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Western Riverside County Plug-in Electric Vehicle Deployment Plan



Prepared for
the Southern
California
Association of
Governments

June 2013

Western Riverside County Plug-in Electric Vehicle Deployment Plan

About this Document

This document was prepared for the Southern California Association of Governments (SCAG) by J.R. DeShazo, Ayala Ben-Yehuda, Norman Wong and Vicky Hsu of the UCLA Luskin Center for Innovation. It constitutes the final PEV deployment plan for Western Riverside County as Deliverable 27 of SCAG contract 12-021-C1 to support regional planning for plug-in electric vehicle (PEV) adoption. SCAG is coordinating a multi-stakeholder group of government agencies, utilities, and university researchers to prepare multi-faceted and interdisciplinary regional PEV readiness plans. Among other purposes, these plans will help illuminate and guide strategic infrastructure investment, PEV-related economic development, and supportive policy design in Southern California.

Disclaimer

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Acknowledgements

We thank the Southern California Association of Governments, the South Coast Air Quality Management District, U.S. Department of Energy, and the California Energy Commission for support of this project. In particular, we thank Marco Anderson of SCAG, Patricia Kwon of SCAQMD, the Western Riverside Council of Governments and the other governmental and utility members of the SoCal PEV Coordinating Council for their guidance and assistance. We also thank the University of California Office of the President Multicampus Research Programs and Initiatives for its support.

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Table of Contents

I. Introduction	2
II. PEV demand in Western Riverside County	6
III. Supply of PEV charging spaces: a land use/parking inventory	7
Steps and assumptions in the land use/parking inventory.....	8
Subregional and municipal PEV planning with the land use inventory	9
Parking opportunities in Western Riverside County.....	9
IV. MUD charging opportunities: a parcel-level analysis	14
Panel size.....	16
Energy efficiency.....	16
Parking configuration.....	16
Conclusions	18
V. Workplace charging	18
Assessing the workplace charging opportunity	19
Conclusions	21
VI. Retail charging	21
Evaluative criteria for the selection of retail charging sites	24
Sites and areas with high potential demand for charging	24
Typical dwell times.....	26
Charging in stand-alone parking facilities.....	27
Conclusions	27
VII. References	27

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I. Introduction

The market for plug-in electric vehicles (PEVs) is just beginning to emerge in Western Riverside County. At the end of 2012, the subregion was home to 574 PEVs, a number that is expected to grow to over 49,000 by 2022.¹

The Western Riverside Council of Governments (WRCOG) has engaged in planning studies of PEVs and neighborhood electric vehicles (NEVs). This document supports those efforts with an analysis of the potential supply of, and current demand for, PEV charging opportunities in Western Riverside County.

The Western Riverside County PEV deployment plan is a subregional complement to the Southern California Regional PEV Readiness Plan and Atlas (DeShazo et al. 2012). These regional planning documents introduce examples of spatial analysis of PEV charging supply and demand. They present guidelines for prioritizing PEV planning efforts according to local land use opportunities as well as maps of PEV registrations and travel patterns at the subregional level.

This document and its accompanying Appendix localize these spatial analyses by providing:

- Inventories of land uses at the subregional and municipal level to help prioritize PEV planning efforts at three types of locations: multi-unit dwellings (MUDs), workplaces, and commercial/retail centers;
- An evaluation of the suitability of hundreds of individual parcels to host PEV charging using criteria that represent supply of parking spaces, the relative cost of installing chargers, and parcel-level demand for charging; and
- Maps of PEV registrations and travel patterns to daytime destinations within 17 WRCOG cities.

The Western Riverside County PEV Deployment Plan will also serve as a model for PEV planning in other outer-suburban, less dense and more recently developed areas in Southern California. Subregional planning organizations, also known as councils of government (COGs), have an important role to play in PEV planning. They can provide technical assistance to local governments and even implement PEV plans in the absence of dedicated staff at the local level. They can maximize the benefit of PEV planning to local drivers by leading efforts to standardize, share knowledge, and extend PEV planning to groups of

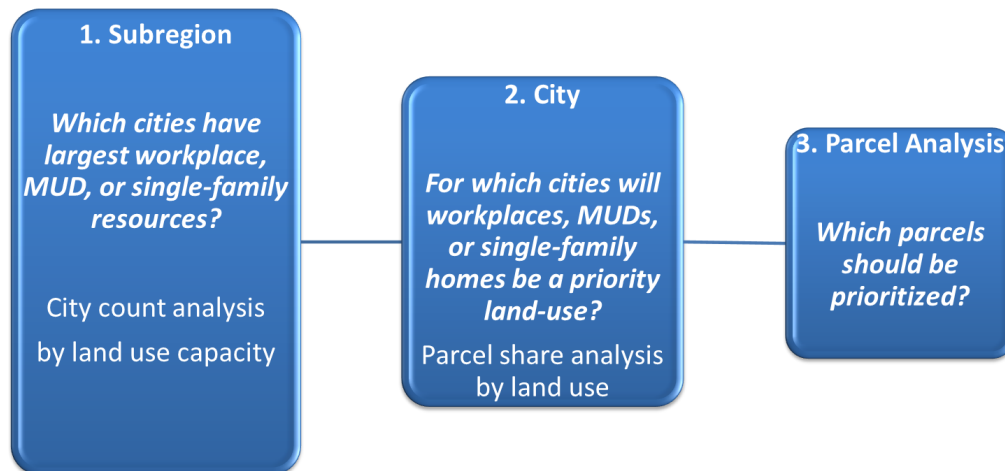
¹ UCLA Luskin Center forecast based on 2012 PEV registrations derived from R.L. Polk & Co. dataset. We define a PEV as any fully electric vehicle (including low-speed neighborhood electric vehicles and electrified trucks) or a plug-in hybrid electric vehicle (PHEV). The PHEV models counted in this analysis are the Chevrolet Volt, Toyota Plug-in Prius, Ford C-Max Energi and Fisker Karma.

neighboring cities. The Western Riverside County PEV deployment plan will demonstrate how COGs can prioritize PEV planning efforts according to dominant land uses and target cities that provide the largest numbers of charging opportunities in those land uses.

Municipal planners can also use the land use inventories and parcel suitability analyses presented here to prioritize PEV planning efforts at the local level. Municipal planners have the ability to target locally-dominant land uses for PEV-ready reforms to building and zoning codes, permitting processes, and parking and signage standards. They can also use the criteria presented here to prioritize specific locations for outreach to employers, property owners and retailers who may wish to provide PEV charging on site. Utilities can also benefit from an understanding of where demand for PEV charging is likely to grow during daytime and nighttime hours so that they can manage electricity loads and prioritize investments in transformer and distribution station upgrades.

Figure 1 describes how planners at different levels of government can use the different levels of analysis provided in this plan.

Figure 1. Levels of PEV planning supported by the Western Riverside County PEV Deployment Plan



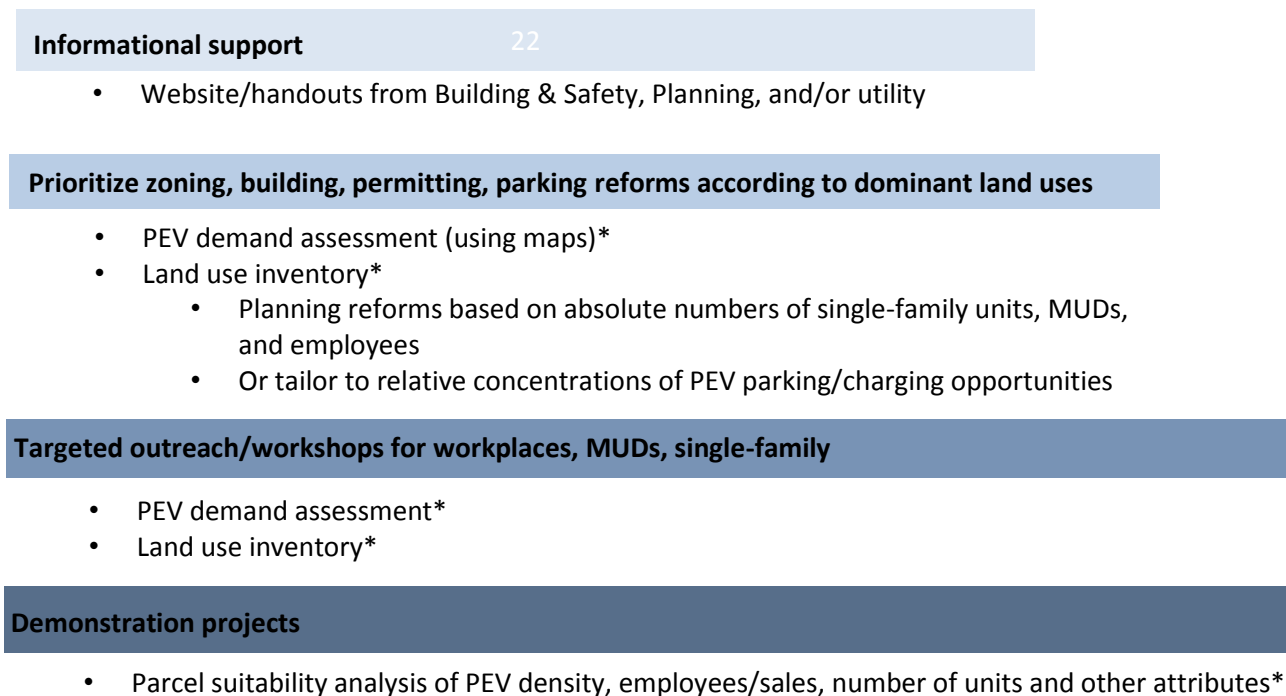
In addition to informing the placement of charging stations, the land use inventories, parcel suitability analyses and maps presented in this plan support the targeting and prioritization of four major planning activities that can have a significant impact on PEV adoption:

- **Zoning codes.** Land use regulations are the most powerful tool cities have to incentivize certain types of development, including placement of charging stations. Designating PEV charging as a land use will help ensure that different charging levels carry the appropriate type of planning review for the zones in which they are located. Developers can also be encouraged to incorporate PEV charging spaces by allowing the spaces to count towards minimum parking requirements or in exchange for other incentives such as density bonuses.

- **Building codes.** By updating building codes to require PEV-ready wiring in new construction, cities can help meet future demand for charging and reduce or eliminate the costs associated with later retrofitting.
- **Permits and inspections.** Local jurisdictions are instrumental in reducing the cost, time and uncertainty associated with installing PEV charging equipment. Cities should minimize redundant or unnecessary levels of review and notification wherever possible. A streamlined permitting and inspection process can reduce the overall cost of installation and encourage compliance with safe permitting and installation procedures.
- **Parking and signage.** Local jurisdictions have leeway in determining signage on surface streets, providing a certain number of PEV-ready parking spaces, and ensuring disabled access. Parking and signage policies can assist with cost recovery, accessibility to disabled drivers, facilitating turnover at charging stations, and making stations more visible and easy to locate.

The planning exercises described above can be undertaken as part of a continuum, or “ladder,” of PEV deployment plan implementation and stakeholder engagement activities. Planners can begin with more passive efforts that grow into more active projects, as shown in Figure 2 below. Each highlighted implementation effort is followed by a supporting activity or analysis, most of which have been undertaken in this document.

Figure 2. Ladder of PEV planning activities supported by the Western Riverside County PEV Deployment Plan



* Provided in this document.

Step 1: Informational support. This serves stakeholders, such as single-family residents and employers, who are already interested in purchasing PEVs or installing charging equipment. Local jurisdictions can provide information on vehicle types, potential cost savings from PEV driving, electrical service, and the charging equipment installation process through passive means such as a website and/or handouts from utilities and the Building & Safety or Community Development Department.

Step 2: Prioritize planning reforms according to dominant land uses. Planners wishing to proactively plan for PEVs should use the maps and land use inventories presented in this document to prioritize dominant land uses for planning reforms. Planners at the COG level can target cities based on absolute numbers of parking opportunities at single-family homes, multi-unit dwellings, and workplaces, or target technical assistance to cities with high shares of parking opportunities at particular land uses. Municipal planners can target land uses that dominate locally for planning reforms as well as neighborhoods that demonstrate high PEV charging demand on the maps provided in the Appendix.

Step 3: Targeted technical assistance, workshops and outreach. Planners may want to approach high-value stakeholders who may be less aware of the technical or procedural aspects of installing charging and using PEVs or who may require more detailed decision support.

Local jurisdictions can host workshops for general or targeted audiences such as drivers, homeowner associations (HOAs), property owners/managers, and renters for residential charging; or for employees, employers, fleet managers, or retailers for non-residential charging.

Many potential hosts may not be interested in installing PEV charging until their employees, tenants or patrons demand it. Actively engaging large employers or property owners in the decision-making process or providing information specific to their needs can facilitate the installation of charging and use of PEVs at their site as the market matures.

Step 4: Demonstration projects. Public agencies and utilities can partner up to install charging equipment via demonstration projects in particularly challenging areas such as multi-unit dwellings.

What follows are an analysis of PEV demand in the Western Riverside County subregion; an estimate of the relative size of the single-family, MUD and workplace charging opportunities in Western Riverside County; and rankings of workplace, retail, and MUD locations across Western Riverside County that are located in neighborhoods of high- and medium-PEV density. The Appendix to this memo contains such rankings for each of the 17 cities in the subregion, as well as maps that display parking opportunities and PEV travel in each WRCOG city.

II. PEV demand in Western Riverside County

To help planners understand the scale of PEV charging demand in the subregion over the next decade, the Southern California Regional PEV Readiness Plan projected the cumulative number of PEVs that will be registered in the subregion between 2012 and 2022. Table 1 shows the numbers of PEVs registered in the Western Riverside County subregion as of December 2012, followed by growth projections to 2017 and 2022. The numbers were calculated from disaggregated registration data purchased from R.L. Polk & Co., an automotive data vendor. The 2012 counts reflect vehicles newly registered from December 2010, when the Chevrolet Volt and Nissan LEAF were introduced, through December 2012.

The baseline growth estimate is based on the annual North American growth rate of standard Toyota Prius hybrid sales beginning in 2000. This growth rate is the baseline because standard hybrids, a product type dominated early on by the Toyota Prius, can be considered parallel in many ways to plug-in hybrid electric vehicles (PHEVs). PHEVs, which comprised 77% of the PEVs newly registered in the Western Riverside County subregion as of December 2012 according to data from R.L. Polk & Co., are similar to standard Toyota Prius hybrids, except with a plug-in battery. The ability to recharge from the grid represents the potential for significant fuel cost savings above a standard hybrid.

The baseline growth rate is a conservative estimate because PEVs are available in many more models than were standard hybrids in the first years after introduction. Because many more PEV models will become available in the coming years, we also present alternative scenarios in which this growth rate is exceeded by 5% and 10%.

Table 1. Projected PEVs in Western Riverside County, 2012-2022

Year	Cumulative PEV registrations		
	Low	Moderate	High
2012	574	574	574
2013	1,148	1,148	1,148
2014*	2,217	2,274	2,296
2015	3,528	3,733	3,884
2016	6,472	7,035	7,512
2017	12,259	13,677	14,981
2018	17,999	20,765	23,493
2019	27,678	32,969	38,476
2020	36,278	44,861	54,277
2021	43,877	56,501	71,074
2022	49,454	66,507	87,215

*The +5 and +10% projections begin in 2014, when uncertainty becomes greater.

Source: R.L. Polk & Co., UCLA Luskin Center projections

A closer look at the PEVs in the Western Riverside County reveals that the majority of them are PHEVs, perhaps due to long commutes to work by PEV drivers who live in the subregion. The trends indicate that slower, low-voltage charging may be a cost-effective solution for homes and workplaces where PHEVs are parked long enough to fully charge using standard outlets instead of dedicated charging units.

Table 2. PEV counts by model and product type in Western Riverside County, 2012

Battery-electric vehicles (BEVs)							Plug-in hybrid electric vehicles (PHEVs)						
Azure Transit Connect	BMW Active E	Ford Focus Electric	Nissan LEAF	Tesla Model S	Tesla Roadster	NEVs	Total BEVs	Chevrolet Volt	Toyota Plug-in Prius	Fisker Karma	Ford C-Max Energi	Total PHEVs	Total PEVs
1	6	1	107	6	1	7	129	261	180	2	2	445	574

Source: R.L. Polk & Co.

Given that PEV consumer studies to date have shown PEV buyers residing almost exclusively in single-family homes, it can be assumed that the current counts largely reflect PEVs charging overnight in this housing type. More than 80% of the housing units in the Western Riverside County subregion are single-family homes.² This represents a substantial opportunity to increase PEV ownership, since the physical and institutional barriers and financial costs of charging in single-family homes are the lowest among all location types (DeShazo et al. 2012).³

III. Supply of PEV charging spaces: a land use/parking inventory

Plug-in electric vehicles charge while parked. Parking spaces are distributed over local land uses such as single-family residential, multi-unit residential, workplaces, and retail establishments. These parking spaces represent the potential *supply* of PEV parking spaces. Every city will have a different number of parking spaces available at these different land uses. An inventory of parking opportunities at different land uses will help planners target and prioritize PEV readiness efforts, and siting of charging stations, according to locally dominant location types.

Understanding the distribution of land uses within a jurisdiction is also helpful because different land uses are also associated with distinctive parking, electrical, and building configurations which can greatly and systematically affect the cost of installing charging equipment on that parcel. Attributes such as MUD building age and whether it is a condominium or apartment can be used as proxies for estimating potential costs (both financial and institutional) of supply. Parcel attributes that represent

² Residential unit counts are based on U.S. Census 2011 American Community Survey 5-year estimates for units in structure. Single-family homes include detached and attached (rowhouse-type) single-family units as well as mobile homes.

³ Guidance for planners on single-family home charging is provided in Chapter 5 of the Southern California PEV Readiness Plan http://164.67.121.27/files/Downloads/luskincenter/ev/PEV_Readiness_Plan.pdf.

potential demand, supply and cost of supply are explained in more detail in later sections, where we present specific parcels that may be particularly suitable for PEV charging across the subregion because they combine such attributes.

In this section, we present a land use and parking inventory of cities in the Western Riverside County subregion. First, we will present the steps and assumptions used in the preparation of the land use inventory. Then we will present the ways in which subregional and municipal planners can use the information provided in the inventory. Finally, we will present the inventory and offer conclusions about the results.

Steps and assumptions in the land use/parking inventory

First, planners must identify the availability of types of residential, workplace and retail parcels that could host charging infrastructure in their jurisdictions. Second, the number of potential PEV parking spaces at each land use type or parcel must be estimated.

Ideally, planners should estimate the number of parking spaces at each land use type in a jurisdiction based on local zoning and building code history (or, even better, a field survey of parking). However, in the absence of more refined information, we make the following simplified assumptions:

- We assume that the number of on-site parking spaces for both single-family and multi-unit dwellings (MUDs) is equal to the number of residential units on a parcel. That is, we assume the potential for one PEV charging space per dwelling unit. While in reality there may be more than one parking space per dwelling unit, the numbers vary by city. In addition, the likelihood of more than one PEV charging per home is low in the early and middle years of the PEV market.
- We count MUDs in terms of individual units (i.e., apartments or condominiums), not buildings, because each unit represents at least one potential PEV space. For MUDs that do not have parking, workplaces and publicly-accessible sites will become important charging options.
- We also assume that there is a parking space for every employee at a workplace.
- The aggregate land use inventories presented here do not separately consider retail (customer) spaces, as there is no reliable estimate available for the number of retail customer parking spaces in each city.

The third step involves deciding which types of land use and parking resources should be targeted and in which order. The fourth step, which involves evaluating and targeting specific parcels within a land use category, will be discussed in Sections IV, V and VI.

Subregional and municipal PEV planning with the land use inventory

PEV readiness efforts and siting of charging stations should be prioritized according to the land uses that offer the highest *number* (across the subregion) or highest *share* (within a city) of potential PEV parking spaces.

Subregional planners will maximize the effectiveness of their resources by prioritizing PEV-ready reforms to zoning and building codes, permitting and signage standards in jurisdictions with the largest **absolute numbers** of the targeted site hosts and/or drivers. In doing so, the policy reforms that are implemented will affect the largest absolute number of prospective charge station site hosts and/or drivers. In order to know which municipalities to target, Western Riverside County planners will need to know how many parking spaces are located at different land uses across member cities.

Municipal planners may wish to know what **share** of parking within their jurisdictions is tied to each land use in order to prioritize PEV planning around those most frequently-encountered land uses. These planning metrics will enable them to assess the relative importance of different land uses within their local PEV readiness plan. For example, a municipality such as Canyon Lake will prioritize single-family charging because this is where more than 80% of all of its parking spaces are by land use. While parking space counts can describe the size of each individual land use opportunity, only data on the shares of land uses can assist the municipal planner in identifying the relative importance of specific land uses.

In the next section, we present both counts and shares of parking by land use within municipalities since these metrics will support both subregional as well as local PEV planning activities.

Parking opportunities in Western Riverside County

Tables 3 – 8 rank each of the Western Riverside County cities by the estimated **number** of parking spaces in each city by land use (single-family, MUD, and employee) as well as the **share** of parking spaces within each city that are represented by a particular land use. While single-family homes represent the dominant parking opportunity in nearly all cities in Western Riverside County, workplace parking represents the majority of parking spaces in four cities (Riverside, Corona, Temecula, and Norco). All cities except for one (Lake Elsinore) have more than half of all parking spaces in either workplaces or single-family homes.

Table 3. Estimated parking spaces by single-family *counts*, Western Riverside County⁴

	Single-Family Count	MUD Count	Employee Count
Riverside	70,331	28,981	137,610
Moreno Valley	45,730	8,377	25,856
Corona	36,245	9,944	56,216
Hemet	27,931	6,936	19,839
Murrieta	27,675	5,526	18,818
Menifee	27,369	1,158	8,776
Temecula	26,840	5,650	42,175
Jurupa Valley ⁵	23,467	3,244	14,666
Perris	15,834	1,912	12,419
San Jacinto	13,397	1,384	6,546
Lake Elsinore	13,257	2,709	10,483
Eastvale	13,080	656	3,899
Banning	12,093	1,581	4,497
Wildomar	9,989	649	3,328
Norco	7,397	268	11,616
Canyon Lake	4,195	90	893
Calimesa	3,695	70	1,632

Source: U.S. Census

Table 4. Estimated parking spaces by single-family *shares*, Western Riverside County

	% Single-Family	% MUD	% Employee
Canyon Lake	81%	2%	17%
Eastvale	74%	4%	22%
Menifee	73%	3%	24%
Wildomar	72%	5%	24%
Calimesa	68%	1%	30%
Banning	67%	9%	25%
San Jacinto	63%	6%	31%
Moreno Valley	57%	10%	32%
Jurupa Valley	57%	8%	35%
Murrieta	53%	11%	36%
Perris	52%	6%	41%
Hemet	51%	13%	36%

⁴ Employee counts are based on U.S. Census Longitudinal Employer-Household Dynamics, Area Profile Analysis 2010, All Jobs. MUD and single-family counts are based on U.S. Census 2011 American Community Survey 5-year estimates for units in structure. Single-family homes include detached and attached (rowhouse-type) single-family units as well as mobile homes.

⁵ Jurupa Valley numbers are the sum of Glen Avon, Rubidoux, Mira Loma, Sunnyslope, and Pedley Census Designated Places.

Lake Elsinore	50%	10%	40%
Norco	38%	1%	60%
Temecula	36%	8%	56%
Corona	35%	10%	55%
Riverside	30%	12%	58%

Source: U.S. Census

Table 5. Estimated parking spaces by MUD counts, Western Riverside County

	MUD Count	Single-Family Count	Employee Count
Riverside	28,981	70,331	137,610
Corona	9,944	36,245	56,216
Moreno Valley	8,377	45,730	25,856
Hemet	6,936	27,931	19,839
Temecula	5,650	26,840	42,175
Murrieta	5,526	27,675	18,818
Jurupa Valley	3,244	23,467	14,666
Lake Elsinore	2,709	13,257	10,483
Perris	1,912	15,834	12,419
Banning	1,581	12,093	4,497
San Jacinto	1,384	13,397	6,546
Menifee	1,158	27,369	8,776
Eastvale	656	13,080	3,899
Wildomar	649	9,989	3,328
Norco	268	7,397	11,616
Canyon Lake	90	4,195	893
Calimesa	70	3,695	1,632

Source: U.S. Census

Table 6. Estimated parking spaces by MUD shares, Western Riverside County

	% MUD	% Single-Family	% Employee
Hemet	13%	51%	36%
Riverside	12%	30%	58%
Murrieta	11%	53%	36%
Moreno Valley	10%	57%	32%
Lake Elsinore	10%	50%	40%
Corona	10%	35%	55%
Banning	9%	67%	25%

Jurupa Valley	8%	57%	35%
Temecula	8%	36%	56%
San Jacinto	6%	63%	31%
Perris	6%	52%	41%
Wildomar	5%	72%	24%
Eastvale	4%	74%	22%
Menifee	3%	73%	24%
Canyon Lake	2%	81%	17%
Norco	1%	38%	60%
Calimesa	1%	68%	30%

Source: U.S. Census

Riverside has the highest absolute numbers of parking opportunities at both single-family homes and MUDs, with Moreno Valley, Corona and Hemet also appearing more than once in the top five positions for both single-family and MUDs. However, due to high numbers of employees, both single-family and MUD parking spaces represent much smaller *shares* of parking opportunities in Riverside and Corona.

