

POLICY BRIEF:

Enhancing Local Land Use Data

June 2019

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Introduction

As California's housing affordability crisis persists, understanding which laws or regulations might impede housing construction in high-cost areas is of vital importance. For nearly three years, our research team has been working to answer this question by focusing on the entitlement process (or the process that property owners move through to get a building permit) within selected cities across the state.

We have analyzed the law applicable to residential development projects in sixteen California cities, including the local zoning ordinances, and interviewed important stakeholders in the residential development process. Within each study city, we also collected data on all residential development projects of five or more units entitled over a four-year period.



Support provided by



We entered this project with the goal of identifying the most significant regulatory constraints on entitlement, and through this work we discovered that the inaccessibility and unavailability of entitlement data at the local level is an important finding on its own. Accurate entitlement data allows researchers and policymakers to carefully examine timelines and processes that lead up to the permitting process. Building permit data is critical to understanding rates of housing production, but this data alone does not provide researchers or policymakers enough information about what type of housing cities and communities are actually allowing to be built. Entitlement data is necessary to inform how local and state land use regulatory tools are being applied in practice and to identify which types of proposed housing developments tend to move faster or slower through the planning review process. Analysis of entitlement data can identify issues of inequity or inefficiency in the first step of the residential development process.

But entitlement data is more than just a tool for policymakers to gauge a jurisdiction's progress towards meeting its housing goals. Lack of entitlement data also directly impacts a jurisdiction's ability to effectively conduct long-term planning strategies. Given the scarcity of planning resources, long-range strategies must be data-informed by current conditions. In other words, data can be a means to enable enforcement and oversight, but also a means to empower cities to meet their housing goals.

Over the course of this work we have therefore observed that the lack of access to entitlement data is a key obstacle to developing policy that can effectively respond to our state's persistent housing crisis. We have discussed this briefly in previous writing, and in recent months, we have observed that public awareness of the lack of local data has sharpened. Recently enacted legislation, like SB 35, and proposed legislation,

like AB 1483, also attempts to improve local data reporting and management.

Our work to date has allowed us to examine the current state of local land use data and the types of data that are unavailable—yet critical to understanding how local entitlements shape housing development patterns. We thus detail what we have learned about data accessibility and provide recommendations on how to improve local data reporting and data maintenance to facilitate compliance with state housing laws and long-term planning strategies.

The current state of local land use entitlement data

Our work has identified local data limitations as a critical barrier to understanding residential entitlements.¹ Data limitations impact how researchers understand the application of law within specific cities and impact policymakers' understanding of and capacity to reform the local land use regulatory system. We also note that current data limitations also impact the California Department of Housing and Community Development's (HCD) ability to verify and enforce obligations under state Housing Element law. We discuss existing limitations below.

The limitations of existing software and data management systems

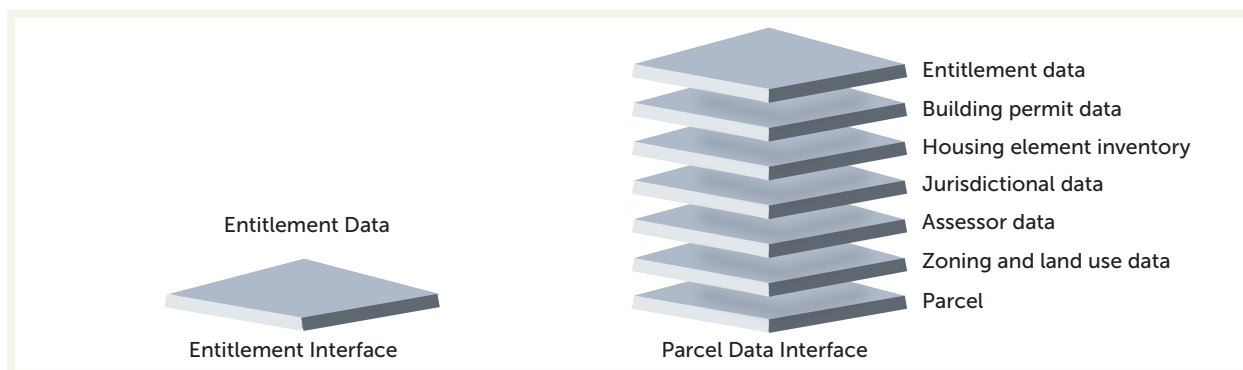
Cities utilize different permitting software and data management systems to share documents and records that inform the public about what development the city has entitled. To date, we have observed that how cities make information about entitlement publicly accessible varies considerably.

