# Exploring Land Banking as a Tool for Affordable Housing in the Inland Empire

A Proof-of-Concept Study







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# **Executive Summary**

#### **Background**

This report evaluates the potential for land banking to support affordable housing development in the Inland Empire, conducted in partnership with Neighborhood Partnership Housing Services (NPHS). Land banking is a public tool designed to acquire, manage, and repurpose tax-delinquent or otherwise distressed properties to reduce blight, stabilize neighborhoods, and facilitate community-serving development. Given California's persistent housing challenges, NPHS sought to determine whether a land banking strategy could offer a feasible and data-informed pathway for expanding affordable housing opportunities in the region.

#### **Data & Methods**

To assess this potential, the study analyzes recent and historical parcel-level tax foreclosure data from Riverside and San Bernardino counties using Geographic Information Systems (GIS). Across both counties, the analysis identifies seven areas with relatively high concentrations of tax-foreclosed parcels, with Lake Elsinore, CA and Lake Arrowhead, CA containing the largest shares in Riverside County and San Bernardino County, respectively. However, the presence of parcel clusters does not automatically translate into development readiness. Additionally, market dynamics and rising land values present practical constraints on acquisition and redevelopment, particularly in communities where demand is strong or speculative activity is increasing.

#### **Analysis**

The subsequent analyses focus on Lake Elsinore and Lake Arrowhead as illustrative localities, selected for their concentration of tax-delinquent parcels, to demonstrate how local employment access, environmental hazards, and transit availability, among other contextual factors, shape the feasibility of land banking. Lake Elsinore offers relatively better regional connectivity but limited transit, while Lake Arrowhead faces pronounced wildfire risk and a seasonal economy, both of which complicate redevelopment prospects. These examples demonstrate that effective land banking cannot rely on parcel availability alone; instead, it must account for the broader conditions that influence long-term housing viability and community resilience. By combining parcel-level analysis with a deeper understanding of local context, this report provides an initial framework for designing a coordinated and regionally grounded land banking strategy.

#### **Future Research**

Looking ahead, this study points to several Inland Empire localities where deeper, locality-specific case studies and expanded parcel-level data infrastructure are needed to meaningfully assess land banking feasibility. Future work should prioritize building access to standardized parcel outcome data, incorporating code-enforcement and other indicators of property distress, and developing longitudinal datasets that clarify parcel trajectories. Together, these steps can lay the groundwork for a more comprehensive evaluation of where land banking could be most effective and how it might be paired with complementary tools to support long-term community benefit.





## **About the Research Institution**

#### **UCR Center for Community Solutions**

The Center for Community Solutions (CCS) at the University of California, Riverside's School of Public Policy is a regional hub for applied, community-engaged research that strengthens public policy and advances equitable outcomes across Inland Southern California and beyond through data-informed analysis. Embedded within a leading public research university, CCS brings together faculty expertise, graduate researchers, and community partners to produce rigorous, data-driven analyses on issues central to the region's long-term well-being - including housing and land use, well-being, sustainability, economic and workforce development, and participatory governance, among other domains.

CCS operates through a collaborative model that integrates academic research with practitioner insight, cocreating research questions and ensuring that findings are both analytically robust and operationally meaningful for policymakers, public agencies, and community-based organizations. Through mixed-methods research, strategic partnerships, and a commitment to translating empirical evidence into actionable solutions, CCS supports the design, evaluation, and implementation of innovative policies tailored to the unique needs of Inland Southern California communities.

To learn more about the UCR Center for Community Solutions, visit <u>communitysolutions.ucr.edu</u>.

# **About the Collaborating Partner**

#### **Neighborhood Partnership Housing Services**

Neighborhood Partnership Housing Services (NPHS) is a nonprofit community development organization, certified Community Development Financial Institution (CDFI), and HUD-certified counseling agency dedicated to expanding affordable housing and sustainable homeownership opportunities across Southern California. NPHS advances its mission through four integrated program areas—Affordable Housing Development, Community Lending, Education, and Policy & Research—developing and preserving housing through innovative models such as factory-built and manufactured homes; providing accessible lending products and comprehensive housing counseling; and driving local, state, and federal advocacy informed by research. With a focus on Inland Empire priorities such as wildfire resilience, community ownership, anti-displacement, multi-generational living, and aligning economic development with housing opportunity, NPHS delivers a holistic approach that strengthens families and builds resilient communities.

To learn more about Neighborhood Partnership Housing Services, visit <a href="mailto:nphsinc.org">nphsinc.org</a>.





# Introduction

Land banking is a process by which a public entity acquires tax-delinquent vacant, abandoned, and/or dilapidated properties, and converts them to productive use. Although land banking can involve an extremely varied set of processes, the overarching goal and purpose of land banking remains consistent: to transform dormant assets into assets that contribute to the wellbeing, vitality and tax base of localities (Alexander, 2005a). Recognizing the potential relevance of this tool for the Inland Empire, Neighborhood Partnership Housing Services (NPHS), an Inland Empire—based Community Development Financial Institution recognized for advancing practical, community-responsive approaches to housing and neighborhood investment, approached the UCR Center for Community Solutions with an interest in using empirical evidence to assess whether a land banking strategy could offer a viable pathway to expand affordable housing opportunities in the region.

This study identifies potential geographic areas within the Inland Empire¹ that present potential for targeted land banking, specifically to advance affordable housing development. We use Geographic Information Systems (GIS)—a set of tools that allow researchers to map and analyze spatial data—to analyze parcel-level data in Riverside and San Bernardino counties, focusing on tax-defaulted properties added to public auction lists. The sections that follow present background information on land banking and review the data sources utilized, followed by an analysis of contextual factors relevant to land banking and affordable housing development within two Inland Empire cities with a high concentration of tax-delinquent properties. The report concludes with a discussion of historical foreclosure data, a review of the study's limitations, and recommendations on further considerations needed to assess the feasibility of a land banking model in the Inland Region.

The corresponding online maps that provide the foundation for this report incorporate additional spatial context including fire hazard severity zones, transportation networks, qualified opportunity zones, and demographic data to situate land banking for affordable housing in the context of the Inland Empire. The maps, while informative, should serve as a proof-of-concept, demonstrating the potential utility of compiling and visualizing key data to understand the potential opportunity for land banking. While the project includes multiple components designed to explore trends and inform discussion, it is not intended to be comprehensive, up-to-date, or suitable as a standalone decision-making tool. Users should interpret findings as indicative rather than definitive, and supplement with additional sources and expert judgment where appropriate.

<sup>&</sup>lt;sup>1</sup>Throughout this report, "Inland Empire" and "Inland Region" are used interchangeably; both terms are co-extensive with Riverside and San Bernardino counties.