In contrast, the vast majority of parking opportunities in Canyon Lake, Eastvale, Menifee, Wildomar, Calimesa, Banning, and San Jacinto are located at single-family homes. Even in Hemet, which has the highest share of its parking opportunities at MUDs (13%), the parking spaces available at MUDs are far outweighed by single-family and employee parking.

The same five cities that rank highest in terms of MUD counts also rank highest in employee counts, as shown in Table 7.

Table 7. Estimated parking spaces by employee counts, Western Riverside County⁶

	Employee Count	Single-Family Count	MUD Count
Riverside	137,610	70,331	28,981
Corona	56,216	36,245	9,944
Temecula	42,175	26,840	5,650
Moreno Valley	25,856	45,730	8,377
Hemet	19,839	27,931	6,936
Murrieta	18,818	27,675	5,526
Jurupa Valley ⁷	14,666	23,467	3,244
Perris	12,419	15,834	1,912
Norco	11,616	7,397	268

⁶ Employee counts are based on U.S. Census Longitudinal Employer-Household Dynamics, Area Profile Analysis 2010, All Jobs. MUD and single-family counts are based on U.S. Census 2011 American Community Survey 5-year estimates for units in structure. Single-family homes include detached and attached (rowhouse-type) single-family units as well as mobile homes.

⁷ Jurupa Valley numbers are the sum of Glen Avon, Rubidoux, Mira Loma, Sunnyslope, and Pedley Census Designated Places.

Lake Elsinore	10,483	13,257	2,709
Menifee	8,776	27,369	1,158
San Jacinto	6,546	13,397	1,384
Eastvale	3,899	13,080	656
Banning	4,497	12,093	1,581
Wildomar	3,328	9,989	649
Calimesa	1,632	3,695	70
Canyon Lake	893	4,195	90

Source: U.S. Census

The City of Riverside contains by far the highest number of employee parking spaces out of any city in Western Riverside County, with more than twice the number of employee parking spaces as Corona and more than three times as many as are found in Temecula. However, the city of Norco, while having a fraction of the workplace parking spaces found in Riverside, is also a strong candidate for workplace charging. This is because workplace parking comprises a higher share of parking spaces in Norco than it does in any other city.

Table 8. Estimated parking spaces by employee shares, Western Riverside County

	% Employee	% Single-Family	% MUD
Norco	60%	38%	1%
Riverside	58%	30%	12%
Temecula	56%	36%	8%
Corona	55%	35%	10%
Lake Elsinore	40%	50%	10%
Perris	41%	52%	6%
Hemet	36%	51%	13%
Murrieta	36%	53%	11%
Jurupa Valley	35%	57%	8%
Moreno Valley	32%	57%	10%
San Jacinto	31%	63%	6%
Calimesa	30%	68%	1%
Banning	25%	67%	9%
Wildomar	24%	72%	5%
Menifee	24%	73%	3%
Eastvale	22%	74%	4%
Canyon Lake	17%	81%	2%

Source: U.S. Census

The land use inventories presented here and the parcel tables presented in the next section were created using different data sources, including Census estimates and county assessor databases. Planners should keep in mind that some level of error exists in every data source, and should view the tools presented in this deployment plan as guidelines that complement each other and that should be validated with local knowledge.

IV. MUD charging opportunities: a parcel-level analysis

PEV ownership is in its infancy in Western Riverside County. Most neighborhoods have few or no PEVs registered to residences. Because there are fewer barriers to charging in single-family homes, most early adopters of PEVs have been single-family residents (CCSE 2012). MUDs represent less than 20% of the housing units in Western Riverside County. These factors combined would predict that relatively few PEVs are registered in neighborhoods where the largest MUDs are located. In fact, of the largest MUDs in Western Riverside County, none were located in neighborhoods with more than 12 PEVs registered. Due to the significant physical and institutional barriers to MUD charging, encouraging PEV adoption in this housing type will require a focused planning effort to establish PEV-ready wiring by code, by negotiation with developers, or through targeted outreach and demonstration projects.

While the planning metrics discussed in Section III can help characterize MUD charging potential at the subregional and city level, they do not show exactly where such opportunities are located spatially. This section presents the largest MUDs across Western Riverside County that are located in neighborhoods in which a moderate number of PEVs (6-12) were registered in 2012.⁸ The maps and tables in the Appendix show the neighborhoods and parcels in each of the 17 cities in Western Riverside County with the highest suitability to host PEV charging based on MUD size (number of units), PEV density, and other criteria discussed below.

Planners can use the maps and tables to identify specific MUDs or owners that could potentially host on-site charging. Utilities can use this information to anticipate where upgrades may be needed for transformers and distribution stations to accommodate PEV charging at MUDs.

The maps and tables below and in the Appendix are designed to help answer the following questions:

- What are the largest MUD buildings and where are they located?
- Which MUDs are located in neighborhoods where there are registered PEVs?
- What other attributes may affect demand or the cost to supply PEV charging at the MUD?

Larger MUDs are better candidates for hosting more PEV charging, given that they have more parking spaces (including visitor spaces). Landlords and condominium associations may also be better-

⁸ High PEV density would indicate 13 or more PEVs registered in a neighborhood in which an MUD is located, according to the distribution of PEV registrations in SCAG subregions analyzed by the UCLA Luskin Center. The largest MUDs in Western Riverside County are all located in areas of moderate (6-12) PEV density.

positioned to achieve economies of scale and recover their costs with more residents using the charging units. Table 9 lists the 20 largest MUD developments in Western Riverside County by number of units.

Table 9. Largest 20 MUDs, Western Riverside County

Address	City	Number of units	Year built ⁹
10250 W COUNTRY VILLAGE RD	Jurupa Valley	1228	1965
5464 W HOMECOMING CIR	Eastvale	738	2005
12640 MEMORIAL WAY	Moreno Valley	552	2006
590 N MCKINLEY ST	Corona	492	
25100 VISTA MURRIETA RD	Murrieta	492	2006
24375 JACKSON AVE	Murrieta	460	1989
3887 PIERCE ST	Riverside	440	
7450 NORTHROP DR	Riverside	432	
24850 HANCOCK AVE	Murrieta	420	
1530 VIA SANTIAGO ST	Corona	412	1987
29405 RANCHO CALIFORNIA RD	Temecula	400	
13933 CHAGALL CT	Moreno Valley	384	1987
42200 MORAGA RD	Temecula	344	1986
30000 RANCHO CALIFORNIA RD	Temecula	344	
2235 TREEHOUSE LN	Corona	336	
24909 MADISON AVE	Murrieta	329	2002
342 DALE ST	Perris	324	2003
890 HOTSPRING ST	Corona	320	
551 SANTA FE ST	Hemet	320	
36491 YAMAS DR	Wildomar	320	

Source: Riverside County Assessor

Knowing the age of a building, in conjunction with other attributes such as size of the electrical panel and parking configuration, can help planners assess the hard and soft costs involved in providing charging at that MUD. Building age may be correlated with panel size and distance between the electrical panel and where vehicles are parked. Building age may also indicate the likelihood of an MUD not having any on-site parking as well as other parking, construction or electrical features that may be typical of MUDs built in a city at a certain point in time. An understanding of MUD building vintages may help planners consider potential permitting and installation streamlining measures that may be needed.

A forthcoming study by California Department of Housing and Community Development will address the relationship between MUD parking configurations and installation cost of PEV-ready wiring. Below are

⁹ Information is omitted where parcel identification numbers could not be matched to construction years in the Assessor databases or to year-built information on web sites such as ForRent.com, LoopNet.com, Homes.com, or developer web sites. Due to the inconsistency in the availability of year-built data from the Riverside County Assessor, planners interested in this information should examine city building and planning department records.

some general guidelines about how to assess the PEV charging suitability of an MUD along certain attributes.

Panel size

Cities generally adopt state or national model codes for building and electrical standards, sometimes with changes that reflect local conditions and preferences. These codes specify minimum requirements for electrical panel sizes in certain types of buildings. Because the first full statewide building code for California was not published until 1989, individual California cities adopted or adapted standards from the National Electrical Code at different times over the years. It is therefore difficult to use year of construction as a definitive indicator of the cost of supplying PEV charging. Even if the year of construction is known, a site visit or permit search may be required to verify the building's actual electrical panel size, as it may have been upgraded over the years.

A study by PEV consulting firm Clean Fuel Connection sampled single-family homes in Southern California Edison's service territory to describe charging installation cost as a function of factors including building age and existing panel size. The results indicated that homes built in 1970 or later faced lower installation costs (Joffe 2010). In a sample of 192 single-family homes, 20% - 30% of customers with 100 amperes of service needed an upgrade to accommodate a PEV. However, none of those with 200 amperes needed an upgrade.¹⁰ The small sample size and the fact that these results were for single-family homes may limit their applicability to MUDs.

Energy efficiency

Most MUD parking area panels are sized to serve the minimum lighting, HVAC, or other electrical needs of the parking area, without enough extra capacity to provide Level 2 charging. Buildings constructed prior to 1978, when California's first energy efficiency standards for new buildings went into effect, may benefit from energy efficiency upgrades that would free up electrical capacity to provide Level 2 charging.

Parking configuration

Other information about an MUD, such as the type of parking (subterranean, podium, carport, or detached), may also help determine the hard and soft costs of PEV charging at that location. Subterranean and podium parking structures are frequently built with some 120V outlets for general maintenance and service needs, even where not required by code. These outlets could be available for Level 1 charging and may circumvent the need (in the short run) to install a Level 2 charger and the accompanying panel upgrade that may be needed for Level 2. Carports, on the other hand, are not

¹⁰ Enid Joffe, personal communication, June 18, 2013.

usually built with electrical outlets.¹¹ Installing a charger in a detached garage is often more expensive than installing one in an attached garage, due to the increased length of conduit needed to connect to the electricity source (Clean Fuel Connection, Brazell & Co. 2011).

However, number of units and building age are not the only factors that may affect demand for and cost (financial and logistical) to supply PEV charging. While most early PEV adopters reside in single-family homes due to the lower physical and institutional barriers associated with single-family charging, MUDs could represent middle-market PEV demand. The number of PEVs registered in the neighborhood where the MUD is located may indicate unmet demand for PEVs by MUD residents that may be similar to nearby single-family homeowners but for the difficulty in charging at an MUD. Moderate PEV density indicates the relative quantity of PEVs (6-12) that are registered to residences in the neighborhood where the MUD is located.¹²

Whether the MUD is a condominium could indicate possible institutional barriers to installing PEV charging due to deeded or assigned parking. However, condominiums experience less turnover than rental properties and unit owners may be more likely than landlords to install hardware for their long-term use. High unit values may also indicate higher demand for PEV charging.¹³

Table 10. Largest MUDs in neighborhoods of moderate PEV registration, Western Riverside County

Address			City	Number of units	Year built	Condo?	Unit value
31237	HIGHWAY 79		Temecula	180		N	\$221,226
39930	WHITEWOOD	RD	Murrieta	180	1989	N	\$199,268
26900	WINCHESTER CREEK	AVE	Murrieta	175		N	\$168,441
2660	CLARK	AVE	Norco	40		N	\$67,559
39060	AGUA VISTA		Murrieta	36	1986	N	\$89,327
39011	AGUA VISTA	ST	Murrieta	32	1989	N	\$92,974
38981	CALLE HERMOSA		Murrieta	24		N	\$51,536
28239	VIA PRINCESSA		Murrieta	16		N	\$54,611
39078	AGUA VISTA	RD	Murrieta	12		N	\$23,384

Source: Riverside County Assessor, R.L. Polk & Co.

¹¹ Interview with Osama Younan, chief of the Green Building and Mechanical Engineering Section, Los Angeles Department of Building and Safety, June 13, 2013.

¹² Registration data was purchased from R.L. Polk & Co., an automotive data vendor. The counts in the maps and parcel-specific tables reflect vehicles newly registered from December 2010, when the Chevrolet Volt and Nissan LEAF were introduced, through September 2012.

¹³ Information on ownership type, year-built and unit value were obtained from the Riverside County Assessor tables extracted in April 2013 by the Riverside County Transportation and Land Management Agency. Average unit values for non-condos were obtained by dividing the assessed value of the property by the number of units. Unit values for condos are the assessed value of one example condo unit on the property and may not be representative of all the units on the property. For developments in which each unit has a separate address, one address is given to stand for the development as a whole.

Conclusions

Although the City of Riverside has the highest absolute numbers of MUD units compared to other cities in Western Riverside County, it does not frequently contain the largest MUDs, nor does it contain the ones in neighborhoods of moderate PEV registration density. This suggests that less dense cities are home to larger MUD developments, and that some of these developments are located in neighborhoods that have current demand for PEVs.

The largest MUDs in medium-PEV density neighborhoods are located in three cities: Temecula, Murrieta and Norco. Given that only 11% of the overall parking opportunities in Murrieta are at MUDs, the fact that there are several MUD developments in areas where PEVs are registered could indicate latent demand for MUD charging in Murrieta. Five developments in Murrieta—the properties on Agua Vista, Calle Hermosa and Via Princesa—are located within a few blocks of each other. Targeting clusters of MUDs that show potential demand for PEV charging may help planners efficiently employ outreach and demonstration efforts.

It is possible that some large MUDs have the same owners or developers, which would allow planners to focus planning efforts even further. For example, Assessor records reveal that the properties at 39060 and 39011 Agua Vista Street have the same owner, as do the properties at 26900 Winchester Creek in Murrieta and 29405 Rancho California in Temecula. Ownership information is available for most properties from the Assessor's office. Large MUD developers that are generally active in Western Riverside County may also be good targets.

Many developments in Western Riverside County are considered MUDs for tax purposes but otherwise resemble single-family homes in that garages are attached to individual units. Such developments have been excluded from our MUD ranking because they do not require the same type of planning effort as do MUDs with common parking areas that are not physically attached to individual units. However, MUDs that otherwise resemble single-family homes may benefit from outreach to homeowner associations and owners of rental developments, as well as from PEV-ready building and zoning codes that are similar to those that apply to single-family homes.

V. Workplace charging

Workplaces present a significant, and largely untapped, opportunity for PEV charging. After residences, they are the single most important environment for electric refueling. Vehicles are generally parked at workplaces for several hours every weekday, making it possible for them to completely recharge before the commute home. This is especially important for maximizing the electric miles driven by PHEVs, which use gasoline when their batteries are depleted. The ability to charge at work may also encourage PEV adoption by those for whom residential charging is cost-prohibitive or logistically difficult, particularly residents of multi-unit dwellings. Workplace charging thus represents the “missing link” between residential and publicly accessible charging.

This section will help planners assess workplace charging opportunities across and within local jurisdictions. It will describe how planners can use the tables that accompany this document to prioritize parcels for targeted workplace charging assistance.

Assessing the workplace charging opportunity

After conducting the land use inventory (Section III), planners can further target specific employers based on number of employees at the workplace and PEV density in the employer's neighborhood during weekday morning rush hour. Additionally, white-collar employees and high-tech workplaces may indicate PEV charging demand by employees.

The subregional table in this section and the city-level tables that accompany this document will help planners and utilities answer the following questions:

- What are the largest employers and where are they located?
- Which employers are located in neighborhoods where current PEV owners drive on weekday mornings?
- Which employers have the highest numbers of white-collar and high-tech workers?

Workplaces with large numbers of employees may be better-positioned than small businesses to recover costs from offering PEV charging due to higher potential usage. Determining which employers are the largest will help planners target outreach efforts and help utilities prioritize locations for transformer and power distribution upgrades.

Tables 11 and 12 rank the largest workplaces in high-PEV and medium-PEV areas in the Western Riverside County subregion by number of employees. High PEV density means that there are 13 or more PEVs that are parked during morning rush hour (6:00 a.m. to 9:00 a.m.) in the neighborhood where the workplace is located. Medium PEV density means there are 6-12 PEVs parked in the employer's neighborhood during that time. Where available, information is provided about whether an employer is in a high-tech or related sector or if at least 50% of its employees are white-collar. These attributes could further indicate potential demand, as high-tech firms have been early adopters of PEV workplace charging and studies indicate PEV ownership is currently correlated with higher incomes and levels of education.

Employer data was obtained from 1) the South Coast Air Quality Management District's April 2013 database of employers subject to Rule 2202, which mandates that workplaces of at least 250 employees take measures to reduce emissions from employee commutes; and 2) commercially available Infogroup data from 2008 on employer size (i.e., number of employees), location, and information on whether the business is in a high-tech sector and whether its employees are mostly white-collar (where available).¹⁴

¹⁴ The UCLA Luskin Center has made an effort to reclassify certain companies along these attributes where appropriate.

PEV density is predicted according to SCAG's 2008 regional travel model¹⁵ as applied to registration data from R.L. Polk & Co. Using surveys of household travel behavior, SCAG's travel demand model estimates the number of trips from home to work, school, and other destinations by time of day.¹⁶ By counting the number of PEVs from each *origin* TAZ that feed into each of the daytime *destination* TAZs, we were able to predict the locations and densities of PEVs traveling to work on weekdays from 6:00 a.m. to 9:00 a.m. It is important to note that these morning peak destination TAZs receive vehicles from outside the city.

Table 11. Largest workplaces in neighborhoods of high PEV density during weekday mornings, Western Riverside County

City	Company	Address	Employees	High-Tech	White-Collar
Temecula	Professional Hospital Supply, Inc.	41980 Winchester Rd	1100	N	Y
Corona	Watson Laboratories	132 Business Center Dr	960	Y	Y
Temecula	Hexfet America	41915 Business Park Dr	663	Y	Y*
Corona	Fender Musical Instruments	1163 Pomona Rd	653	N	N
Corona	Dart Container Corp of California	150 S Maple St	426	N	Y
Corona	Thermal Structures, Inc.	2362 Railroad St	271	Y	N
Temecula	Millipore Inc.	28820 Single Oak Dr	270	N	N
Temecula	Abbott Cardiovascular Systems	42301 Zevo Dr	256		
Corona	Circle Seal Controls Inc	2301 Wardlow Cir	250	Y	N
Corona	R W Lyall & Co Inc	2665 Research Dr	220	N	N
Murrieta	Temecula Valley Drywall	41228 Raintree Ct	220	N	N
Corona	Brasscraft Manufacturing Co	215 N Smith Ave	200	N	N
Corona	Appa Fine Foods Inc	135 Klug Cir	200	N	N
Corona	Minka-Aire	1151 Bradford Cir	200	N	N
Temecula	Chemicon International Inc	28820 Single Oak Dr	200	N	N
Temecula	Molding International Enginrng	42136 Avenida Alvarado	200	N	N
Temecula	Opto 22	43044 Business Park Dr	200	N	Y
Temecula	Keller Williams Realty	27290 Madison Ave # 200	198	N	Y
Corona	ATK Space Systems & Sensors	250 Klug Cir	185	Y*	Y*
Murrieta	Star Trac Strength Inc	41180 Raintree Ct	150	N	N
Temecula	Cutting Edge Staffing Inc	41750 Winchester Rd # L	150	N	Y

*Reclassified by Luskin Center

Sources: South Coast Air Quality Management District, Infogroup, Luskin Center application of data from R.L. Polk & Co. and SCAG regional travel model

Table 12. Largest workplaces in neighborhoods of medium PEV density during weekday mornings, Western Riverside County

City	Company	Address	Employees	High-Tech	White-Collar
Riverside	County of Riverside	4080 Lemon St	3222	N	N
Riverside	Riverside Community Hospital	4445 Magnolia Ave	1865	N	N

¹⁵ http://www.scag.ca.gov/modeling/pdf/MVS08/MVS08_Chap05.pdf

¹⁶ <http://www.scag.ca.gov/modeling/index.htm>

Riverside	Riverside City Hall	3900 Main St	739	N	N
Riverside	County of Riverside	4050 Main St	543	N	N
Riverside	Press-Enterprise	3512 Fourteenth St	461	N*	Y*

*Reclassified by Luskin Center

Sources: South Coast Air Quality Management District, Infogroup, Luskin Center application of data from R.L. Polk & Co. and SCAG regional travel model

Conclusions

The 21 largest employers located in neighborhoods of high PEV travel during morning rush hour are found in only three cities: Temecula, Corona, and Murrieta. This suggests that employers in these cities may be early adopters of workplace charging. Only Riverside employers are located in areas of medium PEV travel during morning rush hour, suggesting locations where employers may adopt workplace charging as the market matures. Employers in health care, technology, and the public sector may find that PEV charging aligns with sustainability goals, a green- or tech-friendly image, or a desire to attract or retain employees that drive PEVs.

The County of Riverside ranks among the largest employers in seven WRCOG cities. Although only two County workplaces are located in an area of moderate PEV density (both in Riverside, as shown in Table 11), the County may be a suitable employer to target for workplace charging. This is because of the high number of parking spaces hosted by the County and a potential desire to meet sustainability goals.

VI. Retail charging

Most plug-in electric vehicle (PEV) charging occurs at home, followed by charging at the workplace. However, the proliferation of plug-in hybrid electric vehicles (PHEVs) has increased the demand for more sporadic charging outside of home or work. To maximize their electric miles driven, many PHEV drivers find it valuable to charge when visiting retail destinations.

Whether charging at public-sector and retail sites is cost-effective for PEV drivers and financially viable for charge station operators will depend upon several factors. These include where stations are located, how much demand there is for charging, and how much it costs to use or own the charge station.¹⁷ This section will help planners assess retail charging opportunities across and within jurisdictions. We present a streamlined process for screening potential retail PEV charging sites and then present more specific information that retailers and planners should obtain about parking on the site to determine actual suitability for PEV charging.

Planners can use the subregional maps provided in the Southern California PEV Atlas or the city-level maps in the Appendix of this document to identify the retail parcels in their respective jurisdictions. The

¹⁷ Guidance on pricing use of retail charging stations is provided in Chapter 8 of the Southern California PEV Readiness Plan http://164.67.121.27/files/Downloads/luskincenter/ev/PEV_Readiness_Plan.pdf.

maps also overlay retail centers of different sizes with densities of PEVs traveling between 9:00 a.m. and 3:00 p.m. Planners and utilities can use these maps to compare the spatial distribution of retail centers and mid-day travel destinations for PEVs. Those retail locations are classified by store type (from regional mall to small storefront) and parking configuration as described in Table 13. Planners can then conduct a land use inventory to estimate how large a share of parking spaces in their jurisdiction are made up by those retailers.

Table 13. Southern California Association of Governments retail land use classifications (as mapped in the Southern California PEV Readiness Plan and the Appendix to the Western Riverside County PEV Deployment Plan)

DESCRIPTION	KEY ATTRIBUTE
Regional Shopping Center	Department store with surrounding parking
Retail Centers (Non-Strip With Contiguous Interconnected Off-Street Parking)	Magnet store with in-front parking
Modern Strip Development	Small businesses with parking on-street and on one side
Older Strip Development	Small businesses with on-street parking

Another way to evaluate the potential of a site host to supply PEV charging is by ranking retailers by annual sales volume. Retailers with higher annual sales may be better equipped to absorb the upfront infrastructure investment of providing PEV charging. Higher annual sales may indicate higher aggregate demand for PEV charging, though the amount of time customers spend parked at the site will be of key importance in determining how much PEV charging is used and whether it can be provided at a price that is cost-effective for both the retailer and the driver.

Table 14 below is designed to help answer the following questions:

- What are the largest retailers by sales and where are they located?
- Which retailers are located in neighborhoods where PEVs are parked during mid-day hours?

Table 14 lists the top retailers in Western Riverside County by annual sales (in thousands) as provided in Infogroup's 2008 database.¹⁸ Retailers are defined as businesses classified under the following North American Industrial Classification System descriptions: retail trade; arts, entertainment and recreation; accommodation and food services; and other services (i.e., dry cleaners and beauty salons). PEV density indicates the relative quantity of PEVs that are parked during mid-day hours (9:00 a.m. to 3:00 p.m.) in the neighborhood in which the retailer is located. A high PEV density indicates that at least 13 PEVs are

¹⁸ Significant retailers not listed in Infogroup's database are also listed separately by city in the Appendix. These include gyms, big-box retailers, etc.

parked in the neighborhood, while medium density indicates the presence of 6-12 PEVs. None of the top retailers in Western Riverside County were located in areas of high PEV presence at mid-day.

We estimated mid-day PEV density by applying Census tract-level PEV registration data to SCAG's 2008 regional travel model. Census tracts closely follow the boundaries of travel analysis zones (TAZs), which are the geographic areas used by SCAG to model vehicle travel. SCAG's travel demand model estimates the number of trips from home to work, school, and other destinations by time of day. By counting the number of PEVs from each *origin* TAZ that feed into each of the midday *destination* TAZs, we are able to predict the number of PEVs traveling to neighborhoods from 9:00 a.m. to 3:00 p.m.

