion. We then examined whether these themes were consistent with theories about how state or local land use regulation influences housing costs and housing supply. We triangulated themes from interviews with analysis based on observations and legal research. Collectively, interview participants identified themselves as knowledgeable about land use regulation in 96 jurisdictions (including many we did not include in our study set) across the state.

F. Research Question and Hypothesis

Our study examines (1) whether existing local land use law and/or environmental regulations governing infill development individually, or in conjunction, present significant obstacles to equitable infill development, (2) whether regulation intended to promote infill development and disincentivize sprawl is disproportionately impacting communities already affected by gentrification and displacement, and (3) whether current law intended to promote infill development and curtail development in previously undeveloped exurban areas (greenfield development) may increase the regulatory burden on the construction of housing in greenfield areas, such that households already pushed out of the urban core face a persistent affordability crisis even in exurban areas, risking overcrowding and homelessness or displacement out of the metro area entirely.

Based on our review of existing research we hypothesized that:

1. There are significant legal, planning, and regulatory barriers to advancing equitable infill development within transit-accessible neighborhoods in high-cost coastal cities;
2. The most significant barriers in infill contexts are a product of local discretion over land and development of onerous local regulations;
3. Local governments can eliminate any barriers associated with state environmental regulation by reforming their local zoning;
4. State law aimed at incentivizing infill development in transit-accessible neighborhoods is applied differently (and sometimes ineffectually) within these local contexts; and
5. State law aimed at incentivizing infill development may operate to make greenfield development more difficult.

G. Limitations of Research Design

This study analyzed how land use law operates in twenty California jurisdictions, using a mixed method approach. This approach allowed us to collect data from a variety of sources, including housing approval data from actual entitlements cities and counties

issued over four years, diverse stakeholder interviews, GIS zoning data, and legal texts. The quantitative portion of the CALES relies on uniquely detailed information of individual housing development approvals. For example, we can analyze and compare how similar development (in terms of affordability or project characteristics) navigated approval processes within and across jurisdictions. The qualitative portion entailed interviews with stakeholders from each identified stakeholder group in each study jurisdiction to gather different perspectives on each research question. In sum, we can provide a detailed picture of each study jurisdiction's regulatory environment and offer some insight into which regulations most likely influence housing development outcomes.

As with any research, there are several limitations. We list those here. First, the findings in each study jurisdiction, or the comparisons across jurisdictions, cannot be extrapolated to other geographies. Second, our descriptive analysis from the quantitative process observation data cannot be extrapolated to entitlements (or, in the case of ministerial process observations, building permits) issued before 2013 or after 2017. Relatedly, we cannot compare timelines for discretionary and ministerial projects, because the timelines for ministerial projects culminate with a building permit, whereas the timelines for discretionary projects culminate with an entitlement that occurs prior to the issuance of a building permit. This type of comparison requires augmenting the observation data set to capture building permits, if any exist, for all entitlement observations to allow for a direct comparison of timeframes. Third, the data does not include information about when and how jurisdictions *deny* proposals to build housing. Fourth, as is the case with any observational data, causal inferences can be drawn from the quantitative CALES only under strong assumptions or with a quasi-experimental research design, which we did not conduct for this report.[54] The qualitative data is comprehensive in that the team interviewed stakeholders from each identified stakeholder group in each study jurisdiction to gather different perspectives on each question. All interview data, and related analysis, however, is limited by the fact that all study participants volunteered. Voluntary participation in interviews increases selection bias and limits the generalizability of findings from interviews, even within the study's geographies.

[54] UCI is presently leading two studies that joins CALES data with other data in ways that may facilitate inferential analysis. The first, sponsored by the UC Irvine Institute of Transportation Studies, examines factors that (1) affect decisions about whether and where to build infill projects in job-rich and transit-accessible locations, and (2) contribute to entitlement delays. The analysis first identifies how the locations of projects are spatially associated with transit systems and other transportation infrastructure. Then, using descriptive statistics and multivariate modeling, it identifies how project-level attributes and contextual variables, including those related to transportation, affect decisions about whether and where to build infill projects in jobs-rich and transit-rich locations. The researchers will also conduct a systematic comparison of permitting timelines for otherwise comparable projects with different degrees of transit availability or job accessibility, along with multivariate modeling to compare potential determinants of delay. The second, sponsored by the Chan Zuckerberg Initiative will join CALES data with proprietary data on housing prices to develop spatially and temporally precise measures of housing cost appreciation, in order to identify "hot spots" for housing cost increases (a key indicator of gentrification).

V. Findings and Discussion

We first analyzed our 16 infill cities to examine how these local regulatory environments approve dense residential development and whether these first 16 regulatory environments appear to promote both climate and fair housing goals. We next added four jurisdictions (one city and three counties) that regularly approve greenfield development in exurban areas to our study. We provide findings that answer the question of whether regulation over infill development likely promotes climate and fair housing policy goals in the first 16 study cities. We then examine whether regulation over exurban development appears to operate any differently in exurban communities to promote climate and fair housing goals—providing comparative analysis of all 20 study jurisdictions.

A. Identifying and Selecting Key Indicators of Stringency and Exclusion

Regulation over land use has increased in its complexity and variability across jurisdictions (William, 1990) and stringent or exclusionary land use regulation has multiple dimensions (J. E. Gyourko & Molloy, 2014; Saiz, 2010a). We evaluate regulation to identify indicators of stringency and exclusion as two separate issues. Stringency and exclusion are related, but they are not the same thing. Stringent regulation, often measured in terms of restrictiveness, may be a tool to promote exclusion (O'Neill at al., 2020). But stringent regulation may also be used to promote inclusion, if for example an inclusionary zoning mandate (which researchers may count as an indicator of stringency) operates to support affordable housing development (Jackson, 2018; Schuetz, Meltzer, & Been, 2009).

We look for potential indicators of exclusive regulation that operates to exclude low-income households that would qualify for deed-restricted affordable housing, and we also look at how regulation might promote or limit development of the "missing middle" income housing. We use multi-family housing as a proxy for housing that could supply middle-income housing. Conceptually, this proxy depends on a supply-side remedy to housing affordability and filtering; it assumes that an increase in supply will reduce housing prices and make housing more affordable to middle-income households that do not qualify for deed-restricted housing (likely because their income exceeds the thresholds for subsidized housing) but are still priced out of the current market.

Three common dimensions of stringency in land use regulation are: (1) prohibition of some or all residential development outright in base zoning; (2) imposition of fees and costs on residential development (Been, 1991), and (3) onerous process that generates increased uncertainty of approval, potentially generating time lags to approvals to build even on parcels that provide for appropriate use and density (Gabbe, 2018; Jackson, 2016; KL Einstein, D Glick, & Palmer, 2017) or public opposition that may lead to a denial of a right to build. Though a study of all three would provide the most comprehensive analysis of how regulation might constrain multi-family housing development, collecting data on all three demands more legal research on both fee

schedules but also data collection on the imposition of fees on individual projects. Our project list could permit the latter at another time. As discussed in our methods, in this report we limit our comparative analyses of stringency to regulation that would fall within the first and third groups, sometimes referred to as prohibition and process (Monkkonen, Lens, & Manville, 2020).

1. Local governments generally make little land available for dense housing.

To determine how much zoned land our study jurisdictions made available for multi-family housing, and later assess whether base zoning operated as a potential constraint on multi-family housing, we defined two basic categories of base zoning. "Permissive base zoning" is zoning that, according to state law, allows multi-family residential use at a density high enough to accommodate housing affordable to all income levels. Specifically, the threshold for permissive base zoning is the default density standard in state law that demonstrates a jurisdiction can accommodate its regional need for housing at all income levels; the density threshold in all our study cities is thirty dwelling units per acre (Cal. Gov't. Code §65832.2). "Restrictive base zoning" refers to single-family only zones. We then examined zoning maps and ordinances to determine the amount of land area with permissive base zoning and land area with restrictive zoning. We do not compare the base zoning of counties that regulate land use in unincorporated areas with our other jurisdictions, as these areas require different analysis for permissive base zoning.[55]

Fifteen of our seventeen study cities made zoning shapefiles publicly accessible, (Folsom and Inglewood did not). We used the zoning ordinance language and zoning map GIS shapefiles to determine how much land area within our study cities limited use and density to single-family homes, only, or would permit dense residential development suitable for all income levels exclusive of street area. Table 2 below details the amount of land area zoned for single-family housing only and land area zoned for all income levels citywide, as a percentage of all zoned land area and by square miles, for the cities and counties where data allowed for this analysis.

Nine of the fifteen cities have less than ten percent of their total zoned land area zoned for multi-family housing sufficient to accommodate all income levels. Among all

[55] We did not categorize zones in exurban unincorporated areas of counties for the purpose of comparative analysis across all jurisdictions for several reasons. The first reason is that some counties provided residential density in distinct form-based metrics for each zone, limiting the ability to compare zones within one jurisdiction, or across jurisdictions. Specifically, some jurisdictions provided many types of form-based limitations for each parcel, not just zone. This meant that height, setback, and even building type were distinct for each zoned parcel, limiting our ability to calculate a dwelling unit per acre equivalency for each zone to compare across different jurisdictions. Additionally, zones that provided a form-based (height) limitation as proportionate to buildable area do not easily allow for calculating what might be a realistic buildable area for the purposes of comparative analysis, as lot size and urban/exurban context vary greatly in unincorporated areas that include both urban village areas and very low-density areas.

cities where we could analyze base zoning, Roseville, one of our exurban study jurisdictions, has the most restrictive base zoning if measured by percentage of zoned land. Among jurisdictions that we would expect to accommodate infill dense housing, San Diego has the most restrictive base zoning (if measured by percentage of permissive base zoning) with approximately 3% of its total zoned land area zoned for all income levels. San Francisco, previously identified in other scholarship as the most stringently regulated of all our studies (J. Gyourko et al., 2019; Jackson, 2018; Joseph Gyourko et al., 2008; Quigley et al., 2008) has the most permissive base zoning of all our study cities, with 33.54% of its total zoned land area zoned for all income levels.

Table 2: Summary of Base Zoning Analysis Entire City All Zoned Land[1]

	% Zoned for all income levels[2]/All Zoned Land Citywide	Total Land Area Zoned for All Income Levels (mi^2)	% Zoned for Single-family Homes/All Zoned Land Citywide[3]	Total Land Area Zoned for Single-family Homes (mi^2)
Fresno	5.22%	4.87	42.33%	39.50
Long Beach	4.34%	1.73	30.84%	12.30
Los Angeles	11.21%	45.56	46.69%	189.79
Mountain View	9.93%	0.99	26.08%	2.60
Oakland	7.11%	4.75	27.83%	18.59
Palo Alto[4]	3.53%	0.80	52.56%	11.87
Pasadena	12.39%	2.28	46.86%	8.62
Redondo Beach	3.30%	0.16	28.26%	1.36
Redwood City[5]	12.81%	1.11	35.29%	3.04
Roseville	.23%	0.10	44.51%	18.09
Sacramento	9.21%	7.64	42.89%	35.61
San Diego	3.19%	8.70	70.25%	191.61
San Francisco	33.54%	11.86	24.99%	8.84
San Jose	4.03%	6.13	44.34%	67.44
Santa Monica	17.73%	1.06	32.21%	1.93

[1]Denominator is all zoned area in the jurisdiction; calculations exclude street area.
[2]San Francisco, Fresno, and Santa Monica all employ a form-based code for some regions of the cities. When a dwelling unit per acre density metric and FAR were not available, or the FAR range or density varied to the point that the zone could not be categorized in just one zone group, we used the narrative section of the city's zoning ordinance to match it to like zones. We looked for keywords such as "medium intensity," "high-rise," and others to sort the individual zones when no other metrics were available. In San Francisco many form-based zones do not have a residential density limit, thus we sought to reflect the overall limitations of these zones in our groupings. Even with height and bulk restrictions in place, form-based codes in San Francisco still permit more density than the RH-2 and RH-3 zones which both satisfy the 30 du/per acre threshold. In San Francisco, form-based zones all together make up 8.14% of zoned land area of the HQTA and 8.14% of zoned land area of the city as a whole. In Fresno, form-based zones all together make up 6.71% of zoned land area of the HQTA and 1.02% of zoned land area of the city as a whole. In San Diego, form-based zones all together make up .93% of zoned land area of the HQTA and .26% of zoned land area of the city as a whole. In Santa Monica, form-based zones all together make up 19.45% of zoned land area of the HQTA and 17.26% of zoned land area of the city as a whole.
[3]This calculation also includes zones in cities that have other zoned land that allows for single family homes, such as agricultural zones that allow for only one single family home. We chose this approach to define zones that allow for residential use expansively.
[4]Our calculations assume that all "Planned Multi-family Districts" were zoned for All Income Levels, as we could not locate the ordinances establishing these districts.
[5]We did not include zoned land described as "Tidal Plain" in the Redwood City zoning code, as much of this area appeared to be water based on Google Satellite imagery.

Next, we calculated permissive or restrictive base zones within ***high quality transit areas (HQTA)*** in fifteen of our study cities where we could access the necessary

transit access shapefiles. HQTA and permissive density together provide a proxy for whether the residentially zoned land area would meet criteria needed for deed-restricted affordable housing development. Land zoned for high-density residential development is also one prerequisite for creating compact, market rate, transit-oriented development (TOD). In addition, dense development in HQTA can be pedestrian- and transit-friendly, helping to advance climate policy goals (California's 2017 Climate Change Scoping Plan: The strategy for achieving California's 2030 greenhouse gas target, 2017).

We define HQTA as referring to areas within ½ mile of ***major transit stop (MTS)*** or ¼ mile of a ***high quality transit corridor (HQTC)***. MTS means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of fifteen minutes or less during the morning and afternoon peak commute periods (Cal. Pub. Res. Code Sec. 21064.3). HQTC means a corridor with fixed route bus service with service intervals no longer than fifteen minutes during peak commute hours (Cal. Pub. Res. Code Sec. 21155(b)). We chose the ¼ mile buffer for the HQTC instead of the ½ mile buffer to be consistent with proposed state laws that would have permitted significant increases in allowable density near transit, like SB 827 and SB 50 (SB 50, Cal. Reg. Leg. Sess. 2019-2020 (2019); SB 827, Cal. Reg. Leg. Sess. 2017-2018 (2018)). In Los Angeles, we were unable to obtain a shapefile that reflects current HQTA boundaries. We used the boundaries of Los Angeles' Transit Oriented Communities program, which are coterminous with the boundaries of the MTS. (City of Los Angeles, Transit Oriented Communities Guidelines (2017)). While we used this Los Angeles layer as an indicator of HQTA, it does not include the HQTC and thus underrepresents the full extent of the HQTA in Los Angeles. [56]

Table 3 indicates how much land area within the jurisdiction's HQTA has permissive base zoning and how much has single-family only zoning. Limited permissive base zoning within the HQTA likely limits affordable housing development or dense TOD. For example, only 7 percent of Long Beach's HQTA also has permissive base zoning, whereas 35% of its HQTA has restrictive base zoning. Similarly, ~10 percent of San Diego's HQTA has permissive base zoning, whereas ~43% of the HQTA has restrictive base zoning. Nine of these fourteen cities have higher percentages of restrictive zoning, compared to permissive base zoning, in their HQTAs—with Long Beach, Palo Alto, Sacramento, and San Diego having the starkest difference between the two zoning categories among this group. Four cities, in contrast, have more of their HQTAs permissively zoned relative to the amount of area restrictively zoned—with San Francisco again the city with the highest percentage of permissively zoned land area within its HQTA.

[56] We used the SCAG 2045 Planning Year transit areas for Long Beach, Pasadena, and Santa Monica zoning and transit analysis. This area is likely overinclusive as it includes intended transit areas for plan year 2045.

Table 3: Base Zoning High Quality Transit Area Only

	% HQTA Zoned for all income levels/All zoned land in HQTA	Total HQTA Land Area Zoned for All Income Levels (mi^2)	% HQTA Zoned for Single-family Homes	Total HQTA Zoned for Single-family Zones Only (mi^2)
Fresno	34.72%	2.94	25.01%	2.11
Long Beach	7.02%	1.55	34.63%	7.64
Los Angeles	28.50%	30.33	26.67%	28.38
Mountain View	24.61%	0.85	21.99%	0.76
Oakland	23.09%	4.39	27.08%	5.15
Palo Alto	21.49%	0.45	39.22%	0.83
Pasadena	29.01%	1.81	33.30%	2.07
Redondo Beach	-	-	-	-
Redwood City	49.41%	0.50	11.35%	0.11
Roseville	1.39%	0.10	40.73%	2.78
Sacramento	13.10%	5.42	45.25%	18.75
San Diego	9.56%	7.41	43.14%	33.42
San Francisco	34.71%	11.18	25.19%	8.11
San Jose	9.33%	2.69	33.68%	9.70
Santa Monica	19.67%	1.03	26.60%	1.39

To assess whether cities are zoning land to promote fair housing goals, we also calculate whether base zoning in our cities is likely to support affordable development in highest or high opportunity areas or likely to direct affordable development primarily into high poverty areas. To incorporate an opportunity measure, we use the Highest Resource and High Resource land area from the California Fair Housing Task Force data, which classifies census tracts in our study jurisdictions into Highest, High, Moderate and Low Resource areas along with a category for High Segregation and Poverty. We consider areas identified as High and Highest Resource by the California Fair Housing Task Force to be highest and high opportunity areas. We again use HQTA with permissive base zoning to assess whether the zoning supports affordable development in highest and high opportunity areas.

Table 4 indicates that a few cities do not have very much land at all that is in a High or Highest Resource area and HQTA. This may be because cities have comparatively low rates of HQTA, generally, (e.g., Palo Alto) or comparatively lower rates of HQTA in High and Highest Resource areas relative to other TCAC classifications (e.g., Oakland). Cities that have some land area that is single-family only zoning in HQTA and in a High or Highest Resource area may want to examine the ability to rezone for all income levels. San Diego is the most noteworthy example as it has 2.78 square miles

of HQTA that is also in a Highest or High Opportunity Area zoned for all income levels, but 16.63 square miles of HQTA in Highest or High Opportunity Areas zoned for single-family zoning. It is possible that HQTA in Highest or High Opportunity areas zoned for single-family only may have other geographic constraints making increased density difficult, but this requires further research to determine if local governments could increase density in these areas but are choosing not to do so. We do not have information about geographic constraints that could make zoning for dense multi-family housing difficult in higher opportunity HQTA (Saiz, 2010b). But this is worthy of further study.

Table 4: Base Zoning, Opportunity, and Transit Area[1]

	% HQTA that is Highest Resource and High Resource and zoned for all income levels	Total land area (mi^2) in HQTA High and Highest Resource and Zoned for All Income Levels	% HQTA that is Highest Resource and High Resource and zoned for Single-family Homes	Total land area (mi^2) HQTA High and Highest Resource Single-family Zoning Only	% HQTA that is High Segregation & Poverty, & Low Resource and Zoned for All Income Levels	Total land area (mi^2) In HQTA High Segregation and Poverty and Low Resource Zoned for All Income Level	% HQTA that is High Segregation and Poverty Zoned for Single-family	Total land area (Sq mi2) HQTA High Segregation and Poverty Zoned for Single-family
Fresno	5.79%	0.49	4.14%	0.35	22.6%	1.91	8.27%	0.70
Long Beach	0.00%[2]	0.00	17.03%	3.76	6.00%	1.32	1.78%	0.39
Los Angeles	8.67%	9.22	12.53%	13.32	13.93%	14.81	2.59%	2.75
Mountain View	22.70%	0.79	18.12%	0.63	-	-	-	-
Oakland	0.66%	0.13	2.03%	0.39	15.51%	2.94	4.34%	0.82
Palo Alto[3]	21.49%	0.45	39.22%	0.83	-	-	-	-
Pasadena	18.58%	1.16	32.16%	2.00	7.97%	0.50	0.00%	0.00
Redondo Beach	-	-	-	-	-	-	-	-
Redwood City	8.88%	0.09	9.17%	0.09	32.48	.33	-	-
Roseville	0.00%[4]	0.00	36.79%	2.51	.91%	.06	-	-
Sacramento	4.10%	1.70	11.39%	4.72	6.78%	2.81	10.66%	4.42
San Diego	3.59%	2.78	21.49%	16.63	5.09%	3.94	5.89%	4.56

San Francisco	16.28%	5.23	9.78%	3.14	8.60%	2.76	1.35%	0.43
San Jose	2.82%	0.81	5.45%	1.57	6.37%	1.83	-	-
Santa Monica	20.18%	1.02	27.62%	1.39	-	-	-	-

[1]For Los Angeles, we used the Transit Oriented Communities (TOC) boundaries to represent high quality transit areas. For Redondo Beach, Pasadena, Long Beach, and Santa Monica, we used SCAG's Transit Priority Area geography to represent high quality transit areas. For San Francisco, Oakland, Mountain View, Palo Alto, Redwood City, and San Jose, we used MTC's HQTA layers. For Sacramento, we used HQTA layers available from SACOG. For San Diego, we used the HQTA file made available by SANDAG. For Fresno, we sourced transit routes and cross-referenced schedules for frequency in order to create HQTA layers.
[2]Area of intersection is so small that the closest rounding is 0% and 0 square miles.
[3]Our estimate for 30 du/acre for Palo Alto assumes that all multi-family Planned Districts (for which we could not locate exact density) allow for 30 du/acre or higher. The amount of land area zoned for 30 du/acre could be lower than this estimate.
[4]Area of intersection is so small that the closest rounding is 0% and 0 square miles.

2. Most dense development is subject to discretionary review, even in areas designated for dense development.

To analyze and compare development approval processes, we first determine whether a proposed development of five or more units is subject to a discretionary or ministerial approval process. Ministerial approvals are approvals in which a government agency simply applies law to fact without using subjective judgment; in short, ministerial review provides more certainty in the approval process. Discretionary review, in contrast, allows the government agency to impose conditions of approval and modify the proposed development even where the proposal to develop conforms to local regulation. Although the Housing Accountability Act (HAA) limits when and how local governments may deny proposals to build housing that conforms to local law (requiring findings in certain circumstances), discretionary review can impose uncertainty in the approval process even for projects covered by the HAA. Discretionary review can do this by imposing unexpected, expensive challenges to meet conditions of approval. Discretionary review also allows local governments deny proposals to build housing that ask for a variance or a rezoning in order to build. Discretionary review generates a requirement for a development approval before a developer or builder may even apply for a building permit. In California, local discretionary review also invokes a state-mandated environmental review process (Cal. Pub. Res. Code § 2108), and a developer carries the costs of satisfying environmental review. Discretionary review may trigger a public hearing requirement. Discretionary review can also allow for administrative challenges to the final approval, or even litigation to challenge the approval. Each of these features of discretionary review may impose time lags to development that a ministerial process would avoid.

Also, because the discretionary approval confers a right to apply for a building permit—but not a building permit itself—we cannot compare observations of

discretionary approval processes against ministerial approval processes in the cities where we have observed use of a ministerial approval process. When measuring the impact of process, in terms of time lags, we only use observations of discretionary approvals with complete timeline information.

During our study years, five of our study cities did not allow for any residential development—including for single-family dwelling—to proceed through a ministerial process (see Table 5 Summary Analysis of Ministerial Processes in Local Ordinances below). These were Pasadena, Redondo Beach, Redwood City, Sacramento, and San Francisco. In several cities, aesthetic controls (such as design review or architectural review) impose a discretionary review process on proposed development that otherwise conforms to underlying base zoning and planning designations. That means that development proposals that comply with zoning and planning designations regarding use, size, and form still face uncertainty in the development approval process. In San Francisco, the City Charter (the constitution for that local government) imposes discretionary review on all building permits (S.F. Bus. And Tax. Regulations Code § 26(a)). In this way, San Francisco also imposes a discretionary review mechanism outside of the formalized planning and zoning process on all proposed development.

In contrast, four cities had ministerial processes to approve proposed development of five or more units of housing: Fresno, Inglewood, Los Angeles, and San Diego. Ministerial processes differed across these cities. Los Angeles allowed proposed development that conforms to underlying use and density controls up to 49 units to move through a ministerial approval process, so long as it is not located within a Community Design Overlay. Inglewood and San Diego do not have a specific unit count threshold for ministerial review. Fresno limits application of the ministerial process to proposed development meeting specific project characteristics located within its Downtown area only. Santa Monica offers a ministerial process exclusively for 100% deed-restricted affordable development only, up to 49 units. Notably, Sacramento has amended its local ordinances and as of 2020 applies ministerial review to proposed development of up to 200 units in specific infill locations. All three counties we studied provide for a ministerial process for at least some development that proposes more than five units of housing.

Table 5: Summary Analysis of Ministerial Processes in Local Ordinances

	Did the local ordinances within jurisdiction allow for any "by-right" development in 2014, 2015, 2016, and 2017, and if so, at what density?	Did jurisdiction permit *any* projects of 5 or more units through a ministerial process (requiring no discretionary review) in 2014-2017?
Folsom	Yes; "by-right" up to 2 dwelling units (du)[1]	No
Fresno	Yes; "by-right" in specific downtown zones meeting specific project criteria[2]	No
Inglewood	Yes; "by-right" theoretically, with no limit to number of units as long as consistent with underlying zoning[3]	No
Long Beach	Yes; "by-right" up to 4 du if underlying zoning permits the proposed density[4]	No
Los Angeles	Yes; up to 49 du if underlying zoning permits proposed density[5]	Yes
Los Angeles County	Yes	Yes
Mountain View	Yes; up to 2 du[6]	No
Oakland	Yes; 1 du[7]	No
Palo Alto	Yes; up to 2 du[8]	No
Pasadena	No[9]	No
Placer County	Yes; up to 20 du in specific district	No
Redondo Beach	No[10]	No
Redwood City	No[11]	No
Roseville	Yes; up to 2 du	No
Sacramento	No during 2014-2019; as of 2020 yes up to 200 du in infill locations[12]	No
San Diego	Yes; "by-right" theoretically, with no limit to number of units as long as consistent with underlying zoning and development standards [13]	Possibly[14]
San Diego County	Yes; "by-right" theoretically, with no limit to number of units as long as consistent with underlying zoning and development standards	No
San Francisco	No[15]	No
San Jose	Yes; up to 1 du[16]	No
Santa Monica	No; up to 1 du or 100% affordable housing projects up to 50 du declared "ministerial" and subject to an administrative process that is exempt from CEQA but subject to design review[17]	No

1. Folsom Zoning Code § 17.06.030.
2. Fresno Municipal Code § 15.-5102(D).
3. Inglewood Municipal Code § 12-39.50 and 12-101 allows by-right development, but all projects of 5 or more units underwent discretionary review during 2014-2017.
4. Long Beach Zoning Code § 21.25.502.
5. Los Angeles Zoning Code §16.05I.
6. Mountain View Municipal Code § 36.44.55 and 36.44.60.
7. Oakland Municipal Code § 17.136.025.
8. Palo Alto Municipal Code § 18.76.020(b)(1)(A).
9. Pasadena Municipal Code § 17.61.030(B).
10. Redondo Beach Municipal Code § 10-2.2500.
11. Redwood City Municipal Code § 45.2.