# Land Banking & the IE: Selected Insights from the Literature

California's housing crisis is the subject of both academic and political debate. Spurred by the combination of high demand for, yet extremely limited supply of housing statewide, the crisis has additional contributory causes including, but not limited to, lengthy environmental reviews, high land values, NIMBYism, and complicated local land use restrictions. Housing, as an important determinant of health and well-being, is of critical importance to the Inland Empire, where residents face high cost burdens and an aging housing stock. Due to the varied nature of this crisis, a variety of policy tools at an assortment of levels may be appropriate. One such tool to renew urban and rural land, and boost the production of affordable housing is a land bank.

Land banks are public or quasi-public entities, established by law to acquire, manage, and repurpose properties that generate negative externalities that may detract from the public good.

Their goals, forms, and function are tremendously diverse: neighborhood stabilization, development of green space, and facilitation of the redevelopment of brownfields (Alexander, 2005b). This diversity points to one of the strengths of land banking as a tool: the **ability to adapt the banking process to the needs, priorities, character, and particular crises of a locality**. When land banks acquire tax-delinquent properties and redevelop the land, this process provides certain community benefits, like correcting previous planning failures, decreasing the cost burden for local law and code enforcement departments, and can boost economic activity (Tappendorf & Denzin, 2011).

Land banks can help improve the financial state of a community through both direct and indirect methods. If a municipality is facing a higher inventory of tax-delinquent parcels or properties that are otherwise vacant or abandoned, the direct decline in government revenues can be substantial and land banking can restore this style of property to productive use, increasing the value of neighboring properties and preserving the equity in surrounding homes (Whitaker & Fitzpatrick, 2016). Stated differently, vacant and abandoned properties can have negative spillover effects on nearby neighborhoods, including decreased property values and increased crime rates (Immergluck et al., 2016).

The primary value of land bank operations lies in the preservation of surrounding home values, particularly for the many properties that surround the distressed property, but are never directly transferred through the land bank. Each year, communities lose millions of dollars in property value because homes located near vacant or blighted properties experience significant long term property devaluation (Measuring the Effect of Vacant Lots, 2019). Therefore, a meaningful cost-benefit analysis must account not only for the operational expenses of the land bank and the tax revenues temporarily forgone (as tax debt is typically cleared by the land bank), but also for the substantial external costs of leaving properties abandoned, and the long-term fiscal and benefits of returning those properties to productive, tax-generating use (Alexander, 2005b). While not a favorite tool in California, many land banks have been established elsewhere in the United States, perhaps most notably in St. Louis, MO, Louisville, KY, Atlanta, GA, Genesee County, MI, and Cuyahoga County, OH.





The literature on the effects of land banking is relatively limited and fragmented. Nonetheless, an analysis of the Cuyahoga County<sup>2</sup> Land Bank using spatially corrected hedonic price models, estimated that **properties slated to enter the land bank impose a 3.4% negative externality on surrounding home values prior to acquisition** (Whitaker & Fitzpatrick, 2016). For example, a \$500,000 property would see its value reduced to approximately \$483,000 before the neighboring, distressed property is entered into the land bank. Another analysis of Alleghany County, PA estimated that the direct costs for municipal services to manage blighted property and the revenue lost due to tax delinquency were estimated to be \$10.7 and \$8.6 million per year, respectively (Measuring the Effect of Vacant Lots, 2019). Although tax delinquency does not directly correlate with abandonment, blight, and vacancy, tax delinquency is typically a key indicator that the owner does not intend to invest further in their property.

Importantly, financial benefits from land banking are not guaranteed. Land banking is not designed to supplant private markets, but to intervene when market conditions break down. Likewise, infill development is not inherently beneficial and must be approached thoughtfully to maximize positive outcomes. As a specific example, while infill can reduce vehicle miles traveled and thereby improve regional air quality, infill may also bring new residents and businesses closer to existing stationary or mobile sources of pollution, increasing exposure to harmful air quality (Winig et al., 2014).

In some neighborhoods, conditions of hypervacancy and prolonged disinvestment are so severe that, even with public intervention, market activity may not resume in the near term (Mallach, 2018), and land banking can risk further community destabilization if not implemented carefully. For this reason, it is critical for local governments to meaningfully engage residents in priority infill areas when shaping policies to attract new investment (Stollman et al., 2015). Strategies must be developed to help long-term residents and local businesses remain in their communities, participate meaningfully in planning processes, and benefit from the growth that follows.

<sup>&</sup>lt;sup>2</sup> Cuyahoga County, located in northeastern Ohio, encompasses the City of Cleveland.





### **Data & Methods**

To better understand where targeted land banking could support affordable housing development in the Inland Empire, we conducted a **spatial analysis of tax delinquent parcels in Riverside and San Bernardino counties**. The spatial analysis is delineated into two major categories: core layers, and context layers. Core layers include parcel basemaps and tax foreclosed properties in both San Bernardino and Riverside County. Context layers are further delineated into environmental, demographic, transit, and government layers. While the core layers host the integral data for the map, the context layers allow the user to discern some of the challenges and constraints of specific parcels and or/clusters.

#### **Core Spatial Layers**

- <u>Riverside County Parcels</u>: Accessed via the Parcel CREST system (updated September 2023). This dataset served as the base for generating industrial buffer zones and was used to identify tax foreclosure parcels in Riverside County.
- Riverside County Tax Foreclosure List: Parcels subject to power of sale in July 2025, inclusive of the period January 2025 through June 2025.
- San Bernardino County Parcels: Sourced from the SB County Parcel Viewer (updated April 2025). This dataset served as the base for generating industrial buffer zones and was used to identify tax foreclosure in San Bernardino County.
- San Bernardino County Tax Foreclosure List: Parcels subject to power of sale in May 2025.