Table 14. Top retailers in medium-PEV neighborhoods at mid-day, Western Riverside County

City	Company	Address	Annual Sales (in thousands)
Corona	Corona Nissan	2575 Wardlow Rd	\$76,451
Corona	Aircraft Spruce & Specialty Co	225 Airport Cir	\$39,060
Temecula	Wal-Mart Supercenter	32225 US Highway 79 S	\$35,640
Corona	C & R Systems Inc	1835 Capital St	\$32,300
Temecula	Stater Bros Markets	31813 US Highway 79 S	\$29,640
Corona	Victor Buick GMC	2525 Wardlow Rd	\$26,000
Corona	Power Volkswagen	2603 Wardlow Rd	\$25,770
Corona	Mighty Mover Trailers	224 N Sherman Ave	\$25,600
Corona	Giant RV	180 N Sherman Ave	\$25,600
Temecula	Henry's Market Place	32413 State Highway 79	\$20,995
Corona	Bosch Kia Isuzu of Corona	2683 Wardlow Rd	\$14,603
Corona	Giant RV	1301 Pomona Rd	\$14,080
Eastvale	Fritschnet Inc-Hostgo	6934 Cottonwood Cir	\$1,628
Eastvale	Eagle Memory Products	7111 Tawny Owl Ct	\$1,372
Eastvale	Cinamatec Home Theater	13430 Cascade Ct	\$1,292
Eastvale	Net Runner Global	7318 Silverwood Dr	\$1,141
Eastvale	Stork News-the Inland Empire	12752 Hungarian St	\$644
Eastvale	Sashi Bear LLC	6310 Golden Bit St	\$603
Eastvale	A G Organics	7215 Woodpigeon Rd	\$546

Sources: R.L. Polk & Co., Infogroup

The retailers listed above tend to fall into three categories: car dealerships, large retail chains, and small businesses. These retailers may have different customer demographics, vehicle dwell times, and energy costs associated with their typical operation. Planners and retailers should consider these and other factors that will help determine demand and relative cost-effectiveness for each potential PEV charging location after initially screening retailers by annual sales and mid-day PEV density. These additional criteria are described in the next section.

Evaluative criteria for the selection of retail charging sites

Planners will want to consider a variety of criteria when prioritizing a site or group of sites. Many of these criteria relate to a site's potential demand for charging or its relative cost-effectiveness in hosting a station. These factors include:

- Potential demand for PEV charging
- Frequency of visits per week
- Time of day when charging
- How long cars are parked (a.k.a. "dwell time")
- Cost of electricity (and demand charges)
- The value of non-PEV parking spaces to the site host
- Driver's cost of waiting
- "Green" reputation for site host

Sites and areas with high potential demand for charging

One of the most important criteria is that the site be a place where PEVs are or will be parked. Several types of current driver-specific, site-specific, and neighborhood-specific criteria can be used to assess current- and near-term potential **demand** for charging. The most reliable evidence on potential charge station utilization comes from those drivers currently using parking at a site. Indeed, the best site-specific evidence is the actual presence of PEVs parked on or adjacent to the site. Customer surveys (or driver surveys in the case of public-sector sites) of PEV ownership and the intent to purchase a PEV can also be a good predictor. Future demand for PEVs is often associated with the current ownership of hybrids, so a higher-than-average concentration of hybrids in a parking lot may be a good predictor. Planners could also use demographics associated with early-market PEV adopters. These characteristics include customers with higher educational achievement, moderate to higher incomes, willingness to innovate, and often attitudes that are pro-environment or pro-oil independence (CCSE 2012; Nixon and Saphores 2011; Landy 2011).

The **frequency** and **total level of visitation** to a site can also be an important factor. Planners might also ask where the site supports parking for 1) routine daily travel (work, school, gyms, etc.), 2) routine weekly travel (stadiums, theaters, churches, etc.) or 3) occasional travel (hotels, major vacation destination charging or freeway-adjacent stations). We discuss specific site types in greater detail in the following sections.

Other site-specific characteristics, such as size and location, may be useful but should be used to make a choice between competing sites that have been prioritized based on customer- or driver-specific evidence of potential demand. With all else equal, sites with larger parking capacity (for example, big-box retailers such as Walmart) are more likely to host PEVs. Similarly, prioritizing sites near high-volume freeways or arterials might incrementally increase site utilization.

Selecting sites that offer the lowest possible cost of charging will benefit not only the site host (by increasing utilization rates) but also PEV drivers (who will pay lower prices for charging). Sites that provide the lowest possible cost per kilowatt-hour (kWh) to PEVs will typically have the following features:

Sites on which PEVs are ***parked for longer periods of time*** (longer “dwell times”) enable slower rates of charging, which may enable the use of less costly Level 1 charging rather than more costly Level 2 or fast charging. The longer the dwell time, the more miles of electric range can be added. At Level 1, an hour of charge can add five to 10 miles of range, depending on the capacity of the vehicle’s onboard charger. At Level 2, an hour of charge adds between 10 to 20 miles of range, depending on the capacity of the vehicle’s onboard charger. Longer PEV dwell times also enable multi-armed smart chargers to deliver lower costs per kWh delivered over a larger numbers of vehicles. Slower charging, enabled by long dwell times, may also help site owners to avoid electricity demand charges.

Planners may also want to balance factors like average trip distance and frequency of travel to a site with the dwell time for each particular site type. While routine destinations may see greater use, shorter trips may benefit less from charging than would longer trips with longer dwell times. Drugstores, for example, would have shorter dwell times than theaters or recreational areas, but may have more patrons on an average day.

Some car dealerships may allow PEV drivers to charge their vehicles even if the driver did not purchase the vehicle that particular dealership, though the service may not be available to drivers of other PEV makes. Unless the driver is bringing a vehicle to the dealer for service, he or she would likely only be using the site for charging, similar to a DC Fast station.

A feature related to the land use or type of site is time of PEV arrival at the site, which determines the ***time of day when charging would occur***. Charging that occurs before 12:00 p.m. and after 9:00 p.m. will enable most site hosts to provide lower-cost electricity to PEVs because of electricity rates that are lower during these periods. Charging between 12:00 p.m. and 9:00 p.m. is not only the most expensive, but more likely to incur demand charges for the site host.¹⁹ Unfortunately, many types of retail sites are only open between 10:00 a.m. and 9:00 p.m., which is the period when electricity costs are highest and demand charges are most likely. In addition, dwell times are often the lowest for many types of retail destinations, making them the least cost-effective type of land use to host charging. Supermarkets, which already have high energy use during peak daytime hours due to refrigeration, may be inclined to provide PEV charging if it does not significantly increase their electricity cost.

The ***value of regular parking spaces to the site host*** is another factor to consider. For many sites, there is no value lost by replacing a regular parking space with a charging space, because most sites have many unused parking spaces. On sites where there is a shortage of parking, charging stations can also be located in places within parking facilities that are the last to fill up in order to avoid the appearance (to

¹⁹ Demand charges are added to the electricity bills of non-residential customers to reflect the additional cost of delivering power to them during the customer’s peak usage times.

the other employees or customers) of displacement.²⁰ Sites can also experiment with dual-use and time-of-day split use of spaces for both parking and charging. For example, charging spaces intended for government employees during the day can be made available to the general public at night.

The second type of cost that may vary across public-sector and retail sites is the *driver's time* while charging. In most instances, PEV drivers will not choose to charge at a site unless there is no additional time associated with charging. Planners should expect the PEV driver will be busy with whatever motivated his or her visit to that destination. Only in the rare case that a PEV driver is in danger of running out of fuel are they likely to be willing to spend time refueling, and then they are likely to choose to refuel quickly with gasoline if they own a PHEV. Chargers should be located at sites where drivers would normally stop for at least 1 to 2 hours or more unless they are refueling along interstate corridors during inter-regional travel.

Two other factors may affect the value proposition of hosting a charge station at retail sites. The first is that, for a few types of retail sites that price charging lower than what drivers would pay at home, charging stations may attract customers that would have otherwise gone to another retail site. Second, some site hosts want to support or be associated with “green” values or energy independence. These are likely to be retail establishments that incorporate these values into the corporate brand identities.

Typical dwell times

Based on the above criteria, we identify several broad categories of sites. We use an analysis of 2009 National Household Transportation Survey data (Krumm 2012) to common travel destinations that tend to require at least moderate travel distance. Based on this analysis, the list below features some examples of retail site types where vehicles tend to be parked for about two hours on average:

Commercial parking facilities

Major retail malls

Sporting events and arenas

Major pedestrian-oriented commercial thoroughfares

Bars and evening entertainment venues

Gyms and sports clubs

Finally, Table 15 describes retail sites that have been documented to have relatively shorter travel distances and shorter dwell times (Krumm 2012).

²⁰ Placement of the first charging space may be constrained by disabled access requirements.

Table 14. Retail sites with short dwell times

Destination	Average dwell time (minutes)
Gas stations	10
Video rental/cleaners/post office/bank	19
Coffee/ice cream/snacks	20
Grocery, hardware, clothing store	36
Attorney/accountant office	41
Meals/restaurants	46
Day care	65
Grooming, hair, nails	67
Medical/dental services	68

Source: Krumm (2012)

Charging in stand-alone parking facilities

Areas rich in small stores and businesses may represent demand for charging curbside or in stand-alone parking structures. Operators of stand-alone parking facilities will have different cost recovery goals depending on whether they are government-owned or commercial pay parking lots. Publicly-accessible parking facilities can fill a gap in PEV charging, particularly in older urban cores where retail stores and even some workplaces and multi-unit dwellings do not have dedicated parking.

Conclusions

Due to potentially short dwell times and high charges for electricity during peak daytime hours, it may be a challenge for many retailers to provide PEV charging at a price that is cost-effective for both the host and driver. Planners and retailers must consider many factors in evaluating retail locations for PEV charging, including current demand, vehicle dwell times, level and frequency of visitation, and electricity costs. Retailers with high sales may be in the best position to supply a higher number of parking spaces and absorb the upfront cost of providing PEV charging.

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Appendix: Western Riverside County Plug-in Electric Vehicle Deployment Plan



Prepared for
the Southern
California
Association of
Governments

June 2013

Appendix: Western Riverside County Plug-in Electric Vehicle Deployment Plan

About this Document

This document was prepared for the Southern California Association of Governments (SCAG) by J.R. DeShazo, Ayala Ben-Yehuda, Norman Wong and Vicky Hsu of the UCLA Luskin Center for Innovation. It constitutes the appendix to the final PEV deployment plan for Western Riverside County as Deliverable 27 of SCAG contract 12-021-C1 to support regional planning for plug-in electric vehicle (PEV) adoption. SCAG is coordinating a multi-stakeholder group of government agencies, utilities, and university researchers to prepare multi-faceted and interdisciplinary regional PEV readiness plans. Among other purposes, these plans will help illuminate and guide strategic infrastructure investment, PEV-related economic development, and supportive policy design in Southern California.

Disclaimer

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Acknowledgements

We thank the Southern California Association of Governments, the South Coast Air Quality Management District, U.S. Department of Energy, and the California Energy Commission for support of this project. In particular, we thank Marco Anderson of SCAG, Patricia Kwon of SCAQMD, the Western Riverside Council of Governments and the other governmental and utility members of the SoCal PEV Coordinating Council for their guidance and assistance. We also thank the University of California Office of the President Multicampus Research Programs and Initiatives for its support.

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Table of Contents

Appendix	1
City-level maps	1
City-level tables	1
List of city-level maps and tables	2
GHG analysis	4
Largest multi-unit dwellings in areas of moderate PEV registration, Western Riverside County	5
Largest workplaces in neighborhoods of high PEV density during weekday mornings, Western Riverside County	6
Largest workplaces in neighborhoods of moderate PEV density during weekday mornings, Western Riverside County	7
Largest WRCOG Retailers in Areas of Moderate Mid-Day PEV Density, Western Riverside County	8
Banning: PEV Registrations	9
Banning: Multi-unit residential and PEV registrations	10
Banning: Top MUDs (table)	11
Banning: PEV morning peak destinations	12
Banning: Top workplaces by number of employees	13
Banning: PEV morning peak destinations and top workplaces	14
Banning: Top workplaces (table)	15
Banning: Commercial (retail) locations	16
Banning: PEV mid-day destinations and commercial (retail) locations	17
Banning: Top retailers (table)	18
Calimesa: PEV Registrations	20
Calimesa: Multi-unit residential and PEV registrations	21
Calimesa: Top MUDs (table)	22
Calimesa: PEV morning peak destinations	23
Calimesa: Top workplaces by number of employees	24

Calimesa: PEV morning peak destinations and top workplaces	25
Calimesa: Top workplaces (table)	26
Calimesa: Commercial (retail) locations	27
Calimesa: PEV mid-day destinations and commercial (retail) locations.....	28
Calimesa: Top retailers (table)	29
Canyon Lake: PEV Registrations.....	31
Canyon Lake: Multi-unit residential and PEV registrations	32
Canyon Lake: Top MUDs (table)	33
Canyon Lake: PEV morning peak destinations.....	34
Canyon Lake: Top workplaces by number of employees	35
Canyon Lake: PEV morning peak destinations and top workplaces	36
Canyon Lake: Top workplaces (table)	37
Canyon Lake: Commercial (retail) locations	39
Canyon Lake: PEV mid-day destinations and commercial (retail) locations.....	40
Canyon Lake: Top retailers (table)	41
Corona: PEV Registrations	43
Corona: Multi-unit residential and PEV registrations	44
Corona: Top MUDs (table)	45
Corona: PEV morning peak destinations	46
Corona: Top workplaces by number of employees	47
Corona: PEV morning peak destinations and top workplaces.....	48
Corona: Top workplaces (table)	49
Corona: Commercial (retail) locations	50
Corona: PEV mid-day destinations and commercial (retail) locations	51
Corona: Top retailers (table).....	52

Corona: Publicly-accessible charging stations (summer/fall 2012)	54
Corona: Stand-alone parking facilities	55
Eastvale: PEV Registrations	56
Eastvale: Multi-unit residential and PEV registrations	57
Eastvale: Top MUDs (table).....	58
Eastvale: PEV morning peak destinations.....	59
Eastvale: Top workplaces by number of employees.....	60
Eastvale: PEV morning peak destinations and top workplaces	61
Eastvale: Top workplaces (table)	62
Eastvale: Commercial (retail) locations	63
Eastvale: PEV mid-day destinations and commercial (retail) locations.....	64
Eastvale: Top retailers (table)	65
Hemet: PEV Registrations	66
Hemet: Multi-unit residential and PEV registrations.....	67
Hemet: Top MUDs (table).....	68
Hemet: PEV morning peak destinations	69
Hemet: Top workplaces by number of employees.....	70
Hemet: PEV morning peak destinations and top workplaces.....	71
Hemet: Top workplaces (table).....	72
Hemet: Commercial (retail) locations.....	73
Hemet: PEV mid-day destinations and commercial (retail) locations	74
Hemet: Top retailers (table).....	75
Jurupa Valley: PEV Registrations.....	76
Jurupa Valley: Multi-unit residential and PEV registrations	77
Jurupa Valley: Top MUDs (table)	78

Jurupa Valley: PEV morning peak destinations.....	79
Jurupa Valley: Top workplaces by number of employees	80
Jurupa Valley: PEV morning peak destinations and top workplaces	81
Jurupa Valley: Top workplaces (table)	82
Jurupa Valley: Commercial (retail) locations	84
Jurupa Valley: PEV mid-day destinations and commercial (retail) locations.....	85
Jurupa Valley: Top retailers (table).....	86
Jurupa Valley: Publicly-accessible charging stations (summer/fall 2012)	88
Jurupa Valley: Stand-alone parking facilities	89
Lake Elsinore: PEV Registrations	90
Lake Elsinore: Multi-unit residential and PEV registrations.....	91
Lake Elsinore: Top MUDs (table).....	92
Lake Elsinore: PEV morning peak destinations.....	93
Lake Elsinore: Top workplaces by number of employees.....	94
Lake Elsinore: PEV morning peak destinations and top workplaces	95
Lake Elsinore: Top workplaces (table)	96
Lake Elsinore: Commercial (retail) locations.....	98
Lake Elsinore: PEV mid-day destinations and commercial (retail) locations	99
Lake Elsinore: Top retailers (table)	100
Menifee: PEV Registrations.....	102
Menifee: Multi-unit residential and PEV registrations	103
Menifee: Top MUDs (table)	104
Menifee: PEV morning peak destinations.....	105
Menifee: Top workplaces by number of employees	106
Menifee: PEV morning peak destinations and top workplaces	107

Menifee: Top workplaces (table)	108
Menifee: Commercial (retail) locations	109
Menifee: PEV mid-day destinations and commercial (retail) locations.....	110
Menifee: Top retailers (table)	111
Moreno Valley: PEV Registrations	113
Moreno Valley: Multi-unit residential and PEV registrations	114
Moreno Valley: Top MUDs (table)	115
Moreno Valley: PEV morning peak destinations	116
Moreno Valley: Top workplaces by number of employees	117
Moreno Valley: PEV morning peak destinations and top workplaces.....	118
Moreno Valley: Top workplaces (table).....	119
Moreno Valley: Commercial (retail) locations	120
Moreno Valley: PEV mid-day destinations and commercial (retail) locations	121
Moreno Valley: Top retailers (table).....	122
Murrieta: PEV Registrations.....	123
Murrieta: Multi-unit residential and PEV registrations	124
Murrieta: Top MUDs (table)	125
Murrieta: PEV morning peak destinations.....	126
Murrieta: Top workplaces by number of employees	127
Murrieta: PEV morning peak destinations and top workplaces	128
Murrieta: Top workplaces (table)	129
Murrieta: Commercial (retail) locations	130
Murrieta: PEV mid-day destinations and commercial (retail) locations.....	131
Murrieta: Top retailers (table)	132
Norco: PEV Registrations	133

Norco: Multi-unit residential and PEV registrations.....	134
Norco: Top MUDs (table)	135
Norco: PEV morning peak destinations	136
Norco: Top workplaces by number of employees	137
Norco: PEV morning peak destinations and top workplaces.....	138
Norco: Top workplaces (table).....	139
Norco: Commercial (retail) locations	140
Norco: PEV mid-day destinations and commercial (retail) locations	141
Norco: Top retailers (table).....	142
Perris: PEV Registrations.....	143
Perris: Multi-unit residential and PEV registrations	144
Perris: Top MUDs (table).....	145
Perris: PEV morning peak destinations.....	146
Perris: Top workplaces by number of employees.....	147
Perris: PEV morning peak destinations and top workplaces	148
Perris: Top workplaces (table)	149
Perris: Commercial (retail) locations.....	150
Perris: PEV mid-day destinations and commercial (retail) locations.....	151
Perris: Top retailers (table)	152
Riverside: PEV Registrations	153
Riverside: Multi-unit residential and PEV registrations.....	154
Riverside: Top MUDs (table)	155
Riverside: PEV morning peak destinations	156
Riverside: Top workplaces by number of employees	157
Riverside: PEV morning peak destinations and top workplaces.....	158

Riverside: Top workplaces (table).....	159
Riverside: Commercial (retail) locations.....	161
Riverside: PEV mid-day destinations and commercial (retail) locations	162
Riverside: Top retailers (table).....	163
Riverside: Publicly-accessible charging stations (summer/fall 2012).....	165
Riverside: Stand-alone parking facilities	166
San Jacinto: PEV Registrations	167
San Jacinto: Multi-unit residential and PEV registrations.....	168
San Jacinto: Top MUDs (table).....	169
San Jacinto: PEV morning peak destinations	170
San Jacinto: Top workplaces by number of employees.....	171
San Jacinto: PEV morning peak destinations and top workplaces	172
San Jacinto: Top workplaces (table).....	173
San Jacinto: Commercial (retail) locations.....	174
San Jacinto: PEV mid-day destinations and commercial (retail) locations	175
San Jacinto: Top retailers (table)	176
Temecula: PEV Registrations	177
Temecula: Multi-unit residential and PEV registrations	178
Temecula: Top MUDs (table)	179
Temecula: PEV morning peak destinations	180
Temecula: Top workplaces by number of employees	181
Temecula: PEV morning peak destinations and top workplaces.....	182
Temecula: Top workplaces (table).....	183
Temecula: Commercial (retail) locations	184
Temecula: PEV mid-day destinations and commercial (retail) locations	185

Temecula: Top retailers (table).....	186
Temecula: Publicly-accessible charging stations (summer/fall 2012)	188
Wildomar: PEV Registrations	189
Wildomar: Multi-unit residential and PEV registrations.....	190
Wildomar: Top MUDs (table).....	191
Wildomar: PEV morning peak destinations	192
Wildomar: Top workplaces by number of employees.....	193
Wildomar: PEV morning peak destinations and top workplaces	194
Wildomar: Top workplaces (table).....	195
Wildomar: Commercial (retail) locations.....	196
Wildomar: PEV mid-day destinations and commercial (retail) locations	197
Wildomar: Top retailers (table)	198
Other significant retailers, Western Riverside County (table).....	198
Technical appendix	201
Impact of PEVs on GHG emissions in Western Riverside County, 2012-2022	208

Appendix: PEV planning maps, tables, and GHG analysis

This section describes the suite of maps and tables provided for each of the 17 cities in Western Riverside County and explains how they can be used in PEV planning. The technical appendix that follows the maps and tables provides detailed information on data sources and analyses used to generate each map and table. The last document in this Appendix is an analysis of the impact of PEV adoption on greenhouse gas emissions in Western Riverside County to the year 2022.

City-level maps

The city-level **maps** in this Appendix describe how many PEVs are in a given neighborhood and how their spatial concentrations vary over the course of a day as their drivers travel to workplaces and retail destinations in 17 cities in the Western Riverside County subregion.

The maps also display potential charging infrastructure opportunities to support and complement growth in the PEV market. They identify the locations and sizes of workplaces, multi-unit residences and retail establishments that could potentially host PEV charging. Lastly, the Appendix includes maps of other resources that support PEV charging, such as existing publicly-accessible charging stations and stand-alone parking facilities.

This spatial information enables planners to know where PEVs are currently and where growth will occur in the future. This will help them prioritize the municipal planning reforms such as those described in the Western Riverside County PEV Deployment Plan. It describes where latent PEV demand is constrained because of the challenges of installing charging opportunities in multi-unit residences. It also describes the locations of workplaces and retail establishments that are in neighborhoods with a higher density of PEVs during the day and evening. With this information, planners can take the next steps to provide the targeted technical assistance to these sites as described in the Western Riverside County PEV Deployment Plan.

City-level tables

The parcel **tables** provided in the Appendix display locations in each Western Riverside County city that may be particularly suitable to host PEV charging. This is because they represent the highest levels of *supply* of PEV parking spaces (in the case of workplaces and MUDs with the highest numbers of employees and dwelling units) or the highest levels of potential *demand* for PEV charging (retailers with the highest annual sales in thousands).

Tables displaying MUD buildings, workplaces and retailers are provided in the Appendix for each city in the Western Riverside County subregion. Planners can use these tables to identify employers, employees, residents, property owners and retailers that may be good targets for informational workshops or demonstration projects for PEV charging. In addition to ranking workplaces by number of employees, MUDs by number of units, and retailers by annual sales, other attributes that affect suitability to host PEV charging are provided as described below.

List of city-level maps and tables

This Appendix features the following maps and tables of the neighborhoods and municipalities within each city in the Western Riverside County subregion:

1. Map of PEV registration density as of 2012. Knowing how many PEVs are currently registered in a given area will indicate the location of current and near-future demand for residential charging. By extension, this information can help planners and utilities anticipate locations that will carry additional nighttime electrical load.

2. Map of multi-unit dwellings (MUDs) by number of units and PEV registration density. Planners can use the maps to compare spatial distributions of MUD density with the numbers of PEVs that are registered in the surrounding neighborhoods. These maps can suggest areas where demand for PEVs may exist at MUDs but is constrained due to lack of residential charging opportunities. Mapping the precise location of MUDs and knowing the density of units on a site will be of particular use in utility planning. Utilities can use such maps to anticipate where upgrades may be needed for transformers and distribution stations to accommodate PEV charging at MUDs.¹

3. Table of the top 20 MUD buildings listed in each city² by number of units. Planners can use these tables to identify specific buildings and/or MUD owners that could potentially host charging on-site. While most early PEV adopters reside in single-family homes due to the lower physical and institutional barriers associated with single-family charging, MUDs could represent substantial middle-market PEV demand. In addition, due to the substantial physical and institutional barriers involved in MUD charging, reforms to building codes and permitting practices will require a more focused effort in cities where MUDs make up a large share of parking opportunities.

In addition to the sheer number of dwelling units/potential PEV parking spaces, planners can use the other attributes in the table to assess potential demand for PEV charging at an MUD. PEV density (high or medium) indicates the relative quantity of PEVs that are registered to residences in the neighborhood where the MUD is located. The year built could indicate such cost factors as parking configuration and the extent of electrical panel upgrades and rewiring that may be needed. Whether the MUD is a condominium could indicate possible institutional barriers to installing PEV charging due to deeded or assigned parking. However, condominiums experience less turnover than rental properties and unit owners may be more likely to install hardware for their long-term use. Where available, information is provided on whether the garage is attached or detached and whether there is a carport. Attached garages (such as podium or subterranean) are often built with some 120-volt outlets for general service and maintenance needs, whereas carports generally are not. Detached garages may require longer

¹ Maps of MUDs may not be available for cities in which MUDs were not mapped by SCAG during its 2005 land use update.

² Some cities will have fewer than 20 developments listed, and some will have more than 20 listed. Not included are MUDs that had less than three units (except for Canyon Lake, where two-unit buildings proliferate). Also excluded were MUDs with parking arrangements that were substantially similar to those of single-family homes. In cases where separate developments in a city had the same number of units, all MUDs of that size were included, resulting in more than 20 listings for some cities.

conduits from the electricity source to the parking space and thus may be more expensive to wire for Level 2 charging. High average unit values may also indicate higher demand for PEV charging.

4. Map of PEV morning travel to work, providing spatial daytime PEV density at or near workplaces. Understanding where PEVs are concentrated during morning peak hours (6:00 a.m. to 9:00 a.m.) can help planners and utilities identify neighborhoods where there will be demand for daytime charging.

5. Map of the top 40 workplaces identified by numbers of employees. Planners can target the largest employers for workplace charging initiatives, as they presumably host the largest numbers of parking spaces on-site and can potentially serve the highest numbers of employees.³

6. Map of the top 40 workplaces overlaid with morning peak PEV density. Planners and utilities can use these maps to assess the potential utilization of workplace charging by comparing the spatial distribution of employers and weekday morning peak travel destinations for PEVs.