We have encountered two existing repositories for local land use data—entitlement data inter-

faces and parcel data interfaces. Entitlement data refers to lists or web portals maintained by a city that exclusively house information on land use applications and approvals. Parcel information refers to systems that geocode and categorize multiple data sources that can then be visualized at a parcel-level on an interactive map. As shown in Figure 1, entitlement data systems are “flat” interfaces because they house entitlement data and have no mapping interface that links to other data characteristics. By contrast, a parcel data system can house multiple layers of data. Entitlement data, for example, might be one layer within a parcel data system.

To help describe what we observed in terms of existing data access, we have grouped our study jurisdictions into four data access, or user interface, typologies: (1) entitlement permitting interface; (2) Geographic Information Systems (GIS) parcel-level interface; (3) entitlement permitting interface linked to GIS parcel-level data; (4) no public data interface. Ten of our cities in our study fall within the first three typologies, and six fall into the fourth. We explain each of these typologies in more detail below.

Figure 1. *Data Management Visualization*



Entitlement permit interface

Nearly half the cities in our study have a public-facing entitlement permit interface.² An entitlement permit interface refers to a web portal that permits a user to search for entitlement records on a parcel-level basis, either by Assessor Parcel Number (APN), address, or local planning application number. Most cities purchase subscriptions to run these software platforms from companies like Accela,³ although some develop and host their own software platform.⁴

Depending on the type of software subscription, these user interfaces may provide access to information on entitlement application file dates, various approval milestones, final approval dates, appeal information, and links to the official approval documents. Some of these systems allow the user to perform searches based on certain types of entitlement processes (design review for example) within a specific time period. This type of interface also permits the user to export all entitlement applications or approvals over a given time period into an excel or comma separated value (csv) format, which permits the user to conduct some analysis of rates, types, and timeline to entitlement.

In our work, we observed several important limitations to this form of data interface. For example, we found that these systems do not always link to underlying entitlement documents, which then requires crosschecking planning and design commission or council agendas. Some systems only export projects by application date, which prevents a user from discerning what projects were entitled when without pulling this information for each project individually. Frequently the milestone dates are incorrect or missing. It's important not to confuse these systems with building permit interfaces, which are more common and typically more up-to-date than the entitlement interfaces.

GIS parcel-level interface

Some cities we studied employ GIS—or Geographic Information System—parcel-level data systems.⁵ A GIS-parcel level data system refers to an interface with maps or property information that allow a user to pull information on a parcel-level by searching with an APN or address.

We found that the appearance and function of these platforms varied more considerably than entitlement permitting interfaces; one explanation for this variation may be that cities often develop and host their own platforms rather than purchasing a subscription to a software platform.

At their most basic level, these systems allow the user to pull assessor information and to locate the zoning and general plan designation of a particular site. More complex systems in San Francisco and Los Angeles allow the user to determine the site's rent stabilization status, prior Ellis Act applications, census data, historic resource classifications of existing improvements, building permit and demolition data, jurisdictional data like the site's location within a Coastal Zone or a protected wetland, and historic entitlement information.⁶

Finally, these GIS systems may be more intuitive for a user seeking data on a proposed development project because it allows a user to locate project data by pinpointing a location on a map and clicking on a parcel, even if you do not have an exact address. These systems also permit users to understand entitlement and zoning on a certain parcel in relationship to the entitlement and zoning status of surrounding parcels.

We observed that some cities *only* offered a data parcel-level data system and did not also provide an entitlement data interface as described above. This limits the user's ability to collect the type of entitlement data that permits analysis of application and approval dates.

Entitlement permit interface linked with GIS parcel-level data

Two cities we studied have what we consider to be the gold standard of data access that combines the two interfaces described above: an entitlement interface that links to GIS parcel-level data.⁷ Linking these systems simplifies analysis of local land use data because it enables the user to gather different types of data points through one streamlined platform.

Linking these two systems is also important because it can provide historic parcel data. Land development commonly involves land division and the creation or consolidation of multiple parcels. This leads to new addresses or retired APNs that complicates the process of accessing entitlement data. In many jurisdictions, subdivision—the process of creating new land or air parcels for the sale of single family homes or condominiums⁸—occurs after the underlying entitlements are approved. Because subdivision can result in new addresses or APNs, locating that original entitlement data can be difficult if the data management system does not link to historic addresses or APNs.