#### **Contextual Spatial Layers**

- Demographic Layers
  - ACS 5-Year Rent Burdened Households (2023, U.S. Census Table B25071)
  - Workplace Area Characteristics, LODES8, 2022 (WAC) (LEHD)
  - Low Educational Attainment (less than a high school diploma) (2023, U.S. Census Table S1501
     Educational Attainment; ACS 5-Year (2019-2023)
- Environmental Risk and Public Health
  - Fire Hazard Severity Zones, State & Local Responsibility Areas (SRA & LRA) (March 2025 (Local); April 2024 (State) CalFire).
  - CalEnviroScreen 4.0 General Indicators (February 2022), including air quality (PM2.5, Ozone) for both percentile and raw scores, as well as the general index percentile.
  - 1000 ft Industrial Buffers: Utilized each county's parcel maps to identify and add a buffer to industrial or manufacturing parcels





#### • Transportation Access

- National Transit Map Routes (March 2025)
- Transit Stops (September 2025, U.S. Department of Transportation and Bureau of Transportation Statistics)
- Quarter mile buffer to bus transit stops based on the Transit stops (October 2025)

#### Government Layers

- Qualified Opportunity Zones (March 2025, California Department of Finance)
- State Senate Districts: Boundaries, 2021 (California Department of Education; Citizens Redistricting Commission (CRC) Plan)
- State Assembly Districts: Boundaries, 2025-2030 (California Department of GIS)
- Riverside County Supervisor Districts: Boundaries, September 2023 (Riverside County Mapping Portal)
- San Bernardino County Supervisor Districts: Boundaries, December 2022 (County of San Bernardino)

#### **Analytical Approach**

First, a descriptive spatial model was built to identify clusters of parcels in San Bernardino and Riverside counties that have been added to tax foreclosure lists, excluding parcels designated under exclusively industrial, commercial, or agricultural uses. This subset of parcels were used to identify clusters of tax-foreclosed parcels by visual inspection. Note that the parcel visual inspection highlights two types of clusters: areas where there are many tax foreclosed parcels in close proximity to each other and parcels that have large land areas. While this study focuses on residential parcels and excludes most industrial, commercial, and agricultural properties, understanding where clusters are located helps tentatively identify areas where there might be high potential for infill development and/or various models of affordable housing production.



# Spatial & Contextual Findings on Land Banking Opportunity in the IE

This section employs a cluster-by-cluster analysis across selected context layers and sublayers. Using GIS software and the datasets described above, the resulting indicators help understand the location of each cluster in relation to demographic, environmental, transportation, and governmental conditions. From a visual analysis, we identified the following areas with comparatively high concentrations of tax foreclosed parcels:

#### **Riverside County Clusters**

- Lake Elsinore
- Beaumont
- Cabazon-Mons
- Desert Hot Springs

#### San Bernardino County Clusters

- Lake Arrowhead
- Crestline
- Twentynine Palms

Across all seven cluster areas, Lake Elsinore and Lake Arrowhead contain the largest shares of tax-foreclosed parcels in Riverside and San Bernardino counties, at ~18% and ~15%, respectively.

Accordingly, the remainder of this section acknowledges study limitations through an analysis of contextual barriers to affordable housing development, then focuses on parcels in these two communities to more clearly contextualize the spatial distribution of tax-foreclosed properties in relation to key demographic and development factors.

#### Contextual Drivers of & Barriers to Affordable Housing Development in the IE

Having identified clusters of tax-foreclosed parcels across Riverside and San Bernardino counties, it is important to contextualize these findings by considering the practical factors that influence whether parcel availability can translate into viable affordable housing development. While land banking offers a potentially promising mechanism to assemble and manage underutilized properties, a range of environmental, regulatory, financial, land use, and market factors may constrain its potential for impact in the Inland Empire. This section highlights an assortment of **key considerations to leveraging tax sale parcels to address the region's shortage of affordable housing, including both structural and market-level constraints**, with the aim of providing the reader with a realistic understanding of both the opportunities and constraints inherent in leveraging tax sale parcels for affordable housing through land banks and otherwise.

#### **Location-Dependent Barriers to Affordable Housing Development & Analysis Limitations**

• Insufficient Number of Relevant Clusters in a priori Locations of Interest: In Riverside County, a significant amount of parcels that are listed for tax foreclosure are redeemed, meaning that the owner pays off all outstanding debt and retains ownership of the property. San Bernardino generally has more parcels up for auction, but further analysis is needed to understand the final outcome of each parcel per year.





- <u>Environmental Risks</u>: Many tax foreclosed parcels are located within high-risk fire zones or environmentally burdened areas. These conditions may increase development costs and regulatory hurdles, potentially constraining—if not prohibiting—the ability to convert parcels into safe, affordable housing.
- Zoning Incompatibilities: Industrial zoning or incompatible land use limits residential redevelopment in key infill locations. Without changes to zoning or land use designations, even centrally located parcels may be unsuitable for affordable housing, underscoring a need for complementary policy interventions where needed.
- <u>Infrastructure Gaps</u>: Parcels in peripheral areas often lack transit access, utilities, or public services. These gaps reduce the attractiveness of sites to potential developers and may exacerbate inequities in access to essential amenities, like education, for future residents.
- <u>Financial Constraints</u>: Market pressures and rising land and home values in some neighborhoods may outpace the capacity of a land bank to acquire properties affordably. This potential financial constraint highlights the potential necessity of combining land banking with other funding mechanisms, subsidies, or incentives to ensure feasible development.

#### Barriers Addressable through Land Banking, Regardless of Location

Land banking can directly mitigate several key barriers to returning parcels to productive use, which can support affordable housing development:

- <u>Property Assembly</u>: Aggregating fragmented or underutilized parcels for coordinated development allows for more cohesive development projects and reduces transaction costs that might otherwise dissuade private investment.
- <u>Title and Tax Resolution</u>: Clearing liens, tax debt, and other legal encumbrances that deter private investment and, by resolving these issues, making parcels more market-ready for developers, community organizations, or other interested parties.
- <u>Strategic Land Disposition</u>: Retaining land for public interest projects, such as affordable housing, green space, or community facilities, which in turn ensures land is allocated in a manner that maximizes collective benefits as opposed to leaving it to more speculative market forces.
- <u>Stabilizing Distressed Neighborhoods</u>: By reducing blight, managing vacant land, and supporting incremental redevelopment, land banking can thus act as a tool to support broader neighborhood revitalization while advancing affordable housing goals.

#### Barriers Not Addressable through Land Banking, Regardless of Location

• <u>Zoning Reform</u>: Changes to allow higher-density or mixed-use development require local action, and land banking alone cannot overcome these regulatory limitations.





- <u>Infrastructure Funding</u>: Utilities, roads, and transit expansion demand broader capital investment beyond land acquisition. Even when parcels are acquired, insufficient infrastructure may prevent practical land development.
- <u>Market Demand</u>: In areas with limited demand, land banking cannot by itself attract developers or financing for projects. In these cases, complementary strategies, including developer incentives or market subsidies, may be necessary to stimulate investment.

For policymakers and practitioners, these limitations underscore that land banking, while a valuable tool, must be considered as part of a broader strategy for affordable housing development. Addressable barriers, such as parcel assembly and title resolution, demonstrate where land banks can directly facilitate housing initiatives and promote neighborhood stabilization. At the same time, barriers unaddressable by land banks highlight the need for comprehensive and complementary policy intervention, targeted investment, and multiagency collaboration. Understanding both the strengths and limitations of land banking can allow decision makers to prioritize resources, design effective local policies, and align land acquisition strategies with broader housing, equity, and community development objectives in the Inland Region.