7. Table of the top 40 workplaces⁴ listed in each city by number of employees. In addition to the sheer number of employees/potential PEV parking spaces, planners can use the other attributes in the table to assess potential demand for PEV charging at a workplace. PEV density (high or medium) indicates the relative quantity of PEVs that are parked during morning rush hour (6:00 a.m. to 9:00 a.m.) in the neighborhood where the workplace is located. If an employer is in a high-tech sector or if at least 50% of its employees are white-collar, this could further indicate potential demand, as high-tech firms have been early adopters of PEV workplace charging and studies indicate PEV ownership is currently correlated with higher incomes and levels of education.⁵

8. Map of retail destinations, from strip development to regional centers. Many PHEV drivers find it valuable to charge when visiting retail destinations in order to maximize electric miles driven. After locating general categories of retail charging opportunities on the map, planners can turn to Chapter 8 of the [Southern California PEV Readiness Plan](#) for more detailed descriptions of how long cars are typically parked at specific types of retail destinations.

9. Map of retail destinations overlaid with PEV mid-day travel, providing spatial retail PEV density at or near retail centers. Planners and utilities can use these maps to assess potential for retail charging by comparing the spatial distribution of retail centers and mid-day travel destinations (9:00 a.m. to 3:00 p.m.) for PEVs.

10. Table of the top 40 retailers listed in each city by annual retail sales (in thousands). PEV density (high or medium) indicates the relative quantity of PEVs that are parked during mid-day hours (9:00 a.m. to 3:00 p.m.) in the neighborhood in which the retailer is located. Retailers with the highest sales may be

³ Cities that did not have 40 workplaces listed in employer databases have fewer than 40 locations represented on the map. Workplaces in unincorporated areas with mailing addresses in a particular city appear on the map outside that city's borders.

⁴ In cities where there were fewer than 40 workplaces listed in the South Coast Air Quality Management's Rule 2202 database or in Infogroup's commercially available business database, fewer than 40 workplaces are listed.

⁵ Information on high-tech and white-collar is provided where available from Infogroup's database. The UCLA Luskin Center has made an effort to reclassify companies as appropriate.

in the best position to absorb the costs of providing PEV charging as an amenity, and may experience the highest utilization rates. Large retailers that were not listed in Infogroup's 2008 database and therefore could not be ranked according to sales are listed separately.

11. Map of publicly-accessible charging locations, identified by power level and number of stations per location.⁶ Planners can use these maps to compare the location of existing publicly-accessible charge stations with the locations of employment centers, retail centers and PEV daytime destinations, also mapped at the city level in the Appendix. The maps can also be used to identify where there are gaps in meeting demand for charging. For MUDs that do not have parking, publicly-accessible sites will become important charging options. The maps identify the number of charging units/cords available at each location along with the level of service (Level 1, Level 2, etc., or "Unknown" where there is charging available but the quantity of connectors and their level of service could not be immediately determined). The maps are based on information collected during the summer and fall of 2012.

12. Map of stand-alone parking facilities. Publicly-accessible parking facilities can fill a gap in PEV charging, particularly in older urban cores where retail stores and even some workplaces and multi-unit dwellings do not have dedicated parking. Park and ride lots in particular may substitute for Level 1 workplace charging if workers leave their PEVs parked all day. Parking lots and structures greater than 2.5 acres that are not attached to other land uses, where they exist, are mapped at the city level.⁷

GHG analysis

This memo projects the adoption of plug-in electric vehicles (PEVs) into the Western Riverside County vehicle fleet and the resulting impact on greenhouse gas (GHG) emissions. The quantity of avoided carbon emissions is presented with a lower bound (based on carbon intensity numbers from Southern California Edison, mandated average efficiency of internal combustion engine vehicles, current PEV registrations in Western Riverside County, historic sales of the standard Toyota Prius hybrid as a conservative predictor of PEV sales growth, and average daily commutes). We also provide a moderate bound (+ 5%), and high bound (+ 10%) for potential emissions. These savings are enumerated for the Western Riverside County subregion. The time span included in the analysis covers the 10 years from 2012 to 2022.

⁶ Maps of publicly-accessible charging stations have been omitted for some cities because stations in those cities were not listed in public charge station databases during the summer and fall of 2012.

⁷ Maps of stand-alone parking facilities have been omitted for some cities because they did not contain stand-alone parking facilities of this size at the time of the Southern California Association of Governments' 2005 land use update.

Largest Multi-Unit Dwellings in Areas of Moderate PEV Registration, Western Riverside County

Address	City	Condo?	Number of units	Unit value	Year built	Attached/detached garage	Carpport?	PEV density
31237 HIGHWAY 79	Temecula	N	180	\$221,226				M
39930 WHITEWOOD RD	Murrieta	N	180	\$199,268	1989			M
26900 WINCHESTER CREEK AVE	Murrieta	N	175	\$168,441				M
2660 CLARK AVE	Norco	N	40	\$67,559				M
39060 AGUA VISTA	Murrieta	N	36	\$89,327	1986			M
39011 AGUA VISTA ST	Murrieta	N	32	\$92,974	1989			M
38981 CALLE HERMOSA	Murrieta	N	24	\$51,536				M
28239 VIA PRINCESSA	Murrieta	N	16	\$54,611				M
39078 AGUA VISTA RD	Murrieta	N	12	\$23,384				M
1652 4TH ST	Norco	N	4	\$33,140	1950			M
2843 VALLEY VIEW AVE	Norco	N	4	\$82,285				M
3307 CORONA AVE	Norco	N	3	\$201,399	1950	A		M
3344 CORONA AVE	Norco	N	3	\$54,101	1953			M

Largest workplaces in neighborhoods of high PEV density during weekday mornings, Western Riverside County						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Temecula	Professional Hospital Supply, Inc.	41980 Winchester Rd	1100	N	Y	H
Corona	Watson Laboratories	132 Business Center Dr	960	Y	Y	H
Temecula	Hexfet America	41915 Business Park Dr	663	Y	Y*	H
Corona	Fender Musical Instruments	1163 Pomona Rd	653	N	N	H
Corona	Dart Container Corp of California	150 S Maple St	426	N	Y	H
Corona	Thermal Structures, Inc.	2362 Railroad St	271	Y	N	H
Temecula	Millipore Inc.	28820 Single Oak Dr	270	N	N	H
Temecula	Abbott Cardiovascular System	42301 Zevo Dr	256			H
Corona	Circle Seal Controls Inc	2301 Wardlow Cir	250	Y	N	H
Corona	R W Lyall & Co Inc	2665 Research Dr	220	N	N	H
Murrieta	Temecula Valley Drywall	41228 Raintree Ct	220	N	N	H
Corona	Brasscraft Manufacturing Co	215 N Smith Ave	200	N	N	H
Corona	Appa Fine Foods Inc	135 Klug Cir	200	N	N	H
Corona	Minka-Aire	1151 Bradford Cir	200	N	N	H
Temecula	Chemicon International Inc	28820 Single Oak Dr	200	N	N	H
Temecula	Molding International Enginrng	42136 Avenida Alvarado	200	N	N	H
Temecula	Opto 22	43044 Business Park Dr	200	N	Y	H
Temecula	Keller Williams Realty	27290 Madison Ave # 200	198	N	Y	H
Corona	ATK Space Systems & Sensors	250 Klug Cir	185	Y*	Y*	H
Murrieta	Star Trac Strength Inc	41180 Raintree Ct	150	N	N	H
Temecula	Cutting Edge Staffing Inc	41750 Winchester Rd # L	150	N	Y	H
Temecula	Plant CML	42505 Rio Nedo	130	Y	Y	H
Temecula	Castaways Thrift Shops	28720 Via Montezuma	120	N	N*	H
Temecula	Rancho Calif Water District	42135 Winchester Rd	120	N	Y	H
Murrieta	Open Solutions FDSI	41188 Sandalwood Cir	80	N	N	H

*Reclassified by Luskin Center

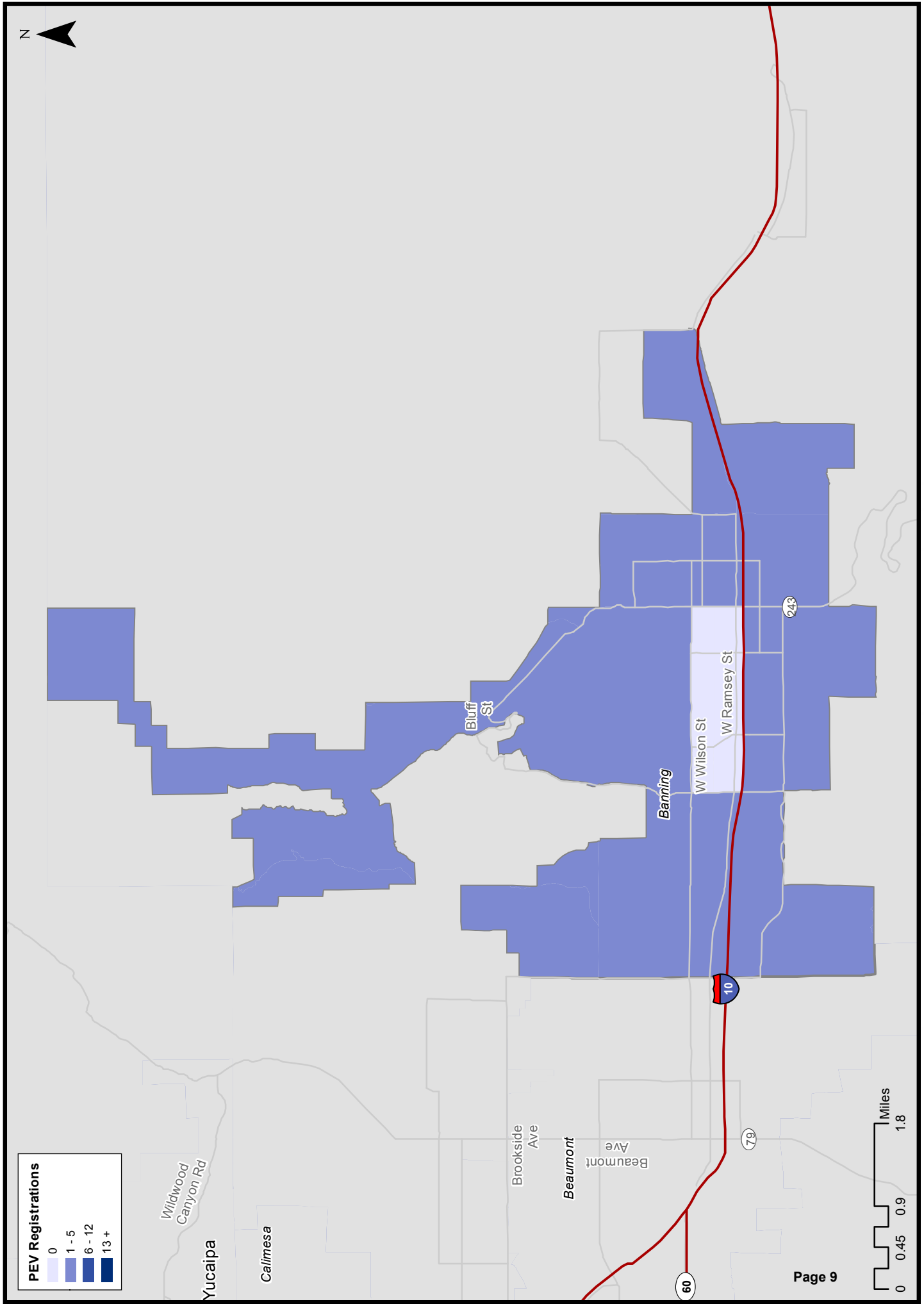
Largest workplaces in neighborhoods of moderate PEV density during weekday mornings, Western Riverside County						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Riverside	County of Riverside	4080 Lemon St	3222	N	N	M
Riverside	Riverside Community Hospital	4445 Magnolia Ave	1865	N	N	M
Riverside	Riverside City Hall	3900 Main St	739	N	N	M
Riverside	County of Riverside	4050 Main St	543	N	N	M
Riverside	Press-Enterprise	3512 Fourteenth St	461	N*	Y*	M

*Reclassified by Luskin Center

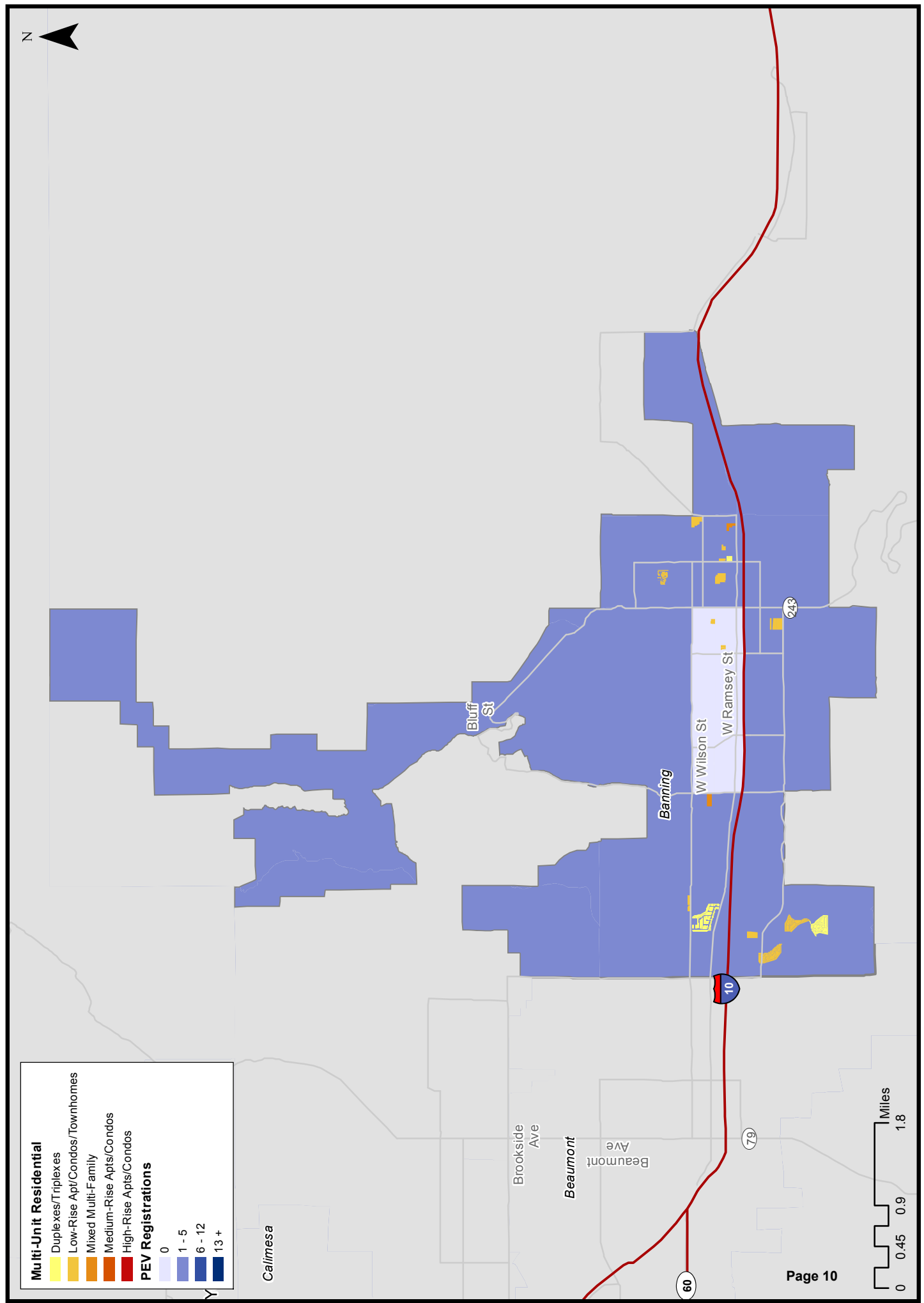
Largest WRCOG Retailers in Areas of Moderate Mid-Day PEV Density, Western Riverside County

CITY	COMPANY	ADDRESS	ANNUAL SALES (000s)	Mid-day PEVs
Corona	Corona Nissan	2575 Wardlow Rd	\$76,451	M
Corona	Aircraft Spruce & Specialty Co	225 Airport Cir	\$39,060	M
Temecula	Wal-Mart Supercenter	32225 US Highway 79 S	\$35,640	M
Corona	C & R Systems Inc	1835 Capital St	\$32,300	M
Temecula	Stater Bros Markets	31813 US Highway 79 S	\$29,640	M
Corona	Victor Buick GMC	2525 Wardlow Rd	\$26,000	M
Corona	Power Volkswagonn	2603 Wardlow Rd	\$25,770	M
Corona	Mighty Mover Trailers	224 N Sherman Ave	\$25,600	M
Corona	Giant RV	180 N Sherman Ave	\$25,600	M
Temecula	Henry's Market Place	32413 State Highway 79	\$20,995	M
Corona	Bosch Kia Isuzu of Corona	2683 Wardlow Rd	\$14,603	M
Corona	Giant RV	1301 Pomona Rd	\$14,080	M
Eastvale	Fritschnet Inc-Hostgo	6934 Cottonwood Cir	\$1,628	M
Eastvale	Eagle Memory Products	7111 Tawny Owl Ct	\$1,372	M
Eastvale	Cinematic Home Theater	13430 Cascade Ct	\$1,292	M
Eastvale	Net Runner Global	7318 Silverwood Dr	\$1,141	M
Eastvale	Stork News-the Inland Empire	12752 Hungarian St	\$644	M
Eastvale	Sashi Bear LLC	6310 Golden Bit St	\$603	M
Eastvale	A G Organics	7215 Woodpigeon Rd	\$546	M

Banning: Plug-in Electric Vehicle Registrations



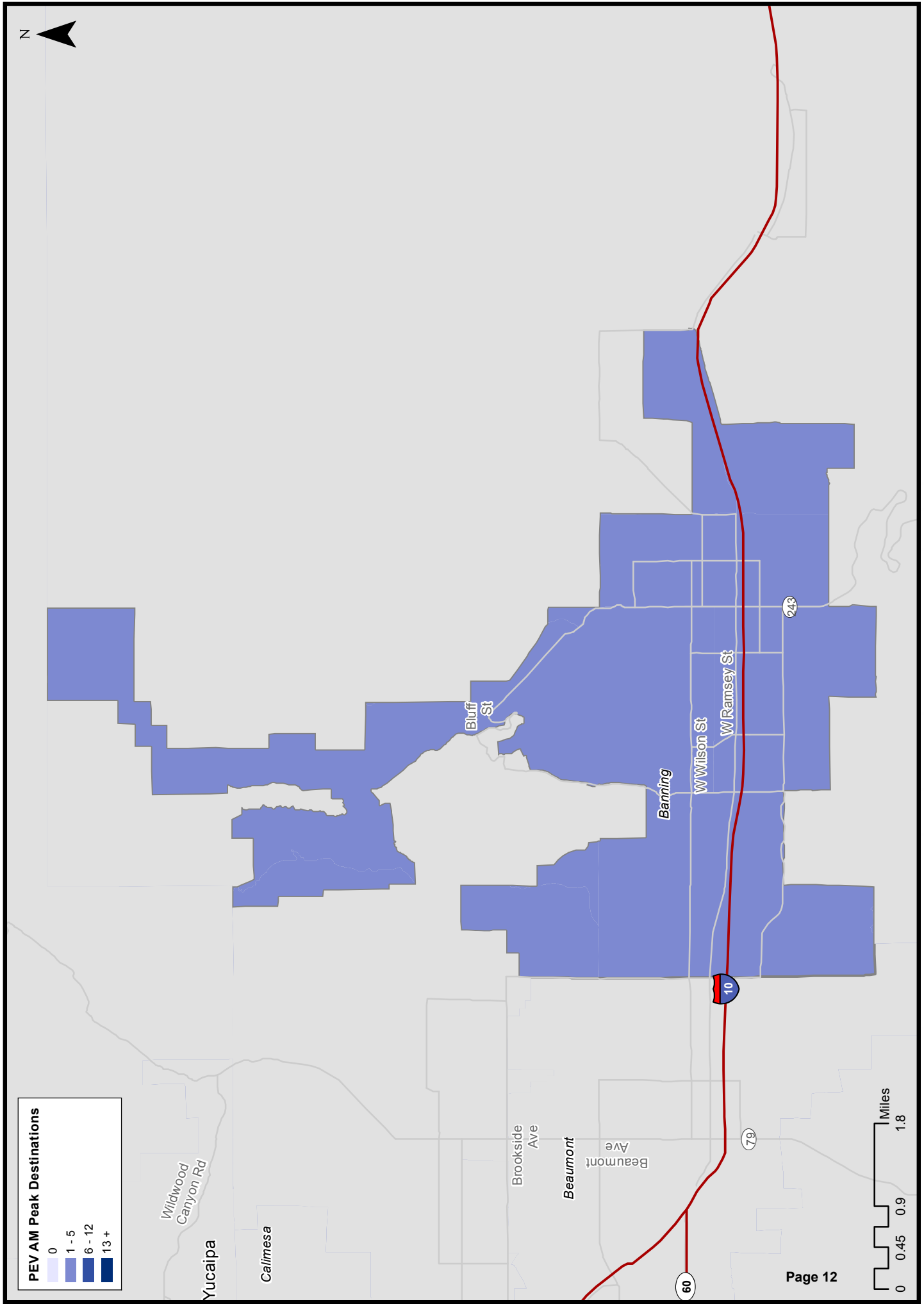
Banning: Multi-Unit Residential and PEV Registrations



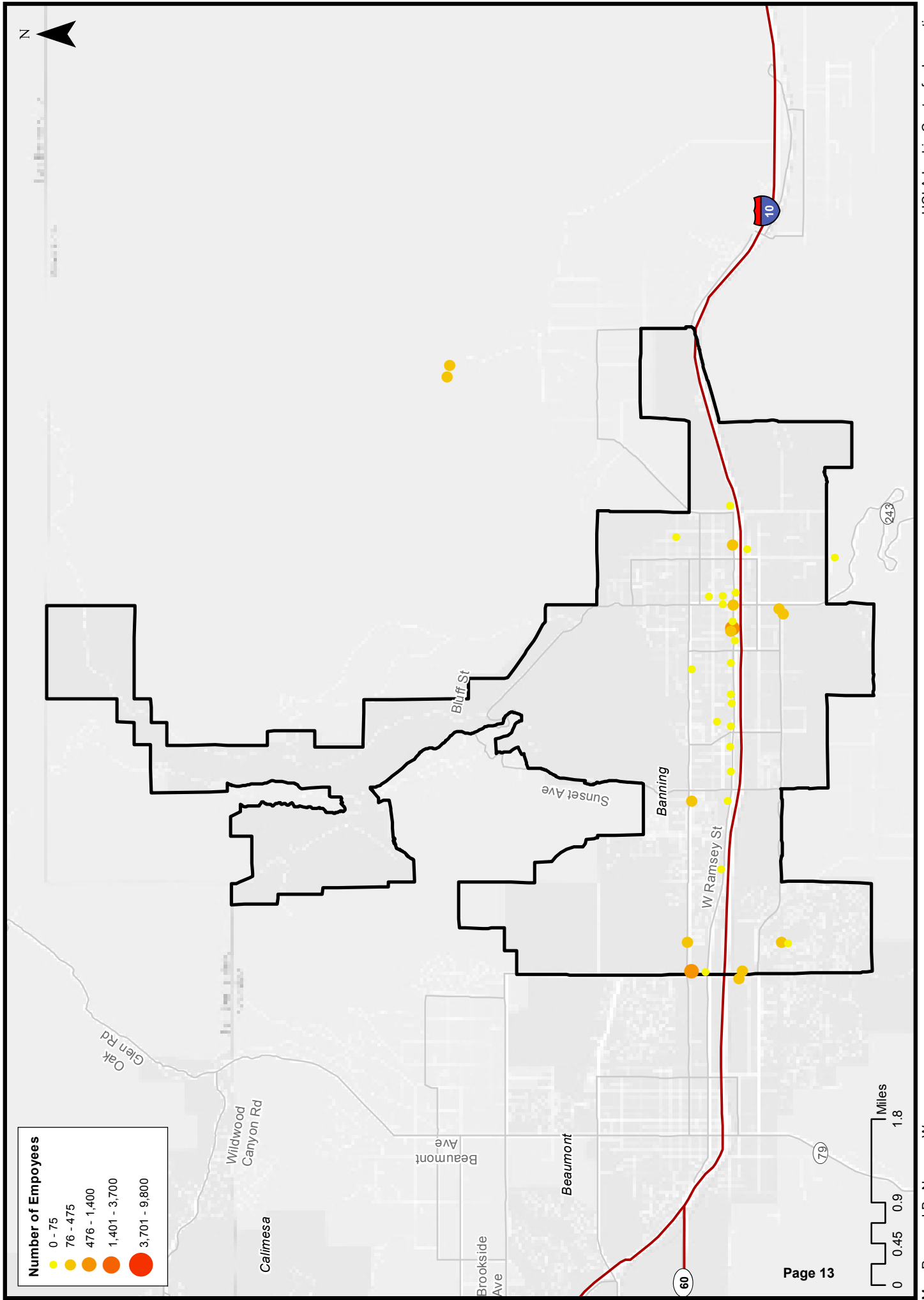
Banning: Top Multi-Unit Dwellings

	Address		Number of units	Condo?	Unit value	Year built	PEV density
Banning	555 N HATHAWAY	ST	81	N	\$96,929		
Banning	456 E NICOLET	ST	81	N	\$38,399		
Banning	380 W BARBOUR	ST	80	N	\$34,615		
Banning	1341 VISTA SERENA	AVE	77	Y	\$35,700	1982	
Banning	3860 W JACINTO VIEW	RD	63	Y	\$69,648	1991	
Banning	381 BARBOUR	ST	48	N	\$34,617		
Banning	5059 WILSON	ST	36	N	\$101,543		
Banning	5001 WILSON	AVE	32	N	\$99,163		
Banning	3394 N SUNSET	AVE	26	N	\$34,844		
Banning	2692 W WILLIAMS	ST	24	N	\$50,540		
Banning	238 W HAYS	ST	23	N	\$15,609		
Banning	233 W NICOLET	ST	21	N	\$87,370		
Banning	477 W RAMSEY	ST	19	N	\$54,867		
Banning	1260 W WILLIAMS	ST	18	N	\$99,045		
Banning	675 W WILLIAMS	ST	13	N	\$41,740		
Banning	368 N 3RD	ST	10	N	\$35,989		
Banning	86 N 3RD	ST	8	N	\$15,600		
Banning	747 W CHESNUT	AVE	8	N	\$78,788		
Banning	729 W WILLIAMS	ST	8	N	\$41,571		
Banning	655 E WILLIAMS	ST	8	N	\$38,469		