12. Sacramento Municipal Code § 17.808.160, 17.860.020 and 17.860.030.
13. San Diego does not provide a blanket discretionary review provision. Determination of whether ministerial review depends on review of each zone and permitted uses.
14. Local records indicate San Diego had 77 projects that may have been processed "by-right" or may have been subject to a discretionary review process, between 2014-2017. The City of San Diego was unable to provide data to determine whether these projects were processed as of right or through a discretionary process.
15. San Francisco Charter 4.106.
16. San Jose Municipal Code § 20.100.610.
17. Santa Monica Municipal Code § 9.40.020(B). This ordinance suggests the City has a ministerial process. Review of 2018 and 2019 data, in which at least some proposed develoment navigated this process reveals that in fact that the City treated those developments as "ministerial" for the purposes of CEQA review, but applied a discretionary design review process. Each relevant staff report included the following qualifying language: The Architectural Review Board's approval, conditions of approval, or denial of this application may be appealed to the Planning Commission if the appeal is filed with the Zoning Administrator within ten consecutive days following the date of the Architectural Review Board's determination in the manner provided in SMMC9.61.100.

3. Local governments approve dense housing at very different rates across metros and within metros.

Table 6 shows how many proposed developments of five or more units each city approved in our study years with either a ministerial or discretionary process. This table also indicates how many units these cities approved and what percentage of these units were deed-restricted affordable units. Notably, some approvals were on the same parcel—in other words, developers had the same parcel entitled more than once in our study years. We counted each entitlement as an independent observation for the purposes of our measuring process even if a parcel received multiple entitlements in our study years. It is also important to note that not all approvals led to construction activity; this is not a measure of housing production but of potential housing production. Observations of approvals provide a direct objective metric of what the local government has allowed to make it past a major regulatory hurdle on the way to construction.

Table 6: Approvals of Proposals to Develop 5 or More Units of Housing, All Cities 2014-2017

	2014-2017 Total Approval Count[1]	2014-2017 Total Approved Units	2014-2017 Total Approved Affordable Units	% of All Units Approved that are Affordable
Folsom	6	1,364	12	0.88%
Fresno*	64	6,153	308	5.01%
Inglewood*	4	568	0	0.00%
Long Beach	27	2,604	374	14.36%
Los Angeles*	1,071	65,846	4,757	7.22%
Los Angeles County*	37	2,532	877	34.64%

Mountain View	33	2,767	268	9.69%
Oakland	136	14,399	1,073	7.45%
Palo Alto	7	351	75	21.37%
Pasadena	37	1,608	127	7.90%
Placer County	19	3,535	111	3.14%
Redondo Beach	7	211	2	0.95%
Redwood City	18	1,630	183	11.23%
Roseville	22	6,394	509	7.96%
Sacramento	68	5,794	53	0.91%
San Diego*	176	13,957	1,284	9.20%
San Diego County*	27	1,434	0	0.00%
San Francisco	140	14,269	2,168	15.19%
San Jose	81	14,601	734	5.03%
Santa Monica	21	1,447	190	13.13%

*Jurisdiction provides a ministerial review process for development of five or more units of housing.

When comparing Table 5 Summary Analysis of Local Ordinances By-Right Provisions, above, with actual project approval data, we found that having a ministerial process "on the books" did not necessarily lead to observations of ministerial approvals within our study years. Los Angeles provided 286 observations of development of five or more units approved through a ministerial process, and Los Angeles County provided 3. Fresno, Inglewood, and the City of San Diego had no data to confirm developments of five or more units approved through a ministerial process in our study years. There were 77 proposed developments in the City of San Diego that may have gone through a ministerial process, but data limitations prevented both the city and us from confirming whether these projects were approved through a ministerial process or a staff level discretionary process.[57] This indicates that even where cities may have ministerial processes, most dense development is still subject to discretionary review.

[57] Specifically, San Diego had five approval pathways for developments of 5 or more units. The first is a ministerial process, or "Process 1." "Process 2" is a staff-level discretionary review process. We analyzed publicly available meeting minutes and staff reports for the approval bodies for any discretionary process, but these documents were not available for Process 1 and 2 projects as they were processed at the staff level. We pulled data on Process 1 and 2 developments using San Diego's building permit database, cross-checking that projects receiving building permits had not received a prior discretionary approval through Process 3-5. We determined that 77 projects might have undergone San Diego's Process 1 or 2 approval pathway in 2014-17, but data limitations make it impossible to identify which of the 77 projects are Process 1 (ministerial) or Process 2. San Diego was unable to provide more data to determine this, as well. We were also unable to locate environmental review notices in the state clearinghouse for any of these projects, but that is not conclusive of whether these projects went through environmental review as cities do not always submit notices to the state clearinghouse.

Simple aggregate totals of approval rates are also not the best way to compare how much housing cities are approving. At the most basic level, Los Angeles is larger in area and population than all our other study cities and should have a higher total of housing approvals. There are different ways to scale housing approvals to facilitate comparisons across our cities. Scaling by land area considers the extent to which there is space for new development, at least in a rough way; however, cities may have large physical area but not much demand for housing. Scaling by population considers that larger population cities may also have more demand for housing. Similarly, the approval of housing as a percentage of housing stock shows the extent to which the city is expanding its overall housing supply to meet regional and statewide needs. Table 7 below shows approval rates standardized according to these different approaches. Roseville, Oakland, and Mountain View, generally, approved more housing relative to their sizes (measured by population).

Table 7: Standardized Approval Rates

Jurisdiction	2014-2017 Total Approvals Count	2014-2017 Units Approved Count	Units/ 1,000 people[1]	Units/square mile[2]	% Increase Total Housing Stock[3]	% of Units that are Deed-Restricted
Folsom	6	1,364	18.60	45.29	5.21%	0.88%
Fresno	64	6,153	12.16	53.04	3.53%	5.01%
Inglewood	4	568	5.11	62.49	1.47%	0.00%
Long Beach	27	2,604	5.56	51.78	1.48%	14.36%
Los Angeles	1,071	65,846	17.05	140.50	4.60%	7.22%
Los Angeles County	37	2,532	2.35	1.00	0.82%	34.64%
Mountain View	33	2,767	36.06	230.58	8.10%	9.69%
Oakland	136	14,399	35.79	258.09	8.43%	7.45%
Palo Alto	7	351	5.32	14.70	1.23%	21.37%
Pasadena	37	1,608	11.56	70.00	2.66%	7.90%
Placer County	19	3,535	32.30	2.69	5.97%	3.14%
Redondo Beach	7	211	3.13	34.03	0.69%	0.95%
Redwood City	18	1,630	20.44	83.93	5.45%	11.23%
Roseville	22	6,394	49.72	144.69	12.69%	7.96%
Sacramento	68	5,794	12.17	59.17	3.02%	0.91%
San Diego	176	13,957	10.40	40.75	2.69%	9.20%
San Diego County	27	1,434	2.91	0.82	0.82%	0.00%
San Francisco	140	14,269	17.21	304.44	3.74%	15.19%
San Jose	81	14,601	14.80	82.71	4.52%	5.03%
Santa Monica	21	1,447	15.79	171.85	2.80%	13.13%

[1]Calculated from Population counts as of January 1, 2014, using American Community Survey Data.
[2]Calculated in square miles with city boundary shapefiles pulled from individual city websites for all cities. All shapefiles were downloaded in 2019, but the year updated depended on how recently the city updated their Shapefile.

[3]Calculated from Housing Stock as of January 1, 2014, using American Community Survey Data for 2014, downloaded from American Fact Finder in fall 2019.

4. Discretionary processes vary by jurisdiction, not by type of development or location in TOD areas; entitlement timeframes range from months to years depending on the city.

We compare how cities apply discretionary review by calculating approval steps to entitlement and mean and median timeframes to entitlement. We use the earliest application date and the final approval that confers the ability to apply for a building permit (the entitlement) to calculate timeframes. The earliest application date represents the beginning of the application process and captures the full timeframe to entitlement.[58] We count each discretionary approval required before entitlement, counting the environmental review determination as one approval step. We have no timeline data for Inglewood because they did not make application dates available.

Table 8 Entitlement Timeframes and Average Steps to Approval All Cities 2014-2017 below shows that San Francisco has the longest timeframes to approvals. The median timeframe to approval within San Francisco is nearly 27 months, 8 months longer than the next longest median approval timeframe in Palo Alto. San Francisco's timeframes represent an outlier not just within the group of cities in that metropolitan region, which had median time frames ranging from ~5 months (Oakland) to ~19 months (Palo Alto), but also across all our study cities.

Also significant is that in these study cities, the number of approval steps does not appear to correlate with median timeframes. Several cities with shorter median timeframes to approval are among those with the highest average number of approval steps per project. Similarly, cities with fewer steps to approval, such as San Francisco and Santa Monica, are among the cities with the lengthiest median timeframes. This result is in tension with prior scholarship that associates the number of approval steps with higher regulatory stringency (e.g., Joseph Gyourko, Albert Saiz, & Summers, 2008).

[58] The earliest application date is not the determined to be complete date (the date on which the jurisdiction determines the application for development is complete, and the date state law uses to limit approval time frames for development that meets specific criteria). During the data collection process, we did note that completeness determination dates were inconsistently available. Only the data from the City of Los Angeles consistently provided determined to complete dates.

Table 8: Entitlement Timeframes and Average Steps to Approval All Jurisdictions 2014-2017

	2014-2017 Total Discretionary Approval Count	Median Timeframe (Months)[1]	Mean Timeframe (Months)	Standard Deviation of Timeframe	Average Number of Approvals per Project, including CEQA
Folsom	6	14.1[2]	14.1	3.1	5.00
Fresno*[3]	64	6.5[4]	12.0	16.5	3.25
Inglewood*	4	-[5]	-	-	4.25
Long Beach	27	7.6	10.6	6.6	3.15
Los Angeles*[6]	785	9.9[7]	13.2	13.9	2.89
Los Angeles County*[8]	35	16.0	27.2	38.0	3.44
Mountain View	33	13.0	13.08	4.3	5.58
Oakland	136	5.4[10]	8.67	7.8	4.38
Palo Alto	7	18.6	15.9	7.9	4.14
Pasadena	37	9.6	13.4	13.8	3.32
Placer County	19	12.8	16.1	14.7	4.00
Redondo Beach	7	2.2	8.8	14.9	5.00
Redwood City	18	7.5	15.1	23.7	4.78
Roseville	22	8.1[12]	13.0	11.7	4.41
Sacramento	68	6.4	8.8	9.7	4.21
San Diego*[13]	99	13.9[14]	21.1	21.0	3.68
San Diego County	27	14.9	29.2	42.2	2.74
San Francisco	140	26.6	31.4	18.8	3.36
San Jose	81	17.7	31.0	36.5	3.80
Santa Monica	21	16.5[15]	34.8	36.5	3.48

*Local ordinances allow for as of right development for five or more units

[1]30.42 was used as the conversion factor from days to months in timeframe calculations. These calculations are based on the entitlement timeframe for discretionary projects only.

[2]One project in Folsom did not have full timeframe information available and was not included in timeframe calculations.

[3] Fresno allows for as of right approvals of 5 or more units. Fresno did approve one project ministerially during our project years but information on this project was not available.

[4]20 projects in Fresno did not have full timeframe information available and were not included in timeframe calculations.

[5]No timeframe information was available for projects in Inglewood.

[6]Los Angeles permitted 286 ministerial projects and 4,585 ministerial units, 252 (5.50%) of which are deed-restricted affordable. Los Angeles entitled 785 discretionary projects with 61,261 units, 4,505 (7.35%) of which are deed-restricted affordable.

[7]One discretionary project in Los Angeles did not have full timeframe information available and was not included in timeframe calculations.

[8]Los Angeles County permitted 3 ministerial projects and 55 ministerial units, 46 of which are deed-restricted affordable. Los Angeles County entitled 34 discretionary projects with 2,477 units, 831 of which are deed-restricted affordable.
[9]In Los Angeles County, we could not determine the timeframe for 3 projects, so these projects were not included in the calculation.
[10]In Oakland, we could not determine the timeframe for 44 projects, so these projects were not included in the calculation.
[11]2 projects in Pasadena did not have full timeframe information available and were not included in timeframe calculations.
[12]One project in Roseville did not have full timeframe information available and was not included in timeframe calculations.
[13]San Diego allows for as-of-right approvals (also known as ministerial approvals) of 5 or more units as well as staff-level discretionary review. These review pathways are known as "Process 1" (as-of-right) and "Process 2" (staff-level discretionary review). While our primary method for data collection used publicly available meeting minutes and staff reports for the approval bodies for discretionary process, these were not available for Process 1 and 2 projects as they were processed at the staff level. Instead, we pulled this data from Open DSD, San Diego's building permit database, cross-checking that projects receiving building permits had not received a prior discretionary approval through Process 3-5. We determined that 77 projects comprise San Diego's Process 1 and 2 2014-17 approvals. Data limitations make it impossible to identify which of the 77 projects are Process 1 (as of right) or Process 2. Also, we do not have access to any Process 2 projects that did not apply for a building permit. The City of San Diego was unable to provide more data on Process 1 and 2 projects. We were unable to locate environmental review notices in the State clearinghouse for any of these projects, but that is not conclusive of whether these projects went through environmental review as cities do not always submit notices to the state clearinghouse. Process 1 and 2 projects, combined, account for 77 projects and 4,620 units, including 9.98% (461) deed-restricted affordable units. Process 3-5 account for 99 projects and 9,337 units, including 8.81% (823) deed-restricted affordable units.
[14]Timeframes for San Diego projects were calculated using Process 3-5 projects only, and 12 projects did not have full timeframe information available and were excluded from timeframe calculations.
[15]Full timeframe information was unavailable for one project in Santa Monica, and it was excluded from timeframe calculation.

5. New dense housing in our Southern California and Silicon Valley infill cities commonly demolishes old housing, potentially causing direct physical displacement in some places; in exurban areas, most development goes where there was no housing before—with some rezoning of agricultural land in San Diego County.

Multiple stakeholders care about where new housing is built—and what was there before. Where new housing is built matters for fair housing and climate policy. If new housing involves the demolition of existing housing, particularly multi-family housing and rent-stabilized housing, there is always a risk of direct physical displacement of tenants (O'Neill et al., 2020). If new housing involves subdivision on formerly agricultural land, that signals exurban sprawl—and depending on its location, that may undercut state climate policy.

We coded the observations for prior use. Prior use represents the existing use of the parcels to be developed at the time the property owner or developer applies for approval to develop. Notably, inland cities and counties like Fresno, Folsom, Placer

County, Roseville, and Sacramento approved most of their dense development on what appears to be vacant land. Folsom and San Diego County stand out among jurisdictions that are more likely to approve greenfield development. Folsom and San Diego County entitled development on formerly agricultural land at a much higher rate than our other study jurisdictions (16.7% and 14.8%, respectively—compared with 0-3.1% everywhere else).

Hypothetically, a higher rate of agricultural prior use could signal a holding zone, where the jurisdiction aims to engage in deal-making to extract benefits from the developers for the community. Interviews, however, indicated that a notable number of entitlements in San Diego County during our study period were inconsistent with the County's General Plan (which focused on approving development in the county's Urban Villages). Research participants described that developing formerly agricultural land invited some of the most onerous discretionary review processes and often considerable community opposition from a well-organized group of climate policy activists—but that some developers will pursue this development strategy, even with uncertainty, because agricultural land costs are very low in an area that provides exponentially higher financial returns on single-family subdivision development. Also notable is that research participants did not describe the same development context in Los Angeles County, Placer County, or Roseville.

Table 9: All Study Jurisdictions Prior Use

Jurisdiction	% Prior Residential Use	% Prior Commercial Use[1]	% Prior Agricultural Use	% Vacant Prior Use[2]	% Prior Use Unknown
Infill					
Folsom	0.0%	0.0%	16.7%	83.3%	0.0%
Fresno	14.1%	12.5%	3.1%	64.1%	6.3%
Inglewood	25.0%	25.0%	0.0%	50.0%	0.0%
Long Beach	0.0%	63.0%	0.0%	14.8%	22.2%
Los Angeles	60.0%	24.2%	0.0%	11.4%	4.4%
Mountain View	60.6%	33.3%	0.0%	6.1%	0.0%
Oakland	13.2%	52.9%	0.0%	28.7%	5.1%
Palo Alto	28.6%	57.1%	0.0%	14.3%	0.0%
Pasadena	67.6%	21.6%	0.0%	8.1%	2.7%
Redondo Beach	42.9%	57.1%	0.0%	0.0%	0.0%
Redwood City	16.7%	50.0%	0.0%	16.7%	16.7%
Sacramento	11.8%	30.9%	0.0%	57.4%	0.0%
San Diego	35.2%	31.8%	0.0%	30.7%	2.3%
San Francisco	3.6%	89.3%	0.0%	6.4%	0.7%
San Jose	32.1%	44.4%	1.2%	19.8%	2.5%
Santa Monica	38.1%	42.9%	0.0%	19.0%	0.0%
Infill Total	43.9%	33.8%	0.2%	18.1%	4.0%
Jurisdiction	**% Prior Residential Use**	**% Prior Commercial Use**	**% Prior Agricultural Use**	**% Vacant Prior Use**	**% Prior Use Unknown**
Los Angeles County	27.0%	37.8%	0.0%	32.4%	2.7%
Placer County	15.8%	15.8%	0.0%	63.2%	5.3%
Roseville	0.0%	4.5%	0.0%	95.5%	0.0%
San Diego County	37.0%	0.0%	14.8%	48.1%	0.0%
Greenfield Total	21.9%	17.1%	3.8%	55.2%	1.9%
All Jurisdictions Total	42.8%	32.9%	0.4%	20.1%	3.8%

[1]Includes all parking uses, including surface parking lots.
[2]Includes grazing or pasture uses.

We also examined prior residential use to determine risk of direct displacement of tenants, which is relevant to equity considerations and fair housing goals (O'Neill et al., 2020). Prior residential use does not necessarily mean that new housing results in the demolition of existing housing (it could be that the new housing development retains existing units). However, higher rates of prior residential use signal the need for more analysis. We see in Table 9 above that some Silicon Valley and many southern California cities have high rates of prior residential use. Oakland and Long Beach have a split between approving new dense development on formerly commercial land and vacant land, though Long Beach also had a high rate of observations without information about prior use. Notably, most of San Francisco's approvals for dense development were on parcels that were formerly commercial—in short, San Francisco mostly approved dense housing where no housing existed.

We next examined rates of demolition; and, in cities with rent-stabilized housing, we also examined whether the demolition was of rent-stabilized units. Because cities were not always consistent when capturing demolition of rent-stabilized units, we also examined whether the units involved ***Ellis Act evictions***. Under the ***Ellis Act***, landlords can evict all tenants in a building in order to withdraw the units from the rental market for sale or conversion into condominiums. Cal. Gov't Code §§ 7060-7060.7.[59] Evictions under the Ellis Act are often a precursor to demolition and thus a good indicator that demolition has taken place.

To prevent double counting in our data analysis, if a unit was noted as both being rent-stabilized and having had an Ellis Act eviction, we counted it in the rent-stabilized column. Demolition of rent-stabilized units and/or units subject to an Ellis Act eviction prior to demolition and development indicates that the development likely involved direct physical displacement of tenants. We see that Los Angeles demolished a high number of units that likely resulted in direct displacement of tenants. We also see that the demolition resulted in exponentially more units, overall, but not necessarily a one-for-one replacement of deed-restricted affordable units. We discuss Los Angeles in more detail below in section V.B.2.

[59] The Ellis Act accomplishes this by preventing local governments from enacting ordinances that compel a landlord to stay in the rental business. See id. § 7060(a). Ellis Act evictions are commonly—but not exclusively—used to withdraw rent-stabilized units from the rental market because Rent Stabilization Ordinances (RSO) limit the circumstances under which a landlord may evict a tenant.

Table 10: Rates of Demolition Associated with Housing Approvals All Jurisdictions

Jurisdiction	Projects Involving Residential Demolition	Demolished Units	Demolished Rent-stabilized Units	Demolished Ellis Act Only Units	Replacement Units	Replacement Market Rate Units	Replacement Affordable Units
Fresno	3[1]	2	—	—	23	23	0
Inglewood	1	5	—	—	12	12	0
Los Angeles*	570[2]	2,400	995[3]	643[4]	12,921	11,599	1,322
Mountain View*	20[5]	282	0	0	1,326	1,262	64
Oakland*	8[6]	6	0	0	56	56	0
Palo Alto	2	8	—	—	32	27	5
Pasadena	19[7]	70	—	—	513	440	73
Redondo Beach	3[8]	24	—	—	13	13	0
Redwood City	3	31	—	—	195	195	0
Sacramento	5[9]	430	—	—	587	587	0
San Diego	48[10]	136	—	—	674	614	60
San Francisco*	4[11]	1,381[12]	0	0	389	102	287
San Jose*	25[13]	320	0	0	2,448	2,226	22
Santa Monica*	6[14]	14	11[15]	0	25	22	3
Infill Total	717	5,109	1,006	643	19,014	17,178	1,836
Los Angeles County	6	10	—	—	136	58	78
Placer County	3	4	—	—	20	20	0
Roseville	0	0	—	—	0	0	0
San Diego County	4[16]	4	—	—	48	48	0
Greenfield Total	**13**	**18**	—	—	**204**	**126**	**78**
All Study Jurisdictions Total	**730**	**5,127**	**1,006**	**643**	**19,218**	**17,304**	**1,914**

*Has Rent Stabilization Ordinance

[1]1 project with current residential use had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.

[2]15 projects with current residential use had unknown current unit count. We included the projects in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.

[3]3 projects with current residential use that were rent stabilized had unknown current unit count. We included the projects in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.

[4]1 project with current residential use that was Ellis Acted had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[5]1 project with current residential use had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[6]5 projects with current residential use had unknown current unit count. We included the projects in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[7]1 project with current residential use had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[8]1 project with current residential use had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[9]2 projects with current residential use had unknown current unit count. We included the projects in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[10]6 projects with current residential use had unknown current unit count. We included the projects in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[11]2 projects with current residential use had unknown current unit count. We included the projects in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[12]Two observations in San Francisco account for the 1,381 demolished units. Both observations were part of San Francisco's HOPE SF program. Two affordable housing complexes, one in Sunnydale (775 units) and one in Portrero Hill (606 units) were demolished.
[13]1 project with current residential use had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[14]2 projects with current residential use had unknown current unit count. We included the projects in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[15]1 project with current residential use that was rent stabilized had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.
[16]1 project with current residential use had unknown current unit count. We included the project in the Projects Involving Residential Demolition column, but not in the Demolished Units or Replacement Units columns.

6. No urban cities have permissive regulatory environments for housing and six are likely prohibitive.

Both climate policy and fair housing policy prioritize increasing infill housing supply in high opportunity metro areas. We therefore examine the relative stringency of only our infill study cities to determine if and whether local regulation could constrain dense infill housing (including deed-restricted housing) within these communities. We do this by comparing approval rates, relative process, and base zoning.

Whether a city approves more housing to be built is not the only determining factor as to whether housing gets built. Existing demand matters. We use analysis from the Legislative Analyst's Office (LAO) to determine demand. Most of our study cities are also in counties where, according to the LAO, housing demand outpaced the number of units built between 1980-2010 (Inglewood, Long Beach, Los Angeles, Oakland, Palo Alto, Pasadena, Mountain View, Redwood City, San Francisco, San Jose, Santa Monica), but some (Folsom, Fresno, and Sacramento) are in counties where units built exceeded demand during that period (Alamo et al., 2015). The LAO analysis indicated that San Diego County's estimated housing demand only slightly outpaced units built during that period. Grouping study cities by county enables us to evaluate standardized rates within

the context of past market conditions. Where we do not have more than one city in a county, like San Francisco, we can compare cities within census metropolitan areas.

Table 11 below indicates that within metros with high demand, some cities approve relatively more housing than other cities. For example, in Santa Clara County, where demand severely outpaces supply, Mountain View approved much more housing than San Jose and Palo Alto. As another example, the City of Los Angeles approved much more housing than any of the other five study cities within Los Angeles County.

Although standardized approval rates do not tell us how much housing specific cities should be approving, it helps us identify cities where market conditions could be conducive to approving more housing—given the performance of neighboring jurisdictions with similar demand. Mountain View's approval rates, for example, suggest that based on market conditions, San Jose and Palo Alto could be approving more housing, based on market conditions. Similarly, Redwood City signals San Francisco could likely approve more housing. Los Angeles' approval rates tell us the same about Pasadena, Redondo Beach, and Santa Monica. However, the approval rates of Los Angeles, Redwood City, and Mountain View do not necessarily set a ceiling for approval rates of other study cities within their respective counties. Nothing in our data suggests that these cities could not approve more housing as well.