#### An Analysis of Contextual Factors Relevant to Land Banking in the IE

To better understand the potential for land banking in the Inland Empire, this section focuses on two communities with the highest share of tax-foreclosed parcels: Lake Elsinore in Riverside County and Lake Arrowhead in San Bernardino County. As noted above, these areas were selected because they consistently appear as locations with clusters of parcels listed for tax sale over multiple years, signaling recurring challenges as well as potential opportunities for intervention. By focusing on these two communities, the analysis provides a more detailed understanding of how local conditions interact with the availability of parcels for potential land banking. Lake Elsinore and Lake Arrowhead differ in key ways, including employment patterns, population density, and regional connectivity, making them useful case studies for illustrating the interplay of land availability and community context.

Through this lens, policymakers and practitioners can better understand not only where land banking could be applied, but also what complementary strategy or support may be needed to maximize the benefits of land acquisition through land banking. This approach underscores that successful land banking demands attention to local context, ensuring that parcels are not just acquired, but positioned to contribute meaningfully to housing stability, neighborhood revitalization and broader community resilience.

#### **Employment**

An important and common criteria when considering land banking investments is the employment opportunities in the community. Employment is one of the most direct routes to financial security, enabling individuals to meet other basic needs, including housing, food, and healthcare. Stable employment can additionally reduce material hardship and support long-term economic resilience (Wilson, 1996). Lake Elsinore and Lake Arrowhead offer different employment opportunities to their respective populations. While Lake Arrowhead's economy is





characterized by seasonal and service-oriented employment, Lake Elsinore is situated in a more interconnected region where many residents commute to external employment centers.

Figures 1 and 2 show places of employment (in red) and foreclosed parcels (in black) in Lake Elsinore and Lake Arrowhead, CA.<sup>3</sup> The economy of Lake Arrowhead primarily relies on seasonal tourism and lake-based recreational activities. According to the Lake Arrowhead Chamber of Commerce, Southern California Edison, the Lake Arrowhead Fire District, and Stater Brothers Markets are some of the town's largest employers (Lake Arrowhead Communities, n.d.). **45% of Lake Arrowhead's residents work outside of Lake Arrowhead**, and have an **average commute time of 38 minutes** (U.S. Census Bureau, 2019 - 2023).

Employment centers in Lake Elsinore are primarily located along the south/west side of I-15 and in two complexes near the lake. While the large cluster of parcels by the northeastern portion of the lake are relatively close (as the crow flies) to a large industrial complex, vehicular access is limited, and few bus lines connect these parcels to employment centers. The majority of parcels are not close to an employment center or a bus stop. This dynamic is unsurprising given that the average commute time for Lake Elsinore residents is above 40 minutes; about 73% of residents work outside of the City of Lake Elsinore (U.S. Census Bureau, 2019 - 2023).

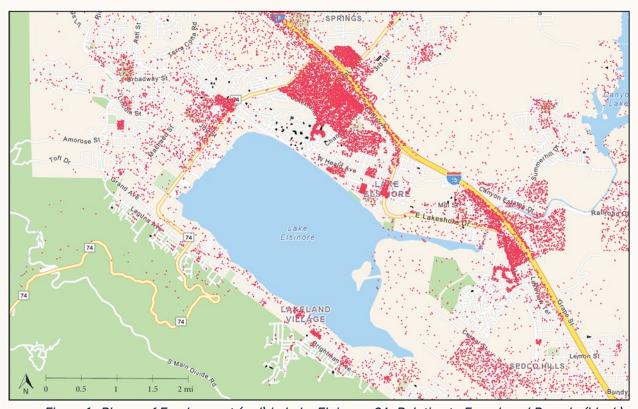


Figure 1. Places of Employment (red) in Lake Elsinore, CA, Relative to Foreclosed Parcels (black)

<sup>&</sup>lt;sup>3</sup> Note that the LODES data used to map out work-based employment is for 2022, and the tax foreclosed parcels are from the 2025 auction.





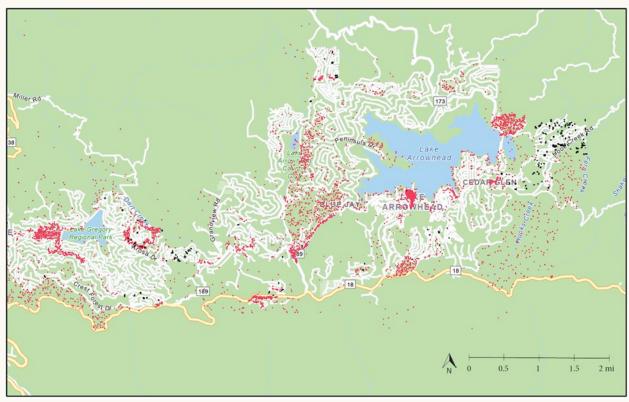


Figure 2. Places of Employment (red) in Lake Arrowhead, CA, Relative to Foreclosed Parcels (black)

Land banking strategies in areas with limited local employment may need to be paired with complementary policies, such as targeted housing subsidies or regional transit connections to areas with a large number of employers, to ensure that acquired parcels can realistically support residents' housing and economic stability.

#### Fire Hazard

Environmental risks, particularly fire hazard severity, are critical for understanding both development constraints and long-term safety considerations. Assessing the spatial relationship between tax-foreclosed parcels and high-risk zones helps identify areas where land banking may help prioritize risk mitigation and resilient development.

Fire Hazard Severity Zones are developed by CalFire using models that predict fire likelihood and fire behavior (Fire Hazard Severity Zones, 2025). Fire Hazard Severity Zones classify areas into moderate, high, or very high fire hazard potential. High and very high Hazard Zones in relation to Lake Elsinore and Lake Arrowhead (with fore-closed parcels in black) are included as Figure 3 and 4, respectively. Unfortunately, in both Lake Arrowhead and Lake Elsinore only a handful of parcels reside outside of the very high hazard severity zone. The **overwhelming majority (over 90%) of tax foreclosed parcels in Lake Elsinore and Lake Arrowhead are within the very high hazard severity zone**.