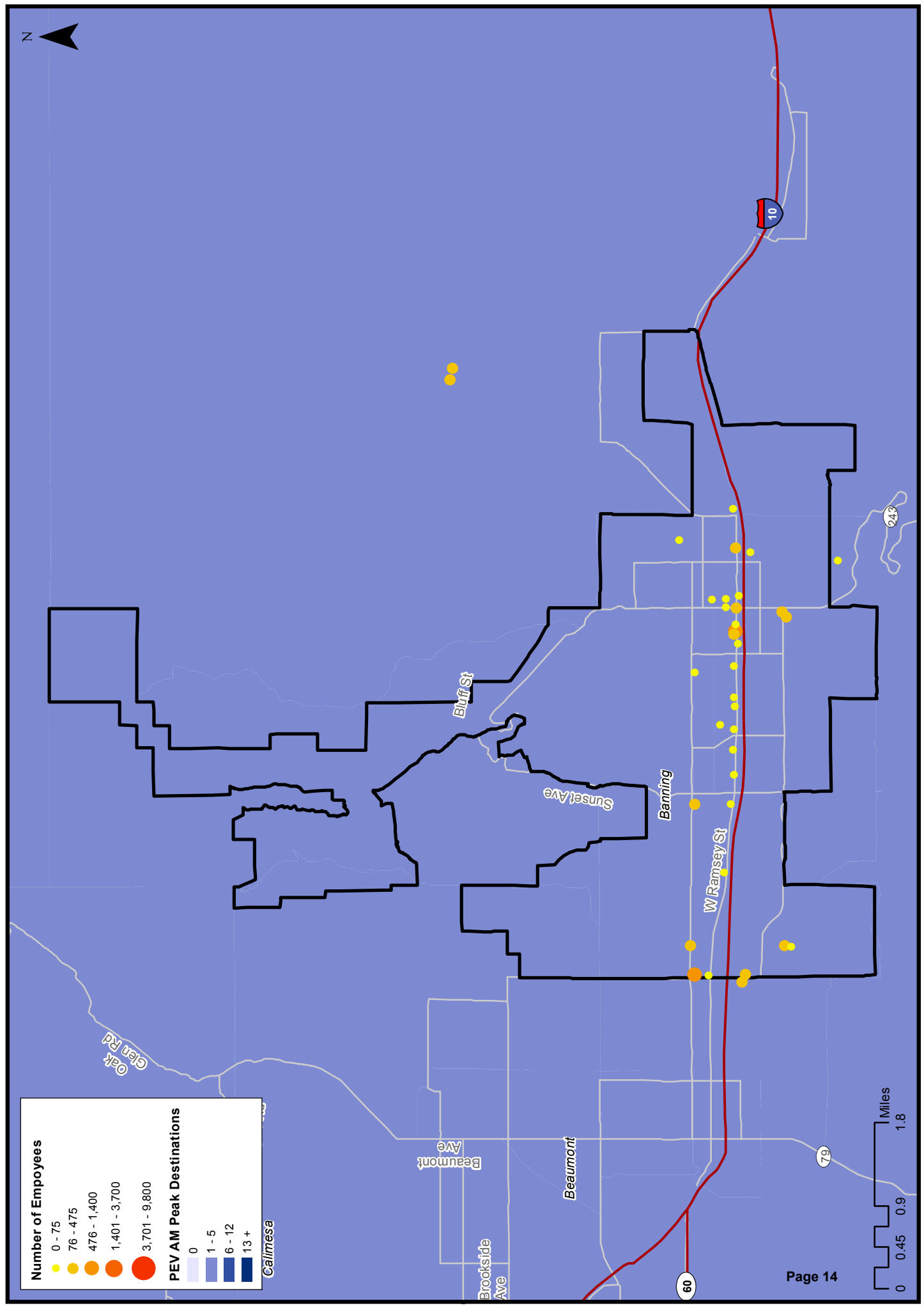
Banning: Plug-in Electric Vehicle Morning Peak Destinations



Banning: Top Workplaces by Number of Employees



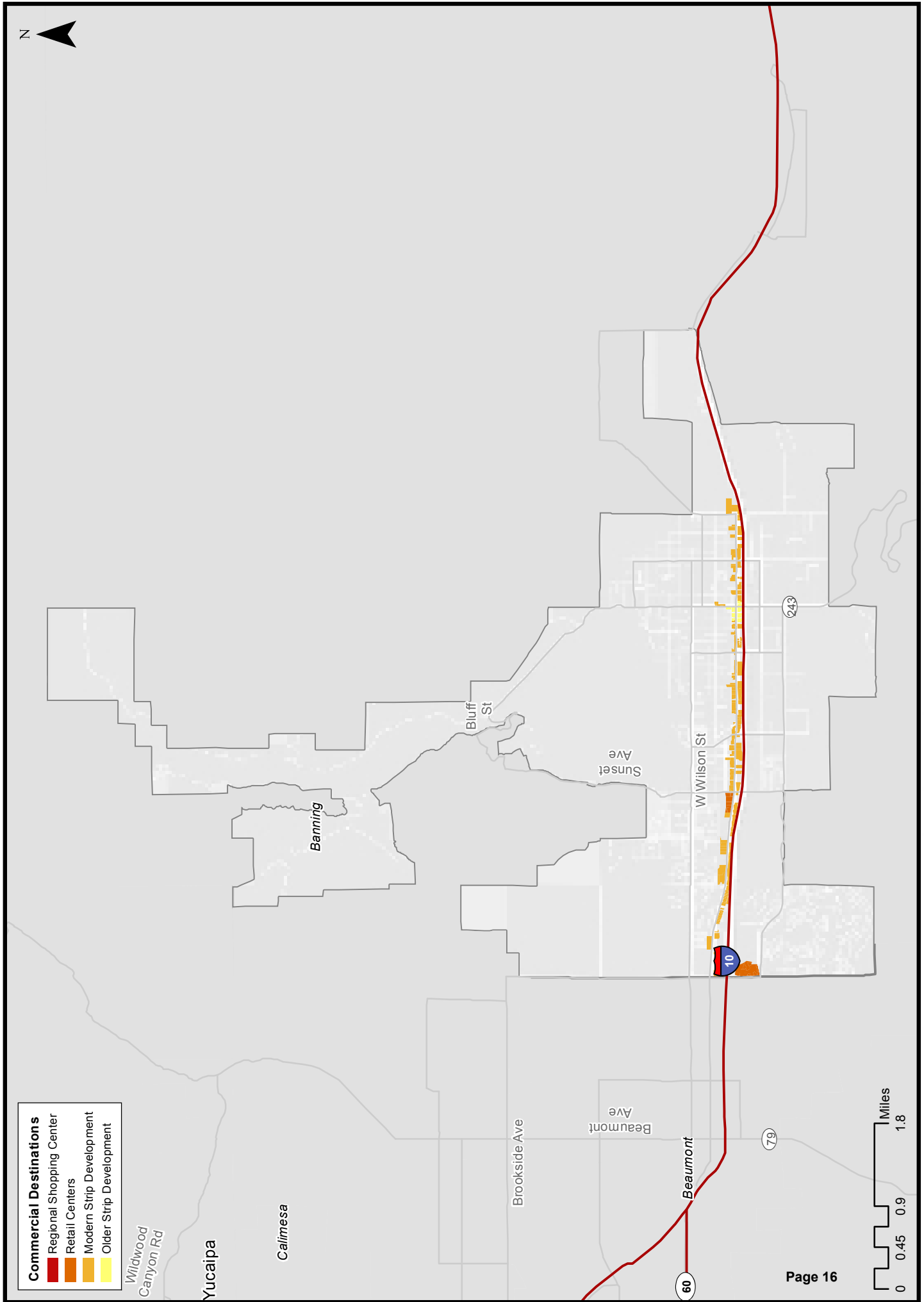
Banning: PEV Morning Peak Destinations and Top Workplaces



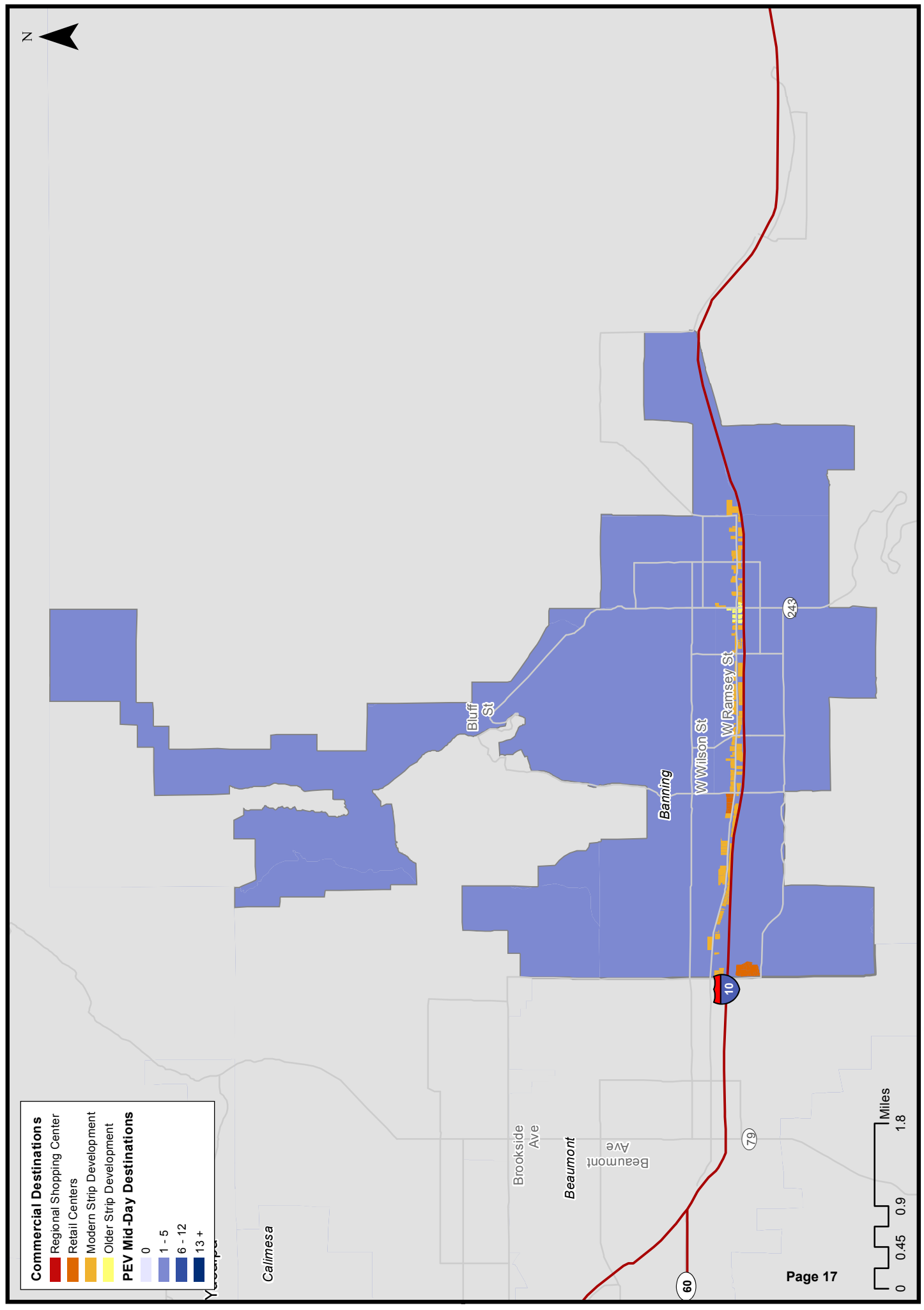
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Banning	CO OF RIVERSIDE, BANNING	63 S 4TH ST	747	N	N	
Banning	SAN GORGONIO PASS MEM HOSP DIST	600 N HIGHLAND SPRINGS AVE	483	N	Y	
Banning	Riverside-San Bernardino Cnty	11555 1/2 Potrero Rd	235	N	Y	
Banning	Green Thumb Produce	2648 W Ramsey St	200	N	N	
Banning	Cherry Valley Health Care	5800 W Wilson St	155	N	Y	
Banning	Banning Unified SchI District	100 W Westward Ave	125	N	Y	
Banning	Banning City Hall	99 E Ramsey St	113	N	N	
Banning	Morongo Indian Health Clinic	11555 1/2 Potrero Rd	100	N	Y	
Banning	Riverside County Public Social	63 S 4th St	100	N	N	
Banning	Silent Valley Club	46305 Poppet Flats Rd	99	N	N	
Banning	Banning High School	100 W Westward Ave	95	N	Y	
Banning	Albertsons	300 S Highland Springs Ave	90	N	N	
Banning	Kmart	300 S Highland Springs Ave	90	N	N	
Banning	Banning Healthcare	3476 W Wilson St	85	N	Y	
Banning	Alsco Inc	979 E Ramsey St	80	N	N	
Banning	Sun Lakes Country Club	850 Country Club Dr	80	N	N	
Banning	Design MGM Inc	1679 E Ramsey St	75	N	N	
Banning	Diamond Hills Auto Group	4545 W Ramsey St	70	N	Y	
Banning	Central Elementary School	295 N San Gorgonio Ave	65	N	Y	
Banning	Nicolet Middle School	101 E Nicolet St	65	N	Y	
Banning	Hoffer Elementary School	1115 E Hoffer St	60	N	Y	
Banning	Banning City Police Dept	125 E Ramsey St	55	N	N	
Banning	Riverside County Sheriff Dept	1627 S Hargrave St	50	N	N	
Banning	Susan B Coombs Intermediate	1151 W Wilson St	50	N	Y	
Banning	Tarbell	1035 W Ramsey St	50	N	Y	
Banning	Walgreens	60 N Highland Springs Ave	50	N	N*	
Banning	Strech Plastics	900 John St # J	48	N	N	
Banning	Gamma's Country Kitchen	2868 W Ramsey St	45	N	N	
Banning	HELP Ctr	53 S 6th St	45	N	N	
Banning	Hemmerling Elementary School	1928 W Nicolet St	45	N	Y	
Banning	New Millennium Assoc	330 W Ramsey St	45	N	Y	
Banning	Banning RV Discount Ctr	2424 W Ramsey St	42	N	Y	
Banning	Sizzler	1750 W Ramsey St	42	N	N	
Banning	US Post Office	176 N Alessandro St	40	N	N	
Banning	Big Lots	3403 W Ramsey St	40	N	N*	
Banning	Mc Donald's	2140 W Ramsey St	40	N	N	
Banning	Ramsey Street Ford	1585 W Ramsey St	40	N	Y	
Banning	Riverside County Twin Pines	49500 Twin Pines Rd	40	N	N	
Banning	Sun Lakes Country Club Acct	850 Country Club Dr	40	N	N	
Banning	Twin Pines Ranch	49500 Twin Pines Rd	40	N	N	

*Reclassified by Luskin Center

Banning: Commercial (Retail) Locations



Banning: PEV Mid-Day Destinations and Commercial (Retail) Locations

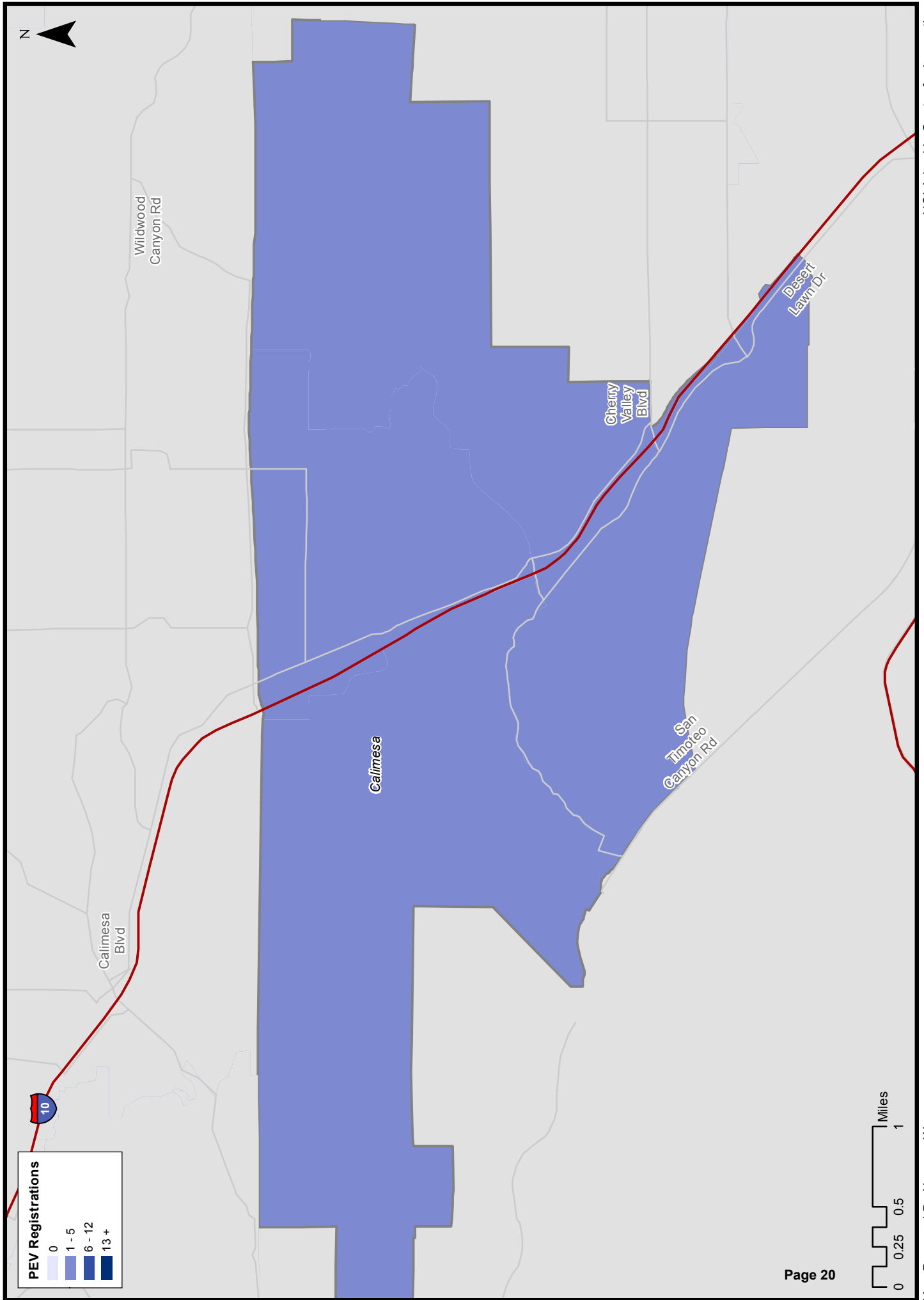


Banning: Top Retailers

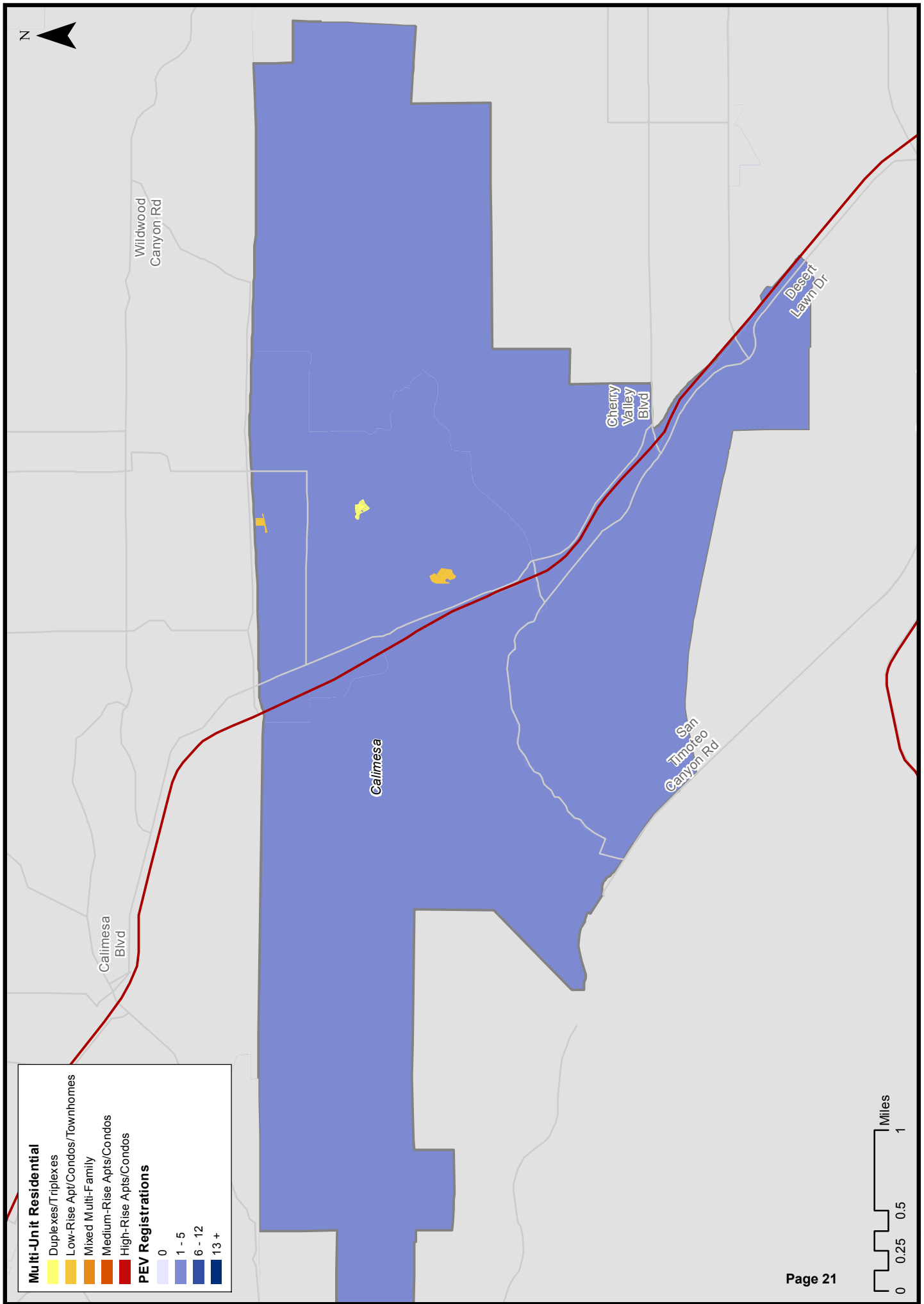
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Stagecoach Motor Inn	1363 E Ramsey St	Hotels & Motels, Except Casino Hotels	\$93,198	
Window Logic Corp	1879 W Lincoln St	Other Building Material Dealers	\$77,400	
Ramsey Street Ford	1585 W Ramsey St	New Car Dealers	\$34,360	
Banning RV Discount Ctr	2424 W Ramsey St	Recreational Vehicle Dealers	\$26,880	
Diamond Hills Auto Group	4545 W Ramsey St	New Car Dealers	\$23,000	
Albertsons	300 S Highland Springs Ave	Supermarkets & Other Grocery Stores	\$22,230	
All Star Dodge	2301 W Ramsey St	New Car Dealers	\$17,180	
Kmart	300 S Highland Springs Ave	Department Stores, Except Discount	\$14,580	
Green Thumb Produce	2648 W Ramsey St	Caterers	\$13,000	
Zoop's Hotrod Products	931 E Lincoln St	Used Car Dealers	\$11,407	
Walgreens	60 N Highland Springs Ave	Pharmacies & Drug Stores	\$9,150	
AlSCO Inc	979 E Ramsey St	Linen Supply	\$7,120	
Banning Truck Sales	1498 E Ramsey St	New Car Dealers	\$6,013	
Rite Aid	300 S Highland Springs Ave # 9	Food, Health, Supplement Stores	\$5,490	
Big Lots	3403 W Ramsey St	Department Stores, Except Discount	\$4,080	
Pro-Rise	60 E Gilman St	Other Building Material Dealers	\$3,870	
American Appliance	160 W Hays St	Household Appliance Stores	\$3,672	
Jim Smith Auto Enterprises Inc	2609 W Ramsey St	Used Car Dealers	\$3,355	
Highland Springs Mobil	300 S Highland Springs Ave # 5	Tire Dealers	\$3,248	
Brunson Auto Sales	2770 W Ramsey St	Used Car Dealers	\$2,684	
Silent Valley Club	46305 Poppet Flats Rd	All Other Traveler Accommodation	\$2,400	
Certified Tires & Svc Ctr	1820 W Ramsey St	Tire Dealers	\$2,300	
Kofdarali Ampm 2	2228 W Ramsey St	Convenience Stores	\$2,016	
Allstar Auto Sales	3724 W Ramsey St	Used Car Dealers	\$2,013	
Dick's Tire Mart	1481 W Ramsey St	Tire Dealers	\$1,989	
Autozone	3453 W Ramsey St # A	Automotive Parts & Accessories Stores	\$1,950	
22nd Shell	2192 W Ramsey St	Other Gasoline Stations	\$1,856	
Banning Shell	780 E Ramsey St	Other Gasoline Stations	\$1,856	
Gramma's Country Kitchen	2868 W Ramsey St	Limited-Service Restaurants	\$1,800	
Domino's Pizza	3083 W Ramsey St # A	Limited-Service Restaurants	\$1,680	
Sizzler	1750 W Ramsey St	Limited-Service Restaurants	\$1,680	
Mc Donald's	2140 W Ramsey St	Limited-Service Restaurants	\$1,600	
Shopping Basket	2217 W Ramsey St	Supermarkets & Other Grocery Stores	\$1,568	