Table 11: Standardized Approval Rates Sorted by LAO Reporting on Metro Housing Costs, Demand, and Production

	2014-2017 Total Approvals Count	Units/1,000 people	Units/square mile	% Increase Total Housing Stock	% of Approved Units that are Deed-Restricted
San Francisco-Oakland-Hayward Metropolitan Statistical Area[60]					
Alameda County					
Oakland	136	35.79	258.09	8.43%	7.45%
San Mateo County					
Redwood City	18	20.44	83.93	5.45%	11.23%
San Francisco County					
San Francisco	140	17.21	304.44	3.74%	15.19%

[60] Between 2013 and 2018 the Office of Management and Budget defined this as MSA as consisting of San Francisco, Alameda, Marin, Contra Costa, and San Mateo Counties.

San Jose-Sunnyvale-Santa Clara MSA[61]					
Santa Clara County					
Mountain View	33	36.06	230.58	8.10%	9.69%
San Jose	81	14.80	82.71	4.52%	5.03%
Palo Alto	7	5.32	14.70	1.23%	21.37%
Los Angeles-Long Beach-Anaheim MSA[62]					
Los Angeles County					
Los Angeles	1,071	17.05	140.50	4.60%	7.22%
Santa Monica	21	15.79	171.85	2.80%	13.13%
Pasadena	37	11.56	70.00	2.66%	7.90%
Long Beach	27	5.56	51.78	1.48%	14.36%
Inglewood	4	5.11	62.49	1.47%	0.00%
Redondo Beach	7	3.13	34.03	0.69%	0.95%

The differing approval rates among cities within the same counties invites the question: what aspects, if any, of these cities' regulatory environments might lead to these differences? To describe and compare the stringency of these diverse local regulatory regimes, we draw on what we conclude to be the two most critical dimensions of land use controls in these cities—base zoning (density and use restrictions) and process requirements measured by discretionary approval time frames. We focus on these two indicators of stringency because within our study cities the number of steps to approval is uncorrelated with discretionary approval timeframes.[63]

We also do not include litigation rates in this comparison. In the context of examining entitlement, litigation rates effectively measure opposition from a neighbor or opponent as a constraint on housing development and political context. We discuss this measure of community opposition to development in separate section below.

[61] This MSA includes Santa Clara and San Benito Counties.

[62] This MSA included Los Angeles and Orange Counties.

[63] Presumably the number of steps to approval would increase the time to approval, but our interviews revealed that increasing steps to approval did not automatically create uncertainty or additional complexity for a developer. This is best illustrated in Redwood City, for example, which had among the highest number of steps to entitlement: study participants described the regulation as detailed but precise, providing more certainty about what each step required to reach approval when moving through discretionary review.

We narrow our analysis of process even more by focusing only on approval timeframes for proposed multi-family development that conforms to all zoning and planning requirements (code compliant proposals). Lengthy approval processes for code compliant proposals to develop are a particularly strong indicator of stringency. A code compliant proposal to develop multi-family housing means that a property owner is not asking the jurisdiction to deviate from any existing planning and zoning law—or even asking for a conditional approval.

Thus, we use (1) median entitlement timeline data for code compliant multi-family development to describe process requirements and (2) analysis of the percentage of zoned land area that has permissive base zoning to determine the restrictiveness of base zoning. These two metrics together allow us to sort our cities into four categories to describe relative stringency and exclusion. We calibrate the process axis by reference the WRLURI18 survey responses that determined that Average Delays Index. We interpret the ADI information from this survey as the planning professional's perception of how long approvals should take on average, in lightly, moderately, and highly regulated communities nationwide (J. Gyourko et al., 2019; Joseph Gyourko et al., 2008).

WRLURI18 responses indicate that planners perceived approval delays in communities that the WRLURI18 described as lightly regulated communities to be, on average, 3.7 months, 5 months in places with average regulation, and 8.4 months in highly regulated communities. We use 8.4 months as the marker for more process. We also use 5 months as a marker to identify potentially permissive regulatory environments. We likewise identify cities as having more process requirements where the median time to approval takes more than 15 months but less than 24 months; this range is the upward tail of findings from the WRLURI18 (J. Gyourko et al., 2019). When the median timeframe to approval for code compliant multi-family development exceed 24 months that exceeds even the upward tail of what planners perceive to be average delays to approvals in highly regulated communities nationwide. We use the 24-month marker to identify process requirements that may be prohibitive.

Along the base zoning axis, we describe cities with more than 20% of the total zoned land area zoned for all income levels as having less restrictive base zoning. To determine this threshold, we relied on our own base zoning analysis and cross-referenced recent related work identifying patterns of single-family zoning in California cities (Mendendian et al., 2020). UC Berkeley's Othering and Belonging Institute found that over 80% of all residentially zoned land in the San Francisco Bay Area was zoned for single family only. These researchers categorized jurisdictions within the San Francisco Bay Area that had 0-80% of their land area zoned for single family only as having a "low" percentage of single family only zoning. They also found that "denser housing options are only permitted in less than one-fifth of residential areas in this region" (Mendendian et al., 2020). This latter finding is consistent with our own base zoning analysis.

Given our and other researchers' findings about the prevalence of single family only zoning, we conclude that if one of our study cities zoned more than 20% of its residentially zoned land area for all income levels, this would qualify as having comparatively "less restrictive" base zoning. In contrast, we interpreted a city zoning 5% or less of all zoned land for all income levels as "more restrictive" as this limits the amount of zoned land available for affordable development.

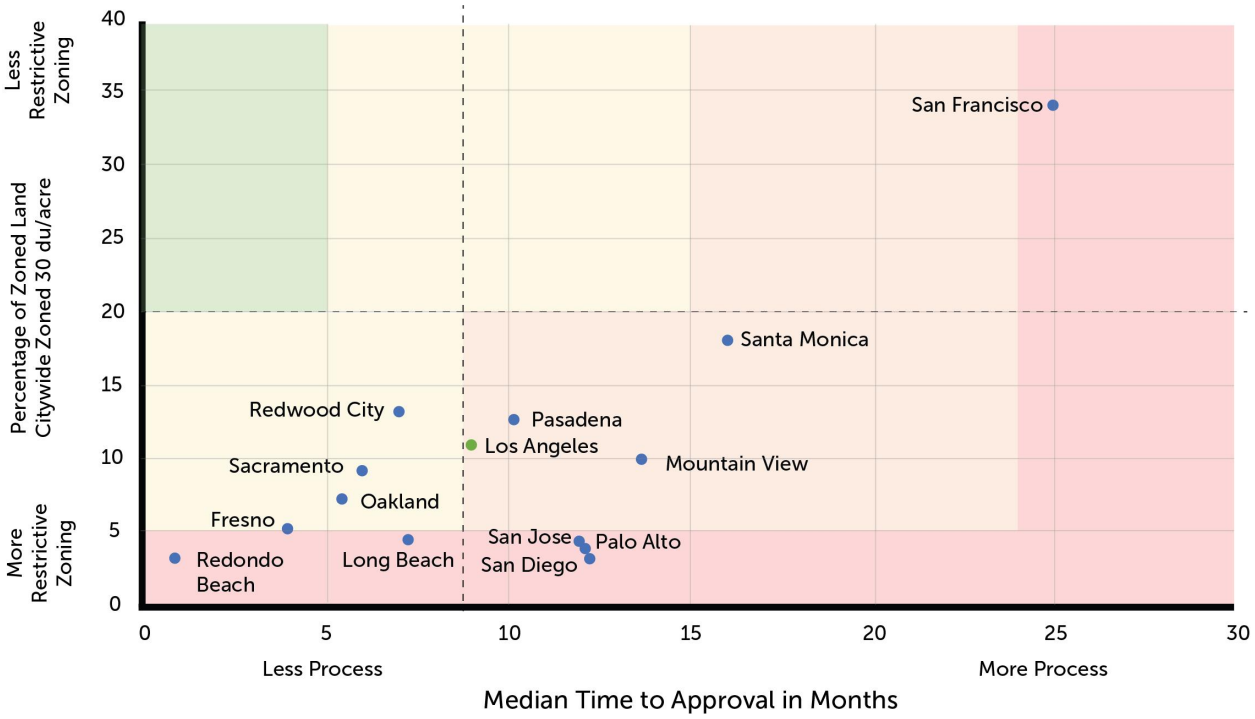
This approach to comparative analysis lent itself to generating typologies to describe our study cities, but not rankings. In this way our analysis is akin to Pendall et al's 2006 work that sorted jurisdictions into four regulatory clusters (Pendall, 2006). Also, after completing legal research in each—none of the cities can be described as lightly regulated. We thus constructed categories that capture degrees of stringency and whether a jurisdiction's application of its law was conducive to allowing multi-family development, particularly affordable development.

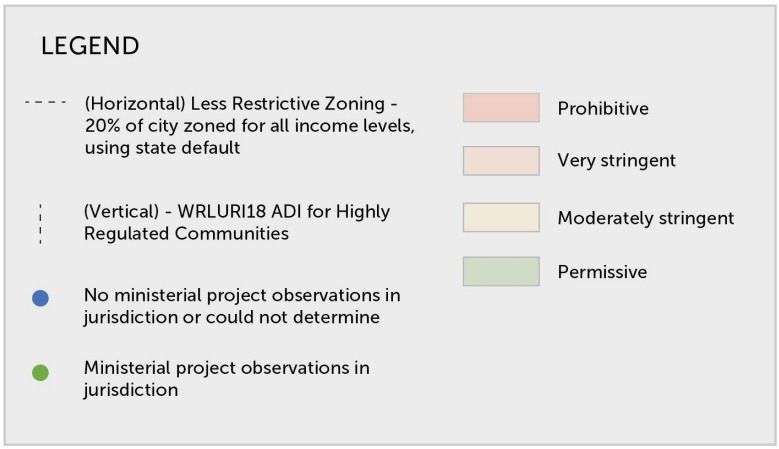
We have four categories. The first is **permissive** jurisdictions, with less process (medians at or under 5 months) and less restrictive base zoning (over 20% of zoned land area zoned for all income levels). The second is **moderately stringent** jurisdictions which can fall into one of two scenarios. Some of these jurisdictions have process timeframes at or under 5 months but have restrictive base zoning (greater than 5% but under 20% of zoned land zoned for all income levels). Others have less restrictive base zoning (greater than 20% of zoned land zoned for all income levels), but have process medians between 5 and 15 months. The third category consists of **very stringent** jurisdictions, which have greater than 5% but under 20% zoned land area for all income areas and median timeframes to approval between 8.4 months and 15 months. This third category also includes jurisdictions with more than 20% zoned land zoned for all income levels and median time frames between 15 and 25 months.

We describe a fourth category of jurisdictions as having **prohibitive** regulation. These cities zone less than 5 percent of their zoned land area citywide for all income levels. This category includes cities with timeframes under 5 months but the most restrictive base zoning. These base zoning limitations would signal a severe regulatory constraint on available land for dense multi-family development, including deed-restricted affordable development. In interviews with affordable developers, participants describe the unavailability of land suited to affordable development as being the first obstacle to increasing affordable supply. Prohibitive cities also include cities with less restrictive base zoning but process time lags that exceed 24 months for code compliant development. During interviews, affordable developers noted that extremely lengthy discretionary processes make forecasting and financing difficult and limit where they choose to propose affordable development.[64]

[64] We have two cities with inadequate data to analyze them in this way (Folsom and Inglewood).

Chart 1: Comparative Analysis of Regulatory Types





Categorizing our study cities according to median timeframes for code compliant multi-family development and percentage of zoned land area citywide zoned for all income levels, we find that none of our study cities are in the permissive category. Fresno, Oakland, Redwood City, and Sacramento are moderately stringent. Los Angeles, Pasadena, Mountain View, and Santa Monica are very stringent. Redondo Beach, Long Beach, Palo Alto, San Diego, San Francisco, and San Jose are in the prohibitive group. Notably, three of those cities—San Diego, San Francisco, and San Jose—had local ordinances to promote inclusion and increase affordability through mandates and incentives. San Jose and San Diego are in the prohibitive group because of more restrictive base zoning. San Francisco's extreme process time lags—which may

derive from the fact that San Francisco's charter makes all approvals discretionary—places San Francisco into the prohibitive group.

Table 12 below provides actual and standardized entitlement rates again and categorizes cities based on their process and base zoning. The cities in the prohibitive group entitled relatively less housing than their neighbors in other categories. For example, Oakland, a city within the moderately stringent group, approved more housing per capita than either Redwood City or San Francisco.[65] Redwood City, within the moderately stringent group, approved more housing per capita than San Francisco. Similarly, Mountain View approved more housing per capita than San Jose and Palo Alto, two study cities within the same high demand county that fall within the prohibitive group.

[65] Though each of these cities is in a different county, the three cities are in neighboring high demand counties and are in the same Metropolitan Statistical Area.

Table 12: Standardized Approval Rates Sorted by LAO Reporting on Metro Housing Costs, Demand, and Production—with Stringency Category

	2014-2017 Total Approvals Count	2014-2017 Total Approved Units	Stringency Category	Units/1,000 people	Units/ square mile	% Increase Total Housing Stock	% of Approved Units that are Deed-Restricted
San Francisco-Oakland-Hayward Metropolitan Statistical Area							
Alameda County							
Oakland	136	14,399	Moderately stringent	35.79	258.09	8.43%	7.45%
San Mateo County							
Redwood City	18	1,630	Moderately stringent	20.44	83.93	5.45%	11.23%
San Francisco County							
San Francisco	140	14,269	Prohibitive	17.21	304.44	3.74%	15.19%
San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area							
Santa Clara County							
Mountain View	33	2,767	Very stringent	36.06	230.58	8.10%	9.69%
San Jose	81	14,601	Prohibitive	14.80	82.71	4.52%	5.03%
Palo Alto	7	351	Prohibitive	5.32	14.70	1.23%	21.37%
Los Angeles-Long Beach-Anaheim Metropolitan Statistical Area							
Los Angeles County							

Los Angeles	1,071	65,846	Very stringent (with ministerial observations)	17.05	140.50	4.60%	7.22%
Santa Monica	21	1,447	Very stringent	15.79	171.85	2.80%	13.13%
Pasadena	37	1,608	Very stringent	11.56	70.00	2.66%	7.90%
Long Beach	27	2,604	Prohibitive	5.56	51.78	1.48%	14.36%
Redondo Beach	7	211	Prohibitive	3.13	34.03	0.69%	0.95%

Our data is consistent with the argument that less stringent regulation may be most effective at facilitating housing development in areas where demand is strongest. Fresno and Sacramento are within the moderately stringent group but have lower standardized entitlement rates than Oakland and Redwood City (both of which are in the moderately stringent group), and lower rates than cities with more stringent regulation. Notably, Fresno and Sacramento are in counties that the Legislative Analyst's Office determined generally kept up with demand in prior years—whereas Oakland and Redwood City are not. Interviews with some stakeholders in the Sacramento metro and in Fresno suggest that market conditions make infill development difficult. In the Sacramento metro, specifically, interview participants shared that there is more demand in the region for single-family housing. This interview data standing alone, however, does not confirm that the market for multi-family housing is too limited to support increased approvals. This should be tested against other data points such as vacancy rates for multi-family housing and rental price data. We will explore that in future research.

7. Generally there is little difference between entitlement timeframes and environmental review pathways in urban and exurban areas.

We next compare how urban and exurban jurisdictions implement discretionary and environmental review processes. When we think of sprawling development, we think of subdivision for single-family homes in exurban areas away from transportation and economic activity, possibly even developing on formerly agricultural land. It is possible that exurban jurisdictions enable sprawl through less stringent processes for approving projects, or because there are fewer neighbors to object to projects (Anderson, 2012), or because the local government supports the development (Fischel, 1985). If any of these are true, then entitlement of single-family subdivisions in our infill jurisdictions should take longer. Alternatively, if climate-friendly policy deters exurban

sprawl, entitlement of single-family subdivisions in exurban areas should take longer. Relatedly, proposed exurban development may also encounter longer and/or more intense environmental review.

When we compare median timeframes for single-family subdivisions within our urban cities and exurban city and counties to see whether there are differences, in the aggregate, we find that there are not significant differences in timeframes. Single family subdivision in exurban jurisdictions takes about a month longer than in infill jurisdictions. There are extreme ranges between cities, however. Single-family subdivision in Silicon Valley jurisdictions, for example, had long median timeframes. When we examine how many units of housing exurban single-family subdivision produces, relative to infill subdivision, we find that in the aggregate, exurban subdivisions on average would also yield more than twice as many units as single-family housing.

Another related consideration is how exurban areas process approvals for multi-family housing. Again, we compare median timeframes for multi-family housing. We find that in the aggregate, multi-family housing takes about a month longer in exurban areas than in infill jurisdictions, but there are extreme ranges between jurisdictions. The shortest and longest median timeframes across all study jurisdictions (with timeframe data) for multi-family are both in exurban areas. Roseville had the shortest median timeframe for multi-family housing at approximately 4 months; San Diego County had the longest median timeframe at approximately 38 months, eclipsing even San Francisco with its remarkably long entitlement timeframes.

Table 13: Single-family Project Timeframes Across Jurisdictions[1]

Jurisdiction	Average Timeframe	Median Timeframe	# Discretionary Observations with full timeframe/Total Discretionary Observations	Average Project Size (units)[2]	Median Project Size (Units)[3]
Folsom	13.6	14.1	3/4	223	147
Fresno	17.5	14.3	23/28	88	91
Long Beach	23.9	23.9	2/2	86	86
Los Angeles	16.0	11.7	45/45	29	12
Mountain View	14.3	14.3	2/2	14	14
Oakland	6.6	6.6	2/3	462	462
Palo Alto	25.6	25.6	1/1	16	16
Redwood City	106.6	106.6	1/1	8	8
Sacramento	10.2	7.33	31/31	54	35
San Diego	31.9	18.9	13/13	49	24
San Jose	51.4	32.2	17/17	89	10.0
Urban Total	**21.4**	**12.6**	**140/148**	**64**	**20.0**
Los Angeles County	47.6	17.5	12/12	86	41
Placer County	19.6	17.0	10/10	128	16

Roseville	14.6	8.7	18/19	320	208
San Diego County	26.1	11.8	23/23	40	20
Exurban Total	**24.6**	**14.0**	**63/64**	**143**	**40**

[1]Includes single-family detached and mixed single-family product type. Some jurisdictions (Inglewood, Redondo Beach, Pasadena, San Francisco and Santa Monica) are not included in this table because no projects approved during our study years were single-family.
[2]Includes only projects with full timeframe. Unit values are rounded.
[3]Includes only projects with full timeframe. Unit values are rounded.

Table 14: Multi-family Discretionary Project Timeframes Across Jurisdictions[1]

Jurisdiction	Average Timeframe	Median Timeframe	# Discretionary Observations with full timeframe/Total Discretionary Observations	Average Project Size[2]	Median Project Size[3]
Folsom	14.9	14.9	2/2	290	290
Fresno	5.5	4.6	19/36	101	74
Long Beach	9.5	7.3	25/25	97	94
Los Angeles	13.0	9.8	739/740	81	31
Mountain View	12.9	13.0	30/30	90	35
Oakland	8.7	5.4	90/133	121	54
Palo Alto	14.3	16.4	6/6	56	33
Pasadena	13.4	9.6	35/37	40	19
Redondo Beach	8.8	2.2	7/7	30	10
Redwood City	9.7	7.4	17/17	95	33
Sacramento	7.6	6.0	37/37	112	73
San Diego	19.2	13.2	74/86	83	21
San Francisco	31.4	26.6	140/140	102	56
San Jose	25.5	15.7	63/63	207	168
Santa Monica	34.8	16.5	20/21	69	36
Urban Total	**15.6**	**10.8**	**1,304/1,384**	**93**	**37**
Los Angeles County	18.3	13.5	19/22	54	42
Placer County	12.2	11.8	9/9	250	63
Roseville	3.7	4.2	3/3	186	201
San Diego County	47.3	37.7	4/4	129	113
Exurban Total	**18.8**	**11.8**	**35/38**	**124**	**56**

[1]Includes all projects with multi-family component including multi-family (including duplexes, triplexes, fourplex), single-family attached (including structures constructed under local small lot ordinances), mixed multi-family and single-family attached, and mixed multi-family and single-family detached
[2]Includes only projects with full timeframe. Unit values are rounded.
[3]Includes only projects with full timeframe. Unit values are rounded.

Tables 13 and 14 also show that there are far fewer multi-family housing development entitlements in the exurban jurisdictions compared with single-family subdivision entitlements. Though we are limited to approvals (rather than all proposals to development, including denials), interview participants that worked in exurban areas shared perceptions of a developer preference for pursuing single-family subdivision. Interview participants in Southern California and Northern California provided related but still different reasons for why developers might pursue more single-family subdivision over infill dense development in certain metros. In the Sacramento metro

area, we heard that demand for single-family homes is comparatively higher than demand for more dense housing. Some participants that worked in both exurban and infill jurisdictions shared that it is difficult to make dense infill development "pencil out." Other participants shared that entitlement is "just easier" to navigate in Roseville as compared to the City of Sacramento.

In contrast, research participants from San Diego County described perceptions that the former County Supervisors favored proposals for single-family subdivision, inclusive of subdivision in locations outside of the urban villages designated for development in the General Plan. They also stated that while exurban entitlement process in those areas, relative to infill development, may require rezoning and general plan amendments for subdivision, single family subdivision is more lucrative.

Reviewing median timeframes, we do see that Roseville and Sacramento have similar median timeframes for single-family subdivision, but the median timeframe for the three multi-family developments in Roseville is 4.2 months, shorter than Sacramento's median of six months. It is also true that Roseville, Placer County, and Los Angeles County's median timeframes for multi-family housing are considerably shorter than each jurisdiction's timeframes for single-family housing—potentially indicating local policies favor climate-friendly development over sprawl. In Los Angeles County, a few multi-family developments moved through a ministerial process, eliminating the need for entitlement. The jurisdiction with the longest median timeframe for multi-family housing in Los Angeles County was Santa Monica, which also had the highest percentage of HQTA in its zoned land area among all our study cities in that county. San Diego County stood alone among our four exurban jurisdictions in its processing of multi-family housing—the median timeframe for multi-family housing was approximately 38 months, more than three times the median timeframe for single-family subdivision entitlement.

Table 15: Single-family Discretionary Subdivision Median Timelines Sorted by Metro[1]

Jurisdiction	Average Timeframe	Median Timeframe	# Discretionary Observations with full timeframe/Total Discretionary Observations	Average Project Size[2]	Median Project Size[3]
Folsom	13.6	14.1	3/4	223	147
Placer County	19.6	17.0	10/10	128	16
Roseville	14.6	8.7	18/19	320	208
Sacramento	10.2	7.3	31/31	54	35
Long Beach	23.9	23.9	2/2	86	86
Los Angeles	16.0	11.7	45/45	29	12
Los Angeles County	42.6	17.5	12/12	86	41

San Diego	31.91	18.9	13/13	49	24
San Diego County	26.1	11.8	23/23	40	20

[1]Includes single-family detached and mixed single-family product.
[2]Includes only projects with full timeframe. Unit values are rounded.
[3]Includes only projects with full timeframe. Unit values are rounded.

Table 16: Multi-family Median Discretionary Timelines Sorted by Metro[1]

Jurisdiction	Average Timeframe	Median Timeframe	# Discretionary Observations with full timeframe/Total Discretionary Observations	Average Project Size[2]	Median Project Size[3]
Folsom	14.9	14.9	2/2	290	290
Sacramento	7.6	6.0	37/37	112	73
Placer County	12.2	11.8	9/9	250	63
Roseville	3.7	4.2	3/3	186	201
Long Beach	9.5	7.3	25/25	97	94
Los Angeles	13.0	9.8	739/749	81	31
Los Angeles County	18.3	13.5	19/22	54	42
Pasadena	13.4	9.6	35/37	40	19
Redondo Beach	8.8	2.2	7/7	30	10
Santa Monica	34.8	16.5	20/21	69	36
San Diego	19.2	13.2	74/86	83	21
San Diego County	47.3	37.7	4/4	129	112

[1]Includes all projects with multi-family component including multi-family (including duplexes, triplexes, fourplex), single-family attached (including structures constructed under local small lot ordinances), mixed multi-family and single-family attached, and mixed multi-family and single-family detached.
[2]Includes only projects with full timeframe. Unit values are rounded.
[3]Includes only projects with full timeframe. Unit values are rounded.

Most interview participants who worked in San Diego County shared their perceptions that a lot of approved development did not conform to prior planning efforts. If true, we should see more frequent use of general plan amendments or rezoning in our exurban jurisdictions as compared to our infill jurisdictions. We see that more entitlement in San Diego County required rezoning and general plan amendments compared to the City of San Diego. Los Angeles County also had a higher rate of rezoning and general plan amendments than the City of Los Angeles, and Roseville also had higher rates of rezoning than Placer County, Sacramento, or Folsom.

Table 17: Prevalence of Rezoning and General Plan Amendments Sorted By Metro

San Diego Region				
Jurisdiction	*% Projects Rezone*	*% Projects GPA*	*% Units Rezone*	*% Units GPA*
San Diego County	14.8%	11.1%	66.6%	43.4%
San Diego	5.1%	4.0%	13.2%	12.0%
Los Angeles Region				
Jurisdiction	*% Projects Rezone*	*% Projects GPA*	*% Units Rezone*	*% Units GPA*
Los Angeles County	20.6%	11.8%	20.0%	7.1%
Los Angeles	14.0%	4.5%	24.4%	15.9%
Santa Monica	4.8%	4.8%	17.2%	17.2%
Long Beach	7.4%	7.4%	6.6%	6.6%
Pasadena	5.4%	0.0%	30.1%	0.0%
Inglewood	0.0%	0.0%	0.0%	0.0%
Sacramento Region				
Jurisdiction	*% Projects Rezone*	*% Projects GPA*	*% Units Rezone*	*% Units GPA*
Placer County	26.3%	10.5%	7.16%	3.31%
Roseville	36.4%	40.9%	23.5%	39.1%
Sacramento	13.2%	11.8%	13.7%	23.4%
Folsom	33.3%	16.7%	28.7%	20.2%

General plan amendments and rezoning require legislative action by the local government's legislature and thus necessarily involve at least one public hearing and are higher profile politically—all of which implies more intensive land use review of large-scale developments. Discretionary approval processes that involve local legislative approvals might offer exurban jurisdictions more leverage to require developers to provide affordable housing as part of their projects. Or they might simply signal the local legislators' willingness to approve development inconsistent with prior planning, as discussed above. Interviews in different metro areas indicate that the former might be true in the Sacramento metro area and Los Angeles County. Consistent with interviews, we find evidence in our observation data for both propositions with notable differences depending on the metro area. Exurban jurisdictions in the Sacramento metro area and Los Angeles County approved comparatively more affordable housing, suggesting the possibility that rezoning and general plan amendments might facilitate

deal making and more affordability (particularly in Roseville and Los Angeles County). In contrast, in the San Diego metropolitan area, San Diego County has comparatively high rates of rezoning and general plan amendments (and is the only jurisdiction with residential development on formerly agricultural land) but no approvals for deed-restricted affordable development in our study years.