Figure 3. Fire Hazard Severity Zones (red denotes "very high"; orange denotes "high") in Lake Elsinore, CA, Relative to Foreclosed Parcels (black)

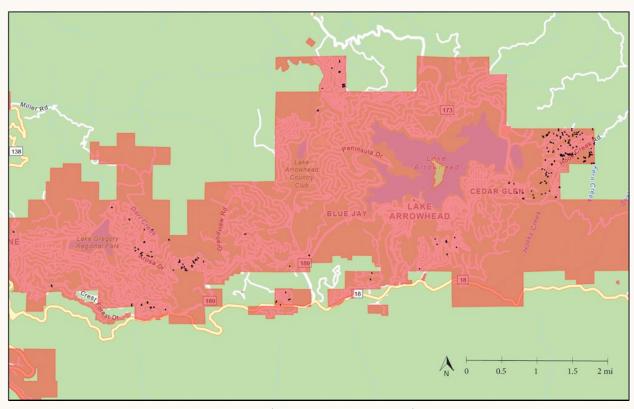


Figure 4. Fire Hazard Severity Zones (red denotes "very high") in Lake Arrowhead, CA, Relative to Foreclosed Parcels (black)





Although somewhat speculative, **land banking in high-risk areas may allow communities to proactively manage hazard exposure**, either by holding parcels for low-density or open space uses, or by integrating fire-resistant development strategies to help ensure that new housing investments are safe and sustainable.

#### **Public Transportation**

Access to public transportation is another important consideration that shapes the potential success of affordable housing developments. Evaluating transit availability near clusters of tax-foreclosed parcels highlights whether land banking in these locations could support households without reliable forms of private transportation.

Figures 5 and 6 show transit routes and stops (in blue) in relation to tax foreclosed parcels (in black) in both Lake Elsinore and Lake Arrowhead. In Lake Elsinore, approximately a third (33%) of the tax foreclosed parcels are within a quarter mile<sup>4</sup> of a bus stop; in Lake Arrowhead only 10% of parcels are within a quarter mile<sup>5</sup>. Although there are some public transportation options, there is generally poor transit access in these communities, and in the Inland Region more broadly. It is important to note that this analysis does not address the availability of sidewalks or bike lanes connecting residential areas to stops, and also doesn't address service frequency nor extent of the bus routes.



Figure 5. Public Transit Routes and Stops in Lake Elsinore, CA, Relative to Foreclosed Parcels (black)

<sup>&</sup>lt;sup>5</sup>This includes all parcels and not just ones with a residential designation.





<sup>&</sup>lt;sup>4</sup> Determined as the crow flies, not by a network analysis of a quarter mile.



Figure 6. Public Transit Routes and Stops in Lake Arrowhead, CA, Relative to Foreclosed Parcels (black)

Where transit access is limited, land banking could be coupled with investments in mobility infrastructure or strategically located housing to connect residents to employment centers and essential services, increasing the overall impact of acquired parcels.

Taken together, these contextual factors demonstrate that the feasibility and potential impact of land banking extend beyond foreclosed parcel counts and are contingent on the surrounding economic, environmental, and infrastructural conditions. Understanding these dynamics in Lake Elsinore and Lake Arrowhead provides a foundation for assessing where land banking could be most effective, as well as what complementary strategies may be needed to support successful redevelopment and housing stability.



# Insights from Tax Delinquency Patterns & Implications for Potential Land Banking Opportunity

While the previous sections examined local conditions, the distribution, frequency, and status of parcels listed for tax sale across both counties provides an additional, complementary lens for policy and planning. The proof-of-concept exercise above focused only on a single year, but **historical data reveals areas with consist-ently high concentrations of tax-delinquent parcels**. Identifying locations that repeatedly appear on tax sale lists or exhibit persistently high parcel volumes offers meaningful **insight into where land banking may present the greatest opportunity to return properties to productive use**.

Tax foreclosure data can reveal not only where parcels are concentrated, but also the persistence of tax delinquency over time and the outcomes of these auctions. Analyzing trends in listings, redemption rates, and auction results helps better understand how land banking could stabilize neighborhoods, support affordable housing, and reduce housing instability. The following subsections focus on Riverside County and San Bernardino County, highlighting differences in parcel patterns, status outcomes, and implications for potential land banking efforts.

#### **Tax Delinquency in Riverside County, 2017-2025**

Using the tax sale outcomes records available from Riverside County, we analyzed both the frequency of appearance on tax sale lists (i.e., how often a city had many parcels for sale) and the total number of parcels listed over the study period and identified the following cities or Census-Designated Places (CDP) for further investigation:

- Lake Elsinore
- Cabazon
- Menifee
- Wildomar
- Desert Hot Springs

Lake Elsinore consistently ranked among the top five jurisdictions with the highest number of parcels offered at tax sale, appearing in this category in five of the nine years examined. Parcel counts in Lake Elsinore varied substantially by year, with at least 100 parcels added to auction lists between 2018-2022, hitting a peak in 2021 with over 300 parcels, and a low in 2024 with just over twenty. Only Cabazon rivaled the number of parcels in 2020, at just under 300.

<sup>&</sup>lt;sup>6</sup> Exact values are not reported due to potential inaccuracies arising from the digitization process.







Figure 7. Tax Delinquent Parcels Listed for Sale on the Northeast Shore of Lake Elsinore in Lake Elsinore, CA, 2017-2025

In Figure 7, parcel plots for each year between 2017-2025 are represented in a different color in a single map. Notably, very few parcels appear in multiple years (see Appendix C: Tax Delinquent Parcels Listed for Auction on the Northeast Shore of Lake Elsinore, CA by year, 2017-2025).

#### Redeemed Status & Policy Relevance

In Riverside County historical tax foreclosure data, each parcel has one final status (e.g., closed, redeemed, canceled, etc.). Parcels with "Redeemed" status indicate that all debt tied to a parcel had been paid. Highlighting this status may help identify and analyze the link between tax foreclosure and housing instability, and may aid in identifying areas for policy intervention, such as preemptive assistance to prevent parcels from reaching auction.

Surprisingly, parcels with Redeemed status represent a significant share of the total outcome options (see Figure 8). In 2024 alone, about 75% of the parcels that were listed for tax sale were redeemed. It was also notable that the percentage of redeemed parcels generally increased over time. Although other external factors likely contribute, this trend warrants further study to determine which interventions, policies, or programs, if any, may influence redemptions (e.g., notification methods, educational campaigns about impact to personal assets/personal tax liability, etc.).

The supplemental Riverside County <u>Tax Delinquent Parcel Dashboard</u> uses the "Redeemed" status as a filter to help clearly identify these parcels.