Baja Grill	940 E Williams St	Furniture Stores	\$1,530
Ortega's Furniture	3453 W Ramsey St	Furniture Stores	\$1,530
Sunset Market Deli & Liquor	3181 W Ramsey St	Supermarkets & Other Grocery Stores	\$1,482
Meerkat Salvage Machining	960 S Hathaway St	Commercial Machinery Repair & Maintenance	\$1,464
Del Taco	1964 W Ramsey St	Limited-Service Restaurants	\$1,400
Farmhouse	6261 Joshua Palmer Way	Limited-Service Restaurants	\$1,400
Auto Source	2159 W Ramsey St	Used Car Dealers	\$1,342
Horeb Motors	5600 W Ramsey St	Used Car Dealers	\$1,342
Unlimited Auto Ctr	4151 W Ramsey St	Used Car Dealers	\$1,342

Calimesa: Plug-in Electric Vehicle Registrations



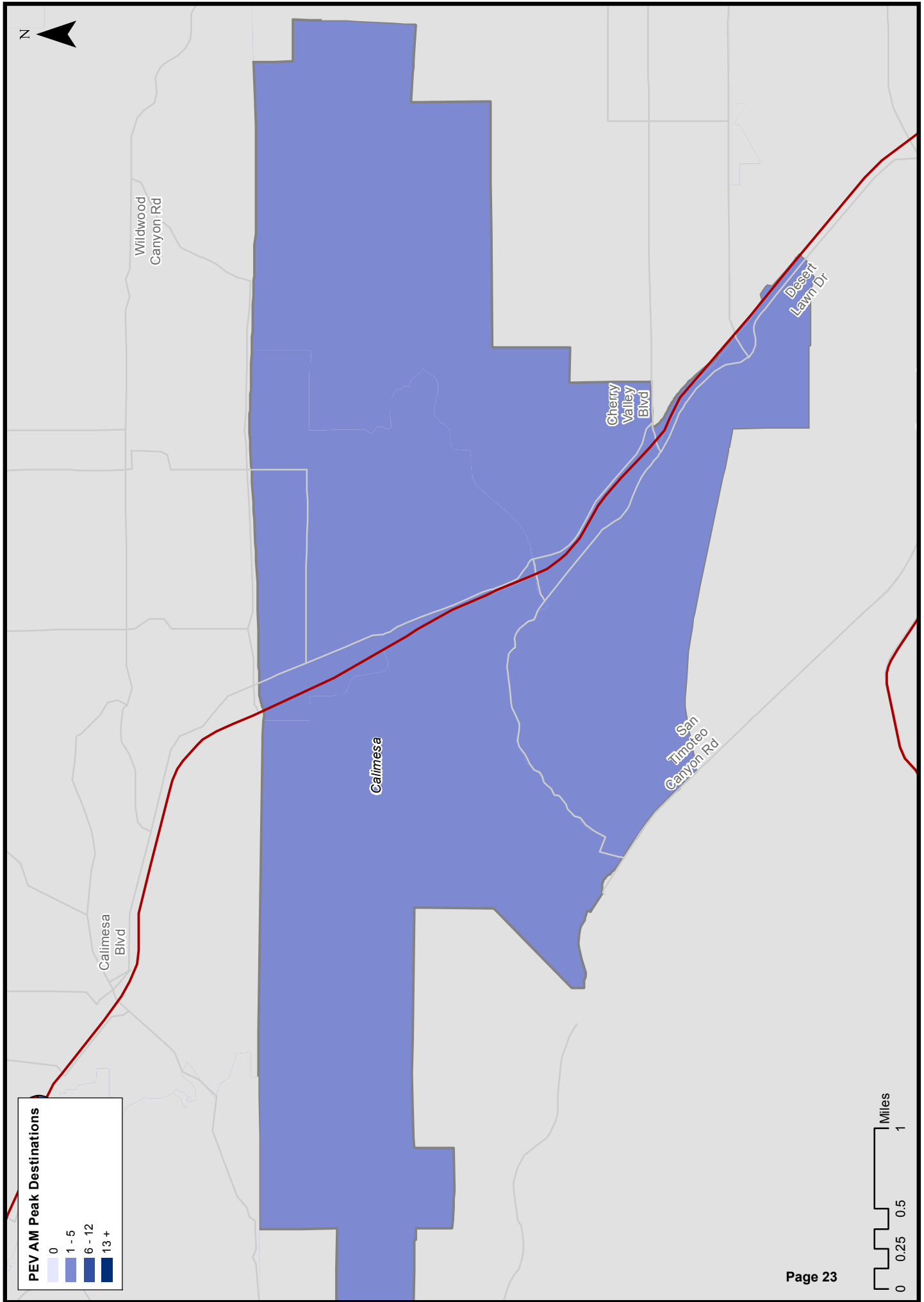
Calimesa: Multi-Unit Residential and PEV Registrations



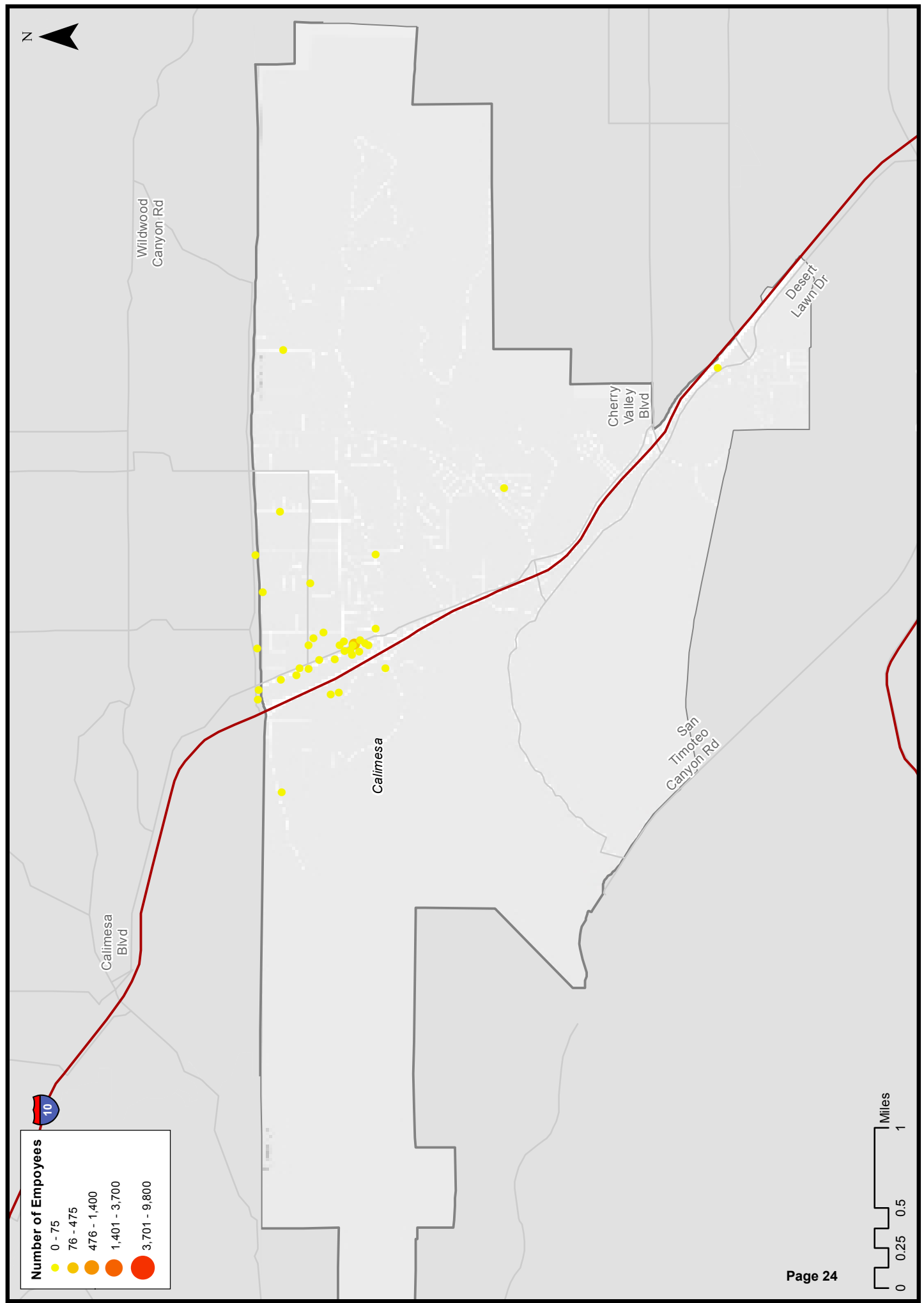
Calimesa: Top Multi-Unit Dwellings

	Address	Number of units	Condo?	Unit value	Year built	Attached/detached garage	Carpport?	PEV density
Calimesa	35100 MESA GRANDE DR	86	Y	\$232,043	1973			
Calimesa	199 SUMMIT VIEW	20	Y	\$60,823	1973			
Calimesa	948 AVENUE B	6	N	\$40,610				
Calimesa	534 AVENUE K	4	N	\$72,192				
Calimesa	525 ERWIN ST	4	N	\$76,476				
Calimesa	532 ERWIN ST	4	N	\$21,334				
Calimesa	946 PARK AVE	4	N	\$78,005				
Calimesa	469 W AVENUE L	3	N	\$157,033	1973		A	
Calimesa	141 E COUNTY LINE RD	3	N	\$73,769	1932		D	

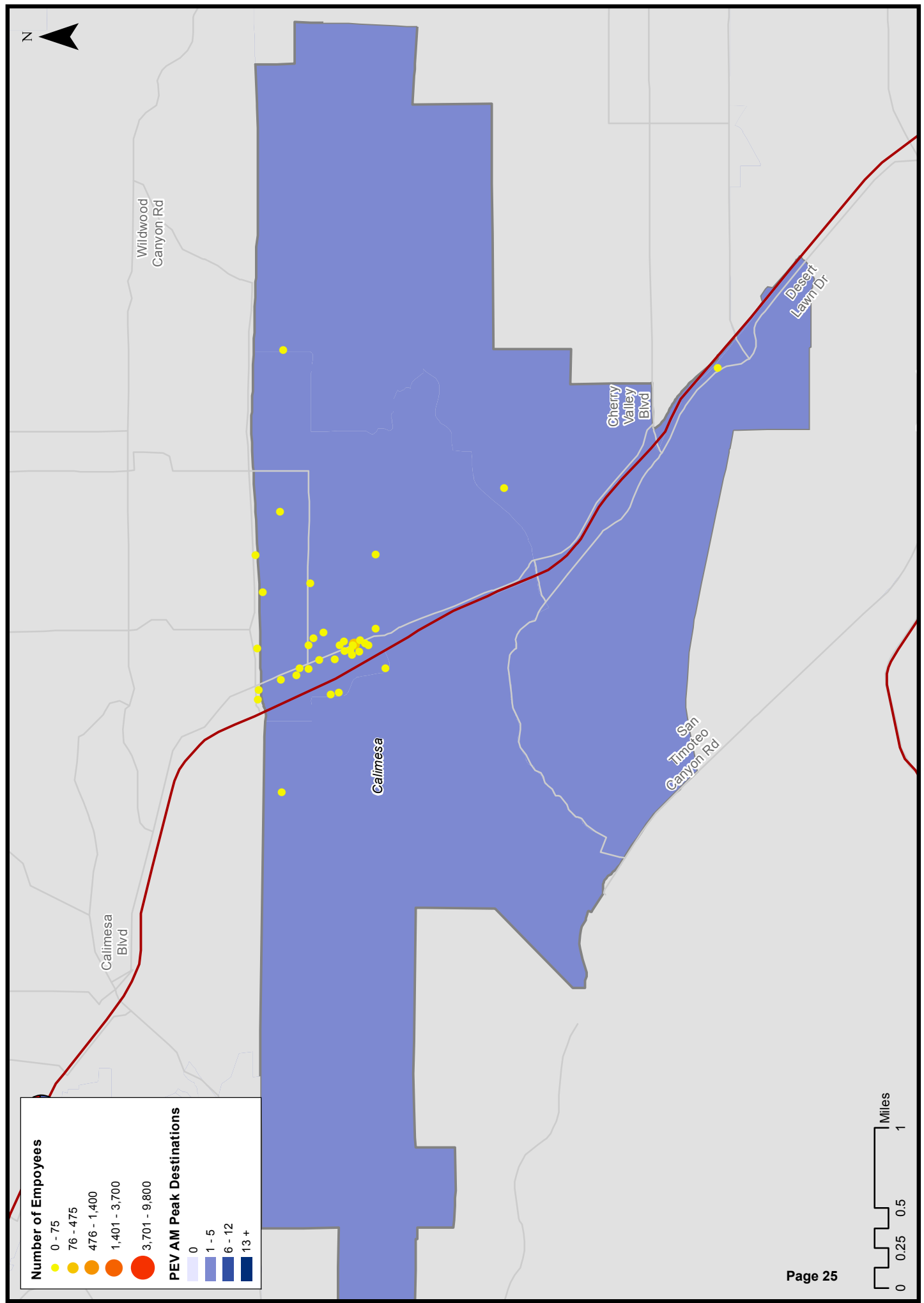
Calimesa: Plug-in Electric Vehicle Morning Peak Destinations



Calimesa: Top Workplaces by Number of Employees

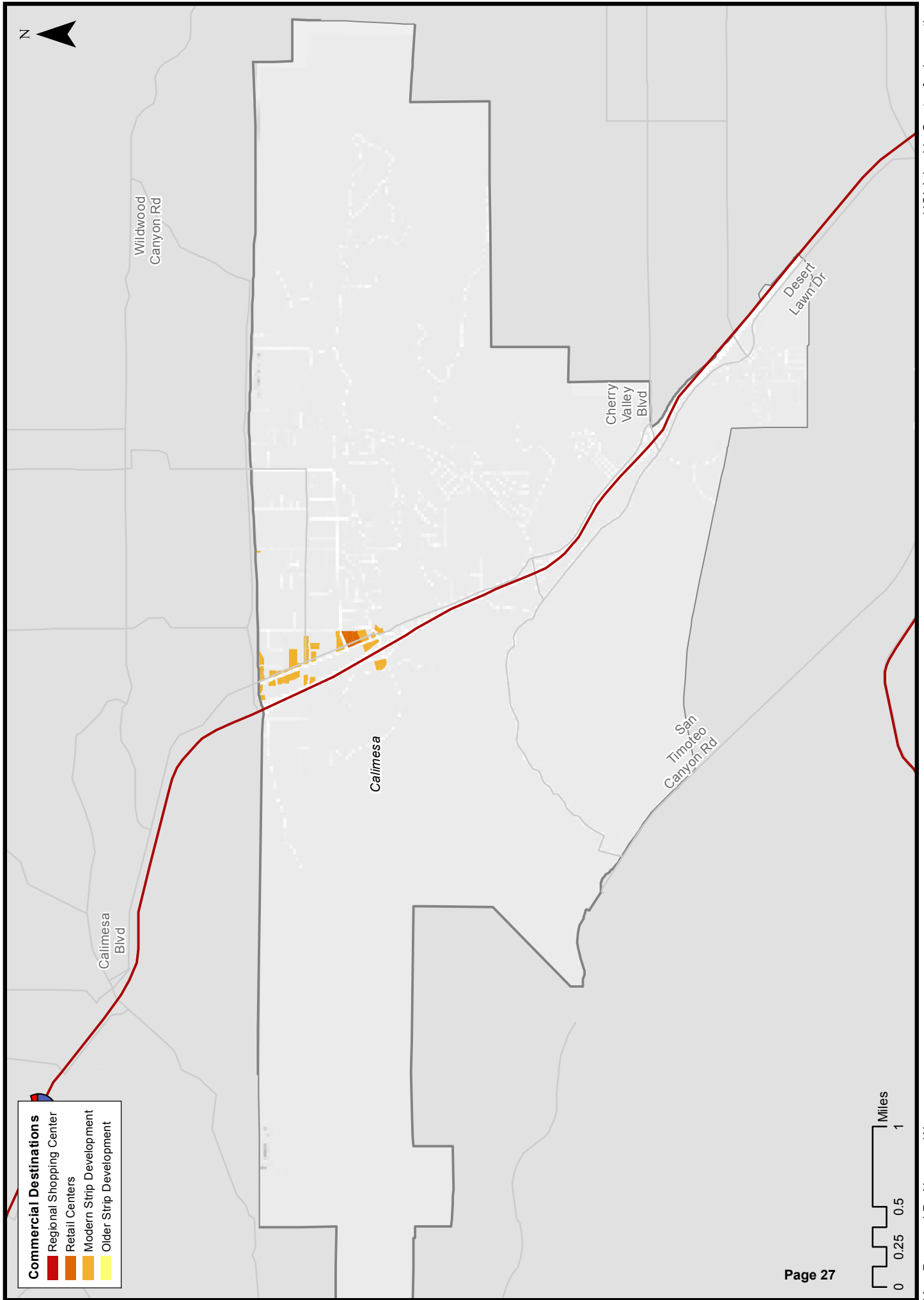


Calimesa: PEV Morning Peak Destinations and Top Workplaces

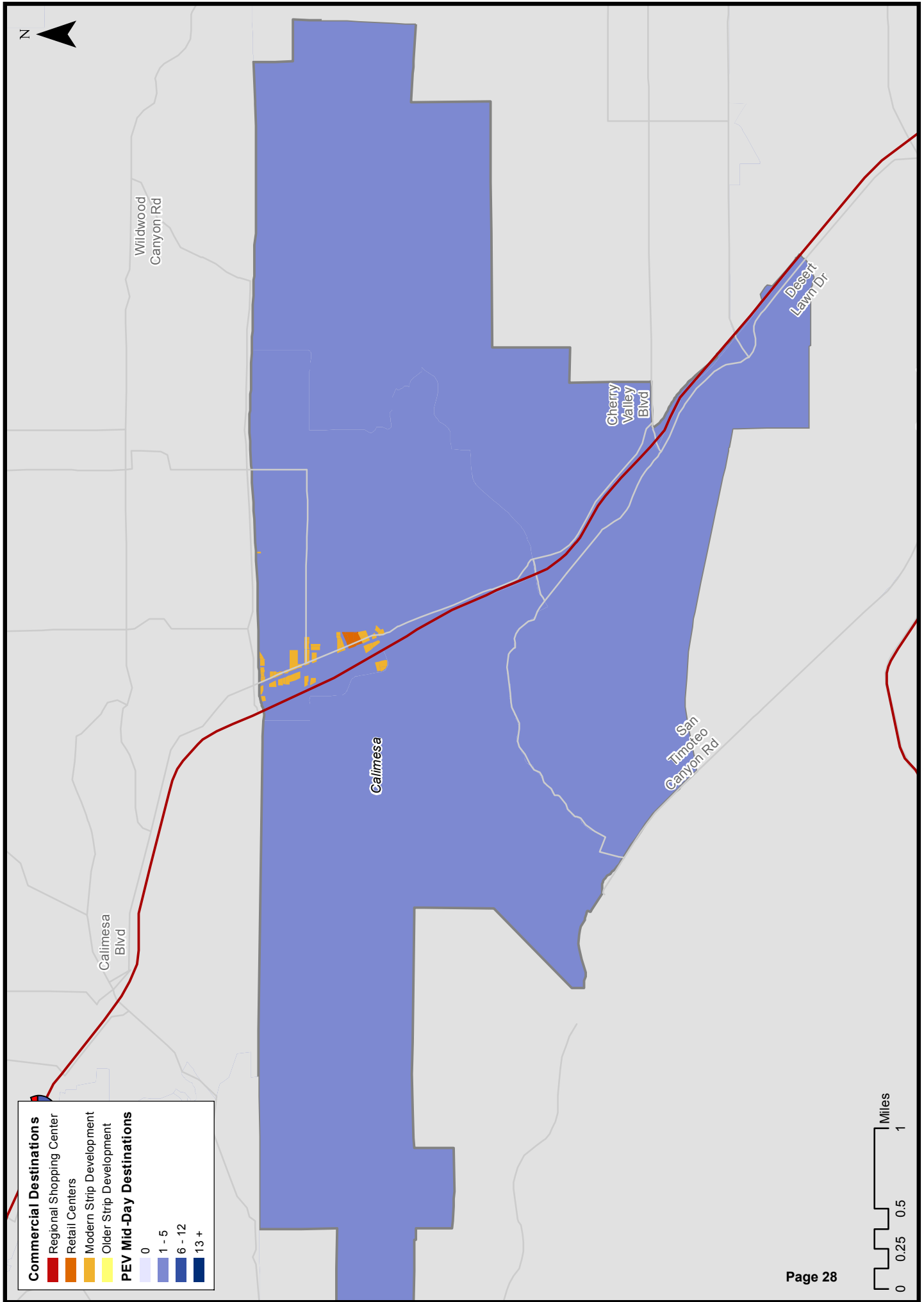


Calimesa: Top Workplaces						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Calimesa	Skat Trak Inc	654 Avenue K	100	N	N	
Calimesa	Stater Bros Markets	1155 Calimesa Blvd	77	N	N*	
Calimesa	Mesa View Middle School	825 W Avenue K	65	N	Y	
Calimesa	Calimesa Country Club	1300 3rd St	57	N	N	
Calimesa	Bob's Big Boy	540 Sandalwood Dr	48	N	N	
Calimesa	Mc Donald's	1199 Calimesa Blvd	40	N	N	
Calimesa	Mesa Grande Seventh-Day Acad	975 Fremont St	35	N	Y	
Calimesa	Cunningham Davis Corp	35600 Singleton Rd	30	N	N	
Calimesa	Del Taco	33940 County Line Rd	28	N	N	
Calimesa	Bakers Drive Through	665 W County Line Rd	26	N	N	
Calimesa	Burger King	497 Sandalwood Dr	23	N	N	
Calimesa	Taco Bell	1190 Calimesa Blvd	22	N	N	
Calimesa	Jack in the Box	1199 7th St	21	N	N	
Calimesa	Coldwell Banker	544 Myrtlewood Dr	20	N	Y	
Calimesa	Tommy Gun Plastering	944 4th St	20	N	N	
Calimesa	Calimesa City Hall	908 Park Ave	18	N	N	
Calimesa	Deseret Industries	1197 Calimesa Blvd	15	N	Y	
Calimesa	Royale Restaurant of Calimesa	1007 Calimesa Blvd # K	14	N	N	
Calimesa	Yucaipa Valley Water District	880 W County Line Rd	14	N	Y	
Calimesa	US Post Office	600 W Avenue L	13	N	N	
Calimesa	Rosie's Restaurant	1145 Calimesa Blvd	12	N	N	
Calimesa	Mc G's Fine Dining & Pub	534 Myrtlewood Dr	12	N	N	
Calimesa	Calimesa Veterinary Clinic	980 Calimesa Blvd	11	N	Y	
Calimesa	Bank of America	1055 Calimesa Blvd	11	N	Y	
Calimesa	Plantation Homes	10961 Desert Lawn Dr	11	N	Y	
Calimesa	Salon 909	1007 Calimesa Blvd # G2	11	N	N	
Calimesa	Cabinet Worx	530 W Avenue L	10	N	N	
Calimesa	Citibank	1139 Calimesa Blvd	10	N	Y	
Calimesa	B & Y Machine Co	1060 5th St	10	Y	N	
Calimesa	4 M Co	1095 Calimesa Blvd	10	N	N	
Calimesa	New Life Preschool	940 2nd St	10	N	Y	
Calimesa	A & A Mobile Homes	520 Myrtlewood Dr	9	N	Y	
Calimesa	Franklin & Son Heating & AC	519 W Avenue L # A	8	N	N	
Calimesa	South Mesa Water Co	391 W Avenue L	8	N	Y	
Calimesa	Subway Sandwiches & Salads	1197 Calimesa Blvd # J	8	N	N	
Calimesa	Oak Valley Family Church	9580 Calimesa Blvd	8	N	Y	
Calimesa	AMPM Mimi Mart	1216 Calimesa Blvd	7	N	N*	
Calimesa	7-Eleven	301 W County Line Rd	7	N	N*	
Calimesa	So-Cal Nursery	1108 7th St	7	N	Y	
Calimesa	Ward Industries-Equipro	1091 7th St	7	N	N	
Calimesa	Desert Lawn Cemetery	11251 Desert Lawn Dr	7	N	N*	
Calimesa	Calimesa Seventh-Day Adventist	353 Myrtlewood Dr	7	N	Y	