Table 18: Rate of Deed-Restricted Affordable Development Sorted by Metro

San Diego Region			
Jurisdiction	% Affordable Units	# Affordable Units	Affordable Units per capita
San Diego County	0.00%	0	0
San Diego	9.2%	1,284	0.96
Los Angeles Region			
Jurisdiction	% Affordable Units	# Affordable Units	Affordable Units per capita
Los Angeles County	34.6%	877	0.81
Los Angeles	7.2%	4,757	1.23
Santa Monica	13.1%	190	2.07
Long Beach	14.4%	374	0.80
Pasadena	7.9%	127	0.91
Inglewood	0.0%	0	0.00
Sacramento Region			
Jurisdiction	% Affordable Units	# Affordable Units	Affordable Units per capita
Placer County	3.1%	111	1.01
Roseville	8.0%	509	3.96
Sacramento	0.9%	53	0.11
Folsom	0.9%	12	0.16

The fact that higher rate of general plan amendments and rezoning in San Diego County, Placer County, and Roseville also suggest that the development would be less likely to benefit from less intensive environmental review processes like tiering (which depends on a prior applicable plan-level Environmental Impact Report, (EIR)). San Diego County and Roseville have high rates of tiering, though Roseville also has a relatively higher rate of EIRs compared to Sacramento—but not Folsom—whereas San Diego County also used EIRs *less* frequently than the City of San Diego. All of this suggests environmental review is not more intensive in the exurban jurisdictions, which is counterintuitive and inconsistent with our original hypothesis. This invites important

questions about whether projects that might lead to high VMT are benefiting from CEQA exemptions, streamlining, and tiering that are intended for low VMT developments. Our current work indicates that there are likely high VMT developments benefiting from CEQA streamlining. This question requires more research and analysis, and the UCI team will continue working on this analysis.

Table 19: CEQA Pathways Sorted By Metro

	San Diego Region								
	CEQA Pathways (% Projects)								
Jurisdiction	Exempt	Tiering	Addendum	Hybrid	ND	MND	EIR	Multiple	Unknown
San Diego County	0.0%	85.2%	0.0%	0.0%	0.0%	7.4%	7.4%	0.0%	0.0%
San Diego	34.3%	21.2%	8.1%	0.0%	2.0%	23.2%	9.1%	2.0%	0.0%
	Los Angeles Region								
	CEQA Pathways (% Projects)								
Jurisdiction	Exempt	Tiering	Addendum	Hybrid	ND	MND	EIR	Multiple	Unknown
Los Angeles County	14.7%	2.9%	0.0%	11.8%	26.5%	35.3%	8.8%	0.0%	0.0%
Los Angeles	32.2%	1.7%	1.4%	0.0%	0.3%	60.5%	2.9%	1.0%	0.0%
Santa Monica	33.3%	14.3%	0.0%	23.8%	0.0%	0.0%	9.5%	19.0%	0.0%
Long Beach	59.3%	18.5%	3.7%	0.0%	0.0%	11.1%	7.4%	0.0%	0.0%
Pasadena	78.4%	2.7%	0.0%	0.0%	0.0%	13.5%	5.4%	0.0%	0.0%
Inglewood	25.0%	0.0%	0.0%	0.0%	25.0%	50.0%	0.0%	0.0%	0.0%
	Sacramento Region								
	CEQA Pathways (% Projects)								
Jurisdiction	Exempt	Tiering	Addendum	Hybrid	ND	MND	EIR	Multiple	Unknown
Placer County	0.0%	21.1%	5.3%	0.0%	0.0%	57.9%	15.8%	0.0%	0.0%
Roseville	0.0%	50.0%	27.3%	0.0%	4.5%	9.1%	0.0%	9.1%	0.0%
Sacramento	52.9%	13.2%	5.9%	4.4%	0.0%	17.6%	4.4%	1.5%	0.0%

Folsom	0.0%	16.7%	33.3%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%

San Francisco Bay Area Region

CEQA Pathways (% Projects)

Jurisdiction	Exempt	Tiering	Addendum	Hybrid	ND	MND	EIR	Multiple	Unknown
Mountain View	45.45%	12.12%	6.06%	0.00%	0.00%	33.33 %	3.03%	0.00%	0.00%
Oakland	2.24%	19.40%	0.00%	0.00%	0.00%	0.00%	2.99%	75.37%	0.00%
Palo Alto	28.57%	0.00%	0.00%	0.00%	0.00%	42.86 %	14.29 %	14.29%	0.00%
Redwood City	22.22%	66.67%	0.00%	0.00%	0.00%	5.56%	0.00%	5.56%	0.00%
San Francisco	8.63%	71.94%	1.44%	0.00%	1.44%	6.47%	8.63%	1.44%	0.72%
San Jose	7.50%	1.25%	35.00%	0.00%	0.00%	32.50 %	13.75 %	10.00%	1.25%

Comparative analysis between urban and exurban jurisdictions is best when it is limited to metro areas. San Diego County's lengthy entitlement timelines for multi-family housing, no entitlement of deed-restricted affordable development, and considerably shorter timeframes for single-family subdivision during our study years signal that development approvals prioritized climate or affordability goals. (Tables 15, 16, and 18). That does not offer insight into other exurban jurisdictions, however. The other three exurban jurisdictions we studied processed multi-family entitlements even faster than single-family subdivisions—with Roseville having the shortest median entitlement timeline to multi-family development among all twenty of our study jurisdictions. Similarly, while the County of San Diego typically used less intensive environmental review pathways compared to the City of San Diego, Los Angeles County and Placer County both used more intensive environmental review pathways than cities within that metro area. Similarly, in Los Angeles County, we see high rates of affordable housing approvals compared to all jurisdictions within that County.

9. Less than 3% of all development approvals face community opposition through litigation, but litigation rates vary across jurisdictions.

We address some of the limitations in the prior research exploring litigation, particularly CEQA litigation. We compiled a census of approved projects in our jurisdictions across four years, allowing us to assess how many of those approved projects faced litigation. Litigation data comes from court records – which include reported and unreported judicial decisions, as well as the underlying petitions filed to challenge approved projects. In all, our data provides a complete picture of all lawsuits

filed, all claims that are raised in challenging projects, and whether litigants brought those claims under state environmental law or other legal provisions.

Our most significant finding is that only 2.8% of all entitled projects within our observation dataset faced litigation, which amounts to 6.9% of all units entitled in our timeframe. One 100% affordable development in our dataset faced litigation.[66] Comparing the litigation rates of our four exurban jurisdictions with the other sixteen infill jurisdictions, we find that project litigation rates are almost identical, but the number of units impacted by litigation in the exurban jurisdictions is much lower than in the infill context at 1.28%. Variation in rates of litigation across local jurisdictions is not unique to the exurban context.

Table 20: Share of Litigated Projects and Units for All Jurisdictions

Jurisdiction Group	Total # Projects	Total # Units	Litigated Projects	% Projects litigated	Litigated Units	% Units Litigated	Litigated Affordable Units	% Affordable Units
Urban Cities	1,896	147,569	52	2.7%	11,022	7.47%	727	6.3%
Exurban Cities and Counties	105	13,895	3	2.9%	182	1.31%	0	0%
All Jurisdictions TOTAL	**2,001**	**161,464**	**55**	**2.8%**	**11,204**	**6.9%**	**727**	**5.5%**

Table 21 below highlights that there are substantial variations in litigation rates across all study jurisdictions – sometimes relatively high in cities with few approvals given jurisdiction size (such as Long Beach). Litigation rates were higher in Southern California cities than in the rest of the state. For instance, our Southern California cities (study cities in Los Angeles County and San Diego) had 3.4% of their entitled projects litigated, constituting 1.6% of entitled units. At the high end, 5 out of 27 projects, representing 726 out of 2,604 total units, were litigated in Long Beach (18.5% projects litigated, and 27.9% units litigated).

[66] This 100% Affordable Development was in Redwood City at 612 Jefferson Avenue. A business neighbor's opposition and subsequent litigation of Redwood City's approval of this 20-unit development, proposed by Habitat for Humanity, has received considerable press attention.

Table 21: Litigation Rates By Individual Jurisdictions

Jurisdiction	Total # Projects	Total # Units	Litigated Projects	Litigated Units	Percentage of projects litigated	Percentage of Units Litigated
Folsom	6	1,364	0	0	0.00%	0.00%
Fresno	64	6,153	0	0	0.00%	0.00%
Inglewood	4	568	0	0	0.00%	0.00%
Long Beach	27	2,604	5	726	18.52%	27.88%
Los Angeles	1,071	65,846	29	6,338	2.71%	9.63%
Los Angeles County	37	2,532	1	102	2.70%	4.03%
Mountain View	33	2,767	0	0	0.00%	0.00%
Oakland	136	14,399	1	47	0.74%	0.33%
Palo Alto	7	351	0	0	0.00%	0.00%
Pasadena	37	1,608	1	201	2.70%	12.50%
Placer County	19	3,535	1	56	5.26%	1.58%
Redondo Beach	7	211	0	0	0.00%	0.00%
Redwood City	18	1,630	2	111	11.11%	6.81%
Roseville	22	6,394	0	0	0.00%	0.00%
Sacramento	68	5,794	2	470	2.94%	8.11%
San Diego	176	13,957	7[1]	1,273	3.98%	9.12%
San Diego County	27	1,434	1	24	3.70%	1.67%
San Francisco	140	14,269	3	1,273	2.14%	8.92%
San Jose	81	14,601	2	583	2.47%	3.99%
Santa Monica	21	1,447	0	0	0.00%	0.00%

[1]In San Diego, two projects were litigated together as part of one lawsuit.

We use spatial analysis of our litigation data to test theories about which neighborhoods (based on opportunity classification) might be more or less likely to oppose dense development through lawsuits. Because we are working with such a small number of observations that faced litigation, we rely on the aggregated totals across all infill jurisdictions. Approximately 6.61% of all dense developments, or 17.75% of units, sited in Highest and High Resource census tracts faced litigation, in contrast to 5.86% of all dense developments, or 13.76% of units, sited in Low Resource or High Segregation and Poverty census tracts. We see that this trend of more litigation in High or Highest Resource Areas is more pronounced when examining the three lawsuits against development in our four exurban jurisdictions.

Table 22: % Projects Litigated in TCAC Areas

Jurisdiction Group	% Projects in Highest Resource that faced lawsuits	% Projects in High Resource that faced lawsuits	% Projects in Moderate Resource that faced lawsuits	% Projects in Low Resource that faced lawsuits	% Projects in High Segregation and Poverty that faced lawsuits
Infill/Urban Cities	2.31%	4.46%	1.64%	3.30%	2.24%
Exurban Cities and Counties	5.12%	7.14%	0.00%	0.00%	0.00%

Table 23: % Units Litigated in TCAC Areas

Jurisdiction Group	% Units in Highest Resource that were Litigated	% Units in High Resource that were Litigated	% Units in Moderate Resource that were Litigated	% Units in Low Resource that were Litigated	% Units in High Segregation and Poverty that were Litigated
Urban Cities	8.76%	8.77%	6.43%	6.98%	8.07%
Exurban Cities and Counties	1.64%	5.26%	0.00%	0.00%	0.00%

Most litigation against projects in all study jurisdictions did not exclusively rely on state environmental law to challenge approvals, though most lawsuits did include a CEQA claim. Table 24 indicates that while only 29% of the projects in all twenty jurisdictions that faced litigation were challenged under CEQA alone, another 67% were challenged using claims under CEQA as well as under other laws—usually claims that the project violated the local government's general land use plan or provisions of the local government's zoning code. Comparatively, as the final column in Table 24 shows, less than four percent of projects in all twenty jurisdictions that faced litigation were challenged with claims that did not involve CEQA at all. This tells us that when litigation occurs, CEQA claims are common—but that most lawsuits (almost 3 out of 4) could proceed even if the plaintiff or petitioner could not bring a claim under CEQA.

Table 24: Litigated Projects by Claim Type

Jurisdiction Group	CEQA Only Litigated Projects Count	CEQA Only % Litigated Projects	CEQA/Other Claims Litigated Projects	% CEQA/Other Claims Litigated Projects	Non CEQA Claims — litigated projects	% Non CEQA Claims — litigated projects
Urban Cities	16	30.8%	34	65.4%	2	3.9%
Exurban Cities and Counties	0	0	3	100.00%	0	0
TOTALS	16	29.1%	37	67.3%	2	3.6%

We next assessed how often litigants claimed that the approving jurisdiction inadequately analyzed the impacts of the proposed project on greenhouse gas (GHG) emissions or vehicles miles traveled (VMT). We included both GHG and VMT claims because VMT analysis was not the standard for CEQA analysis of traffic impacts during our study period; the revised CEQA guidelines requiring VMT analysis did not become effective until 2020 (SB 743 Frequently Asked Questions). Thus, we included claims of inadequate GHG analysis in our coding structure to capture those claims that often overlap with claims that the project will increase VMT, and GHG analysis was required by the CEQA guidelines during our study period.

Two-thirds of all litigated projects were challenged on the grounds that there was inadequate analysis of GHG or VMT. All three of the projects in exurban jurisdictions that were litigated had GHG or VMT claims raised against them.

Table 25: Litigated Units by Claim Type

Jurisdiction Group	CEQA Only Litigated Units	CEQA Only % Litigated Units	CEQA/Other Claims Litigated Units	% CEQA/Other Claims Litigated Units	Non CEQA Claims — litigated units	% Non CEQA Claims — litigated units
Urban Cities	4,290	38.9%	6,434	58.4%	298	2.7%
Exurban Cities and Counties	0	0.0%	182	100.0%	0	0.0%
TOTAL*	4,290	38.3%	6,616	59.1%	298	2.7%

*All Study Jurisdictions

Another striking pattern is that few project approvals within our dataset required an EIR, but projects that underwent the EIR process faced comparatively more litigation. Statewide, 23.3% of all entitled projects that went through an EIR were litigated, constituting 26.8% of all units in projects that went through an EIR. The percentage of projects and units that were litigated for any other CEQA pathway were much lower: 2.9% of projects that were approved through an MND were litigated, constituting 3.0% of units; 1.3% of tiered projects were litigated, constituting 1.0% of units; 0.9% of exempt projects were litigated, constituting 2.2% of units. This raises additional questions about whether EIRs are prepared in anticipation of litigation, or as a response to local political pressure or opposition to a project. Again, while the sample size is small, a comparison with the exurban jurisdictions reveals a very similar pattern: All three litigated exurban projects required an EIR.

Table 26: Litigation and Use of EIRs

	Projects that used EIRs[1]		Units that used EIRs[2]		Projects that used EIRs that were litigated		Units that used EIRs that were litigated	
	Number	%	Number	%	Number	%	Number	%
TOTAL*	90	5.5%	28,501	18.7%	21	23.3%	7,627	26.8%

[1]Some projects that used EIRs may have also gone through other CEQA pathways. One litigated project went through two CEQA pathways (MND and Hybrid Exemption).
[2]As a percentage of all discretionary projects.
*All Study Jurisdictions

Table 27: Litigation and Use of MNDs

	Projects that used MNDs[1]		Units that used MNDs[2]		Projects that used MNDs that were litigated		Units that used MNDs that were litigated	
	Number	%	Number	%	Number	%	Number	%
TOTAL*	629	38.5%	50,640	33.3%	18	2.9%	1,525	3.0%

[1]Some projects that used MNDs may have also gone through other CEQA pathways. One litigated project went through two CEQA pathways (MND and Hybrid Exemption).
[2]As a percentage of all discretionary projects.
*All Study Jurisdictions

Table 28: Litigation and Use of CEQA Tiering

	Projects that used CEQA Tiering[1]		Units that used CEQA tiering[2]		# projects that used CEQA tiering that were litigated		# of units that used CEQA tiering that were litigated	
	Number	%	Number	%	Number	%	Number	%
TOTAL*	374	22.9%	44,217	29.1%	5	1.3%	453	1.0%

[1]Some projects that used tiering may have also gone through other CEQA pathways. One litigated project went through two CEQA pathways (MND and Hybrid Exemption).
[2]As a percentage of all discretionary projects.
*All Study Jurisdictions

Table 29: Litigation and Use of CEQA Exemptions

	Projects Exempt[1]		Units exempt[2]		# projects that were exempt and litigated		# of units that were exempt and litigated	
	Number	%	Number	%	Number	%	Number	%
TOTAL*	554	33.3%	20,095	13.2%	5	0.92%	432	2.2%

[1]Some projects that used a CEQA exemption may have also gone through other CEQA pathways. One litigated project went through two CEQA pathways (MND and Hybrid Exemption).
[2]As a percentage of all discretionary projects.
*All Study Jurisdictions

Higher-profile local land use approval processes, specifically rezoning, also faced comparatively higher rates of challenge in court. Table 30 indicates 7.4% of projects that received a rezoning faced legal challenges. In contrast, Table 31 indicates that 2.2% of projects requiring a variance, and 4.5% of projects requiring a conditional use permit, faced litigation. All other approval pathways had a litigation rate of 2.9% of projects. Again, while the sample size is small, a comparison with the exurban jurisdictions reveals a somewhat different pattern, with litigation more evenly distributed across different approval pathways: Of the three projects litigated, one was approved through a rezone and CUP process, while the other two were approved through alternative processes.

Table 30: Litigation and Land Use Approval Pathways

	Projects that received a rezoning	# Rezone projects that were litigated	% Rezone projects that were litigated	CUP projects	CUP projects that were litigated	% CUP projects that were litigated
TOTAL*	242	18	7.4%	242	11	4.5%

*All Study Jurisdictions

Table 31: Litigation and Land Use Approval Pathways

	Variance projects	# Variance projects that were litigated	% Variance projects that were litigated	# All Other Approvals	% All Other Approvals projects that were litigated	% All Other Approvals that were Litigated
TOTAL*	179	4	2.2%	1,095	32	2.9%

*All Study Jurisdictions

In addition to few projects facing litigation, petitioners or plaintiffs rarely prevailed in court.[67] Petitioners were more likely to reach a settlement with the defendant (defined as either an explicit settlement between the parties that was filed with and/or approved by the court, or as a voluntary motion by a petitioner to dismiss a lawsuit, which is often associated with a private agreement between the parties to resolve the lawsuit). Of all lawsuits, more than half were settled. As shown in Tables 32 and 33, these success rates did not vary significantly depending on whether the lawsuit contained GHG or VMT claims.

Table 32: Litigation Success Rates

	Litigated Projects[1]	Litigated Units	# Projects litigation Success	Overall % success for litigation	# Projects litigation settled	% Projects Litigation Settled	# Projects Defendant Wins	% Projects Defendant Wins
TOTAL*	55	11,204	4	7.3%	30	54.5%	20	36.4%

*All Study Jurisdictions
[1]1 project had unknown litigation outcome.

Table 33: Litigation Success Rates and GHG/VMT Claims

	Litigated Projects	Litigated Units	# Projects litigation Success	Overall % success for litigation	# Projects litigation settled	% Projects Litigation Settled	# Projects Defendant Wins	% Projects Defendant Wins
GHG or VMT Claims	40	9,349	3	7.5%	22	55.0%	14	35.0%

[67] We calculate these percentages based on the number of projects challenged by lawsuits, rather than the number of lawsuits, since some projects were challenged by more than one lawsuit. If we looked at the number of lawsuits, the success rates would be lower.

No GHG or VMT Claims	15	1,855	1	6.7%	8	53.3%	6	40.0%
TOTAL	55	11,204	4	7.3%	30	54.5%	20	36.4%

*All Study Jurisdictions, 1 project has a unknown outcome.

Though less than 3% of all developments faced litigation, litigation adds substantial time to the overall development timeline. As shown in Table 34: Entitlement Timeframe and Litigation, for projects that are litigated, the litigation process adds almost two years to overall timeframes. The litigation process is particularly drawn out for projects where there is an appeal of the initial trial court decision on the lawsuit. For these projects, the additional step of an appeal to the Court of Appeal adds on average almost two and half years to the timeframe compared to projects where the initial lawsuit is not appealed beyond the trial court. These extended timelines only apply to a limited number of projects; only 13 out of 55 total projects that were litigated had the lawsuit taken to the Court of Appeal, but for these projects overall timeframes extended to over six years. In addition, in the few instances where the plaintiff succeeded in their challenge to the project approval, the end of litigation did not allow the project to proceed until after the local jurisdiction completed additional process, adding even more time to the overall approval process.

Table 34: Entitlement Timeframe and Litigation

Jurisdiction	Total Number of Entitled Projects	Median Entitlement Timeframe for all Projects	Total Number of Litigated Projects	Average Entitlement Timeframe for Litigated Projects	Median Entitlement Timeframe for Litigated Projects	Entitlement Process + Lawsuit Completion Average Timeframe (Months)	Entitlement Process + Lawsuit Completion Median Timeframe (Months)
Long Beach	27	7.6	5	14.79	9.93	18.34	15.09
Los Angeles	790	9.7	30	24.50	12.36	47.13	40.37
Oakland	136	5.4	1	2.96	2.96	14.00	14.00
Pasadena	38	9.9	1	unavailable	unavailable	unavailable	unavailable
Redwood City	18	7.5	2	10.70	10.70	23.29	23.29
Sacramento	68	6.4	2	38.54	38.54	76.94	76.94
San Diego	176	13.9	7	29.92	22.58	49.64	55.49
San Francisco	140	26.6	3	53.75	47.83	89.55	88.46
San Jose	81	17.7	2	31.72	31.72	57.50	57.50
Placer County	19	10	1	10.85	10.85	25.61	25.61
San Diego County	27	11.4	1	161.74	161.74	198.98	198.98
Los Angeles County	34	17.5	1	176.53	176.53	208.84	208.84
Infill Total	1,539	11.0	53	25.87	15.88	47.14	39.25
Exurban Total	102	12.8	3	116.37	161.74	144.48	198.98
Statewide Total	1,641	11.0	56	30.90	16.10	52.31	39.81

Table 35: Appeals and Litigation Timeframes

Jurisdiction	Total Number of Litigated Projects where Trial Court Decision was Not Appealed	Total Number of Litigated Projects where Trial Court Decision was Appealed	Average Entitlement + Litigation Timeframe for Litigated Projects where Trial Court Decision Was Not Appealed	Median Entitlement + Litigation Timeframe for Litigated Projects where Trial Court Decision Was Not Appealed	Average Entitlement + Litigation Timeframe for Litigated Projects where Trial Court Decision Was Appealed	Median Entitlement + Litigation Timeframe for Litigated Projects where Trial Court Decision Was Appealed
Long Beach	5	0	18.34	15.09	-	-
Los Angeles	25	5	46.06	36.06	49.79	47.24
Oakland	1	0	14.00	14.00	-	-
Pasadena	1	0	unavailable	unavailable	-	-
Redwood City	2	0	23.29	23.29	-	-
Sacramento	0	2	-	-	76.94	76.94
San Diego	6	1	47.01	45.81	65.45	65.45
San Francisco	1	2	92.37	92.37	88.13	88.13
San Jose	1	1	14.92	14.92	100.07	100.07
Placer County	0	1	-	-	25.61	25.61
San Diego County	0	1	-	-	198.98	198.98
Los Angeles County	1	0	208.84	208.84	-	-
Infill Total	42	11	41.18	31.92	67.69	65.45
Exurban Total	1	2	208.84	208.84	112.29	112.29
Statewide Total	43	13	45.26	32.41	74.55	65.45

We also analyzed if and whether the litigation and appellate review processes prevented development activity for a particular project from proceeding. To do this, we examined media coverage of litigated projects, where available. Media reports indicate that one project was definitively canceled as a result of litigation, whereas nine projects proceeded to construction after litigation. Media coverage of the litigated projects indicated that project opponents shared a range of concerns, though scale was the most frequently cited concern, followed by historical preservation issues, gentrification, traffic, and health concerns.

The variability of litigation across jurisdictions suggests that local politics and context drive these outcomes, rather than state-level mandates. Notably, lawsuits frequently rely on claims based on local law and state environmental law; this indicates most lawsuits in our dataset might still proceed, producing delay and uncertainty. There are high rates of lawsuits among projects with particular approval pathways, even if they are infrequent (e.g., EIR versus other CEQA compliance options), pathways that might reflect contentious approval processes at the local level. It may be that local political opposition, rather than state mandates, determines whether some projects undergo more intensive environmental review pathways, though this would require additional research. Finally, we note that although lawsuits rarely succeed on the merits (and are more likely to either settle or result in a defendant victory) they likely add substantial time to the final approval of a project.

Comparing litigation rates across infill and exurban jurisdictions, we do not observe notable differences in litigation rates at the project level between infill and exurban jurisdictions, though litigation rates calculated by percentage of units litigated are much lower in exurban jurisdictions.

Our interviews indicate a need for additional research to inform all litigation analysis in both infill and exurban jurisdictions. Our interview data indicated that in the exurban context for large multi-stage, single-family subdivision development, litigation generally focused on the specific plan or other plan-level documents that lay out the overall staged process for the development. Our research methods for this study focused on litigation associated with each individual entitlement observation. We therefore may have underestimated the amount of litigation associated with specific plans in either the infill or exurban context. Research that assesses the litigation rates for specific plans used to approve individual projects in our datasets for both our exurban and infill jurisdictions is outside the scope of this study but would be an appropriate next step.