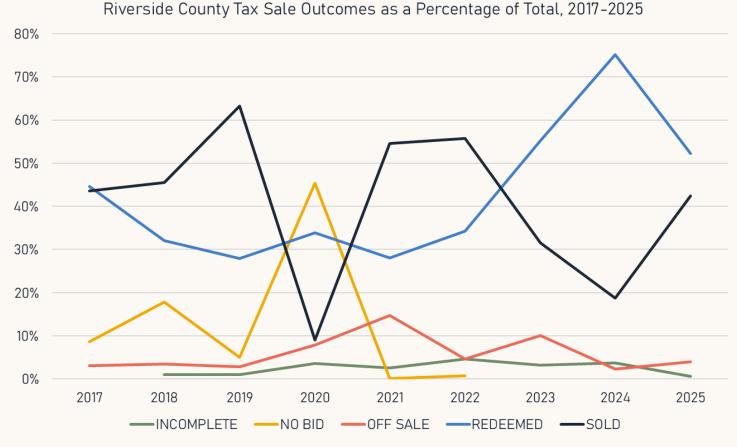


Figure 8. Tax Sale Outcomes as a Percentage of Total, Riverside County: 2017 - 2025

Future analyses may benefit from combining the redemption filter with aerial imagery, allowing for clearer differentiation between developed and undeveloped parcels, especially within residential zones.

#### **Tax Delinquency in San Bernardino County, 2014-2024**

A similar analysis was conducted for San Bernardino County, focusing on the number of unique mentions of parcels within CDPs. From this, the **following areas were identified as top contenders for further investigation**:

- Lake Arrowhead
- Crestline
- Twentynine Palms
- Big Bear

For San Bernardino County, identifying a fifth area of interest is somewhat more challenging than for Riverside County. If the only criterion were the number of times a CDP appeared in the top-five rankings across the study period, Big Bear Lake would qualify. However, Apple Valley accounted for over 200





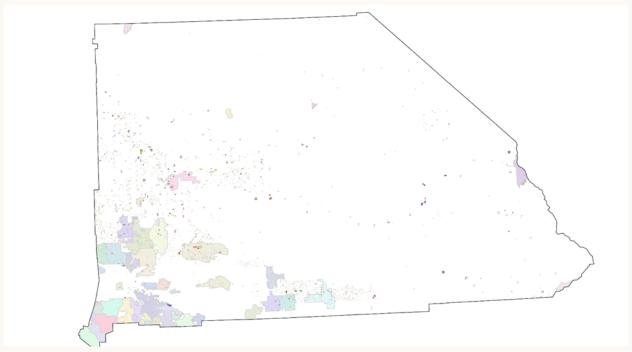


Figure 9. CDP Boundaries with Color Added; White Space is Anything Outside of a CDP

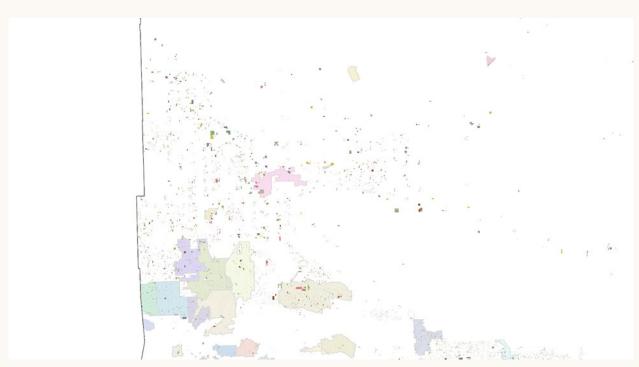


Figure 10. Zoom-in of the Central Portion of the Western San Bernardino County





parcels in 2015, ranking ninth across all years, and Victorville had the largest parcel count in 2016, followed by Lake Arrowhead in 2015. Lake Arrowhead and Crestline consistently ranked highest for most parcels listed for tax sale, with Lake Arrowhead leading almost every year (excluding 2020, when there were no tax sales held) and Crestline consistently second from 2018-2024. **Unlike Riverside County, there were a significant number of parcels in San Bernardino County that appeared outside the CDP boundaries**.

Figures 9 and 10 illustrate San Bernardino County's CDP boundaries and highlight parcels in the non-CDP areas of the County. Non-CDP parcels are concentrated primarily in the Western half of the County. Future study should consider sub-regions (e.g., high desert versus the low desert, Morongo Basin, etc.), re-running the analysis using both CDP and sub-region boundaries to better capture these patterns.

Additionally, while we conducted a methodologically similar analysis to that done for Riverside County in terms of identifying counts and years, there was a key difference in the data itself: the data from Riverside County was already cleaned and aggregated such that there was the final outcome per parcel for that year, whereas the data from San Bernardino County came directly from custom Tax Collections extractions, and were thus significantly more detailed. Due to time constraints and the information about sub-debt coding, we opted to flatten the data to aggregate all Assessor Parcel Number (APN) sub-debt into a single APN, and removed all movement on any sub-debt into a binary mention/no mention.

Unfortunately, there was **no similar status flag in San Bernardino County's data to the "Redeemed" status that exists in Riverside County's auctions**. The closest parallel is the **"Canceled" flag, which includes any parcel where the debt was paid off**, but also may include any other reason why a parcel was pulled from the auction - including insufficient data, a clerical error, bankruptcy, etc.. Although we could not conduct a facsimile redemption analysis for San Bernardino County, we were able to perform a more limited analysis examining the rates of parcels coded as "Canceled" or "Closed," excluding those identified as timeshares.<sup>7</sup>

"Cancelled" parcels were filtered to include only those appearing at least three times across the auction data<sup>8</sup>, then assessed to determine whether the parcel fell within CDP boundaries. The **majority of "Canceled" parcels fell within CDP boundaries**, though there were only a handful within each CDP boundary. The notable exception was Apple Valley, which accounted for about two-thirds of the entire list for which "Canceled" showed up as the status at least three times out of all auction data.

A similar approach was applied to parcels with "Closed" status, which indicate auctions that concluded without a sale. Compared to "Canceled" parcels, there were **roughly three times the number of parcels that fell into the "Closed" category**. Lake Arrowhead—which also had the greatest number of parcels up for Tax Sale

<sup>&</sup>lt;sup>8</sup> Note that San Bernardino holds multiple auctions a year, so one year could potentially yield two "Cancelled" statuses for a single parcel in a single year, complete precision cannot be guaranteed.





<sup>&</sup>lt;sup>7</sup> Timeshares were excluded as the debt on timeshares is coded as a portion of the unit/parcel. Further analysis could identify if all shares in a timeshare development are up for auction, at which point there is the potential for the entire development to be redeveloped/repurposed.

for the majority of years analyzed–accounted for one-third of parcels with a "Closed" status, with Big Bear City, Twentynine Palms, and Yucca Valley contributing, though with fewer parcels. The supplemental <u>San Bernardino County Tax Parcel Dashboard</u> includes a dedicated APN filter, a searchable table of "Canceled" and "Closed" parcels, and a separate layer for parcels that have "Closed" as the auction outcome for at least three auctions over all years.