Calimesa: Commercial (Retail) Destinations



Calimesa: PEV Mid-Day Destinations and Commercial (Retail) Locations

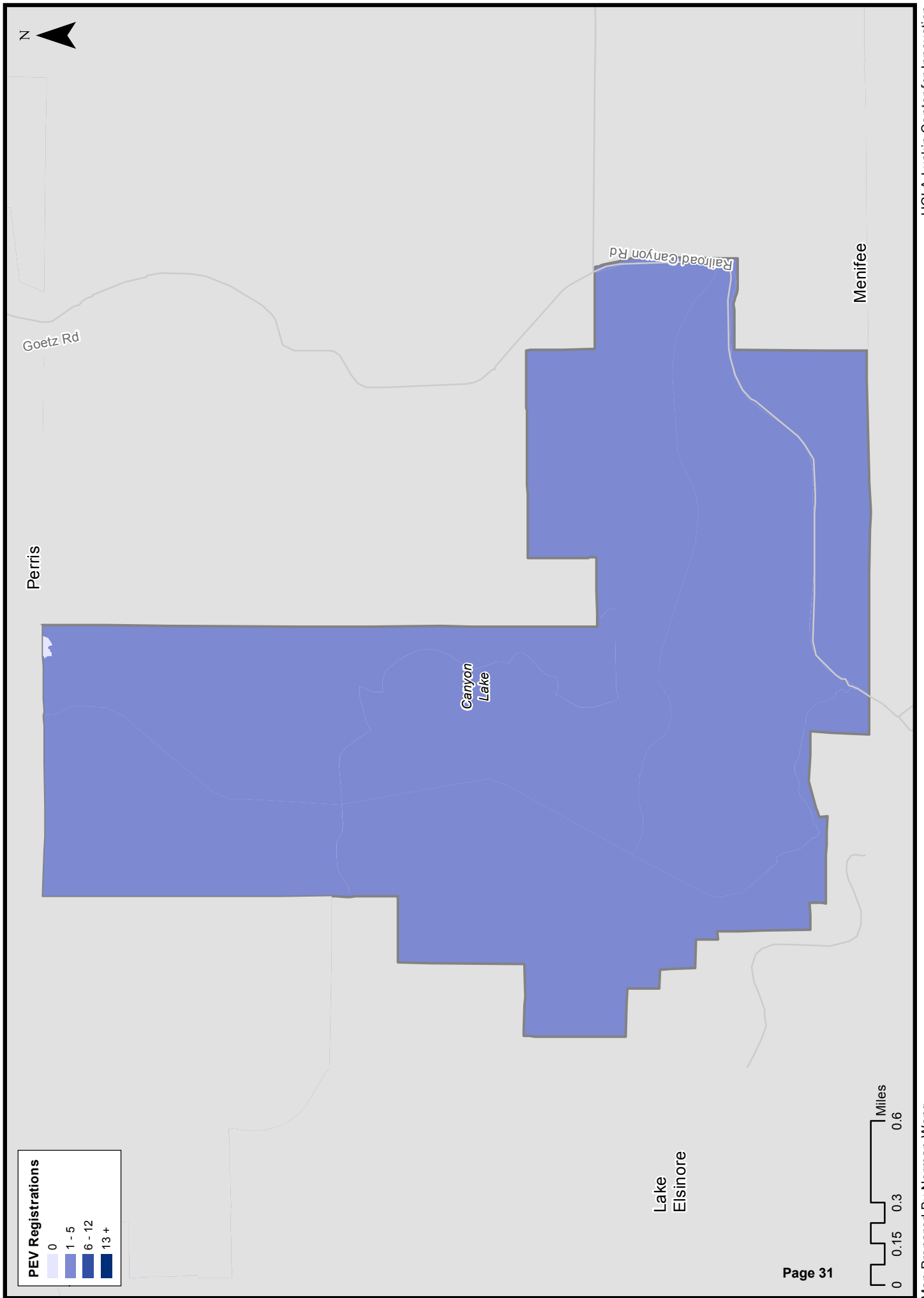


Calimesa: Top Retailers

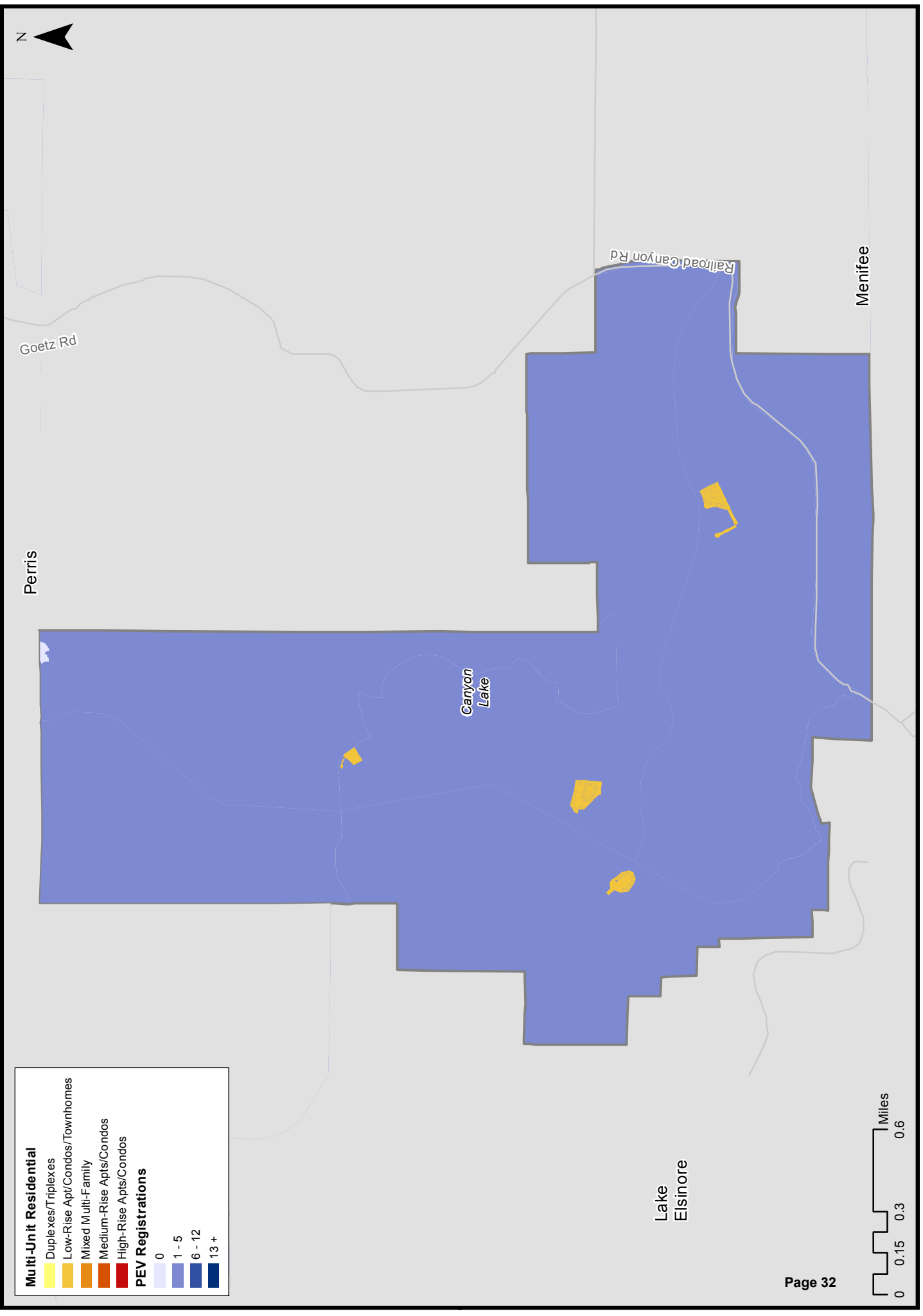
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Stater Bros Markets	1155 Calimesa Blvd	Supermarkets & Other Grocery Stores	\$19,019	
Calimesa Country Club	1300 3rd St	Food Svc Contrs	\$4,332	
A & A Mobile Homes	520 Myrtlewood Dr	Manufactured, Mobile, Home Dealers	\$4,059	
Soco	33928 County Line Rd	Other Gasoline Stations	\$2,320	
Plantation Homes	10961 Desert Lawn Dr	Manufactured, Mobile, Home Dealers	\$2,068	
Bob's Big Boy	540 Sandalwood Dr	Limited-Service Restaurants	\$1,920	
G & M Oil Co	499 Sandalwood Dr	Other Gasoline Stations	\$1,856	
Leo Fuller's Mfd Housing Sales	522 Myrtlewood Dr	Manufactured, Mobile, Home Dealers	\$1,804	
Villa Calimesa Mobile Home Pk	1134 Villa Calimesa Ln	Manufactured, Mobile, Home Dealers	\$1,804	
Mc Donald's	1199 Calimesa Blvd	Limited-Service Restaurants	\$1,600	
7-Eleven	301 W County Line Rd	Supermarkets & Other Grocery Stores	\$1,568	
AMPM Mini Mart	1216 Calimesa Blvd	Convenience Stores	\$1,568	
Deseret Industries	1197 Calimesa Blvd	Used Merchandise Stores	\$1,515	
Del Taco	33940 County Line Rd	Limited-Service Restaurants	\$1,120	
Calimesa Plaza Drugs	1151 Calimesa Blvd	Pharmacies & Drug Stores	\$1,098	
Star Drug Ctr	1151 Calimesa Blvd	Pharmacies & Drug Stores	\$1,098	
Bakers Drive Through	665 W County Line Rd	Limited-Service Restaurants	\$1,040	
Empresal LLC	1091 7th St # F	Radio, TV & Other Electronics Stores	\$969	
Burger King	497 Sandalwood Dr	Limited-Service Restaurants	\$920	
Calimesa Drive Thru Dairy	1045 Calimesa Blvd	Convenience Stores	\$896	
Taco Bell	1190 Calimesa Blvd	Limited-Service Restaurants	\$880	
Jack in the Box	1199 7th St	Limited-Service Restaurants	\$840	
Desert Lawn Cemetery	11251 Desert Lawn Dr	Cemeteries & Crematories	\$833	
MIMAP	906 2nd St	Store Retailers Not Specified Elsewhere	\$804	
S & N Liquor	526 Myrtlewood Dr	Tobacco Stores	\$770	
Salon 909	1007 Calimesa Blvd # G2	Beauty Salons	\$605	
Royale Restaurant of Calimesa	1007 Calimesa Blvd # K	Limited-Service Restaurants	\$560	
Mc G's Fine Dining & Pub	534 Myrtlewood Dr	Limited-Service Restaurants	\$480	
Rosie's Restaurant	1145 Calimesa Blvd	Limited-Service Restaurants	\$480	
I Deal Mobile Home Sales	1041 Calimesa Blvd # B	Manufactured, Mobile, Home Dealers	\$451	
County Cork Wine Spirits	1198 Calimesa Blvd	Supermarkets & Other Grocery Stores	\$448	
Calimesa Inn	1205 Calimesa Blvd	Hotels & Motels, Except Casino Hotels	\$392	
Buckle & Belts	1007 Calimesa Blvd # S	Men's Clothing Stores	\$386	

Computerland	35034 Yucaipa Blvd	Computer & Office Machine Repair	\$326
Pc Mechanix	1039 Calimesa Blvd	Computer & Office Machine Repair	\$326
Subway Sandwiches & Salads	1197 Calimesa Blvd # J	Limited-Service Restaurants	\$320
Joyce Austin Ladies Clothing	1007 Calimesa Blvd	Women's Clothing Stores	\$316
Shillington Aquariums	965 Calimesa Blvd	Pet & Pet Supplies Stores	\$314
Everything Nice	1007 Calimesa Blvd # J	Household Appliance Stores	\$298
Morgan's Creek Nursery	381 W County Line Rd	Nursery, Garden, & Farm Supply Stores	\$273

Canyon Lake: Plug-in Electric Vehicle Registrations



Canyon Lake: Multi-Unit Residential and PEV Registrations

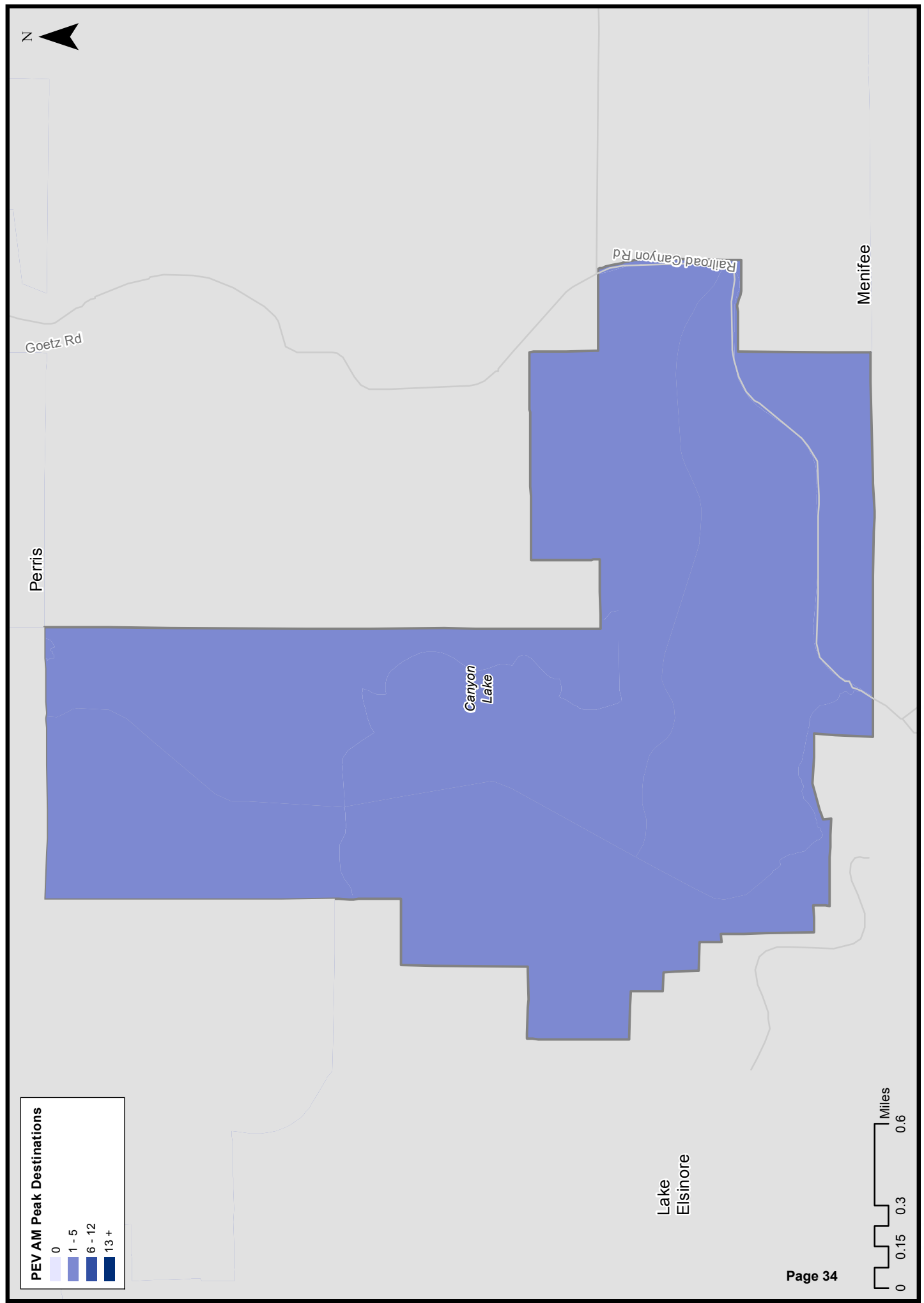


Multi-Unit Residential	
	Duplexes/Triplexes
	Low-Rise Apt/Condos/Townhomes
	Mixed Multi-Family
	Medium-Rise Apts/Condos
	High-Rise Apts/Condos
PEV Registrations	
	0
	1 - 5
	6 - 12
	13 +

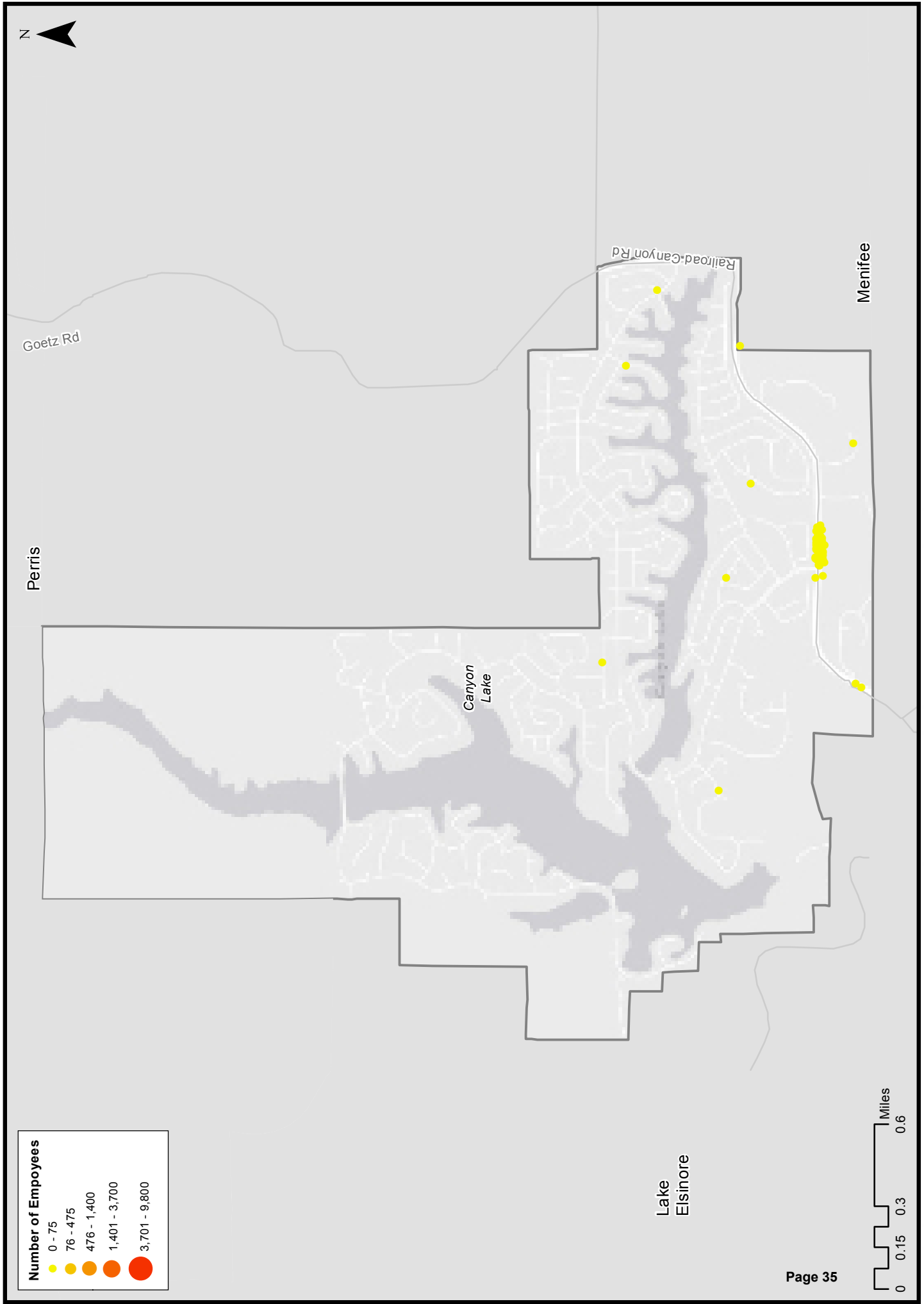


Canyon Lake: Top Multi-Unit Dwellings									
City	Address	Number of units	Condo?	Unit value	Year built	Attached/detached garage	Carpport?	PEV density	
Canyon Lake	22570 BASS	13	Y	\$452,772	1981				
Canyon Lake	24311 CANYON LAKE	10	Y	\$113,867	1973				
Canyon Lake	31864 RAILROAD CANYON	9	Y	\$129,935	1982				
Canyon Lake	24319 CANYON LAKE	5	Y	\$137,700	1973				
Canyon Lake	28840 AVENIDA ESTRELLA	2	N	\$47,858	1955		Y		
Canyon Lake	28884 AVENIDA ESTRELLA	2	N	\$75,579	1990	A			
Canyon Lake	30890 BLACK HORSE	2	N	\$316,379	1987	D			
Canyon Lake	24365 CANYON	2	N	\$211,620	2007	D			
Canyon Lake	24415 CANYON	2	N	\$157,958	2000	A			
Canyon Lake	22326 CANYON CLUB	2	Y	\$190,950	1972		Y		
Canyon Lake	22352 CANYON CLUB	2	Y	\$104,378	1970		Y		
Canyon Lake	22370 CANYON CLUB	2	Y	\$130,153	1970		Y		
Canyon Lake	22396 CANYON CLUB	2	Y	\$106,917	1970		Y		
Canyon Lake	22420 CANYON CLUB	2	Y	\$171,855	1972		Y		
Canyon Lake	23915 CIRCLE	2	N	\$50,047	1958				
Canyon Lake	24451 CONEJO	2	N	\$70,915	1955	D			
Canyon Lake	24540 CONEJO	2	N	\$48,774	1955	A			
Canyon Lake	28330 CONNECTICUT	2	N	\$183,938	1971	D			
Canyon Lake	28948 GOETZ	2	N	\$23,521	1968				
Canyon Lake	28964 GOETZ	2	N	\$40,012	1968				
Canyon Lake	29455 GOETZ	2	N	\$137,962	1982	A			
Canyon Lake	31852 RAILROAD CANYON	2	Y	\$92,922	1976				
Canyon Lake	28071 RANCHO	2	N	\$121,074	1982	A			
Canyon Lake	28171 RANCHO	2	N	\$162,605	1943	D			
Canyon Lake	22401 W SAN JOAQUIN	2	N	\$262,493	1991	A			
Canyon Lake	30148 SKIPPERS	2	N	\$255,764	2000	A			
Canyon Lake	30605 SORREL	2	N	\$503,841	1992	A			
Canyon Lake	22056 TREASURE ISLAND	2	Y	\$215,915	1974	D			
Canyon Lake	22084 TREASURE ISLAND	2	Y	\$276,814	1974	D			
Canyon Lake	22086 TREASURE ISLAND	2	Y	\$453,327	1974	D			

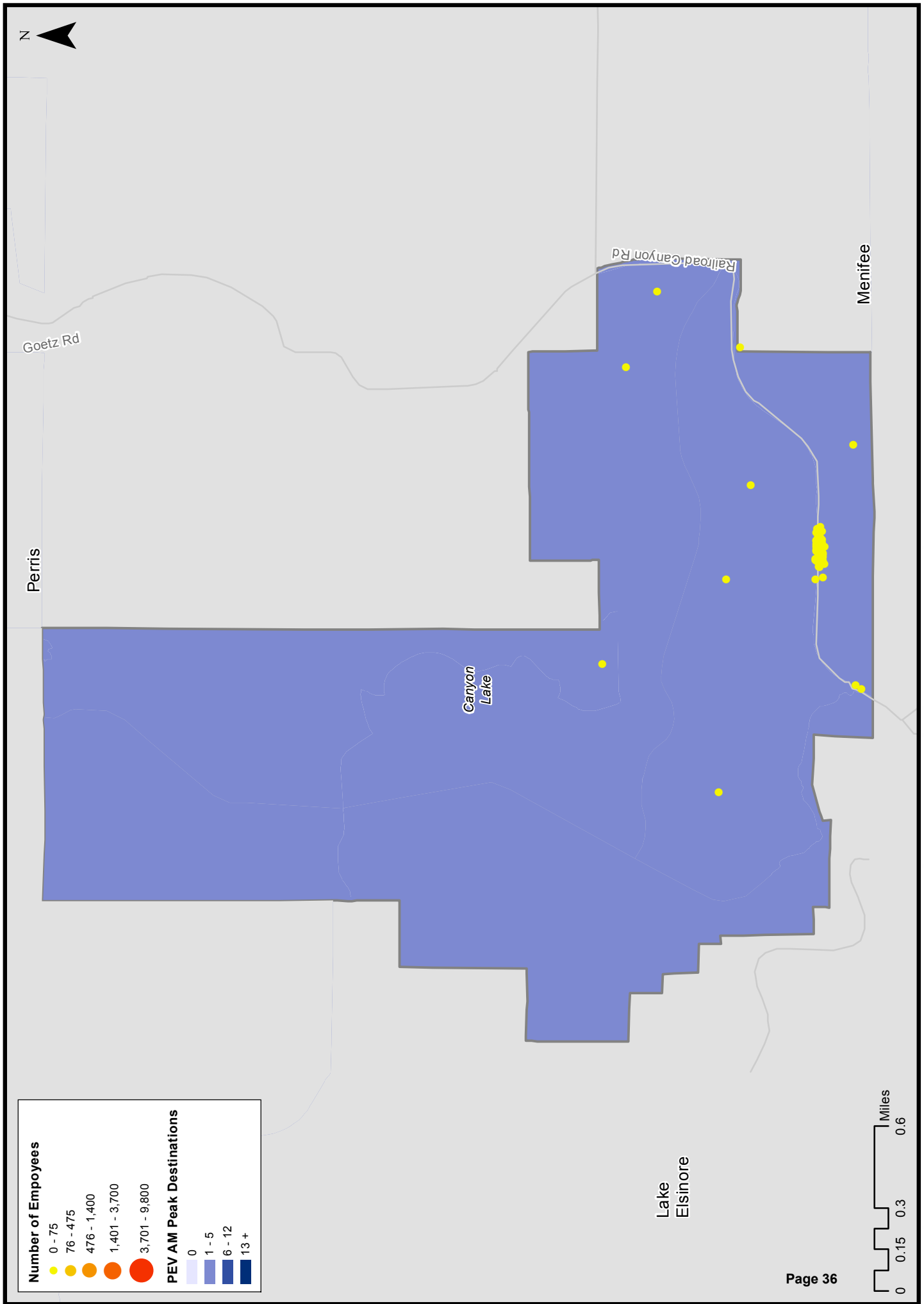
Canyon Lake: Plug-in Electric Vehicle Morning Peak Destinations