10. Approximately 11% of development approvals are challenged through local administrative appeals, with variable rates across jurisdictions.

Administrative appeals are important indicators of local opposition to project approvals. Local objectors can challenge project approvals through administrative

appeals processes. Local governments set up these processes as part of their zoning codes to allow appeals of adverse zoning decisions by lower bodies (e.g., the Planning Commission) to higher levels of local government (e.g., the City Council). As Table 35 below indicates, administrative appeals occur at higher rates than litigation. Across all our study jurisdictions, around 10.84% of all observed projects faced administrative appeals, constituting 18.40% of approved units. Three 100% Affordable Developments faced opposition through local administrative appeals.[68] But there are also variations in administrative appeal rates across cities that are even more extreme than the variation of litigation rates we observed in Table 20. Notably, exurban jurisdictions in the aggregate had lower rates of administrative appeals, in terms of both projects (7.62%) and units (6.26%). This difference may be due to either infill projects facing a larger number of potential neighbors who might oppose the project in the infill context and/or that infill jurisdictions make administrative appeals easier to pursue.

This variation in administrative appeal rates is consistent with how local control over administrative appeals operates. Local governments develop and control administrative appeal processes, including whether and how projects can be appealed and whether appellants must post bonds or pay fees and the amount of bonds. Therefore, administrative appeal rates reflect both how local governments choose to encourage (or discourage) opposition through administrative appeals, as well as how local politics might impact land use approvals.

In contrast to litigation, administrative appeals were more focused on conditional use permits (CUP)—with 12.8% of rezoning projects administratively appealed, 19.3% CUP approvals administratively appealed, and 9.5% of all other approvals administratively appealed.

[68] One of these was the 20-unit Habitat for Humanity development at 612 Jefferson Avenue in Redwood City. Another was a 94-unit development in the Mission neighborhood of San Francisco (1296 Shotwell), and the third was an 81-unit development in downtown Oakland at 1415 Harrison Street.

Table 36: Opposition to Approvals Through Administrative Appeals in All Jurisdictions[1]

Jurisdiction	Number of Approvals	Number of Units	Appealed Approvals	Appealed All Units	% Appealed Approvals	% Appealed All Units	Appealed Affordable Units	% Appealed Affordable Units
Folsom	6	1,364	0	0	0.0%	0.0%	0	0
Fresno	64	6,153	2	260	3.1%	4.2%	90	29.2
Inglewood	4	568	1	310	25.0%	54.6%	0	0
Long Beach	27	2,604	1	315	3.7%	12.1%	0	0
Los Angeles	1,071	65,846	138	17,887	12. 9%	27.2%	974	20.5
Mountain View	33	2,767	0	0	0.0%	0.0%	0	0
Oakland	136	14,399	16	2,149	11.8%	14.9%	81	7.5
Palo Alto	7	351	1	180	14.3%	51.3%	0	0
Pasadena	37	1,608	2	163	5.4%	10.1%	8	6.3
Redondo Beach	7	211	4	183	57.1%	86.7%	0	0
Redwood City	18	1,630	4	863	22.2%	52.9%	55	30.1
Sacramento	68	5,794	3	377	4.4%	6.5%	0	0
San Diego	176	13,957	9	661	5.1%	4.7%	29	2.3
San Francisco	140	14,269	20	3,477	14.3%	24.4%	649	30.0
San Jose	81	14,601	6	1,631	7.4%	11.2%	0	0
Santa Monica	21	1,447	2	387	9.5%	26.7%	39	20.5
INFILL TOTAL	**1,896**	**147,569**	**209**	**28,843**	**11.0%**	**19.6%**	**1,925**	**16.6%**
Los Angeles County	37	2,532	5	800	13.5%	31.6%	91	10.4
Placer County	19	3,535	2	51	10.5%	1.4%	0	0
Roseville	22	6,394	0	0	0.00%	0.00%	0	0
San Diego County	27	1,434	1	19	3.7%	1.3%	0	0
EXURBAN TOTAL	**105**	**13,895**	**8**	**870**	**7.6%**	**6.3%**	**91**	**6.1%**
TOTAL*	**2,001**	**161,464**	**217**	**29,713**	**10.8%**	**18.4%**	**2,016**	**15.4**

*All Study Jurisdictions

[1]Note that ministerial approvals (included in the project and unit counts above in jurisdictions that allow for ministerial development) are not subject to administrative appeals. However, we calculate appeal rates as a % of both discretionary and ministerial projects and units.

Table 37: Administrative Appeals and Rezoning

Jurisdiction	Total # Projects	Total # Units	Rezone projects	# Rezone projects that	% Rezone projects that

				were appealed	were appealed
TOTAL*	**2,001**	**161,464**	**242**	**31**	**12.8%**

*All Study Jurisdictions

Table 38: Administrative Appeals and CUPs

	Total # Projects	Total # Units	CUP projects	CUP projects that were appealed	% CUP projects that were appealed
TOTAL*	**2,001**	**161,464**	**243**	**47**	**19.3%**

*All Study Jurisdictions

Table 39: Administrative Appeals and Variances

	Total # Projects	Total # Units	Variance Projects	Variance projects that were appealed	% Variance projects that were appealed
TOTAL*	**2,001**	**161,464**	**179**	**24**	**13.4%**

*All Study Jurisdictions

Table 40: Administrative Appeals and Other Land Use Approval Pathways

	Total # Projects	Total # Units	All other approvals # projects	All other approvals # projects that were appealed	% all other approvals projects that were appealed
TOTAL*	**2,001**	**161,464**	**1,460**	**139**	**9.52%**

*All Study Jurisdictions

When we analyze project approvals across all sixteen infill jurisdictions that faced opposition through administrative appeals to the local government, we see that 26.61% of all dense developments sited in Highest and High Resource neighborhoods faced opposition through an administrative appeal, considerably higher than the 17.23% of dense developments that faced opposition in Low Resource and High Segregation and

Poverty neighborhoods. Breaking out city-specific rates, however, we see that the rates of opposition vary considerably across neighborhoods depending on the city. In San Francisco, for example, 21.51% of all dense developments sited in Highest and High Resource neighborhoods faced opposition through an administrative appeal, a share of projects considerably lower than the 44.17% of projects that faced opposition in Low Resource and High Segregation and Poverty neighborhoods. By contrast, in Los Angeles, the percent of all dense developments sited in Highest and High Resource neighborhoods that faced opposition through an administrative appeal was greater than those sited in Low Resource and High Segregation and Poverty neighborhoods: 35.81% and 18.96% respectively.

The trend is different in exurban areas—but that is likely due in part to the fact that some exurban areas do not have areas classified as High Segregation and Poverty. Los Angeles County, which is the only exurban jurisdiction with all five classifications has a more pronounced difference in opposition rates relative to opportunity. 66.67% of projects in Highest Resource areas Los Angeles County faced opposition through administrative appeals, as compared to 16.67% of projects in High Segregation and Poverty areas.

We also examined the extent to which administrative appeals were based on CEQA versus non-CEQA claims. We were able to determine the basis of an administrative appeal in about two-third of the appeals (152 out of 217 total appeals), and of those, 21 (9.7%) involved a CEQA claim.

Table 41: % Projects Appealed in TCAC Areas[1]

Jurisdiction	% Projects appealed in Highest Resource	% Projects appealed in High Resource	% Projects appealed in Moderate Resource	% Projects appealed in Low Resource	% Projects appealed in High Segregation & Poverty
Folsom	0.00%	-[2]	-	-	-
Fresno	2.94%	0.00%	0.00%	0.00%	9.09%
Inglewood	-	-	-	25.00%	-
Long Beach[3]	-	0.00%	-	5.88%	0.00%
Los Angeles[4]	20.59%	15.13%	10.27%	11.11%	7.62%
Mountain View	0.00%	0.00%	0.00%	-	-
Oakland	-	0.00%	20.69%	8.11%	12.50%
Palo Alto	16.67%	0.00%	-	-	-
Pasadena[5]	0.00%	5.26%	0.00%	0.00%	20.00%
Redondo Beach	57.14%	-	-	-	-
Redwood City	0.00%	-	0.00%	28.57%	-
Sacramento[6]	0.00%	8.33%	4.35%	0.00%	8.33%
San Diego[7]	0.00%	7.79%	13.64%	0.00%	0.00%
San Francisco[8]	25.00%	5.88%	19.05%	11.11%	0.00%
San Jose[9]	25.00%	0.00%	7.14%	6.82%	0.00%
Santa Monica	5.00%	100.00%	-	-	-
Infill Totals	**14.74%**	**12.07%**	**11.09%**	**9.62%**	**7.37%**
Los Angeles County	66.67%	0.00%	14.29%	8.33%	16.67%
Placer County[10]	8.33%	0.00%	0.00%	100.00%	-
Roseville	0.00%	-	0.00%	-	-
San Diego County[11]	0.00%	0.00%	7.14%	0.00%	-
Exurban Totals	**7.69%**	**0.00%**	**8.33%**	**9.09%**	**16.67%**
All Jurisdictions Totals	**14.03%**	**11.65%**	**10.96%**	**9.59%**	**7.55%**

[1]Rate of appeals per project includes ministerial and possibly ministerial projects, which are not subject to administrative appeal, in Los Angeles, Los Angeles County, and San Diego.

[2]No intersection between jurisdiction and TCAC category, or no approved projects in that TCAC category
[3]In Long Beach, 4 projects that were litigated were not administratively appealed.
[4]In Los Angeles, 3 projects that were litigated were not administratively appealed.
[5]In Pasadena, one project that was litigated was not administratively appealed.
[6]In Sacramento, one project that was litigated was not administratively appealed.
[7]In San Diego, two projects that were litigated were not administratively appealed.
[8]In San Francisco, one project that was litigated was not administratively appealed.
[9]In San Jose, one project that was litigated was not administratively appealed.
[10]In Placer County, one project that was litigated was not administratively appealed.
[11]In San Diego County, one project that was litigated was not administratively appealed.

B. Assessing regulatory constraints on achieving fair housing goals.

California's new AFFH rule and recent legislative reform to the Housing Element law may operate together to require local governments to identify and correct for local regulatory constraints on housing development that obstruct fair housing goals. Assessing whether a city's regulatory environment potentially constrains housing development that promotes fair housing goals requires evaluating how a city's regulatory environment compares with its neighbors within a metro area, and whether its planning and zoning controls might promote racial and income residential integration within its own city boundaries. The latter is particularly true in racially and ethnically diverse larger cities that might be segregated, particularly by income, at a neighborhood level. Large diverse cities can be comprised of distinct neighborhoods—some of which offer tremendous access to economic and educational opportunity and others with long histories of disinvestment and present-day concerns about gentrification and displacement. To evaluate whether land use regulation advances fair housing goals within cities, we use our data to identify where approved housing of different types is located within city boundaries in relationship to transit and existing opportunity metrics.

This deep-dive into local regulatory environments also provides useful analysis for aspects of state-level policymaking. As discussed above, Housing Element law has primarily used base zoning (use and density) as the tool to measure whether a jurisdiction is zoning to accommodate housing for all income levels, but process constraints may also operate to exclude. Our data uniquely allows us insight into process constraints, even in cities that make a lot of zoned land available for all income levels. We illustrate this by comparing two very different local regulatory environments in terms of geography, size, and percentage of residentially zoned land in in a HQTA—San Francisco and Los Angeles.

1. Analyzing the impact of onerous process on achieving fair housing and climate goals in San Francisco.

San Francisco's acute need for deed-restricted affordable development outpaces its available public subsidies for affordable development (Elmendorf et al., 2020b) and it is one of the most expensive cities to live in among our study group. San Francisco's

local housing policy in many ways indicates an intent to promote inclusion and fair housing goals. San Francisco has inclusionary zoning, rent stabilization, and tenant protections. After the dissolution of Redevelopment Agencies, San Francisco created one of the only independent successor agencies statewide that selects, entitles, and funds projects in former redevelopment areas. The HOPE SF redevelopment (included among our observations) prioritized multi-year community engagement and public health, developing temporary housing to keep low-income tenants in place during demolition and rebuilding to avoid displacement associated with past public housing renovations (Fullilove, 2004).

But our above analysis of the city's land use regulatory environment suggests that San Francisco has a prohibitive regulatory environment. San Francisco, the city with the most permissive base zoning among all cities in our study, is also an extreme outlier in terms of timeframes to entitlement, generally. Notably, the city charter's discretionary permit provision creates a blanket discretionary review requirement applicable to all projects, including those that are consistent with base zoning.

We now examine San Francisco's 140 project observations in depth to understand whether approval pathways, product types, or project siting correlate with longer approval delays. Nearly everything San Francisco approves is in HQTA and is multi-family housing. In this way, San Francisco's entitlement patterns support climate policy. But entitlement timeframes in San Francisco can make it difficult for at least some developers to proceed (particularly affordable developers); only 5% of all the 140 project observations were entitled in 12 months or less. We sort the projects by timelines into quartiles, with the upper quartile of 36 projects compared against the lower quartiles (totaling 104 projects) to explore differences between these groups in local zoning pathways, state mandated environmental review pathways, project attributes such as size, affordability defined by market rate, mixed income, and 100 percent deed-restricted affordable housing.

Table 42: San Francisco Timelines Percentiles and Median—All Projects

Maximum	~134 months
75th Percentile	~38 months
Median	~27 months
25th Percentile	~21 months
Minimum	~3 months[1]

N = 140 Projects
[1]3.48 months

Processes we expect would take longer—such as rezoning and completing a full Environmental Impact Report—are relatively infrequent but slightly more represented in the upper quartile. That is unsurprising. What is surprising is the number of code-compliant observations in in the upper quartile. We examined the ten code compliant observations in the upper quartile for timeframes and found that nine are in the same Eastern Neighborhoods Specific Plan in the Mission, Central Waterfront, and East

SOMA areas. This should prompt San Francisco to explore why proposed developments conforming to underlying base zoning and located within a specific plan area would be in a group with timeframes of at or over 38 months. It may be that at least some are located within neighborhoods with a history of contentious politics around new development (Hutson, 2016).

Table 43: San Francisco Prevalence of Zoning Actions in Timeline Quartiles

	Rezoning	GPA	Variance	CUP	Code Compliant
Upper Quartile	3	1	11	6	10
	8.82%	2.94%	32.35%	17.65%	29.41%
Lower Quartiles	6	5	39	34	32
	5.66%	4.72%	36.79%	32.08%	30.19%

Note: Percentages for these discrete pathways will not total to 100% as some observations will require more than one of these discretionary review approvals (which is why the number total more than 140 observations).

Table 44: San Francisco Prevalence of California Environmental Quality Act Review Pathway by Timeline Quartiles

	Exemption	ND	MND	Tiering	EIR	Addendum	Unknown
Upper Quartile	1	1	2	23	7	0	0
	2.94%	2.94%	5.88%	67.7%	20.59%	0.00%	0.00%
Lower Quartiles	11	1	7	77	7	2	1
	10.38%	0.94%	6.60%	72.64%	6.60%	1.89%	0.94%

[1]Projects in multiple CEQA pathways included in the more intensive CEQA pathway only.

The upper quartile has a higher percentage of developments that are over 75 units, which might suggest that these projects present more difficult issues for land use approvals and environmental review.

Table 45: San Francisco Project Size Sorted by Timeline Quartiles

	5 to 24 units	25 to 49 units	50 to 75 units	over 75 units
Upper Quartile	10	6	2	16
	29.41%	17.65%	5.88%	47.06%
Lower Quartiles	30	20	11	45
	28.30%	18.87%	10.38%	42.45%

There is also a higher percentage of mixed income developments in the upper quartile. Given that San Francisco relies on its inclusionary ordinance for affordable development, and mixed income development would theoretically support economic integration, this may be a point of concern for the City of San Francisco and demand further research.

Table 46: San Francisco Affordability Sorted by Timeline Quartiles

	Market-Rate	Mixed Income	100% Affordable
Upper Quartile	15	19	0

	44.12%	55.88%	0.00%
Lower Quartiles	47	54	5
	44.34%	50.94%	4.72%

Geocoding the approval observations then allows for analysis of median timelines in relationship to product type (affordability) and access to opportunity. We use the California's ***Tax Credit Allocation Committee (TCAC)***[69] Shapefiles for the 2019 classifications to analyze median timelines in neighborhoods sorted by opportunity classifications. There is a higher percentage of developments sited in Highest Resource areas in the upper quartile, and a lower percentage in Low Resource neighborhoods compared with the lower quartiles. This is consistent with research in other states that finds that residents of high resource neighborhoods may use the land use review process to object to housing projects (Einstein, 2019).

Table 47: San Francisco Opportunity Classifications Sorted by Timeline Quartiles

	Highest Resource	High Resource	Moderate Resource	Low Resource	High Segregation & Poverty
Upper Quartile	3	4	16	10	1
	8.82%	11.76%	47.06%	29.41%	2.94%
Lower Quartiles	1	13	47	44	1
	0.94%	12.26%	44.34%	41.51%	0.94%

Comparing median timeframes across affordability type and neighborhood opportunity classification produced similar results, and the details raise important implications for fair housing. Median timeframes for market rate development in the Highest Resource areas timelines took the longest (at approximately 90 months), and mixed income housing in the Highest Resource and High Segregation and Poverty neighborhoods were the next longest timelines (one entitlement in each that took approximately 39 months). There were also no 100% Affordable Developments entitled in High or Highest Resource areas in our dataset. Most all market rate development is sited in Moderate Resource areas and most mixed income development is sited in Low Resource areas.

Four of the five 100% affordable developments were among the entitlements below the ~27 months median. But of 140 entitlement observations, there were only seven proposed developments that took 12 or fewer months to entitlement and only one of the seven was a 100% affordable development. The 100% affordable development took ~11.9 months to entitle, was in a Low Resource area, and received a general plan amendment and rezoning. The observation with the shortest timeframe to entitlement in our San Francisco data—a HOPESF project in a Moderate Resource area

[69] The California Tax Credit Allocation Committee administers the federal and state Low-Income Housing Tax Credit Program. These are programs to promote private investment in affordable rental housing for low-income Californians. For more information, see California Tax Credit Allocation Committee (CTCAC), https://www.treasurer.ca.gov/ctcac/.

would redevelop a public housing complex into 222 new residential units, 120 of which would be deed-restricted affordable.

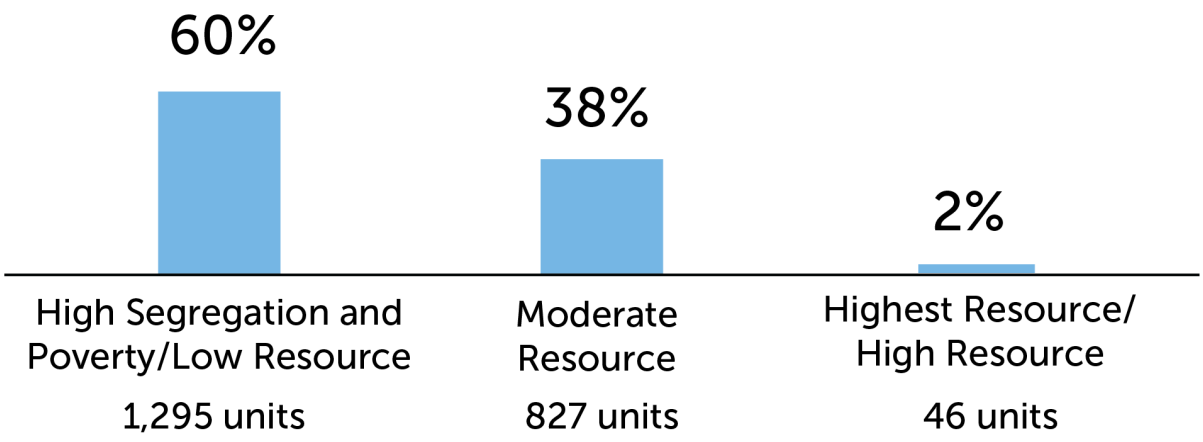
Table 48: San Francisco Median Timelines Measured by Affordability and Access to Opportunity

Highest Resource	Projects	Units	Median Time	Mean Time
Market Rate	3	69	89.97	79.67
Mixed Income	1	41	38.69	38.69
100% Affordable	0	0	-	-
High Resource	Projects	Units	Median Time	Mean Time
Market Rate	9	196	25.05	24.50
Mixed Income	8	390	25.31	36.67
100% Affordable	0	0	-	-
Moderate Resource	Projects	Units	Median Time	Mean Time
Market Rate	32	2,864	26.17	33.48
Mixed Income	30	3,890	30.67	30.26
100% Affordable	1	94	12.06	12.06
Low Resource	Projects	Units	Median Time	Mean Time
Market Rate	18	1,175	23.98	26.72
Mixed Income	33	5,000	31.23	30.90
100% Affordable	3	306	15.28	14.86
High Segregation & Poverty	Projects	Units	Median Time	Mean Time
Market Rate	0	0	-	-
Mixed Income	1	77	39.35	39.35
100% Affordable	1	167	34.48	34.48

Also critical to fair housing policy is the distribution of deed-restricted units across the city—relative to access to opportunity. The entitlement observations within this data indicate that only 2% of entitled affordable units are in Highest and High Resource areas, and 60% are in Low Resource or High Segregation & Poverty areas.[70] Translating the numbers above into a chart demonstrates the extreme problem with current distribution of entitled units in our study.

[70] 14 projects in San Francisco had an unknown number of deed-restricted units and were not included in this calculation.

Chart 2: Distribution of Deed-Restricted Affordable Housing Units in Relationship to Opportunity Classification in San Francisco



This data highlights how onerous local process constraints within San Francisco during our study years may not have advanced the City's fair housing goals. First, approval processes in in San Francisco took far longer than any of our other study cities, including those cities that are similar in size (such as San Diego or San Jose), even though San Francisco was more resourced in planning staff than much larger cities (Mawhorter & Reid, 2018). Second, approval delays were not easily attributable to typically intensive processes such as full environmental review or rezoning, as most proposed development does not require a full Environmental Impact Report or require a rezoning. Third, lengthy timelines persisted for development that conformed to underlying base zoning proposed within specific plan areas. Fourth, timeframes were disproportionately longer in highest resource neighborhoods. Finally, these entitlements would yield very little affordability in higher opportunity areas. The first four findings indicate that neighborhood level politics, not state mandates or planning department staffing or resources, likely influenced how land use regulation operated in San Francisco during these years. The last finding raises concerns for fair housing goals.

In sum, San Francisco had more permissive base zoning, generally, then any other city we studied, but that was insufficient to overcome the prohibitive nature of its overall regulatory environment. Permissive base zoning, limited to specific sections of the city with a history of disinvestment or industrial use (O'Neill et al., 2020), now overlaps with high opportunity areas. Generally, permissive base zoning would invite opportunities for low-income housing. But the discretionary review process was exceptionally onerous (particularly in Highest Resource areas), taking years to get to entitlement for code compliant development, with markedly longer timeframes in different neighborhoods and for different types of housing. This typically increases uncertainty in the development process, limiting development to investors that can manage the risk and handle holding costs that span years. In the context of San Francisco, this regulatory environment may have promoted development of extremely expensive housing with a

small (and likely inadequate) number of deed-restricted units—particularly in Highest or High resource neighborhoods. Also, the process constraints likely prevented increasing housing supply for the working poor that do not qualify for below market rate housing and middle-income households. In this way, San Francisco's local regulation appears to have operated in an exclusionary manner and did not promote fair housing goals of affirmatively furthering fair housing.

The next level of research in this area would look critically into qualitative data associated with proposed developments in the upper quartile for timelines, to understand whether there were commonalities across why those developments took more than three years to entitlement—particularly code compliant mixed income housing. Additional research should also explore if and how these 140 developments proceeded to certificate of occupancy, the rental and purchase prices of the housing units in the entitlement data, and in and out migration of different demographic groups in relationship to locations of these proposed developments. This is outside the scope of this study.

2. Analyzing whether climate policy and fair housing policy are in tension in the City of Los Angeles.

If compared to San Francisco, the City of Los Angeles has a less stringent regulatory environment. The City of Los Angeles provides for ministerial review of dense development. It is also unique among all our cities as the only study city with a substantial number of developments in our study years approved through a ministerial process. Within Los Angeles County, the City of Los Angeles approved far more housing than the other jurisdictions we studied, even when standardized for city population. Although only 26% of the city's zoned land area is HQTA, approximately 81% of all approved dense development is in a HQTA (O'Neill et al., 2020). That pattern generally supports state policy aims of placing more density in locations where residents can access public transit.

Determining whether housing approvals are likely to further fair housing goals requires a more searching analysis of Los Angeles housing approvals using TCAC mapping, to start. Los Angeles approved housing development in all five neighborhood classifications, but the highest percentages of proposed dense housing units in Los Angeles are sited in Moderate Resource (28.61%) or High Segregation and Poverty neighborhoods (28.48%). This is significant because citywide, only about 20% of the land area was classified as Moderate Resource, and 11% of the land area was classified as High Segregation and Poverty. Standing alone this fact does not necessarily indicate that these dense development approvals worked against fair housing goals. What is more concerning is that although 27% of the City's zoned land area citywide was classified as Highest Resource, less than 9% of all units were approved in Highest Resource neighborhoods. In contrast, ~10% of the City's zoned land area is classified as High Segregation and Poverty, and ~28% of units were approved in High Segregation

and Poverty areas. Fair housing analysis invites questions about why this is and would require more research to explore potential impacts.