Even where the data management system does link to historic parcel information, variation in how the system administrator enters this data—for example, inconsistent use of dashes in APNs or cardinal/ordinal directions in street addresses—can prevent a user from accessing entitlement data. Mapping, instead, permits the user to localize a project based on a pinpoint click.

Finally, a linked system also has the potential to reinforce housing element obligations. Existing law requires cities to compile an inventory of suitable sites to meet the applicable regional housing needs allocation (RHNA).⁹ In our review of thousands of entitlement approval documents, we rarely found references to whether an entitled site was also listed on the housing element inventory.

To our knowledge, none of the existing linked systems provide data on whether a site is listed on the inventory. Cities with linked systems can theoretically also geocode housing element inventory sites so that a user can easily determine whether a proposed project is listed on the inventory and whether the proposed project is being entitled at densities commensurate with the inventory's specifications.

No public entitlement or GIS interface

Six of the cities in our study have no online entitlement permit interface, which required us to locate publicly available agendas and minutes and associated staff reports to extract entitlement data.¹⁰ Many of the agendas and associated staff reports, where digitized, are not in a searchable PDF format that would permit data scraping.

In some cities, these staff reports are not even digitized. Often we would have to circle back with the city to pull missing data. Most of the cities were willing to work with us to provide this data, but many do not have the data accessible internally themselves.

Figure 2. *Existing Data Management Typologies*

Typology	Type of Data Available	Cities
Entitlement permit interface	Allows user to search for entitlement data by parcel number or APN.	Oakland, San Jose, Redwood City, Santa Monica, Pasadena, Fresno, Palo Alto
GIS parcel-level data	Allows user to pull layered zoning, land use, assessor data, and other jurisdictional information on a parcel-basis; links to historic parcel data.	Oakland, Redwood City, San Diego
Linked entitlement permit interface and GIS parcel-level data	Allows user to search for entitlement data (application numbers, entitlement types, relevant dates) and links this data with parcel-level zoning, general plan designation, assessor data, Ellis Act, Rent Stabilization, and other jurisdictional data.	Los Angeles and San Francisco
No data management system	No access to entitlement data; user must search through City Council, Planning Commission, and/or Director/ZA meetings to identify entitled projects	Sacramento, Folsom, Long Beach, Inglewood, Redondo Beach, Mountain View

Commonly missing or unavailable data

Certain categories of data tended to be more unavailable than others, even across different data management typologies. The fact that our team struggled to locate these data points in cities that had very sophisticated data maintenance systems *and* cities that had no data maintenance system suggests that this is an area of data management and analysis that has been either overlooked or under-resourced.

Application milestones

Existing research has linked protracted housing development timeframes with high housing costs and lower housing production.¹¹ We have found that measuring entitlement timeframes is instrumental to understanding how local land use processes affect housing development timelines. Yet, application milestones were difficult to extract. Approval dates tend to be the

easiest milestone to locate; however, cities differ in what they determine to be the approval date.

Some cities report the approval date as the date that the adjudicative or legislative body heard the project and issued the approval. Other cities report the approval date as the date that statutory appeal period lapsed without a protest being filed. Typically, the difference between the two is a matter of seven to ten days. But for cities that do not link to underlying entitlement documents in their data management systems, this distinction is important. In order to locate the official approval, the user must locate the minutes of the approval body, which are organized by hearing date.

Notably, the impact of the California Environmental Quality Act (CEQA) on residential development timelines is often the subject of considerable public debate. We observed, however, that CEQA milestone dates are rarely available. Typically, the approval body adopts the CEQA findings at the same time it approves the underlying discretionary entitlements. Thus determining when the CEQA review process began relative to the application file date or deemed complete date is impossible in all existing systems. In our own analysis, for example, we detail timelines to entitlement as a whole because of this data limitation. Yet understanding how long CEQA review takes, separate from the overall approval process, would aid in unpacking the role of CEQA, and specific CEQA processes, within overall discretionary review.¹²

Application file dates tend to be available in the more sophisticated data management systems. File dates are impossible to locate in cities that have no data management system—unless the department staff report references them. Many cities with entitlement permit interfaces had missing application files dates or software modules that did not track this data point. This means that researchers and policymakers are unable to draw conclusions about which review processes might enable expedited review.