Further analysis could help clarify patterns for San Bernardino's 'Cancelled" parcels. We recommend additional conversations with the Assessor's Office to understand the auction process and whether it is possible to pull further, relevant information (e.g., whether the parcel debt was paid off, if owners filed for bankruptcy, etc.).

Overall, the historical analysis of tax-foreclosed parcels in Riverside and San Bernardino counties highlights both recurring patterns and important differences across geographies, data availability, and parcel outcomes. While Riverside County provides a clear redemption signal through "Redeemed" status, San Bernardino County requires a more nuanced approach using "Cancelled" and "Closed" flags, and both counties show variation in parcel concentrations across years and locations. These findings underscore that while clusters of tax-delinquent parcels may suggest potential opportunities for land banking and other housing interventions, eligibility, land use, and data limitations must be carefully considered. The insights gained from this analysis lay the groundwork for a targeted approach to future research, including refined geographies, parcel status tracking, and potential interventions to prevent housing instability before parcels reach auction.

#### **Key Caveats & Considerations**

Several caveats are important for interpreting these historical findings. First, depending on the specific policies and procedures adopted by a future land bank, the **presence of clusters of tax-delinquent parcels does not** *necessarily* **indicate that these properties would be eligible for acquisition**. Even where clear clusters of parcels appear at tax sale, there may be limitations on how many are actually accessible. Second, this **analysis was only run on cities and Census-Designated Places** and thus does not cover any clusters that may exist elsewhere in the county.

Third, the historical tax-foreclosed parcels were not filtered for a specific land use; this analysis covers the entirety of the tax sale list, and not only property with a current residential land use/zoning designation. Parcel identifiers were matched against the current Riverside County parcel file, so data should be interpreted carefully as parcel information changes constantly. Additionally, the greater the gaps between the data year and the parcel map year, the greater potential for inaccuracy in the resultant analysis.<sup>9</sup>

<sup>&</sup>lt;sup>9</sup> Tax sale data was digitized from the original PDF via a combination of OCR and a LLM. While the data were spot-checked for accuracy, complete precision cannot be guaranteed.





# Leveraging Case Studies to Identify Land Banking Opportunity & Housing Policy Interventions in the IE

The findings from this proof-of-concept analysis point to several localities in the Inland Empire with higher concentrations of tax-delinquent parcels and these areas provide a logical starting point for a deeper case-study approach that can ground innovative housing policy strategies, like land banking, in real, place-specific conditions. A focused case study would allow researchers and practitioners to move beyond broad, regional trends to examine parcel development, neighborhood conditions, and market dynamics at a level of detail that is operationally meaningful for policymakers, practitioners, and community partners working in this space.

A central priority for the next phase of work is strengthening the data infrastructure needed to evaluate an effective land banking strategy. This includes access to standardized and comprehensive parcel outcome data, as well as developing consistent, longitudinal datasets that track parcel trajectories. Collaboration with county assessor and tax collection offices will be essential to clarify key distinctions, including whether parcels are developed and the pathways by which parcels become tax delinquent.

Data permitting, future work should also **incorporate additional sources that enhance the ability to identify patterns of parcels** in distress and assess redevelopment potential. **Code enforcement data** is particularly valuable for distinguishing between minor, episodic violations and chronic property distress, which helps to pinpoint concentrations of parcels where intervention may be the most impactful. Integrating **aerial imagery analysis** would further support clearer identification of improvements and built structures, while access to **utility data** could shed light on patterns of vacancy and under-occupancy - distinguishing, for example, between abandonment, intermittent use (e.g., second homes, vacation rentals), and stable residential occupancy.

Locality-specific case studies also create space for the examination of contextual factors in a more holistic manner. Subregional analyses, especially in San Bernardino County's extensive non-CDP areas, could reveal patterns that remain obscured at broader geographic scales, including multi-year clusters of delinquency, repeated entries onto tax sale lists, and neighborhood-level demographic and economic trends. This level of granularity may help identify communities experiencing persistent structural challenges where land banking or complementary interventions could be most beneficial.

Finally, a case-study approach is well positioned to explore how land banking (or any such form of innovative housing policy) might be paired with complementary tools, such as zoning reform, infrastructure upgrades, community land trusts, or other strategic investments. Understanding how these tools





operate within specific communities will help policymakers and practitioners design integrated, regionally appropriate strategies.

Together, these next steps—expanded data infrastructure (particularly fuller integration of contextual data), enhanced parcel-level analysis through locality-focused case studies—would significantly improve the capacity to determine whether land banking is feasible and where it would be most likely to generate long-term community benefit.



## **Conclusion**

This analysis demonstrates that land banking holds meaningful potential as a strategic tool to support affordable housing production and neighborhood stabilization in the Inland Empire, but its effectiveness depends heavily on local context, data clarity, and coordinated policy action. By examining parcel-level tax foreclosure patterns across Riverside and San Bernardino counties and situating these parcels within broader demographic, environmental, and infrastructural conditions, the study highlights both the opportunities and limitations inherent in leveraging tax-delinquent properties for community benefit.

The findings show that **while clusters of tax-foreclosed parcels exist**, particularly in communities such as Lake Elsinore and Lake Arrowhead, **these clusters do not necessarily translate into development-ready opportunities**. Many parcels are located in high fire hazard zones, lack transit access, fall under incompatible zoning, or are situated in areas with limited infrastructure or low market demand. These constraints illustrate that land banking alone is insufficient to address the region's complex housing challenges and that complementary investments and policy reforms are essential for any land acquisition strategy to succeed. Differences in parcel outcomes across counties further emphasize the need for enhanced data systems and interagency coordination. Riverside County's high proportion of redeemed parcels suggests that tax delinquency may be a valuable early indicator of housing instability and an area for targeted intervention before properties reach auction.

Future research in this area should **focus on strengthening the underlying data infrastructure** needed to support any land banking strategy in the Inland Empire. A clear priority is improving access to standardized and comprehensive parcel outcome data across both counties. Collaboration with county assessor and tax collection offices could clarify these distinctions and support the development of consistent, longitudinal datasets that track parcel trajectories over time. Additional work is also needed to differentiate developed from undeveloped parcels, particularly through the integration of aerial imagery to better assess which sites may be viable for novel affordable housing.

Further research should also examine how contextual factors influence the feasibility and desirability of using land banking in specific communities. More granular, subregional analyses, especially in San Bernardino County's extensive non-CDP areas, could reveal patterns of tax delinquency and parcel distress that are not visible at broader geographic scales. Likewise, longitudinal studies that assess multi-year parcel clusters, repeat appearances on tax sale lists, and neighborhood-level demographic or economic trends would help identify which areas face persistent structural challenges and may benefit most from intervention. Exploring how land banking might be paired with complementary tools, including zoning reform, infrastructure upgrades, community land trusts, or targeted mobility investments, would also provide policymakers and practitioners with clearer guidance on how to design integrated, regionally appropriate strategies. Together, these continued research efforts can help build a more complete understanding of if—and, if so, where—land banking can have the greatest and most efficient impact.