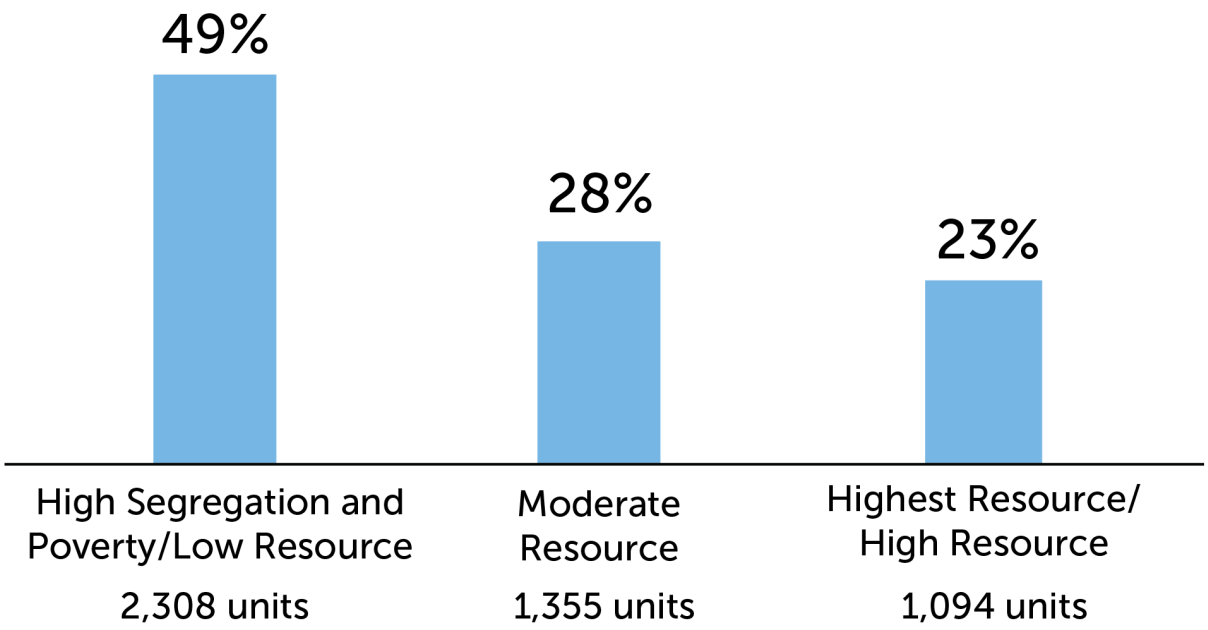
Table 49: Percentage of Los Angeles Entire City Zoned Land Area by TCAC Classification and Percentage of Units Entire City by TCAC Classification

% Zoned Land in Highest Resource	% Zoned Land in High Resource	% Zoned Land in Moderate Resource	% Zoned Land in Low Resource	% Zoned Land in High Segregation and Poverty	% Zoned Land in Uncategorized
27.4	15.7	18.8	13.0	9.8	15.3
% Units Approved in Highest Resource	% Units Approved in High Resource	% Units Approved in Moderate Resource	% Units Approved in Low Resource	% Units Approved in High Segregation and Poverty	% Units Approved in Uncategorized
8.65	18.24	28.65	16.01	28.34	0.12

One challenge that the City of Los Angeles must grapple with is how little land area is HQTA to begin with and where existing transit investment exists in relationship to opportunity. If the aim is to support climate policy, TOD requires siting in the HQTA. 100% affordable development also often depends on finding locations near transit to secure financing. During our study years, the City of Los Angeles approved affordable units at a comparatively lower rate than every other jurisdiction we studied within the County, except Redondo Beach—which approved less than 1% affordable housing. The highest percentage (approximately 35%) of deed-restricted affordable units (units that are legally required to be offered below market rate) were in High Segregation and Poverty neighborhoods. Chart 3 highlights that nearly half of all affordable housing, if built, would be in areas of reduced opportunity. If we combine the amount of affordable development going into Highest Resource areas with High Resource areas, we also see that less than a quarter of all affordable units, if built, would be in areas with the most opportunity. In sum, the location of affordable housing units approved in these years may have limited access to opportunity for low-income households. The disproportionate rate of affordable development in High Segregation and Poverty neighborhoods, and low rate of affordable development in Highest and High Resource neighborhoods, raises questions about how current zoning, particularly residentially zoned land in HQTA contributes to these outcomes.[71]

[71] The City of Los Angeles' Department of City Planning is examining how zoning and planning obstruct fair housing goals based on available 2021 publicly available memoranda to the City Council. (See, for

Chart 3: Siting of Deed-Restricted Affordable housing units in relationship to TCAC Los Angeles



[1]3 projects in Los Angeles had an unknown number of deed-restricted units and were not included in this calculation.

Whether and where new dense development involves demolishing existing residential development is another important fair housing issue. Displacement from demolition is evident in Los Angeles' housing approval data from prior years. The City issued housing approvals in our study years that would demolish existing residential units, including 1,642 units of rent-stabilized housing.[72] These approvals could signal direct physical displacement of households if these approvals proceeded to construction (O'Neill et al., 2020). Not all demolitions of rent-stabilized housing had a 1:1 replacement with deed-restricted affordable housing; but a 1:1 replacement with deed-restricted affordable housing would not have resolved the displacement issue. Rent stabilized units and deed-restricted units are not equivalencies, and the households that occupy each may be completely different. Deed-restricted affordable housing stays below market for the duration of the term of the deed. But not everyone can access deed-restricted housing, even if they are low-income and in need of affordable housing. Tenancy is limited to qualifying households based on a set of criteria, including but not limited to income levels and immigration status. In contrast, there are also no income

example the May 21, 2021 Report Relative to Citywide Equitable Distribution Of Affordable Housing (CF 19-0416) (City of Los Angeles, 2021), acknowledging that little affordable housing has been developed in higher opportunity areas, and multi-family zoning is not equitably distributed throughout the City.)

[72] We include units subject to Ellis Act evictions in this count that were not otherwise noted as rent-stabilized units.

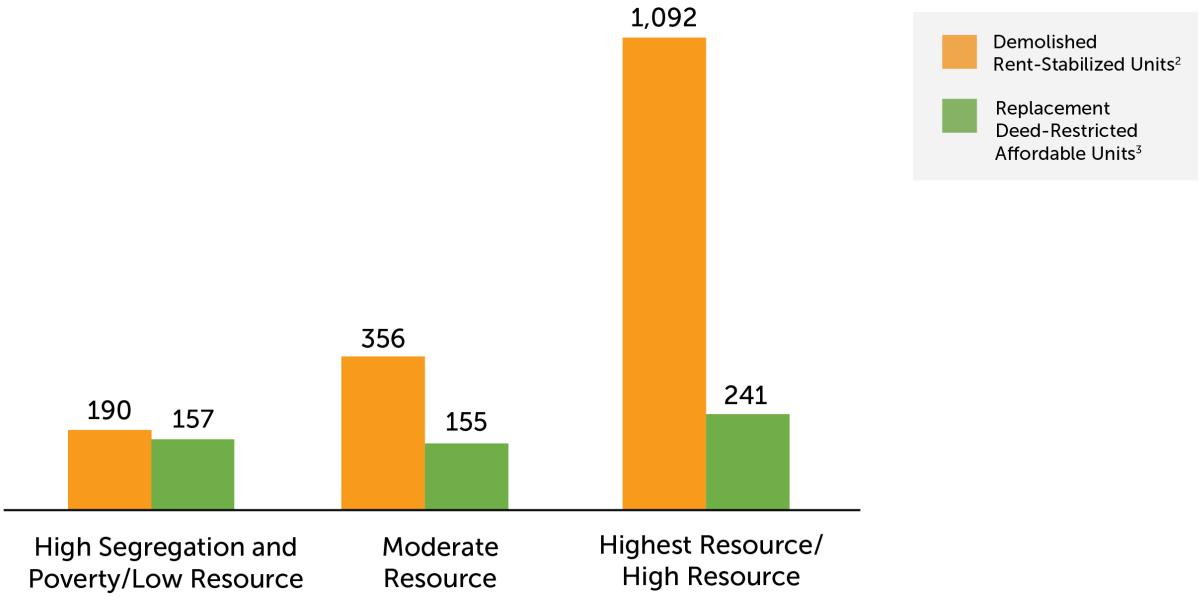
caps or immigration status eligibility requirements to access rent-stabilized housing. In sum, replacement of rent stabilized housing with deed-restricted affordable units may not directly address physical displacement of existing tenants.

Table 50: Demolition Rates and Replacement Rates for the City of Los Angeles

Total Residential Units	HQTA	Non-HQTA	Entire City
All Housing Units Demolished	1,661	739	2,400
Ellis Act or Rent-stabilized Demolished	1,132	506	1,638
Total Replacement Market-Rate Units	8,735	2,864	11,599
Total Replacement Affordable Units	1,185	137	1,322

At least some of the approvals to demolish rent-stabilized units were in the City's Highest or High Resource Areas, and comparatively little affordable development was approved in these same neighborhoods. Chart 4 demonstrates that housing approvals during our study years would lead to more demolition and less affordability going into the higher opportunity areas in Los Angeles.

Chart 4: City of Los Angeles Rate of Demolition of Rent-Stabilized Units in Relationship to Replacement by Deed-Restricted Affordable, Sorted by TCAC Classifications[1]



[1]Demolished and replacement unit counts reflect only known instances of demolished rent-stabilized units. In our data collection for 1 observation, we could not determine whether demolition occurred, or

whether a partial demolition included the residential component on the site, although existing units on site were rent-stabilized. For another 26 observations, current use information provided in staff reports indicated that current use was another use besides residential or unknown, but elsewhere in the city's database, we noticed the site was listed as having Rent Stabilized/Ellis Act units. Additionally, another 5 observations had prior residential use and demolition of residential units, but we could not determine whether the demolished units were subject to RSO.

[2]4 projects with unknown number of demolished rent-stabilized units (2 in High Segregation/Poverty, 1 in Moderate Resource, 1 in High Resource), so these units and replacement units were not included in the chart above.

[3]2 projects with unknown number of new affordable units (1 in High Resource, 1 in Highest Resource). We included the demolished units above, but not include any number of replacement units in the chart above.

Demolition of rent-stabilized housing in these places to increase housing stock could displace long-time tenants who may have benefited from rent stabilization in these higher opportunity areas. Although we do not have household level occupants' demographic data, this trend raises the concern that some displaced tenants may have been lower-income tenants who would not otherwise have had access to a high opportunity neighborhood.[73] This concern is reflected in contemporaneous news reports describing displacement events in the higher opportunity neighborhoods where we observed the highest demolition rates but few approvals of affordable units. Specifically, news articles and reports described how demolition of rent-stabilized units impacts specific communities of color in Sawtelle-Japantown, Hollywood, and North Hollywood—reporting, for example, that demolition of rent-stabilized housing is displacing and erasing Latinx culture from Hollywood and North Hollywood neighborhoods (Kiszla, 2019; Cabral, 2018; Barragan, 2020), and that new development and gentrification in the Japantown-Sawtelle neighborhood has decreased the presence of Japanese culture (Huang et al., 2015). We also found reports that tenant advocacy groups in Koreatown and Pico-Robertson neighborhoods were concerned about the adverse impacts on lower and moderate-income households evicted from rent-stabilized units to make way for new development (Barragan, 2016; TRD Staff, 2018). As some of those same reports note, increasing overall housing supply in these neighborhoods may require demolishing older, smaller, multi-family housing, and some of the older housing stock may be of poor quality.

Our data cannot confirm the media reports; we do not have household income information about the occupants of the units approved for demolition. But our data does show that housing approvals during our study years would contribute to a loss of rent-stabilized units in these areas without an equivalent number of deed-restricted affordable housing units. This raises potential fair housing concerns.

Our data also shows that the approved demolition of existing residential units in the City of Los Angeles, overall, would allow for the construction of significantly more

[73] It is also possible that the displaced tenants may have been more affluent at the time of demolition. California law does not allow for vacancy control measures in local rent stabilization ordinances: when a tenant departs rent-stabilized housing, the landlord can raise the rent to market rent for the next incoming tenant (referred to as vacancy decontrol). It is possible that at the time of demolition, a tenant of a rent-stabilized unit may have been paying market rent.

housing units than were demolished. The increased supply of new housing, overall, may have advanced fair housing goals because inadequate supply overall drives up housing costs. Demolition may have been a necessary trade-off to increase housing stock citywide and support climate policy—but it should be a trade-off that is explicitly considered in all housing policy discussions.[74] Recent state law now provides a no net loss requirement, which prohibits the local approval of proposed housing that would demolish existing or vacant protected units, inclusive of rent-stabilized units that meet specific criteria (SB 330, 2019). The City of Los Angeles' implementation of SB 330, effective January 1, 2020, requires the City to also collect household income information to determine whether a unit is a protected unit. Lower income and very low-income households receive a first right of refusal and location assistance to mitigate the displacement risk associated with demolition. Though tracking the data related to this aspect of SB 330 requires additional local level data collection and analysis, this will be important both for fair housing policy and to measure how effectively state law prevents displacement related to new development going forward.

C. Ongoing work to assess how CEQA exemptions and tiering may be used in higher VMT locations and higher wildfire hazard areas.

We are also exploring the data to determine whether environmental review streamlining provisions appear to support climate policy by incentivizing infill development. This work is incomplete and ongoing, as it is outside of the scope of this study. We are sharing how we have begun this work because of its relationship to this study.

1. Some urban infill developments that benefited from CEQA exemptions are in higher VMT locations.

One topic for ongoing work is the use of CEQA categorical exemptions for urban infill developments (CEQA Guidelines, § 15332). Within several study cities, our preliminary spatial analysis indicates that at least some of our approval observations that moved through a 15332 CEQA exemption for urban infill developments are in what might be higher VMT locations—or locations that are outside of the urban core infill areas. While these are not necessarily greenfield developments, we think these might be better described as "fringe infill developments." We began our work to create a measurement for when an observation was a fringe infill development by first using CEQA guideline definitions of what would constitute an infill development. We next

[74] The Los Angeles Times also tracked demolition activity for years, and some of that work overlapped with our own study years. Prior to state legislative intervention, the City Los Angeles' City Council also reconsidered the issue of rates of demolition of rent stabilized housing and replacement with affordable housing in 2017 and strengthening the affordability replacement requirements. Media reports at the time indicated that even with more strict replacement rules, city staff noted that demolished units may not be replaced with affordable units 1:1 (Reyes, 2017).

defined "fringe infill" development to describe development proposed outside of a 5-mile radius of a downtown or central business district area in cities that are centered around a traditional downtown area or central business district. This allows us to identify proposed developments that are typically sited far from daily services and employment centers but are not necessarily considered greenfield development because they are surrounded by urban uses. With mapping, we found that some of our observations appeared to fit this description. This working definition for "fringe" infill development is insufficient, so the UCI Team is currently working to develop an alternative VMT-based metric to distinguish "core" and "fringe" infill. The UCI Team is collecting infill definitions, including relevant VMT metrics, from local jurisdictions, and it is also surveying MPOs to determine the availability and consistency of regional VMT measures at the traffic analysis zone (TAZ) and block-group level.

2. Residential development sited in Fire Risk Zones had expedited CEQA review or no CEQA review.

Severe wildfire seasons in California over the past few years have brought public and policy attention to the issues of fire risk, including the siting of residential development in areas of high fire risk. As described earlier, CEQA generally does not require environmental review to consider the environment's impact on a project with one exception—when the project would exacerbate existing environmental conditions.

We mapped our observations of project entitlements with California Fire Hazard Severity Zone Maps[75], and fire hazard maps available at the local level for cities that assume responsibility. We then examined what CEQA pathways those projects used to achieve entitlement in relationship to their siting in fire risk zones. We found that most of the proposed and approved development in unincorporated San Diego County was sited in a very high- or high-risk fire hazard zone, and had environmental review based on tiering. (Most often the project used a 15183 Notice of Exemption, where the projects tiered off of a 2011 General Plan EIR). Over four years, San Diego County entitled 1,434 units of housing (27 proposed developments) in the unincorporated land in our study period. Eleven proposed developments, with ~62% of the 1,434 entitled units of housing over a four-year period, are sited in "Very High" Fire Hazard Severity Zones. Two proposed developments, with ~20% of the 1,477 entitled units of housing over that four period, are sited in "High" Fire Hazard Severity Zones. Of these 13 projects, which site more than ~80% of these 1,434 entitled units of housing Very High or High Fire Hazard Zones, only two projects (with 304 units) had an EIR.

[75] We mapped our projects with CalFire Fire Hazard Severity Zone State Responsibility Area (SRA) and Local Responsibility Area (LRA) data. In addition to mapping CALES observations with FHSZ areas, we also analyzed the percentage of land area within high fire risk zones in the exurban jurisdictions we studied. We noted that 51% of zoned land was within a very high fire risk SRA or LRA in the City of San Diego, 37% in San Diego County, and 34% in Los Angeles County. We did not have access to fire risk data for federal responsibility areas, so we were not able to include this in our analysis. We discuss this area of analysis further in our forthcoming "Building to Burn" article in Ecology Law Quarterly.

We found similar issues outside of unincorporated counties. In the City of Los Angeles there were 45 proposed developments located in Very High Fire Hazard zones. Among those 45 proposed developments, 39 were discretionary and while most used MNDs, 7 used CEQA exemptions (4 Class 32, 1 Class 1, 1 Class 3, and 1 unknown based on project documents). The ministerial observations reflect the complexity of trying to address climate impacts while also addressing other policy needs. All seven ministerial developments approved in Very High Fire Hazard areas were multi-family developments that would add 105 units of housing primarily in Highest Resource areas (when examining TCAC classifications).

We did not find developments in Folsom, Fresno, Roseville, Sacramento, or Pasadena sited in High or Highest Fire Hazard zones. One project in Oakland (5 units) was sited in Very High Risk Fire Hazard zone, and one project in San Jose (7 units) was sited in a High Risk Fire Hazard zone. We also did not find any deed-restricted affordable development sited in High or Highest Fire Risk Zones.

Wildfires can spread from house to house, so adding housing to an area can exacerbate fire risks. In addition, new development in high fire risk areas makes use of prescribed burns more difficult, and prescribed burns are a primary approach to reducing fire risk (Calkin et al., 2014). And increased residential development in high fire risk areas also increases the risks of ignition of fires by human-caused activities (Radeloff et al., 2018). Yet, we observed limited or no environmental review associated with these project approvals in very high and high fire hazard zones. During data collection, we encountered denials of major subdivisions on the grounds that the proposed project would exacerbate fire risk. The amendments to the CEQA guidelines in 2019 (mandated by state legislation) to consider the impacts of residential development exacerbating fire risk, particularly in the Safety Element of the planning process, may address this issue. Determining whether the new guidelines impact CEQA review requires data collection outside of our study timeframe, but follow-up on this specific question is important.[76]

[76] We completed additional data collection and preliminary analysis in San Diego County only, and will provide that writing in a separate forthcoming article.

Table 51: Distribution of Projects and Units by Fire Risk (Cal Fire FHSZ (Fire Hazard Severity Zone) State and Local Responsibility Areas)

Jurisdiction	Total Projects	Projects in Very High Fire Risk	Projects in High Fire Risk	Projects in Moderate Fire Risk	Total Units	Units in Very High Fire Risk	Units in High Fire Risk	Units in Moderate Fire risk
City of Los Angeles	1,071	46	0	0	65,846	1,099	0	0
City of San Diego	176	31	0	0	13,957	2,100	0	0
Los Angeles County	37	2	0	0	2,532	585	0	0
Placer County	19	6	0	4	3,535	138	0	1,135
San Diego County	27	11	2	3	1,434	889	301	34
Total	**1,330**	**96**	**2**	**7**	**87,304**	**4,811**	**301**	**1,169**

Table 52: Distribution of % Projects and % Units by Fire Risk (Cal Fire FHSZ State and Local Responsibility Areas)

Jurisdiction	% Projects in Very High Fire Risk	% Projects in High Fire Risk	% Projects in Moderate Fire Risk	% Units in Very High Fire Risk	% Units in High Fire Risk	% Units in Moderate Fire risk
City of Los Angeles	4.30%	0.00%	0.00%	1.67%	0.00%	0.00%
City of San Diego	17.61%	0.00%	0.57%	15.05%	0.00%	0.06%
Los Angeles County	5.41%	0.00%	0.00%	23.10%	0.00%	0.00%
Placer County	31.58%	0.00%	21.05%	3.90%	0.00%	32.11%
San Diego County	40.74%	7.41%	11.11%	61.99%	20.99%	2.37%
Total	**7.22%**	**0.15%**	**0.53%**	**5.51%**	**0.34%**	**1.34%**

Table 53: Project CEQA Pathways by Fire Risk in Placer County

	% of Projects	Projects	Exempt	Tiering	Addendum	MND	ND	EIR	Multiple Pathways
Very High	31.58%	6	0	0	0	4	0	2	0
High	0	0	-	-	-	-	-	-	-
Moderate	21.10%	4	0	1	1	2	0	0	0
Not in Fire Risk Zone	47.37%	9	0	3	0	5	0	1	0

Table 54: Project CEQA Pathways by Fire Risk in San Diego County

	% of Projects	Projects	Exempt	Tiering	Addendum	MND	ND	EIR	Multiple Pathways
Very High	40.74%	11	0	8	0	2	0	1	0
High	7.41%	2	0	1	0	0	0	1	0
Moderate	11.11%	3	0	3	0	0	0	0	0
Not in Fire Risk Area	40.74%	11	0	11	0	0	0	0	0

Table 55: Project CEQA Pathways by Fire Risk in the City of San Diego

	% of Projects	Discretionary Projects	Process 1-2 Projects	Exempt	Tiering	Addendum	MND	ND	EIR	Multiple Pathways
Very High	17.61%	25	6	5	8	4	6	0	2	0
High	-	0	0	-	-	-	-	-	-	-
Moderate	-	0	0	-	-	-	-	-	-	-
Not in Fire Risk Area	82.39%	74	71	29	13	5	17	2	7	2

Table 56: Project CEQA Pathways by Fire Risk in the City of Los Angeles

	% of Projects	Discretionary Projects	Ministerial Projects	Exempt	Tiering	Addendum	MND	ND	EIR	Multiple Pathways
Very High	4.30%	39	7	7	2	0	28	0	1	1
High	-	-	-	-	-	-	-	-	-	-
Moderate	-	-	-	-	-	-	-	-	-	-

Not in Fire Risk Area	95.84%	746	279	246	11	11	447	2	22	7

Table 57: Project CEQA Pathways by Fire Risk in Los Angeles County

	% of Projects	Discretionary Projects	Ministerial Projects	Exempt	Tiering	Addendum	MND	ND	EIR	Multiple Pathways
Very High	5.41%	2	0	0	0	0	1	0	1	0
High	-	-	-	-	-	-	-	-	-	-
Moderate	-	-	-	-	-	-	-	-	-	-
Not in Fire Risk Area	94.60%	32	3	9	1	0	11	9	2	0

Summary and Conclusions

Scholars, lawmakers, and commentators have deliberated for years on what California's city and state governments need to do to address the state's persistent housing crisis. Communities across the state are also confronting disruptive and deadly climate events—including annual wildfire seasons that increase in length and severity. Experts and policymakers agree that increasing the supply of dense infill housing near transportation and economic opportunity is critical to combating climate change. Affordable housing advocates warn that housing policy needs to prioritize increasing affordability within the state's high-cost cities, or rising prices will push low-income populations out of cities to the detriment of the state's climate and fair housing goals.

The aim of this study was to collect housing approval and litigation data in urban and exurban jurisdictions to explore how well existing land use regulation and enforceable climate policy serves California's climate or fair housing goals to inform active housing policy debates. We identified 20 differently sized jurisdictions across the state for mixed method case study research to gain insight into how these jurisdictions regulate land and process development proposals to add dense housing supply. We conducted legal research on how our study jurisdictions plan and regulate land for housing, gathered data on all approvals issued in one of four years post-Great Recession for development that would add five or more units of housing, and challenges to those approvals through local administrative proceedings and litigation. We then interviewed 85 stakeholders, inclusive of planners, lawyers, developers (market rate and affordable) and community and housing advocates with experience and knowledge of how housing development processes operate within our study jurisdictions.

Our findings indicate that none of our urban study cities have permissive regulatory environments. Most of our urban study cities have moderately to very stringent local land use regulations. A few of these cities may use stringency to promote deal-making to increase affordable development in conjunction with market rate development. But if the primary tool to increase affordability rests on inclusionary ordinances, for example, long entitlement timelines may still impact market rate and affordable development supply—particularly in higher cost regions. Six of our urban cities appear to have regulatory environments that are best described as prohibitive;

these regulatory environments are unlikely to effectively serve either fair housing or climate goals at a local, metro, regional or state level. The way each city restricts housing development varies, though aside from San Francisco, the other five study cities we would describe as prohibitive zone very little land for dense housing.

City-specific analysis can illuminate how different types of local land use regulations may obstruct fair housing and climate goals, and the importance of identifying the potential impacts of these local regulatory environments at the neighborhood level. In San Francisco, for example, the onerous discretionary review process imposes years to entitlement for proposed multi-family development that otherwise conforms to all its local ordinances. This likely imposes high costs on developers in the form of holding costs—possibly limiting who can even propose development in San Francisco. And despite its inclusionary ordinance, San Francisco entitled very little deed-restricted housing in higher opportunity areas. The City of Los Angeles, in contrast, has much faster process times for discretionary review and ministerial processes for some dense development, but a lower percentage of zoned land available for all income levels. In Los Angeles, our data indicated that housing approvals involved development that would require repurposing land where lower density housing already existed, often necessitating demolition. This included approving demolition of rent stabilized housing—which signals physical displacement of existing tenants. Although too little deed- restricted affordable housing is approved in Highest and High Resource areas in Los Angeles, Los Angeles approved a significantly higher percentage of approved deed restricted housing in higher resource areas when compared with San Francisco.

Overall, we found that the differences between study cities in the same metro or across metros are more significant than differences between urban jurisdictions and exurban jurisdictions. In comparing infill and exurban jurisdictions with respect to land use review pathways and timeframes for approval, generally, exurban development did not take longer than urban infill development to get entitled. We also did not find consistent differences between infill and exurban jurisdictions in terms of environmental review pathways or timeframes—nearly all jurisdictions heavily used environmental review streamlining tools. In the exurban context, this also meant that single-family subdivisions benefited from environmental review tiering and streamlining.