For example, we have observed that several cities employ planning tools to facilitate expedited review of proposed developments that are subject to discretionary review but determined to be of priority (such as infill affordable or sustainable development). If certain planning strategies can expedite entitlement process at the project level without sacrificing community input, this presents a potentially effective planning response to an otherwise challenging local regulatory problem. Without application file dates, however, researchers have no way of testing whether this planning work yields faster discretionary processes.

Finally, Application Deemed Complete dates are important to gauge a city's compliance with the Permit Streamlining Act.¹³ Only Los Angeles made Deemed Complete dates publicly available in a systematic manner.

Staff-level discretionary project approvals

Much of the public imagines land use approvals as occurring at a formal hearing before a publicly convened body like a Planning Commission or a City Council. We have observed that some cities allow planning staff to review and approve certain kinds of residential developments without a public hearing. While these approvals are still discretionary—thus triggering compliance with CEQA—staff-level review can strike a balance between the competing needs of expediting approvals and retaining local discretion over development. Figure 3 depicts cities that utilize administrative review for residential development at varying levels of intensity.

Data on these processes is almost universally unavailable in cities that utilize staff-level review. When we followed up with planning departments about this data, we found that the departments failed to track these types of approvals in a systematic fashion. Some departments said that they do not retain staff reports on these developments; other departments that retained the records stored them on different servers and required significant staff time to locate and consolidate. In cities where very large developments can be approved administratively, this means there is missing data on a very large swath of development.

Figure 3. *Administrative Review Thresholds*¹⁴

City	Project Size	Approval Body
Pasadena	Less than 10 units	Director/Staff
	10+ units	Commission
Long Beach	Less than 50 units	Director/Staff
	50+ units	Commission
Sacramento	Less than 150 units	Director/Staff
	150+ units	Commission
San Diego	Process 2 projects (no unit threshold)	Director/Staff
	Process 3 and 4 projects (no unit threshold)	Commission
Fresno	All code compliant projects regardless of unit count	Director/Staff

Researchers therefore have no way of testing the efficacy of this approach to discretionary review in terms of entitlement timelines or rates or type of entitlement. Given the political challenges that attach to proposed legislation that seeks to limit local discretionary review, it is essential to be able to test the impact of staff-level discretionary review.

If staff level review presents a pathway towards expedited review of projects without sacrificing local discretion, it could offer the state a less controversial model for expediting approval processes than limiting local discretion outright. But without the ability to examine the staff level review process, questions about efficiency and equity will persist.

Ministerial project approvals

Very few cities have a ministerial process¹⁵ for residential development.¹⁶ In two large cities, however, we were unable to discern exactly which projects benefitted from ministerial review because the city kept no centralized list of these projects. To determine what was ministerial, we had to pull all the building permit issuance files for our four study years and cross-reference

that list with our entitled project database. This is not a perfect system, because some of the projects that received a building permit but not an entitlement in our years might have been entitled outside the study years. While Los Angeles did not keep a centralized list of these projects, their data management system enabled us to access historic entitlement information on each parcel to determine which projects were truly ministerial.

Recently proposed and enacted legislation has proposed ministerial processes as a solution to increase housing supply in California.¹⁷ The lack of data, however, means that cities and researchers actually know very little about the outcomes associated with existing ministerial processes. In Los Angeles, for example, where we could access data on proposed development subject to a ministerial process, we found that contrary to common perceptions, the local ministerial process did not yield more deed-restricted affordable housing than its discretionary counterpart.¹⁸

Staff reports

Planning department staff reports precede the adoption of the project entitlements and typically provide the basis for the approval body to make the requisite findings. Staff reports enable the user to identify project characteristics like size, affordability, and the requested entitlements. Though the quality of department staff reports varies considerably, the availability of staff reports is an even more pressing issue. Frequently meeting minutes or agenda reference the staff reports, but the reports are not hyperlinked. And where the reports are hyperlinked, often the link was no longer functioning.