Ultimately, this study provides a foundational, proof-of-concept framework for identifying priority geographies, understanding recurring patterns of property distress, and assessing the feasibility of land banking within diverse community contexts. The insights gained here can inform more detailed future analyses, deeper cross-jurisdictional collaboration, and the development of targeted strategies that align land acquisition with broader housing, equity, and community resilience goals. As the Inland Empire continues to confront rising housing pressures and widening disparities, land banking can offer a promising tool for shaping long-term, community-centered solutions.



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# **Appendix A: Data Source Detailed Tables**

### **Dataset Details, Core Layers**

Name	Last Update	Source Name	Notes
San Bernardino County Parcels	April 2025	SB County Parcel Viewer	No longer updating, Deprecated by SB county
Riverside County Parcels	September 2023	Parcel CREST	Live Connection to server. Source layer is managed by Riverside, Connected layer to Tax Foreclo- sure list breaks source link.
Tax Foreclosure List Riv- erside	July 2024	Inventory of Parcels Subject to the Power of Sale	Updated yearly. First date of publication for a 5-year delinquent parcel is July 1st
Tax Foreclosure List San Bernardino	May 2025	SBCounty.Mytaxsale.com	Update for each new tax sale, 1-4 per year. Requires a free account to access files.

#### **Dataset Details, Context Layers**

Name	Last Update	Source Name	Notes
Fire Hazard Severity Zones	March 2025	FHSZLRA25 1 Phase4_v1_gdb	Geodatabase provided directly by CalFire in an email.
CalEnviroScreen4.0	February 2022	CalEnviroScreen 4.0 Results	Hosted by OEHHA, Live connection to map. Documentation
CalEnviroScreen4.0: Ozone & PM2.5	February 2022	CalEnviroScreen 4.0 Results	Satellite and sensor measure- ments, raw scores, CARB limits <u>PM2.5</u> and <u>Ozone</u>
CalEnviroScreen4.0: % Low Educational Attain- ment	February 2022	CalEnviroScreen 4.0 Results	Percent of Census Tract individuals 25 years or older with less than high school education.
CalEnviroScreen4.0: % Low Income Extremely Housing Burdened	February 2022	CalEnviroScreen 4.0 Results	Census tract households making under 80% HAMFI & Spending 50% of income in housing.



ACS-5Y Rent Burdened Households	2023	<u>US Census - Table B25071</u>	Households paying above 30% of yearly income in rent.
1000 ft Industrial Buffer Riverside	May 2025	Riverside County Parcels in Core Layers.	From inclusion of all Riverside County Parcels for which CLASS_CODE (zoning designation) included any industrial, warehous- ing, or manufacturing use. 5,576 parcels identified.
1000 ft Industrial Buffer San Bernardino	May 2025	San Bernardino County parcels in Core Layer	From inclusion of San Bernardino county parcels for which AS-SESS_CLASS or AS-SESS_DESCRIPTION included any industrial designation excluding industrial mixed with residential zoning.
National Transit Map Routes	April 2025	US Department of Transporta- tion	Not directly connected to source layer
National Transit Stops	May 2025	Bureau of Transportation Statistics	Direct from hosted feature layer
National Transit Buffers	May 2025	Calculated from National Transit	¼ mile dissolve buffer, approximates 5-minute walk to nearest stop.
Treasury Qualified Op- portunity Zones	March 2025	Treasury Department	Direct from hosted feature layer
Major Employment Cen- ters	2022	<u>US Census, LEHD</u>	CSV downloaded from policy maps and published as a web layer through ArcGIS pro.
State Excess Surplus Land Parcels	2025	Housing and Community Development DGS	Only three parcels within the Inland Empire available and not on offer.





# **Appendix B: Mapping Suite**

#### **Proof of Context Land Banking Dashboard - Dual County**

This dashboard is a companion to a report produced by the Center for Community Solutions at the University of California Riverside, that explores the potential for land banking in Riverside and San Bernardino counties to help address housing needs. The dashboard contains 2025 tax foreclosure parcel data for Riverside and San Bernardino counties, Demographics (including educational attainment and employment locations), environmental factors (including 2025 CalFire severity zones), transit information (routes & stops), government information (opportunity zones and political boundaries).

**Interpretation Guidance:** The corresponding online maps that provide the foundation for this report, accessible at the link above, incorporate additional spatial context including fire hazard severity zones, transportation networks, qualified opportunity zones, and demographic data to situate land banking for affordable housing in the context of the Inland Empire. The maps, while informative, should serve as a proof-of-concept, demonstrating the potential utility of compiling and visualizing key data to understand the potential opportunity for land banking. While the project includes multiple components designed to explore trends and inform discussion, it is not intended to be comprehensive, up-to-date, or suitable as a standalone decision-making tool. Users should interpret findings as indicative rather than definitive, and supplement with additional sources and expert judgment where appropriate.

#### <u>Historical Tax Foreclosure Dashboard - Riverside County</u>

The Riverside County Historical Tax Foreclosure Dashboard contains parcels added to public auctions lists from 2017 to 2025. The map additionally includes a redemption filter, and additional development considerations, like fire hazard zones, local education options, and locations of employment. You can additionally see parcel counts for localities by year.

**Interpretation Guidance**: The data displayed on this map are derived from Riverside County's publicly available Tax Sales records, linked to a current Riverside County address parcel map. As such, not all parcels included on the historical tax sales records are shown here, and the accuracy decreases the older the tax sale data gets due to regular changes to parcel lines. Additionally, the Tax Sales records files were digitized using a combination of OCR and an LLM, which results in inconsistencies.

#### <u>Historical Tax Foreclosure Dashboard - San Bernardino County</u>

The San Bernardino County Historical Tax Foreclosure Dashboard contains parcels added to public auctions lists from 2014 to 2024. The map additionally includes a canceled/closed filter, and additional development considerations, like fire hazard zones, local education options, and locations of employment. You can additionally see parcel counts for localities by year.

**Interpretation Guidance:** The data displayed on this map are derived from San Bernardino County's Tax Sales records (received from the Tax Collector's Office), joined to a 2020 vintage and a current San Bernardino County parcel map. As such, not all parcels included on the historical tax sales records are shown here, and the accuracy decreases the older the tax sale data gets (due to regular changes to parcel lines). No tax sales were held in 2020.





# Appendix C: Tax Delinquent Parcels Listed for Auction on the Northeast Shore of Lake Elsinore, CA by year, 2017-2025