Although entitlement timelines were not significantly different from infill jurisdictions, exurban jurisdictions appear to be more likely to use general plan amendments and rezoning to approve new projects compared to infill jurisdictions. Frequent use of general plan amendments and rezoning could indicate that the local government is approving development inconsistent with planning that may often codify local level fair housing and climate policy. It could also signal that existing planning and zoning does not adequately accommodate population growth and housing demand. Alternatively, it could indicate that the jurisdiction routinely uses “holding zones” to negotiate with developers. Exploring why these exurban jurisdictions are so frequently

approving general plan amendments and rezoning would be a fruitful line for future research.

Our litigation data showed both that less than 3% of approvals (comprising about 7% of units) end up litigated, but also offers a reminder that land use regulation creates opportunities for opposition to housing projects through litigation. Exurban and infill jurisdictions had similar levels of litigation for approved projects, though fewer units were litigated in exurban jurisdictions. Consistent with other findings, neither infill nor exurban jurisdictions as a group had substantial differences between litigation rates; there are more variations among groups of exurban jurisdictions or infill cities in terms of litigation rates than there are differences between the two types of jurisdictions.

Though litigation rates are less than 3 percent across all development in all jurisdictions, in the aggregate, litigation was most frequent in High or Highest Resource Areas in both infill and exurban areas—possibly indicating that communities with more resources were more likely to oppose development, which would be consistent with the relevant literature on this topic. In the urban cities where approved development is sited in Highest, High, Moderate, Low Resource, and High Segregation and Poverty areas, there was also a noticeable amount of litigation in Low Resource and High Segregation and Poverty Areas.

Over 95% of litigated projects included CEQA claims, but two-thirds of all litigated developments also faced claims under local land use law. This indicates that local regulation provides an opportunity for opposition through litigation in two ways. Local regulation generates a significant basis for litigation regardless of the possibility of CEQA claims *and* local regulation renders a development approval vulnerable to a CEQA claim by making the approval process discretionary in the first place.

Developments that used more intensive local and environmental review processes, specifically rezonings or an EIR, had higher rates of litigation as compared to developments that used other local and environmental review process pathways. EIRs are generally infrequent in our data across all jurisdictions; rezonings are infrequent in our urban cities but more common in our exurban jurisdictions. Higher rates of litigation among developments requiring either rezoning and/or EIRs requires more analysis specific to the context of the development. In an urban infill context, where EIRs are typically uncommon, but more frequently associated with litigation, that raises questions about whether our urban infill jurisdictions are choosing more intense environmental approval pathways in response to local or neighborhood politics.

Plaintiffs rarely won lawsuits (regardless of claim type), and most cases settled. About two-thirds of all litigated projects faced claims of inadequate analysis of GHG or VMT. Success rates for plaintiffs did not vary depending on whether GHG or VMT claims were raised.

For projects that were litigated, litigation extended the timeframes for projects by almost two years—and for projects where the initial trial court decisions was appealed, litigation extended timeframes by almost four years. These extensions likely impose serious costs on these projects in terms of uncertainty and financing, though our review of the media coverage of litigated projects found that for a number of them, development was ultimately able to proceed. Media coverage did not allow us to get significant information about the extent to which projects that went through litigation may have shifted in terms of units proposed, affordability, rental/sale, or other major product characteristics over the course of the litigation (particularly post resolution). We found that scale was one of the most frequently basis cited in media coverage by those challenging litigated projects. Depending on the capacity to complete VMT related analysis, we may also identify potential VMT for litigated developments relative to VMT for developments that did not face litigation.

Across urban and exurban jurisdictions, administrative appeals—which involve challenges to discretionary land use decisions using the local jurisdiction's own administrative process—are more likely than litigation. Administrative appeal rates were also highly variable across jurisdictions, again showing the importance of local government choices as to the structure for land use regulation, particularly given that administrative appeal systems are primarily a function of local ordinances.

All three exurban counties, and the cities of Los Angeles and San Diego, approved housing development in high fire-risk areas. Among this group, San Diego County stood out as about two thirds of its approvals are for housing developments in high fire-risk areas with minimal CEQA review; the most common environmental review pathway was use of tiering from the County's 2011 General Plan EIR. The prevalence of approving housing in high fire risk areas in San Diego County, which primarily approved single-family subdivisions, raises questions about the adequacy of state environmental law in preventing sprawling development that might increase fire risk. Recent changes to the CEQA Guidelines may have addressed these concerns by providing local governments the means to require additional consideration of these risks for all development approvals going forward, but this would require data collection in selected jurisdictions with more land area within fire risk zones to assess this issue.

Recommendations

Our findings indicate that local land use regulations in at least some of our study jurisdictions do not appear to support California's climate or fair housing goals. Few jurisdictions had sufficient land area zoned for dense housing, and even fewer have ministerial processes in place to support sustainable and affordable infill development during our study period. Changes to state and local law may address some of these issues. Sacramento has made notable changes to local law to incorporate a ministerial process for more dense development. Fresno created a Focused Infill District in 2020. Santa Monica created a ministerial process for 100% affordable development. State

efforts to address regulatory constraints on sustainable development—particularly affordable development—have gone into effect as well. SB 35 went into effect at the close of our initial study period. More recently, the state has taken incremental steps towards reducing the prevalence and constraint of single-family only zoning (SB 9) and offered support for cities that want to pursue rezoning (SB 10). Despite these milestones, advancing infill development that is equitable, affordable, and supports state climate goals likely will require local governments to rezone and implement ministerial review for development that meets fair housing and sustainability goals, or additional state intervention in the local land use regulatory process. Meaningful state oversight of existing local land use regulation and planning through Housing Element law may encourage cities to address local regulatory constraints.

We recommend that housing policy research continue to prioritize improving local housing data reporting. Quality local level housing data is critical to understanding recent legislative changes and modifying or building on those efforts. With the passage of AB 1483, the new data now provided through annual progress reports is a helpful and important step in that direction. But more is needed. During our own research, we observed considerable differences between local data management practices. Housing data research should prioritize identifying opportunities and obstacles to improving local level data management within the public sector to allow for state oversight of local regulation and planning. Housing data research should also support augmenting existing housing approval data that local governments currently make available through annual progress reports. The latter could identify necessary improvements to local data reporting while also simultaneously support measuring the effectiveness of recent changes to Housing Element law over the next several years.

The predominance of tiering and similar streamlining mechanisms for environmental review in several of our infill cities suggests that specific plans and similar streamlining efforts by local governments may offer a promising way to advance additional housing production in infill cities without undermining public participation or important environmental review. It is possible, however, that a primary challenge to greater use of these tools is that they require local governments to fund the planning and environmental review, rather than imposing the costs on developers. State grants to support this planning (like what is occurring for a limited period under the funding from SB 2, which imposed a real estate transaction fee to support housing production) on an ongoing basis would be helpful. In addition, identifying ways in which local governments could require contributions from project proponents that benefit from specific plan streamlining in ways that are consistent with state constitutional limits on taxes and fees would be another important option. Both would require additional research to identify implementation options and feasibility.

Relatedly, we observed minimal to no environmental review on sprawling subdivision in high fire hazard areas. Recent changes to CEQA guidelines may resolve this issue—but assessing this requires focused and continued data collection to determine the efficacy of those regulatory changes.

We also observed that less than three percent of all project-level approvals faced litigation. Our interviews suggest, however, that in certain contexts specific plans and community plans also face litigation and that this may need to be an area of focus. This is outside the scope of our current study but would be a natural extension of the work that we have completed in these jurisdictions.

For the projects that were litigated, litigation added significant time to the review process. These timeframes were particularly long for the minority of litigated projects where the initial trial court decision was appealed to the Court of Appeal. As noted above, extended timeframes as a result of litigation can create significant impacts on projects in terms of cost and uncertainty. The state legislature has attempted to address the delays that can be caused by litigation through legislation that requires resolution of lawsuits within a limited time period. While courts have generally complied with these timeframes, they are not likely enforceable against the courts, as the state constitution probably limits the ways in which the state legislature can control litigation in this manner. In other words, more aggressive efforts to address litigation delays (for instance, enforceable deadlines for resolution of cases, allowing cases to be determined in the first instance at the Court of Appeal to reduce lengthy appeals, or using specialized courts to resolve cases expeditiously) would probably require an amendment to the state constitution.

Finally, with respect to CEQA litigation, specifically, to the extent that CEQA litigation poses an obstacle to dense infill development, one strategy to address the problem of litigation without diminishing the notice, participation, and mitigation benefits of CEQA would be to address the legal concept of standing. The legislature could require that petitioners challenging projects demonstrate a connection between the harms they claim to suffer from the project and the environmental harms that CEQA is intended to protect against. In general, individuals filing lawsuits must have standing to sue—and demonstrating standing requires showing that the petitioner filing the lawsuit has suffered an injury from the action challenged in the lawsuit. The California Supreme Court has articulated one of the broadest conceptions of standing for suing under environmental laws in the country, allowing economic harms unrelated to the environment to support lawsuits under CEQA. In contrast, at the federal level, lawsuits challenging projects under the National Environmental Policy Act (NEPA), the federal analogue to CEQA, often (though not always) require demonstration of environmental harm by the plaintiffs in order to be able to establish standing. Narrowing standing under CEQA might reduce some of the lawsuits that are not related to environmental harms, including frivolous claims, while still allowing claims that directly relate to the environment to proceed. The federal standing requirement does not appear to be overly burdensome, as it does allow many challenges to federal actions to proceed. Additional research on this approach and its feasibility would also be helpful.

References

Alamo, C., Uhler, B., & O'Malley, M. (2015). *California's high housing costs: causes and consequences*: Sacramento, CA: Legislative Analyst's Office, March 17, 2015.

Alpert Reyes, E. (Apr. 19, 2017). L.A. stiffens rules for replacing rent-controlled units. Los Angeles Times. Retrieved from https://www.latimes.com/local/lanow/la-me-ln-housing-ellis-act-20170404-story.html

Anderson, M. W. (2012). Sprawl's Shepherd: The Rural County. California Law Review, 100(2), 365-380. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.calr100.15%26site%3deds-live

Baer, W. C., & Williamson, C. B. (1988). The Filtering of Households and Housing Units. *Journal of Planning Literature, 3*(2), 127-152. doi:10.1177/088541228800300201

Barbour, E., & Teitz, M. (2005). CEQA Reform: Issues and Options Retrieved from Public Policy Institute of California: https://www.ppic.org/content/pubs/op/OP_405EBOP.pdf

Barbour, E., Chatman, D., Doggett, S., Yip, S., Santana, M. (2019) SB 743 Implementation: Challenges and Opportunities. University of California Center for Economic Competitiveness in Transportation, V, 18, 39-40. doi:10.7922/G2S180Q7

Been, V. (1991). "Exit" as a Constraint on Land Use Exactions: Rethinking the Unconstitutional
Affordability. Housing Policy Debate, 29(1), 25-40. doi:10.1080/10511482.2018.1476899

Been, V. (2018). CITY NIMBYS. Journal of Land Use & Environmental Law (2), 217. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsglt%26AN%3dedsgcl.553840101%26site%3deds-live

Been, V., Ellen, I. G., & O'Regan, K. (2019). Supply Skepticism: Housing Supply and Affordability. Housing Policy Debate, 29(1), 25-40. doi:10.1080/10511482.2018.1476899

California's 2017 Climate Change Scoping Plan: The strategy for achieving California's 2030 greenhouse gas target. (2017). California Air Resources Board. https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf, 75-77.

Carruthers, J. I., Growth at the Fringe: The influence of political fragmentation in United States metropolitan areas, 83 Papers in Regional Science 475 (2003)

Conditions Doctrine. *Columbia Law Review, 91*(3), 473-545. doi:10.2307/1122797

Barragan, B. (2020, February 14). Renters need more protections as Hollywood booms, community groups say. Curbed Los Angeles. https://la.curbed.com/2020/2/14/21136773/hollywood-community-plan-update-renters

Barragan, B. (2016, April 11). Koreatown Pushing Back Against Dense and Pricey Developments. Curbed Los Angeles. https://la.curbed.com/2016/4/11/11409194/koreatown-mobilizing-against-dense-and-pricey-developments

Been, V. (2018). CITY NIMBYS. *Journal of Land Use & Environmental Law* (2), 217. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsglt%26AN%3dedsgcl.553840101%26site%3deds-live

Been, V., Ellen, I. G., & O'Regan, K. (2019). Supply Skepticism: Housing Supply and Affordability. *Housing Policy Debate, 29*(1), 25-40. doi:10.1080/10511482.2018.1476899

Berg, B. L., & Lune, H. (2012). *Qualitative research methods for the social sciences* (8th ed. ed.): Pearson.

Billingham, C., Bluestone, B., & Pollack, S. (2010). Maintaining diversity in America's transit-rich neighborhoods: tools for equitable neighborhood change. *New England Community Developments*, 1. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsrep%26AN%3dedsrep.a.fip.fedbcd.y2010p1.6n1%26site%3deds-live

Blaesser, B. W. (2005). *Discretionary land use controls: avoiding invitations to abuse of discretion* (8th ed. ed.): Thomson/West.

Byun, P. and Esparza, A. X., 24 J. Planning Education and Research (2005)

Cabral, J. (2018, January 16). "This Side of Hoover" is Archiving Gentrification in East Hollywood, One Portrait at at Time. L.A. Taco. https://www.lataco.com/side-hoover-archiving-gentrification-east-hollywood-one-portrait-time/

California Environmental Quality Act (CEQA) Survey FY 2011/12 to FY2015/16. (2017). California State Senate Environmental Quality Committee. https://senv.senate.ca.gov/sites/senv.senate.ca.gov/files/ceqa_survey_full_report_-_final_12-5-17.pdf

California Fair Housing Task Force Opportunity Mapping Methodology. (2018). https://www.treasurer.ca.gov/ctcac/opportunity/final-opportunity-mapping-methodology.pdf

California, SB 743 frequently asked questions. Retrieved March 15, 2021, from https://opr.ca.gov/ceqa/updates/sb-743/faq.html

Calkin, D. E., Cohen, J. D., Finney, M. A., & Thompson, M. P. (2014). How risk management can prevent future wildfire disasters in the wildland-urban interface. Proceedings of the National Academy of Sciences, 111(2), 746. https://doi.org/10.1073/pnas.1315088111

Chapple, K., & Loukaitou-Sideris, A. (2019). *Transit-oriented displacement or community dividends?: understanding the effects of smarter growth on communities*: The MIT Press.

Chatman, D. G., Xu, R., Park, J., & Spevack, A. (2019). Does Transit-Oriented Gentrification Increase Driving? *Journal of Planning Education and Research*. doi:10.1177/0739456X19872255

Chava, J., Newman, P., & Tiwari, R. (2018). Gentrification of station areas and its impact on transit ridership. *Case Studies on Transport Policy, 6*(1), 1-10. doi: 10.1016/j.cstp.2018.01.007

Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (Third ed.): SAGE.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches* (Fifth edition. ed.): SAGE Publications, Inc.

Dillon, L. (2018, May 2, 2018). A major California housing bill failed after opposition from the low-income residents it aimed to help. Here's how it went wrong. Los Angeles Times. Retrieved from https://www.latimes.com/politics/la-pol-ca-housing-bill-failure-equity-groups-20180502-story.html

Dillon, L. (2019, May 13, 2019). California could bring radical change to single-family-home neighborhoods. Los Angeles Times. Retrieved from https://www.latimes.com/politics/la-pol-ca-single-family-zoning-changes-senate-bill-50-legislation-20190513-story.html

Dougherty, C. (2020). Golden Gates: The Housing Crisis and a Reckoning for the American Dream. New York: Penguin Books.

Einstein, K. L. (2019). Neighborhood defenders: participatory politics and America's housing crisis (First ed.): Cambridge university press.

Einstein, K.L., Glick, D. & Palmer, M. (2017). *The politics of delay in local politics: How institutions empower individuals*. Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago. http://sites.bu.edu/kleinstein/files/2017/05/EinsteinGlickPalmerMPSA.pdf

Elkind, E. N., Galante, C., Decker, N., Chapple, K., Martin, A., & Hanson, M. (2017). Right Type, Right Place: Assessing the Environmental and Economic Impacts of Infill Residential Development through 2030. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedssch%26AN%3dedssch.oai%253aescholarship.org%252fark%253a%252f13030%252fqt9fk087g3%26site%3deds-live

Elmendorf, C., Biber, E., Monkkonen, P., & O'Neill, M. (2020a). Making it Work: Legal Foundations for Administrative Reform of California's Housing Framework. Ecology Law Quarterly, 46. doi: https://dx.doi.org/10.2139/ssrn.3500139

Elmendorf, C., Biber, E., Monkkonen, P., & O'Neill, M. (2020b). State Administrative Review of Local Constraints on Housing Development: Improving the California Model. 63 Ariz. L. Rev. 609. doi: https://dx.doi.org/10.2139/ssrn.3614085

Esparza, A. X. and Carruthers, J.I. Land Use Planning and Exurbanization in the Rural Mountain West, 20 J. Planning Education and Research 23 (2000)

Fischel, W. A. (1985). The economics of zoning laws: a property rights approach to American land use controls: John Hopkins University Press.

Fischel, W. A. (1995). Regulatory takings: law, economics, and politics: Harvard University Press.

Fischel, W. A. (1999). "Does the American Way of Zoning Cause the Suburbs of Metropolitan Areas to Be Too Spread Out?" In Governance and Opportunity in Metropolitan America, edited by Alan A. Altshuler, William Morrill, and Faith Mitchell, 151–91. Washington, DC: National Academy Press

Fischel, W.A. The Homevoter Hypothesis: How Home Values Influence Local Government Taxation, School Finance, and Land-Use Politics 15 (2001)

Friedrich, Johannes, Ge, M., & Tankou, A. (August 10, 2017). 8 Charts to Understand US State Greenhouse Gas Emissions. World Resources Institute.

https://www.wri.org/insights/8-charts-understand-us-state-greenhouse-gas-emissions (presenting data from the Environmental Protection Agency, updated as of August 2021).

Fullilove, M. T. (2004). Rootshock: how tearing up city neighborhoods hurts America and what we can do about it. United States of America: One World/Ballantine Books.

Gabbe, C. J. (2018). How Do Developers Respond to Land Use Regulations? An Analysis of New Housing in Los Angeles. *Housing Policy Debate* (3), 411. doi:10.1080/10511482.2017.1368031

Gabbe, C. J. (2019). Changing Residential Land Use Regulations to Address High Housing Prices. *Journal of the American Planning Association* (2), 152. doi:10.1080/01944363.2018.1559078

Gallagher, M., Lo, L., & Pendall, R. (2019). An Introduction to the National Longitudinal Land Use Survey and Data. Urban Institute: Metropolitan Housing and Communities Policy Center; University of Illinois at Urbana-Champaign.

Getting There Together: Tools to Advocate for Inclusive Development near Transit. (2012). *Journal of Affordable Housing and Community Development Law, 21*(1), 101-140. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.jrlaff21.11%26site%3deds-live

Glaeser, E. L., & Gyourko, J. E. (2002). *The impact of zoning on housing affordability. [electronic resource*: Cambridge, MA. : National Bureau of Economic Research, c2002.

Glaeser, E. L., Gyourko, J. E., & Saks, R. E. (2003). *Why is Manhattan so expensive? [electronic resource]: regulation and the rise in house prices*: National Bureau of Economic Research.

Gualco-Nelson, G. (2017). Reversing Course in California: Moving CEQA Forward. *Ecology Law Quarterly, 44*(2), 155-194. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.eclawq44.11%26site%3deds-live

Gyourko, J., Hartley, J., & Krimmel, J. (2019). The Local Residential Land Use Regulatory Environment Across U.S. Housing Markets: Evidence from a New Wharton Index. In: National Bureau of Economic Research, Inc.

Gyourko, J. E., & Molloy, R. S. (2014). *Regulation and housing supply*: Cambridge, Mass.: National Bureau of Economic Research, 2014.

Hecht, S. (2015). Anti-CEQA Lobbyists Turn to Empirical Analysis, But Are Their Conclusions Sound? Influential Attacks on California's Environmental Impact Law Aren't Supported By the Data. Retrieved from https://legal-planet.org/2015/09/28/anti-ceqa-lobbyists-turn-to-empirical-analysis-but-are-their-conclusions-sound/

Hernandez, J. (2018). California Environmental Quality Act Lawsuits and California's Housing Crisis. *Hastings Environmental Law Journal, 24*(1), 21-72. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.haswnw24.8%26site%3deds-live

Hernandez, J. (2019). California Getting in Its Own Way: In 2018, Housing Was Targeted in 60% of Anti-Development Lawsuits. Retrieved from https://www.chapman.edu/communication/_files/ca-getting-in-its-own-way.pdf

Hernandez, J., Friedman, D., & DeHerrera, S. (2015). In the Name of the Environment. Retrieved from San Francisco, California: https://issuu.com/hollandknight/docs/ceqa_litigation_abuseissuu?e=16627326/14197714

Hills, R. M., & Schleicher, D. (2015). Planning and Affordable City. Iowa Law Review, 101(1). https://ilr.law.uiowa.edu/print/volume-101-issue-1/planning-an-affordable-city/

Hutson, M. (2016). The urban struggle for economic, environmental and social justice: deepening their roots: London, [England]; New York, New York: Routledge, 2016.

Mandelker, D. (1976). The Role of the Local Comprehensive Plan in Land Use Regulation. Michigan Law Review, 74(5), 899-973. doi:10.2307/1287830

Housing Discrimination: affirmatively furthering fair housing, AB-686 Chapter 958 (2017-2018 Reg. Ses.), "Bill Analysis" and "Text."

Huang, J., Kweon, J., Park, J., & Zhang, T. (2015). Sawtelle Japantown: The Trajectory of Japanese American Neighborhoods. University of California, Los Angeles.
Hutson, M. (2016). *The urban struggle for economic, environmental and social justice: deepening their roots*: London, [England]; New York, New York: Routledge, 2016.

Jackson, K. (2016). Do land use regulations stifle residential development? Evidence from California cities. *Journal of Urban Economics, 91*, 45-56. doi: 10.1016/j.jue.2015.11.004

Jackson, K. (2018). Regulation, land constraints, and California's boom and bust. *Regional Science and Urban Economics, 68*, 130-147. Doi:https://doi.org/10.1016/j.regsciurbeco.2017.10.005

Joseph Gyourko, Albert Saiz, & Summers, A. (2008). A New Measure of the Local Regulatory Environment for Housing Markets: The Wharton Residential Land Use Regulatory Index. *Urban Studies, 45*(3), 693. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsjsr%26AN%3dedsjsr.43197779%26site%3deds-live

Kallerman, P., & Weinberg, M. (2016). Another Inconvenient Truth: To Achieve Climate Change Goals, California Must Remove Barriers to Sustainable Land Use. Retrieved from http://www.bayareaeconomy.org/files/pdf/Another_Inconvenient_Truth_BACEI16.pdf

Karkkainen, B. C. (2002). Toward a Smarter NEPA: Monitoring and Managing Government's Environmental Performance. *Columbia Law Review, 102*(4), 903-972. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.clr102.44%26site%3deds-live

Kaswan, A. (2009). Climate Change, Consumption, and Cities. *Fordham Urban Law Journal, 36*(2), 253-312. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.frdurb36.14%26site%3deds-live

Khouri, A. (2019, April 23, 2019). Can California boost home building without supercharging gentrification? Los Angeles Times. Retrieved from https://www.latimes.com/business/la-fi-housing-affordability-gentrification-20190423-story.html

Kim, J. H., et al., Fragmented Local Governance and Water Resource Management Outcomes, 150 J. Environmental Management 378 (2015)

Kiszla, C. (2019, August 15). AHF sues to combat Hollywood 'gentrification.' Park Labrea News Beverly Press. https://beverlypress.com/2019/08/ahf-sues-to-combat-hollywood-gentrification/

Knox, P. L., & McCarthy, L. (2012). *Urbanization: an introduction to urban geography*: Boston: Pearson, c2012.
3rd ed.

Koseff, A. (2020, May 21, 2020). California housing shortage: More duplexes, apartments in lawmaker's plan. The San Francisco Chronicle. Retrieved from https://www.sfchronicle.com/politics/article/State-Senate-leader-endorses-package-of-bills-to-15284014.php

Landis, J. D., & Smith-Heimer, M. (2000). *Raising the roof: California housing development projections and constraints, 1997-2020*: University of California at Berkeley, Institute of Urban and Regional Development, c2000.

Lens, M. C., & Monkkonen, P. (2016). Do Strict Land Use Regulations Make Metropolitan Areas More Segregated by Income? Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedssch%26AN%3dedssch.oai%253aescholarship.org%252fark%253a%252f13030%252fqt7v58b6j2%26site%3deds-live

Letter from Andrew Contreiras, Deputy Attorney General, regarding Guenoc Valley Mixed-Use Planned Development Project Final Environmental Impact Report, SCH No. 2019049134 (July 20, 2020), https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/comments-lake-county-feir-072020.pdf (elaborating on inadequacies of focused EIR on wildfire hazard).

Letter from Sheryll D. Cashin et al., to Mike McGuire & Jim Beall (Apr. 5, 2018), https://perma.cc/4DPJ-UCWP (letter from fair housing experts endorsing SB 827 as "a major step towards promoting integration and reducing racial residential segregation.")

Letter from Amanda Eaken et al., to Scott Wiener (Mar. 23, 2018), https://perma.cc/S84A-8YTX (endorsing SB 827 as "a key element in achieving California's climate goals" on behalf of the Natural Resources Defense Council, Climate Resolve, and Environment California).

Lewis, P. G. (2003). *California's housing element law: the issue of local noncompliance*: Public Policy Institute of California.

Lewyn, M. (2017). Government intervention and suburban sprawl: the case for market urbanism: Palgrave Macmillan.