Where staff reports are available, quality varies considerably. Some staff reports analyze the project in a brief five to ten pages; other reports consist of hundreds of pages of detailed analysis, reports and appendices. Some cities upload staff reports as scanned PDFs, which then requires software to convert to readable and searchable text. Because project characteristics like height, density, parking, and affordability are not available in most existing data management systems, staff reports are one of the few ways users can analyze the character of proposed development. The character of proposed development can reveal constraints around substantive zoning standards that might be barriers to increased housing production.¹⁹

Appeal data

Local residents can appeal most types of discretionary land use approvals by asking a higher authority to reconsider the grant or denial of a permit.²⁰ Before filing a lawsuit against a project, a project opponent must have exhausted their administrative remedies.²¹ Thus local appeals are an important barometer of local opposition to development. Yet few cities track appeal data. San Francisco, Los Angeles, and Oakland track whether a project was appealed

in their data management systems. But rarely do these systems link to an appeal determination that would permit the user to ascertain the basis for the appeal, the appellant, or the appeal outcome. Manual appeal extraction—by systematically searching the dockets of appellate bodies—takes an extraordinary amount of time and details on outcomes are still limited. Through this painstaking work, we have uncovered variable rates of appeals that tend to be much higher than litigation rates.²² More information is therefore needed to understand how these appeals impact local entitlement approvals.

Litigation data

Commentators commonly cite legal opposition to development as another barrier to housing development.²³ Yet data on project litigation is difficult to obtain. Even data systems that track administrative appeals do not track whether the project is or was subject to litigation. And while City Council action is often required to engage outside counsel to defend or to settle a lawsuit, often these actions take place in closed meetings, and it is difficult to discern outcomes from those abbreviated agendas.

Extracting data from county court records is time intensive and costly. Some online court systems charge up to one dollar to even view a page to determine whether the record is relevant. Because search engines are not optimized to locate writ petitions against development expeditiously, obtaining records frequently requires a trip to the courthouse. And while CEQA litigants are required to notify the California Attorney General of pending CEQA litigation,²⁴ this notification is not required for litigation under the local or state planning and zoning laws, which our research has found to be a relatively common basis for project litigation.²⁵

Preliminary recommendations

Current data legislation

Recently proposed data legislation has focused on enhancing reporting and augmenting local data maintenance systems.²⁶ Augmented reporting and centralized data management have enormous potential to shine light on process and outcomes at the local level. But sophisticated reporting on important land use characteristics like project density, types of variances and rezonings granted, and current parcel use may be beyond the abilities of local governments without radical investment in data management and analysis, and repositioning data analytics as a core function of local planning departments. Investment in data management and analysis remains a topic that is an important for future discussion.

We therefore focus primarily on where existing reporting obligations under the Annual Progress Report (APR) could be slightly augmented without substantially increasing the burden on local planning departments. Under existing law, cities and counties are required to report their progress towards meeting their RHNA through APRs.²⁷ The 2017 Housing Package significantly augmented APR obligations—an important first step towards understanding what is happening at the local level.²⁸ ‘

Additional reporting obligations set forth below could enhance the utility of this data without substantially burdening departments.

Suggested Additional Reporting Obligations:

- A) date the project was heard and approved by the city;
- B) adjudicative or legislative body that heard the approval;
- C) date that statutory appeal period lapsed without a protest being filed
- D) date an administrative appeal was filed (if any);
- E) date the administrative appeal was heard by the appellate body;
- F) adjudicative or legislative body that heard the appeal; and
- G) appeal outcome.

An important nuance is that some cities do not process approvals concurrently. For example, a Design Review Committee might hear the design review, but the Planning Commission hears the CUP. This can also occur where historic resources are present that trigger review by the Historic Resources Board, or where the project is pursuing subdivision. Data entry should permit cities to report on multiple approval pathways.

Standardization of terms and process

In addition to data accessibility obstacles, divergent terminology and procedures present another barrier to understanding what is happening on the ground. Cities are employing distinct land use approval processes each with their own set of terminology and procedures. This terminology and process impacts how cities report out on entitlement data, and how the public interprets this data.

Figure 4 depicts a sample of entitlement permitting pathways culled from our 16 cities. This list is not comprehensive; Los Angeles alone has over 90 discretionary entitlement actions.²⁹ Not only do these varying systems increase the administrative costs of entitlement, the terminology can also be misleading for project applicants and external auditors.

Sometimes two cities will use the same permitting terminology, but the function of the permit differs. For example, a Conditional Use Permit (CUP) in San Francisco is required for large developments in certain neighborhoods.³⁰ In Oakland, CUPs are available to obtain exemptions from onerous zoning standards like height and parking—similar to what a variance would be in other jurisdictions.³¹ Other permits may have different names, but function very similarly. Site Plan Review and Development Permits are examples, as are variances and exceptions (although the findings legally required to justify each may differ).