Mangin, J. (2014). The New Exclusionary Zoning. *Stanford Law & Policy Review, 25*(1), 91-120. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.stanlp25.8%26site%3deds-live

Manville, M., Monkkonen, P., & Lens, M. (2020). It's Time to End Single-Family Zoning. Journal of the American Planning Association, 86(1), 106-112. doi:10.1080/01944363.2019.1651216

Manville, M., & Taylor, B. (2018). Falling Transit Ridership: California and Southern California. Retrieved from https://trid.trb.org/view/1500403

Marble, W. and Nall, C., Where Self-Interest Trumps Ideology: Liberal Homeowners and Local Opposition to Housing Development (Journal of Politics forthcoming 2020)

Massey, D. S., Rothwell, J., & Domina, T. (2009). The Changing Bases of Segregation in the United States. *The Annals of the American Academy of Political and Social Science, 626*, 74-90. Retrieved from http://www.jstor.org/stable/40375925

Mawhorter, S., Garcia, D., & Raetz, H. (2018). It All Adds Up: The Cost of Housing Development Fees in Seven California Cities. The Terner Center, University of California Berkeley.https://ternercenter.berkeley.edu/wp-content/uploads/pdfs/Development_Fees_Report_Final_2.pdf

Mawhorter, S., & Reid, C. (2018). Local Housing Policies Across California: Presenting the Results of a New Statewide Survey. https://californialanduse.org/download/Terner_California_Residential_Land_Use_Survey_Report.pdf

Memorandum from Jennifer Seeger, Assistant Deputy Director Division of Housing Policy Development to Interested Parties (June 9, 2017).

Menendian, S., Gambhir, S., French, K., & Gailes, A. (2020). Single-Family Zoning in the San Francisco: Bay Area Characteristics of Exclusionary Communities. Othering & Belonging Institute. https://belonging.berkeley.edu/single-family-zoning-san-francisco-bay-area

Monkkonen, P., Lens, M., & Manville, M. (2020). *Built-Out Cities? How California Cities Restrict Housing Production Through Prohibition and Process*. Retrieved from https://californialanduse.org/working-papers.html

Nelson, K., Gromis, A., Kuai, Y., & Lens, M.C. (2021). Spatial Concentration and Spillover: Eviction Dynamics in Neighborhoods of Los Angeles, California, 2005-2015. *Housing Policy Debate*, 1-26. doi: 10.1080/10511482.2020.1847163

Nasri, A., & Zhang, L. (2014). The analysis of transit-oriented development (TOD) in Washington, DC and Baltimore metropolitan areas. *TRANSPORT POLICY, 32*, 172-179. doi: 10.1016/j.tranpol.2013.12.009

Nolon, J. R. (2012). Shifting Paradigms Transform Environmental and Land Use Law: The Emergence of the Law of Sustainable Development [comments]. In (pp. 242).

O'Neill, M., Gualco-Nelson, G., & Biber, E. (2019). Developing Policy from the Ground Up: Examining Entitlement in the Bay Area to Inform California's Housing Policy Debates. *Hastings Environmental Law Journal*(Issue 1), 1. Retrieved from https://libproxy.berkeley.edu/login?qurl=http%3a%2f%2fsearch.ebscohost.com%2flog

in.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.haswnw25.3%26site%3deds-live

O'Neill, M., Gualco-Nelson, G., & Biber, E. (2020). Sustainable Development or the Next Urban Renewal? Ecology Law Quarterly, 47.4. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3532672

O'Neill, M., Gualco-Nelson, G., & Biber, E. (2021). Perspectives or Misperceptions? Why Better Land Use Data is Critical to Housing Policy Debates.

Olshansky, R. B. (1996). *The California Environmental Quality Act and local planning*.

Owen, D. (2009). *Green metropolis: why living smaller, living closer, and driving less are the keys to sustainability*: New York: Riverhead Books, 2009.

Porter, D.R., et al. Flexible Zoning: How It Works 58 (1988)

powell, j. (2002). Sprawl, Fragmentation, and the Persistence of Racial Inequality: Limiting Civil Rights by Fragmenting Space. In G. D. Squires (Ed.), *Urban Sprawl: Causes, Consequences & Policy Responses* (pp. 73-118). Washington, D.C.: Urban Institute Press.

Quigley, J. M., Raphael, S., & Rosenthal, L. A. (2008). Measuring Land-Use Regulations and Their Effects in the Housing Market. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=edssch&AN=edssch.qt07t5d0q4&site=eds-live

Radeloff, V. C., Helmers, D. P., Kramer, H. A., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., Butsic, V., Hawbaker, T. J., Martinuzzi, S., Syphard, A. D., & Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. Proceedings of the National Academy of Sciences, 115(13), 3314. https://doi.org/10.1073/pnas.1718850115

Raetz, H., Garcia, D., Decker, N., Kneebone, E., Reid, C., & Galante, C. (2019). Residential Impact Fees in California: Current Practices and Policy Considerations to Improve Implementation of Fees Governed by the Mitigation Fee Act. The Terner Center, University of California Berkeley. https://ternercenter.berkeley.edu/wp-content/uploads/2020/08/Residential_Impact_Fees_in_California_August_2019.pdf

Rawson, M., & Tawatao, M. (2012). Growing Smaller and Cooler without Exclusion or Displacement. *Duke Forum for Law and Social Change, 4*, 65-90. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.dukef4.5%26site%3deds-live

Report Relative to Citywide Equitable Distribution Of Affordable Housing (CF 19-0416) . (2021). City of Los Angeles. https://planning.lacity.org/odocument/0062db2b-073b-4e96-8217-8b103ccde78b/Fair_Share_Report.pdf

Rice, J. L., Cohen, D. A., Long, J., & Jurjevich, J. R. (2020). Contradictions of the Climate-Friendly City: New Perspectives on Eco-Gentrification and Housing Justice. *INTERNATIONAL JOURNAL OF URBAN AND REGIONAL RESEARCH, 44*(1), 145-165. doi:10.1111/1468-2427.12740

Robert, C. (2007). Transit-Oriented Development's Ridership Bonus: A Product of Self-Selection and Public Policies. *Environment and Planning A*(9), 2068. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsrep%26AN%3dedsrep.a.sae.envira.v39y2007i9p2068.2085%26site%3deds-live

Rodriguez-Pose, A., & Storper, M. (2020). Housing, urban growth and inequalities: The limits to deregulation and upzoning in reducing economic and spatial inequality. *Urban Studies, 57*(2), 223-248. doi:10.1177/0042098019859458

Rolf Pendall, Robert Puentes & Jonathan Martin, From Traditional to Reformed: A Review of the Land Use Regulations in the Nation's 50 Largest Metropolitan Areas, The Brookings Institution 7–8 (2006)

Rothwell Jonathan, T., & Massey Douglas, S. (2010). Density Zoning and Class Segregation in U.S. Metropolitan Areas. *Social Science Quarterly, 91*(5), 1123-1143. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsjsr%26AN%3dedsjsr.42956453%26site%3deds-live

Saiz, A. (2010a). THE GEOGRAPHIC DETERMINANTS OF HOUSING SUPPLY. *The Quarterly Journal of Economics, 125*(3), 1253-1296. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsjsr%26AN%3dedsjsr.27867510%26site%3deds-live

Saiz, A. (2010b). THE GEOGRAPHIC DETERMINANTS OF HOUSING SUPPLY. *The Quarterly Journal of Economics* (3), 1253. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=edsjsr&AN=edsjsr.27867510&site=eds-live

Salkin, P. E. (2009). Sustainability and Land Use Planning: Greening State and Local Land Use Plans and Regulations to Address Climate Change Challenges and Preserve Resources for Future Generations. *William & Mary Environmental Law and Policy Review, 34*(1), 121-170. Retrieved from

https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedshol%26AN%3dedshol.hein.journals.wmelpr34.6%26site%3deds-live

S.B. 9, 2021–2022 Reg., Leg. Sess. (Cal. 2021)

S.B. 10, 2021–2022 Reg., Leg. Sess. (Cal. 2021)

S.B. 35, 2017–2018 Reg., Leg. Sess. (Cal. 2017)

S.B. 330, 2019–2020 Reg., Leg. Sess. (Cal. 2019)

Schuetz, J., Meltzer, R., & Been, V. (2009). 31 Flavors of Inclusionary Zoning: Comparing Policies From San Francisco, Washington, DC, and Suburban Boston. *Journal of the American Planning Association, 75*(4), 441-456. doi:10.1080/01944360903146806

Shigley, P. (2010). California Struggles with Its LEGAL YOKE. Planning, 76(4), 12. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dbrb%26AN%3d49162552%26site%3deds-live

Smith-Heimer, J., Hitchcock, J., Roosa, P., & Guerrero, C. (2016). CEQA in the 21st Century: Environmental Quality, Economic Prosperity, and Sustainable Development in California. Retrieved from https://www.pcl.org/media/2019/05/CEQA-in-the-21st-Century-1.pdf

Taylor, M. (2016). Perspectives on Helping Low-Income Californians Afford Housing. Retrieved from https://lao.ca.gov/Reports/2016/3345/Low-Income-Housing-020816.pdf

Taylor, M., Alamo, C., & Uhler, B. (2015). California's High Housing Costs: Causes and Consequences (p. 44). California Legislative Analyst's Office. https://lao.ca.gov/reports/2015/finance/housing-costs/housing-costs.pdf

Transit Oriented Communities Affordable Housing Incentive Program Guidelines (TOC Guidelines). (2017). City of Los Angeles. https://planning.lacity.org/ordinances/docs/toc/TOCGuidelines.pdf

TRD Staff. (2018, October 22). Koreatown landlord settles lawsuit alleging it forced out rent-controlled tenants. The Real Deal Los Angeles Real Estate News. https://therealdeal.com/la/2018/10/22/koreatown-landlord-settles-lawsuit-alleging-it-forced-out-rent-controlled-tenants/

Turner Matthew, A., Haughwout, A., & van der Klaauw, W. (2014). LAND USE REGULATION AND WELFARE. *Econometrica, 82*(4), 1341-1403. doi:10.3982/ECTA9823

Verma, P., Rinzler, D., Kaplan, E., Zuk, M., DiSilva, M., Philips, E., Wilson, K., & Burrell, E. (2019). Rising Housing Costs and Re-Segregation in the San Francisco Bay Area (p. 36). UC Berkeley's Urban Displacement Project and the California Housing Partnership. https://www.urbandisplacement.org/sites/default/files/images/bay_area_re-segregation_rising_housing_costs_report_2019.pdf

Waite, David, Laffer, C. (Jan 2010). Weather Report Recent Trial Court Decisions Have Held That the State Can Regulate Greenhouse Gas Emissions Under CEQA, *Low Angeles Lawyer*, 22-26.

William, A. F. (1990). Introduction: Four Maxims for Research on Land-Use Controls. *Land Economics, 66*(3), 229-236. doi:10.2307/3146725

Wyly, E. K., & Hammel, D. J. (2004). Gentrification, Segregation, and Discrimination in the American Urban System. *Environment and Planning A*(7), 1215. Retrieved from https://libproxy.berkeley.edu/login?qurl=https%3a%2f%2fsearch.ebscohost.com%2flogin.aspx%3fdirect%3dtrue%26db%3dedsrep%26AN%3dedsrep.a.sae.envira.v36y2004i7p1215.1241%26site%3deds-live

Yin, R. K. (2014). *Case study research design and methods*: Los Angeles: SAGE, [2014] Fifth edition.

Glossary of terms, abbreviations, and symbols

*Accessory Dwelling Unit (*ADU): State law defines ADUs as "an attached or a detached residential dwelling unit which provides complete independent living facilities for one or more persons" that is an accessory to an existing residential use on the parcel. See Cal. Gov't Code § 65852.2. State law grants local governments authority to enact local laws to permit ADUs that comply with a set of criteria (addressing form) even within zoning districts that are limited to single-family dwellings. More significantly, it imposes a requirement on local governments to provide a streamlined development process for proposed ADUs that meet specified criteria. See id. § 65852.2(a)(3).

Administrative appeal: Refers to the local government administrative process by which a party can appeal a determination made by the local government in a discretionary review process. Unlike litigation, administrative appeals are not decided by a court, but rather by a local agency. For example, once a discretionary project is entitled, there may be a 30-day window for a member of the public or applicant to file for an appeal, which obligates the approval body to reevaluate the project and determine whether the permits shall be revoked or if the appeal shall be rejected. Projects can be appealed

based on the decisions under local regulatory requirements or on CEQA determinations.

Affirmatively Furthering Fair Housing (AFFH): California Government Code § 8899.50 defines Affirmatively Furthering Fair Housing as 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; address significant disparities in housing needs and in access to opportunity; replace segregated living patterns with truly integrated and balanced living patterns; transform racially and ethnically concentrated areas of poverty into areas of opportunity; foster and maintain compliance with civil rights and fair housing laws. (For more information, see also "Do cities' Housing Element sites Affirmatively Further Fair Housing? The AFFH Sites Score" Paavo Monkkonen et al., 2020.)

As-of-right/ministerial development: This is another term used to describe ministerial review processes, where a local government must approve a proposed development so long as it conforms to certain objective standards; environmental review is not applicable in as of right processes.

*Berkeley Land Use Regulation Index (*BLURI): The Berkeley Land Use Regulation Index is a study that relies on 2007 survey responses from building officials to measure a variety of factors impacting housing development, including land use regulations. More information can be found in "Measuring Land-Use Regulations and Their Effects in the Housing Market."

Base zoning: By "base zoning" we mean the underlying zoning district and use designations (residential, commercial, or industrial) provided for in the text of the ordinance and zoning map. Base zoning is distinguishable from process requirements. Cities can allow for an objective ministerial process (or "by-right" process) when proposed development conforms to the underlying base zoning district's use and density requirements. Cities can also impose requirements for subjective discretionary review for categories of projects that are still built within the framework of the zoning ordinance—in other words, the zoning ordinance itself contemplates that at least some property owners would propose these projects, but they must meet a certain set of conditions to obtain one of these types of permits.

*California Environmental Quality Act (*CEQA): The California Environmental Quality Act (CEQA) mandates environmental review for projects undergoing discretionary review. CEQA imposes notice and information requirements that involve documentation and public engagement processes around potential environmental impacts, and mitigation of potentially significant environmental impacts below a significant level where feasible. Projects must either complete a CEQA document, supplementary CEQA document or can be issued an exemption if the project fulfills certain criteria.

California Fair Housing Task Force Opportunity Mapping Methodology – The opportunity map classifications (referred to as TCAC classifications) and the methodology that supports them can be found on the state treasurer's website. The methods consider several different indicators of opportunity including rates of poverty, adult educational achievement, employment rates, geographic proximity to jobs, median home values, environmental quality, math and reading proficiency levels, high school graduation rates, and student poverty.

*California Land Use Regulation Index (*CaLURI): The CaLURI is an Index that relies on underlying data comes from a land use survey that asked planners about affordable housing requirements and perceptions as to which groups wield the most political influence and as to the main drivers of development regulation. The researchers who designed the survey then aggregated these possible indicators of stringency to create an index of stringency. This is distinguishable from the CALURI, which is a study that uses data from the national Wharton Land Use Survey (the WRLURI) for a California specific analysis.

*Comprehensive Assessment of Land Use Entitlements Study (*CALES): This is the title of the UC Berkeley led land use study that predates this contract. This contract extended the scope of the CALES.

Deed-restricted housing: Refers to housing where a deed restriction maintains affordability by setting income requirements for renters or by restricting the resale price.

Dense housing development: Development that proposes five or more residential units. This number is derived from state law, which uses the five-unit threshold to require more substantial review for the subdivision of parcels for development and defines "housing development" as "five or more residential units" in the state Density Bonus law (Cal. Gov't. Code § 65915(i)).

Density Bonus: Density Bonus is a state provision that allows denser development in return for provision of affordable housing. See Cal. Gov't Code §§ 65915–65918. Specifically, the incentive operates by allowing the developer a "density increase over the maximum allowable gross residential density" where the proposed new development provides for senior or affordable housing. See id. § 65915(f). It also operates to provide waivers from specific development standards (detailed within the local or state law—often referred to as "on menu") in exchange for the developer providing specific types (and percentages) of senior housing or affordable housing.

Discretionary review: Discretionary review, or local discretion over land use, refers to a local government's authority to impose subjective standards when deciding on whether to approve proposed development; environmental review applies to projects subjected to discretionary review.

Displacement: Varying definitions of displacement inform legal reform debates. We typically refer to four different definitions of displacement that are in the urban planning literature: (1) exclusionary displacement (the inability to move into a neighborhood because of reasons outside of a household's control—like high housing costs); (2) direct physical displacement (eviction or demolition); (3) direct economic displacement (when price increases force an individual or a family's departure from home); and (4) symbolic or cultural displacement (when transitions in the physical and social environment of gentrifying neighborhoods cause a once familiar place to become unfamiliar, resulting in long-term residents feeling politically/socially marginalized or unsafe).

*Ellis Act eviction***:** The Ellis Act permits a landlord to evict all the tenants in a building in order to withdraw the units from the rental market for sale or for conversion into condominiums. Cal. Gov't Code §§ 7060-7060.7. The Ellis Act prevents local governments from enacting ordinances that compel a landlord to stay in the rental business. See id. § 7060(a). Ellis Act evictions are commonly—but not exclusively—used to withdraw rent-stabilized units from the rental market because Rent Stabilization Ordinances (RSO) limit the circumstances under which a landlord may evict a tenant.

Entitlement: See Residential Entitlement.

Environmental review: mandated by the California Environmental Quality Act (CEQA), projects undergoing discretionary review imposes notice and information requirements that involve documentation and public engagement processes around potential environmental impacts, and mitigation of potentially significant environmental impacts below a significant level where feasible. Projects must either complete a CEQA document, supplementary CEQA document or can be issued an exemption if the project fulfills certain criteria.

Environmental impact report (EIR): a California Environmental Quality Act (CEQA) document created to inform stakeholders and community of the potential environmental impacts presented by a new project as well as possible mitigation strategies and substitutes for the project.

Exurbs: Areas lying beyond the suburbs of a major urban center where a significant portion of the population commute to work in an urbanized area and housing density is low.

*Fire Hazard Severity Zone (*FHSZ): These zones are defined by CalFire to describe the fire risk in each area in California. Broken into federal, state, and local responsibility areas, they are categorized as: Very High Fire Hazard, High Fire Hazard, Moderate Fire Hazard, and not categorized (not in a fire risk area).

*Greenhouse Gas Emissions (*GHG emissions): The state legislature directed in 2006 that the CEQA guidelines mandate analysis of greenhouse gas emissions (GHG) from proposed projects (California Public Resources Code Section 21083.5). Several

provisions of the CEQA guidelines provide for this analysis (14 California Code of Regulations Sections 15064.4, 15126.4(c), 15183.5,15364.5). The adequacy of CEQA GHG emissions analysis has been the subject of a significant body of caselaw in the state courts, indicating the potential for litigation based on the issue.

One key issue for GHG analysis under CEQA is the extent to which a project might increase automobile use for transportation, and therefore increase GHG emissions from gasoline-powered automobiles. CEQA guidelines used to mandate that CEQA analysis of the transportation impacts of a project focus on traffic congestion and level-of-service -- i.e., whether a project would cause increased delays and congestion for automobiles. This created an incentive for project proponents to increase the capacity for automobile use for a project in order to mitigate traffic impacts -- but this form of mitigation can increase automobile use.

Greenfield development: Development in exurban areas; often results in a low-density housing product.

*High Quality Transit Area (*HQTA): We define HQTA as referring to areas within ½ mile of major transit stop (MTS) or ¼ mile of a high-quality transit corridor (HQTC). MTS means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of fifteen minutes or less during the morning and afternoon peak commute periods (Cal. Pub. Res. Code Sec. 21064.3). HQTC means a corridor with fixed route bus service with service intervals no longer than fifteen minutes during peak commute hours (Cal. Pub. Res. Code Sec. 21155(b)). We chose the ¼ mile buffer for the HQTC instead of the ½ mile buffer to be consistent with proposed state laws that would have allowed significant increases in allowable density near transit, like SB 827 and SB 50 (SB 50, Cal. Reg. Leg. Sess. 2019-2020 (2019); SB 827, Cal. Reg. Leg. Sess. 2017-2018 (2018)).

*High Quality Transit Corridor (*HQTC): HQTC means a corridor with fixed route bus service with service intervals no longer than fifteen minutes during peak commute hours (Cal. Pub. Res. Code Sec. 21155(b)). We chose the ¼ mile buffer for the HQTC instead of the ½ mile buffer to be consistent with proposed state laws that would have allowed significant increases in allowable density near transit, like SB 827 and SB 50 (SB 50, Cal. Reg. Leg. Sess. 2019-2020 (2019); SB 827, Cal. Reg. Leg. Sess. 2017-2018 (2018)).

Infill development: We use this term to describe housing development in cities that are within the urban core of strong economic regions.

Lead agency: In environmental review, the lead agency is the public body that gives final discretionary approval for the project.

Metropolitan Statistical Area (MSA): As defined by the United States Census Bureau, "[t]he general concept of a metropolitan or micropolitan statistical area is that of a core

area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Currently delineated metropolitan and micropolitan statistical areas are based on application of 2010 standards (which appeared in the Federal Register on June 28, 2010) to 2010 Census and 2011-2015 American Community Survey data, as well as 2018 Population Estimates Program data. Current metropolitan and micropolitan statistical area delineations were announced by OMB effective March 2020." For more information, see discussion at U.S. Census Bureau, https://www.census.gov/programs-surveys/metro-micro/about.html.

Mitigated negative declaration (MND): a California Environmental Quality Act (CEQA) document created to inform stakeholders and community that the proposed project's potential impacts to the environment can be mitigated by certain strategies and describes how the developer will implement these strategies.

*Negative Declaration (*ND): a California Environmental Quality Act (CEQA) document created to inform stakeholders and community that the proposed project will not have a significant effect on the environment.

*National Environmental Policy Act (*NEPA): The National Environmental Policy Act (NEPA) mandates environmental review for all projects managed by federal agencies or sited on federal land. NEPA imposes notice and information requirements involving documentation around potential environmental impacts, and mitigation of potentially significant environmental impacts below a significant level where feasible. Projects must either complete a NEPA Environmental Assessment, Environmental Impact Statement, or can be issued a Categorical Exclusion if the project fulfills certain criteria. California provides a joint CEQA/NEPA process for some projects.

Permissive density: We define permissive density in relationship to base zoning as base zoning that allows for new residential or mixed-use development at a density that meets state default standards to accommodate all income levels. In urban cities, that default is 30 dwelling units or higher as a "permitted use" in the zone. We define "permitted use" as a use that does not trigger additional discretionary approvals aside from regulations already in place citywide.

*Regional Housing Needs Assessment (*RHNA): RHNA is the total amount of housing a metropolitan area is required to plan for under state law in order to meet housing needs over the next planning cycle (usually eight years). Using Department of Finance (DOF) demographic data, the RHNA is determined by the California Department of Housing and Community Development (HCD). Then the councils of governments (COGs) – in consultation with HCD – allocate the RHNA to their individual local governments.

Residential entitlement: Refers to a final approval for a proposed development subject to discretionary review that precedes the application for a building permit. Entitlement typically requires a series of approvals and documentation to proceed to apply for a

building permit application. Typically the first step towards constructing new development, the specific procedural steps and amount of time required to obtain such approval varies between jurisdictions, affecting whether and how much new development is likely to occur.

Sprawl: Low-density residential and commercial development that occurs at the outer edges of urban areas. Sprawl can impose significant environmental and economic costs in the form of increased vehicle mileage, paving over agricultural or undeveloped land, placing greater strain on infrastructure and public services. Smart Growth America examined the impact of sprawl in its 2014 report, Measuring Sprawl 2014, available at https://smartgrowthamerica.org/resources/measuring-sprawl-2014/.

Streamlining: refers broadly to accelerating environmental review processes for proposed development on an individual project level. Streamlining can refer to "tiering" whereby cities can streamline or accelerate the environmental review process on the individual project level by developing an Environmental Impact Report for an area within the city where development is anticipated, from which individual projects can be 'tiered,' or to predetermined CEQA exemptions for classes and types of proposed development.

*Tax Credit Allocation Committee (*TCAC): The California Tax Credit Allocation Committee administers the federal and state Low-Income Housing Tax Credit Program. These are programs to promote private investment in affordable rental housing for low-income Californians. For more information, see California Tax Credit Allocation Committee (CTCAC), https://www.treasurer.ca.gov/ctcac/.

Tiering: We define "tiering" as the process by which cities can streamline or accelerate the environmental review process on the individual project level by developing an Environmental Impact Report for an area within the city where development is anticipated, from which individual projects can be 'tiered' to satisfy environmental review requirements, or qualify for predetermined CEQA exemptions for classes and types of proposed development.

Transit-oriented development (TOD): Development that takes place nearby public transit resources, often results in a medium or high-density housing product. The aim of transit-oriented development is to reduce car traffic and greenhouse gases while also creating neighborhoods that contain a variety of uses.

*Vehicle Miles Traveled (*VMT): The state legislature in 2013 directed amendments of the CEQA guidelines to require the use of vehicle miles traveled (VMT) to assess the transportation and GHG impacts of a proposed project (SB 743). Using VMT as the assessment of the impacts of a project encourages mitigation measures that decrease automobile use and therefore GHG emissions, and also can incentivize projects that are located in dense urban settings (projects that might otherwise increase traffic

impacts). The CEQA guideline revisions were completed in 2018 (14 California Code of Regulations 15064.3).

Wharton Residential Land Use Regulatory Index (WRLURI): This refers to a national land use survey developed in 2006 and reissued in 2018 that uses a survey instrument to measure regulatory restrictiveness. The findings from the WRLURI asses the "average" degree of land use regulation in the nation by focusing on process and outcomes, rather than just the presence of regulatory constraints (Joseph Gyourko, Albert Saiz, & Summers, 2008).

Zoned for all income levels: We refer here to areas within jurisdictions zoned to allow for what state law (Housing Element law) provides as a default to ensure density sufficient to accommodate all household income levels. Although not a complete representation of the feasibility of developing affordable housing in a given jurisdiction, the amount of land zoned for all income levels is a key indicator of whether a jurisdiction is creating or eliminating a fundamental regulatory barrier to affordable housing. The standard of 30 or more dwelling units per acre—applicable to our study cities—is derived from the Housing Element law, which set this as the default standard for density to allow for all income levels is 30 dwelling units per acre in urban jurisdictions. (Cal. Gov. Code Section 65852.2).