Relatedly, even where cities use similar entitlement terminology, the process that attaches to

each type of entitlement differs. Planned Unit Developments (PUD)—which typically permit large-scale developments combining a variety of compatible land uses—are an important aspect of the development process in many cities because they permit large-scale, dense mixed-use development.³² Yet process diverges considerably. For example, PUD permits in San Jose require both a rezoning (meaning legislative action by the City Council) and an adjudicative permit issued by the department director.³³ PUD permits in San Francisco do not require legislative action.³⁴

The effects of divergent terminology are particularly acute when external auditors are trying to gauge a city’s compliance with their Housing Element. Existing state law requires that as of right processes be in place for certain types of residential development.³⁵ For example, under SB 2, cities must permit homeless shelters as of right in at least one zone of the city.³⁶ But differing terminology and specificity in local codes can obscure what is truly an as of right process from processes where the local government retains discretion.

Figure 4. *Sample of Entitlement Permitting Pathways*

• Design Review/Architectural Review • Site Plan Review/Development Permit • Conditional Use Permit • Special Use Permit • Neighborhood Use Permit • Community Use Permit • Variance • Minor/Major Exception • Minor/Major Deviation • Director’s Interpretation/Determination • Specific Plan Compliance Permits (Large Project Authorizations, Community Permits, Downtown Plan Permits, Project Permit Compliance)	• Planned Unit Development Permit • Planned Unit Development Rezoning • Historic Resources Permit/Certificate of Appropriateness • Coastal Development Permit • Rezoning • Height Change • General Plan Amendment • Map/Text Amendments • Development Agreement • State Density Bonus • Local Density Bonus Codifications • Zone Clearance • Specific Plan Amendments
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Site Plan Review in Long Beach, for example, is a discretionary action even though review can occur administratively for projects under 50 units.³⁷ In Inglewood, while Site Plan Review applies to all new structures that exceed \$20,000 in value, the code explicitly makes this approval ministerial for the purpose of CEQA.³⁸ Without an in-depth review of the local zoning code, this nuance is difficult to ascertain. Requiring cities to report on the function of their local entitlements through a standardized reporting key can help auditors enforce existing state law and increase transparency for residents, developers, and other stakeholders.

Opening the administrative record

The administrative record for projects approved by the local legislative body—either the City Council or County Board of Supervisors—tends to be more robust and more accessible than data for projects approved by a lower adjudicative authority such as a Planning Commission or a Zoning Administrator. For example, at the City Council level, staff reports were always available, at the Planning Commission level they were usually available, and at the Zoning Administrator level they were rarely available.

As discussed above, staff reports for projects that did not undergo a public hearing were never available. Requiring local governments to make public the study and approval records for these projects would be an important first step to opening access to local land use data. This mandate would likely be less burdensome for resource-challenged jurisdictions than new reporting mandates, but would still make critical data available for outside analysis, particularly around the streamlined approval processes that are the focal point of state reform.

Outreach to local planning departments of varying sizes and resources

Planning departments are very differently situated and resourced. Recent data from the Turner Center California Land Use Survey, for example, shows that San Jose—a city of 1.035 million people and 177 square miles—has just 35 full-time planners relative to San Francisco, which has 105 full-time planners for 884,363 people and 47 square miles.³⁹ Yet our study shows that both cities are entitling similar rates of housing on a population basis.⁴⁰

In our qualitative research interviews, most planners highlighted the need for better data on local land use approvals, but emphasized different obstacles. Some departments are simply not large enough to track data in house and must contract large planning functions to outside consultants. Other departments struggle with resources and maintaining institutional knowledge necessary to keep these data systems functioning. Regardless of the obstacles, local departments should be involved directly in proposed land use data legislation, not just their representatives in regional or professional lobbying organizations. Policymakers should outreach to a variety of departments across different geographies, demographics, and resources to determine data solutions that are feasible for cities.

Conclusion

Good data has the potential to both ensure that local and regional planning efforts are data-informed and that California's housing laws can be enforced on the ground. Our work has shown, however, that additional reporting mandates without significant investment in data management might not yield accurate data given existing limitations. Too much emphasis on reporting without additional resources might also cause departments to divert current or long range planning resources towards these efforts—to the detriment of new growth. Departments need resources and technical assistance.

One way to deliver this expertise is to empower the Governor's Office of Planning and Research (OPR) to require that California's 18 Metropolitan Planning Organizations (MPOs) create a uniform data management system for their region that cities can report into in real time as entitlement applications are processed and approved. This front-end work would eliminate the need for cities to generate Annual Progress Reports

(APRs), as the MPO could generate this report on their end. MPOs should also standardize divergent processes and terminology within their regions to make these user interfaces more accessible.

As the nature of the state housing crisis and proposed solutions evolve, so will data needs. Moreover, our work has uncovered that the drivers of high housing costs differ from city to city and region to region. MPOs should have flexibility to mandate additional data collection when warranted by on the ground conditions. Maintaining this data at the regional level would complement the Sustainable Communities Strategy and regional planning efforts around climate change, transportation, housing, employment, and air quality. HCD should also have a role in determining reporting requirements; particularly as legislation expands into new facets of the housing crisis, new data points will emerge that existing legislation does not contemplate.

Endnotes

¹Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, Comparing Perceptions and Practice: Why Better Land Use Data is Critical to Ground Truth Legal Reform (2019) (forthcoming, on file with authors); Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, Developing policy from the ground up: Examining entitlement in the Bay area to inform California's housing policy debates, *Hastings Env'tl. L. J.* 1, 78 (2019).

²Cities: Oakland, San Jose, Redwood City, Santa Monica, Fresno, Palo Alto

³See e.g., City of Oakland, Online Permitting Center, <https://aca.accela.com/OAKLAND/Welcome.aspx>; City of Palo Alto, Citizen Portal, <https://aca.accela.com/paloalto/Default.aspx>; City of Santa Monica, Citizen Access Website, <https://epermit.smgov.net/CitizenAccess/Default.aspx>; City of Fresno, Fresno's Accelerated Application System to Track Electronic Reviews, <https://lmsaca.fresno.gov/CitizenAccess/>.

⁴See e.g., City of Pasadena, Property Search, <https://eservices.cityofpasadena.net/iwrplandev/PropertySearch.aspx>; City of San Jose, Online Permits System, <https://sjpermits.org/permits/general/combinedquery.asp>.

⁵Cities: Los Angeles, Oakland, Redwood City, San Diego, San Francisco

⁶City of Los Angeles, ZIMAS, <http://zimas.lacity.org/>; City of San Francisco, Property Information Map, <https://sfplanninggis.org/pim/>.

⁷Cities: Los Angeles and San Francisco

⁸Subdivision refers to the process of dividing land into two or more parcels for the purpose of sale, lease, or financing. See Cal. Gov't Code § 66424.

⁹Cal. Gov't Code § 65400. A.B. 879, 2017 – 2018 Reg. Sess. (Cal. 2017) and S.B. 35, 2017 – 2018 Reg. Sess. (Cal. 2017) augmented these reporting obligations to require new reporting of entitlements issued, not just building permits.

¹⁰Cities: Sacramento, Folsom, Long Beach, Inglewood, Redondo Beach, Mountain View

¹¹See e.g., John Quigley, Steven Raphael & Larry A. Rosenthal, Measuring Land Use Regulations and Their Effects in the Housing Market, *Housing Market and the Economy* 272, 280 (Lincoln Institute of Land and Policy ed., 2009).

¹²See Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, Developing policy from the ground up: Examining entitlement in the Bay area to inform California's housing policy debates, *Hastings Env'tl. L. J.* 1, 36-47 (2019).

¹³The Permit Streamlining Act applies to certain non-legislative local land use decisions—such as conditional use permits—and requires cities to make those decisions within prescribed time limits. See Cal. Gov’t Code § 65941; *Land Waste Mgmt. v. Contra Costa Bd. of Supervisors*, 222 Cal. App. 3d 950, 959 (1990). On the date that the jurisdiction deems the application to be complete, the approval deadline starts running.

¹⁴Pasadena Muni. Code § 17.61.030; Long Beach Muni. Code § 21.25.503 (specifying that the Site Plan Review Committee can review all site plan review applications and has the discretion to refer certain applications to the Planning Commission. In practice, it appears that projects with 50 or more units are referred to the Planning Commission); Sacramento Muni. Code § 17.808.130; San Diego Muni. Code § 112.0503; Fresno Muni. Code § 15-5203. While the Fresno code permits the Director to review all Development Permit applications regardless of size, the Director has the ability to refer particular applications to the Planning Commission. Unlike in Long Beach, we have not observed that the Director systematically refers projects of a certain size to the Planning Commission.

¹⁵Ministerial approvals are approvals in which a government agency simply applies law to fact without using subjective judgment. See *Friends of Westwood Inc. v. City of Los Angeles*, 235 Cal. Rptr. 788, 793 (Ct. App. 1987). Ministerial approvals do not trigger compliance with the California Environmental Quality Act.

¹⁶Within our study set Inglewood, Los Angeles, San Diego, and Fresno appear to have ministerial processes for certain types of development. See Los Angeles Muni. Code § 16.05; Fresno Muni. Code § 15-5102(D); San Diego Muni. Code §§ 113.0222(a); 156.0304(c)(1-3); Inglewood Muni. Code § 12-101.

¹⁷See e.g., S.B. 35, 2017–2018 Reg., Leg. Sess. (Cal. 2017), S.B. 827, 2017–2018 Reg., Leg. Sess. (Cal. 2018), S.B. 50, 2019–2020 Reg., Leg. Sess. (Cal. 2019).

¹⁸Moira O’Neill, Giulia Gualco-Nelson & Eric Biber, *Examining the local land use entitlement process in California to inform policy and process* 19 (2019), <https://www.law.berkeley.edu/wp-content/uploads/2019/02/Examining-the-Local-Land-Use-Entitlement-Process-in-California.pdf>.

¹⁹Moira O’Neill, Giulia Gualco-Nelson & Eric Biber, *Comparing Perceptions and Practice: Why Better Land Use Data is Critical to Ground Truth Legal Reform* (2019) (forthcoming, on file with authors)

²⁰Adam U. Lundgren et al., *California Land Use Practice* §1.24 (CEB 2018).

²¹Administrative appeals are generally a prerequisite to challenge a project in court. See Cal. Pub. Res. Code § 21177.

²²Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, Developing policy from the ground up: Examining entitlement in the Bay area to inform California's housing policy debates, *Hastings Env'tl. L. J.* 1, 71 (2019); Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, Examining the local land use entitlement process in California to inform policy and process 20 (2019), <https://www.law.berkeley.edu/wp-content/uploads/2019/02/Examining-the-Local-Land-Use-Entitlement-Process-in-California.pdf>.

²³See e.g., Jennifer Hernandez, David Friedman & Stephanie DeHerrera, *In the Name of the Environment*, Holland & Knight (2015).

²⁴Cal. Pub. Res. Code § 21167.7.

²⁵Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, Developing policy from the ground up: Examining entitlement in the Bay area to inform California's housing policy debates, *Hastings Env'tl. L. J.* 1, 70 (2019).

²⁶A.B. 1483, 2019-2020 Reg., Leg. Sess. (Cal. 2019).

²⁷See Cal. Gov't Code § 65400.

²⁸A.B. 879, 2017-2018 Reg., Leg. Sess. (Cal. 2017); S.B. 35, 2017-2018 Reg., Leg. Sess. (Cal. 2017),

²⁹City of Los Angeles, Discretionary Actions in the LAMC, https://recode.la/sites/default/files/project_files/2015-06-24-Processes_Existing_Entitlement_Procedures.pdf.

³⁰See e.g., San Francisco Muni. Code § 711.

³¹See e.g., Oakland Muni. Code §§ 17.116.110(D); 17.58.030.

³²Adam U. Lundgren et al., *California Land Use Practice* §7.40 (CEB 2018).

³³San Jose Muni. Code § 20.120.110.

³⁴San Francisco Muni. Code § 304.

³⁵See e.g., Cal. Gov't Code § 65582(c)(3) (requiring supportive housing to be a by right use in all zones where multifamily is a permitted use); Cal. Gov't Code § 65583(a)(4)(A) (requiring that emergency shelters be allowed as a permitted use without a conditional use or other discretionary permit).

³⁶Cal. Gov't Code § 65583(a)(4)(A).

³⁷See Long Beach Muni. Code § 21.25.502.

³⁸See Inglewood Muni. Code § 12-101.

³⁹Sarah Mawhorter & Carolina Reid, *Terner California Residential Land Use Survey* (2018), <http://californialanduse.org/index.html>.

⁴⁰Moirra O'Neill, Giulia Gualco-Nelson & Eric Biber, *Developing policy from the ground up: Examining entitlement in the Bay area to inform California's housing policy debates*, *Hastings Env'tl. L. J.* 1, 25, 65 (2019).