Canyon Lake: Top Workplaces by Number of Employees



Canyon Lake: PEV Morning Peak Destinations and Top Workplaces



Canyon Lake: Top workplaces		Canyon Lake: Top workplaces				
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Canyon Lake	Coldwell Banker	31620 Railroad Canyon Rd	50	N	Y	
Canyon Lake	Homeloans Inc	31534 Railroad Canyon Rd # A	50	N	Y	
Canyon Lake	Keller Williams Realty	31630 Railroad Canyon Rd # 9	45	N	Y	
Canyon Lake	Paradise Properties	31720 Railroad Canyon Rd	40	N	Y	
Canyon Lake	Prudential Canyon Lake Realty	31730 Railroad Canyon Rd # 4	21	N	Y	
Canyon Lake	Canyon Fitness Ctr	32150 Railroad Canyon Rd	20	N	Y	
Canyon Lake	Canyon Lake Community Church	30515 Railroad Canyon Rd	17	N	Y	
Canyon Lake	Canyon Lake Market	31682 Railroad Canyon Rd	15	N	Y	
Canyon Lake	Domino's Pizza	31546 Railroad Canyon Rd	15	N	N	
Canyon Lake	Pepe's Catering	31780 Railroad Canyon Rd	15	N	N	
Canyon Lake	Pepe's Mexican Restaurant	31780 Railroad Canyon Rd	15	N	N	
Canyon Lake	Zingg & Assoc	31610 Railroad Canyon Rd # 4	15	N	Y	
Canyon Lake	Amato's Italian Restaurant	31714 Railroad Canyon Rd	14	N	N	
Canyon Lake	Coast-2-Coast Communications	31588 Railroad Canyon Rd # 300	12	N	Y	
Canyon Lake	Canyon Lake Travel	31740 Railroad Canyon Rd # 2	12	N	Y	
Canyon Lake	Basic Educational Svc Tea	31542 Railroad Canyon Rd	12	N	Y	
Canyon Lake	Curves	31542 Railroad Canyon Rd	12	N	N*	
Canyon Lake	Giardinelli & Assoc	31594 Railroad Canyon Rd	12	N	Y	
Canyon Lake	Pro Tel Communications	31532 Railroad Canyon Rd	12	N	Y	
Canyon Lake	Canyon Lake Hair Productions	31656 Railroad Canyon Rd	11	N	N	
Canyon Lake	California Styles Ltd	31610 Railroad Canyon Rd # 6	11	N	N	
Canyon Lake	Friday Flyer	31558 Railroad Canyon Rd # 15	10	N	Y	
Canyon Lake	Golding Quality Quickprint	31558 Railroad Canyon Rd # 15	10	N	Y	
Canyon Lake	Diana's Dance Co	32150 Railroad Canyon Rd	9	N	Y	
Canyon Lake	Guaranty Bank	31740 Railroad Canyon Rd # 1	9	N	Y	
Canyon Lake	Security First Guaranty LLC	31682 Railroad Canyon Rd	9	N	Y	
Canyon Lake	Century 21 Zingg & Assoc	24311 Canyon Lake Dr N # 20	8	N	Y	
Canyon Lake	Canyon Lake Dentistry	31570 Railroad Canyon Rd # 101	8	N	Y	
Canyon Lake	Hilltop Guest Home	30951 Blackhorse Dr	8	N	N	
Canyon Lake	Canyon Lake Funding	31720 Railroad Canyon Rd	7	N	Y	
Canyon Lake	Canyon Lake Animal Clinic	31704 Railroad Canyon Rd	7	N	Y	
Canyon Lake	Canyon Custom Painting	23246 Pretty Doe Dr	7	N	N	
Canyon Lake	Avalon Management Group	31608 Railroad Canyon Rd	7	N	Y	
Canyon Lake	Aaa Interstate	31566 Railroad Canyon Rd # 407	7	N	N	
Canyon Lake	Nabson Inc	31409 Emperor Dr	7	N	Y	
Canyon Lake	Superior Office Svc	31570 Railroad Canyon Rd # 211	7	N	Y	
Canyon Lake	Canyon Lake Vision Ctr	31740 Railroad Canyon Rd # 4	6	N	Y	
Canyon Lake	Canyon Lake Hair Design	31730 Railroad Canyon Rd	6	N	Y	
Canyon Lake	Autocare USA	31638 Railroad Canyon Rd	6	N	Y	
Canyon Lake	Americlean	30110 Skippers Way Dr	6	N	N	
Canyon Lake	Empire Sign & Crane Svc Inc	22816 Cove View St	6	N	Y	
Canyon Lake	Lucy Demoss Inc	31740 Railroad Canyon Rd # 4	6	N	Y	
Canyon Lake	Nootbaar Plumbing & Drain	30421 Sparkle Dr	6	N	N	
Canyon Lake	Not Just 4 Paws Pet Groom	31564 Railroad Canyon Rd	6	N	Y	

Canyon Lake
Canyon Lake

Prestige Golf Cars
Telenomics Inc

31672 Railroad Canyon Rd
31566 Railroad Canyon Rd # 645

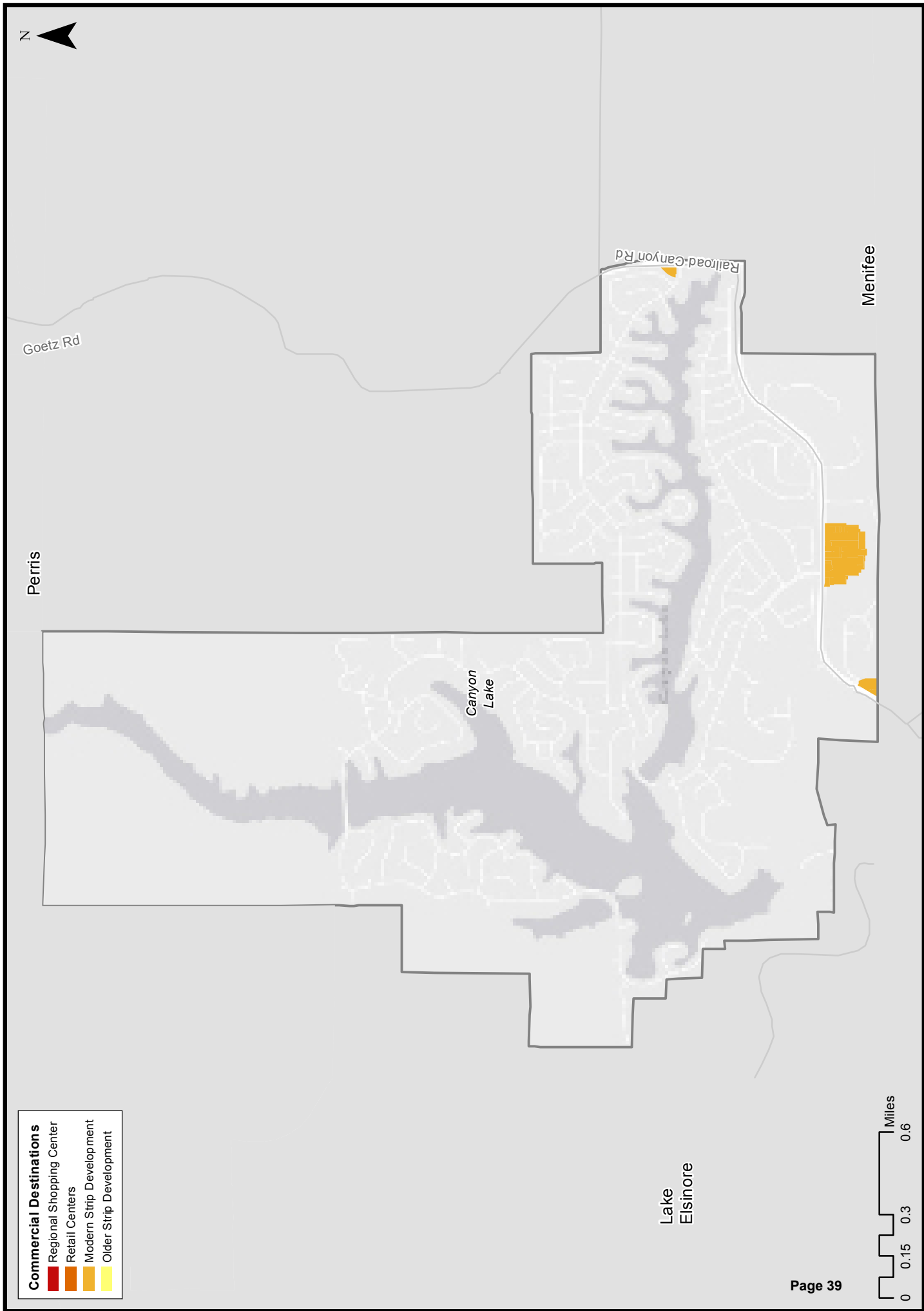
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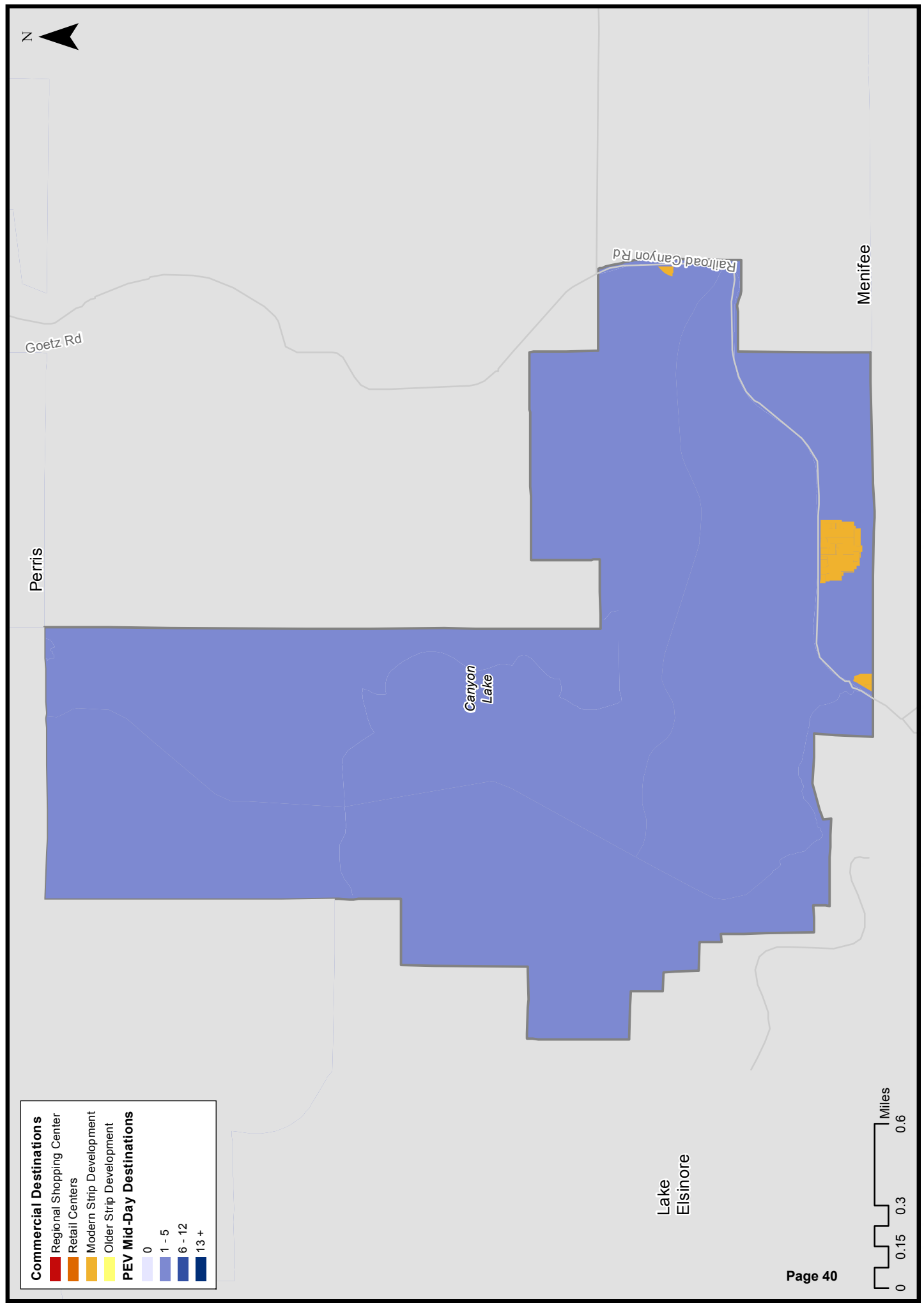
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*Reclassified by Luskin Center

Canyon Lake: Commercial (Retail) Destinations



Canyon Lake: PEV Mid-Day Destinations and Commercial (Retail) Locations

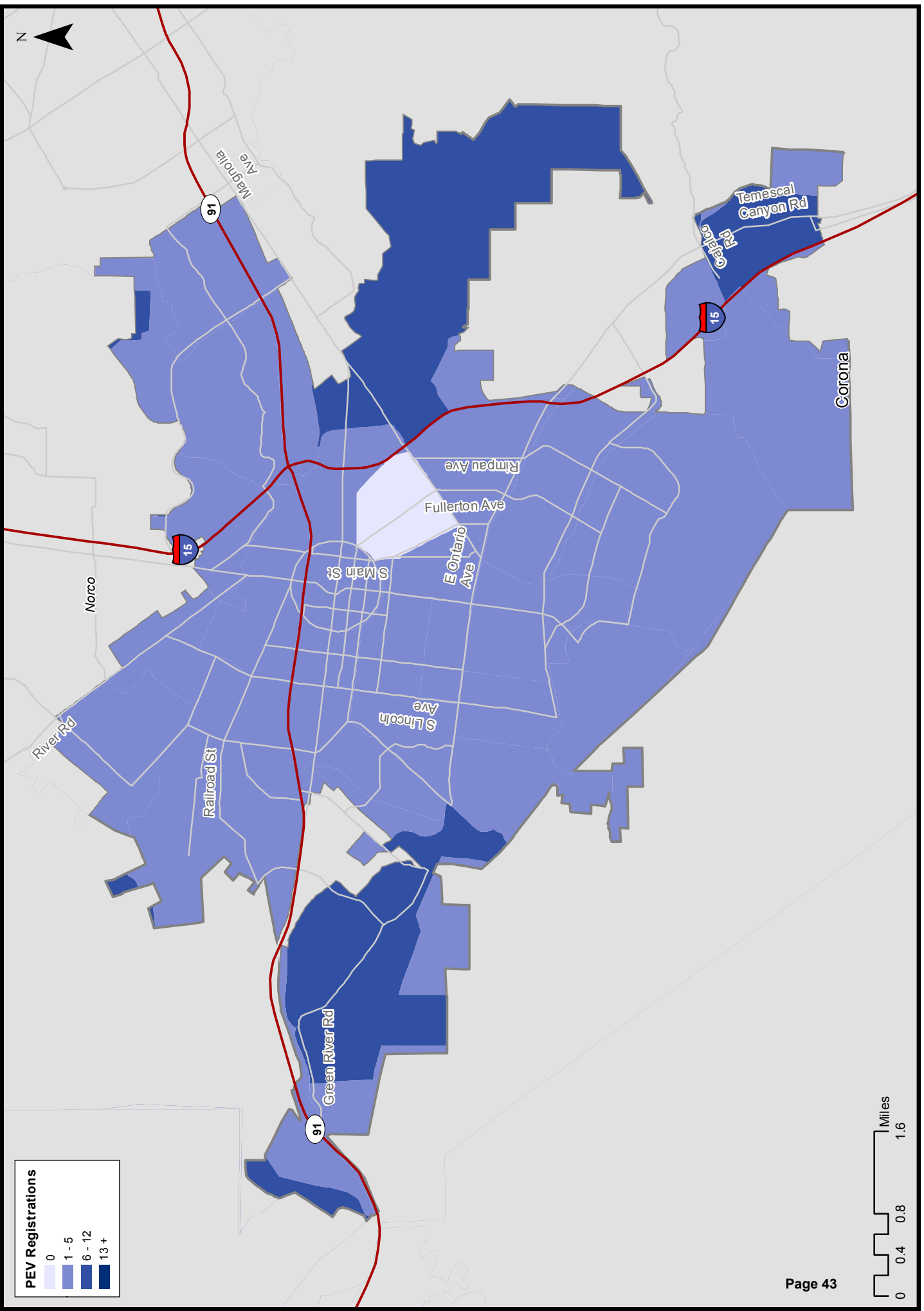


Canyon Lake: Top Retailers

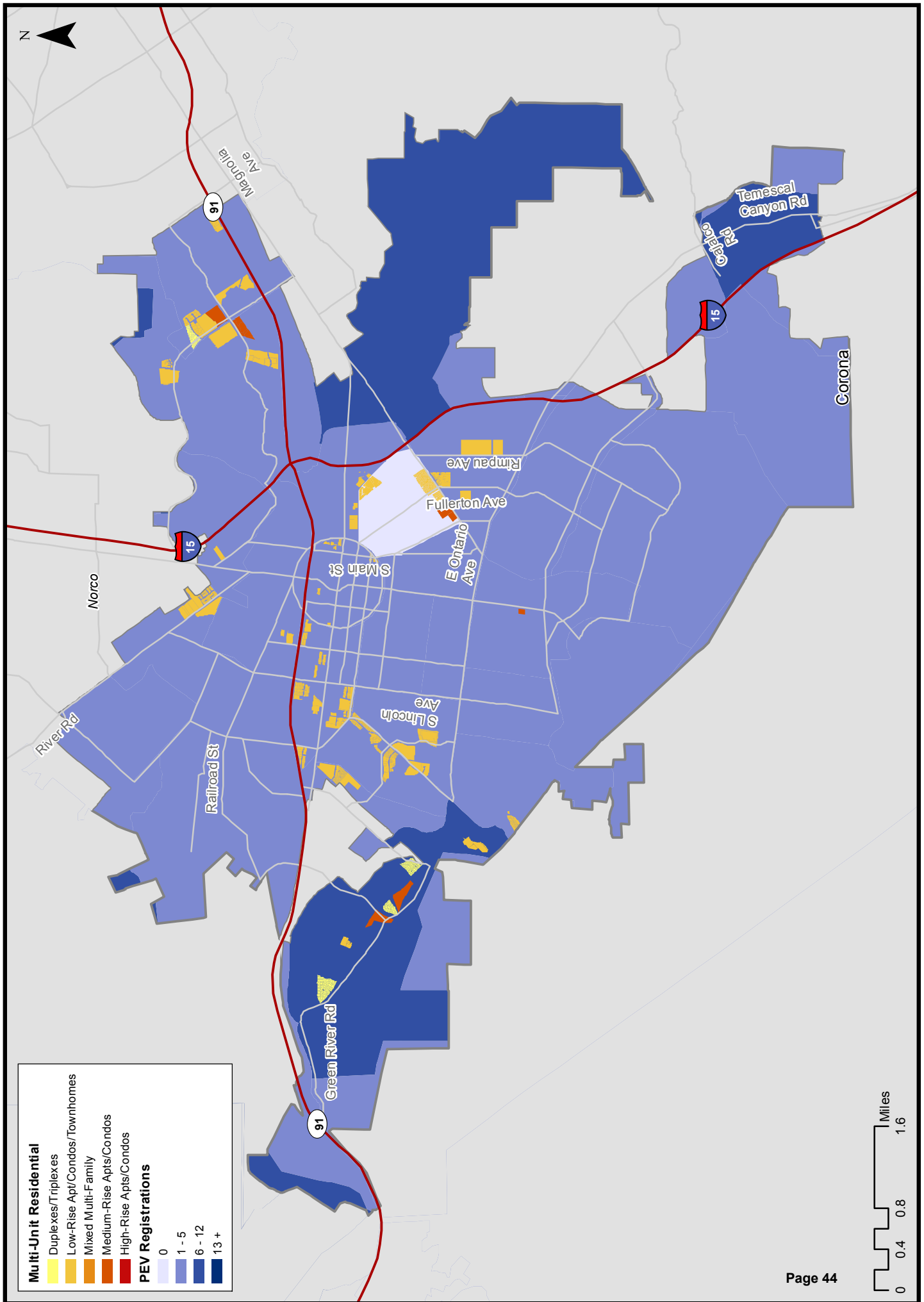
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Canyon Lake Market	31682 Railroad Canyon Rd	Supermarkets & Other Grocery Stores	\$3,705	
Prestige Golf Cars	31672 Railroad Canyon Rd	Motorcycle Dealers	\$2,904	
Pro Tel Communications	31532 Railroad Canyon Rd	Radio, TV & Other Electronics Stores	\$2,904	
Autocare USA	31638 Railroad Canyon Rd	Other Gasoline Stations	\$2,784	
A-A Great American Golf Cart	32160 Railroad Canyon Rd	Motorcycle Dealers	\$2,420	
Express Lube & Smog	25371 Railroad Canyon Rd	Other Gasoline Stations	\$1,856	
Canyon Fitness Ctr	32150 Railroad Canyon Rd	Diet & Weight Reducing Centers	\$1,440	
Stereo Stone	22543 Canyon Club Dr	Radio, TV & Other Electronics Stores	\$1,292	
Rancho Floor Covering	31550 Railroad Canyon Rd # 3	Other Building Material Dealers	\$1,290	
Canyon Lake Vision Ctr	31740 Railroad Canyon Rd # 4	Optical Goods Stores	\$1,194	
European Carpet	31562 Railroad Canyon Rd	Floor Covering Stores	\$1,180	
Granite Shield	31566 Railroad Canyon Rd # 714	Other Building Material Dealers	\$1,032	
I Level Commercial Weyerhaeuse	30110 Boat Haven Dr	Other Building Material Dealers	\$1,032	
Quality Shower Door & Mirror	31550 Railroad Canyon Rd # 1	Other Building Material Dealers	\$1,032	
C E Averill	23066 Blue Bird Dr	Computer & Software Stores	\$1,029	
Aaa Interstate	31566 Railroad Canyon Rd # 407	All Other Automotive Repair & Maintenance	\$987	
Pepe's Catering	31780 Railroad Canyon Rd	Caterers	\$975	
Air Boom Inc	22714 Canyon Club Dr	Boat Dealers	\$942	
Domino's Pizza	31546 Railroad Canyon Rd	Limited-Service Restaurants	\$840	
Jensen Doors	31550 Railroad Canyon Rd # 3	Home Centers	\$700	
Reunion Resource	31566 Railroad Canyon Rd # 622	Other Direct Selling Establishments	\$624	
A M Furniture	31508 Railroad Canyon Rd # 2	Furniture Stores	\$612	
California Styles Ltd	31610 Railroad Canyon Rd # 6	Nail Salons	\$605	
Pepe's Mexican Restaurant	31780 Railroad Canyon Rd	Limited-Service Restaurants	\$600	
Amato's Italian Restaurant	31714 Railroad Canyon Rd	Limited-Service Restaurants	\$560	
Johncee's Closet	31566 Railroad Canyon Rd	Family Clothing Stores	\$558	
Mobile Screen Shop	30023 White Wake Dr	Other Building Material Dealers	\$516	
Curves	31542 Railroad Canyon Rd	Diet & Weight Reducing Centers	\$468	
Round Up Jr Mart	24610 Railroad Canyon Rd	Supermarkets & Other Grocery Stores	\$448	
Scott's Skateboards	31702 Railroad Canyon Rd	Sporting Goods Stores	\$444	
Anderson Aircraft Parts	29775 Yellow Gold Dr	All Other Motor Vehicle Dealers	\$434	
Designer Glass & Doors By SGO	30520 Golden Gate Dr	Other Building Material Dealers	\$402	
Chosen Industries	31606 Railroad Canyon Rd	Family Clothing Stores	\$372	

Sixx Inch Clothing	32150 Railroad Canyon Rd	Family Clothing Stores	\$372
Village Lights	31562 Railroad Canyon Rd	All Other Home Furnishings Stores	\$372
Canyon Lake Stationery	31702 Railroad Canyon Rd	Office Supplies & Stationery Stores	\$363
Quality Computer Systems	31588 Railroad Canyon Rd # B	Computer & Software Stores	\$343
Water Wars of California	22986 Gray Fox Dr	All Other Amusement & Recreation Industries	\$336
Canyon Lake Hair Design	31730 Railroad Canyon Rd	Nail Salons	\$330
Canyon Lake TV	31682 Railroad Canyon Rd # 8	Radio, TV & Other Electronics Stores	\$323

Corona: Plug-in Electric Vehicle Registrations



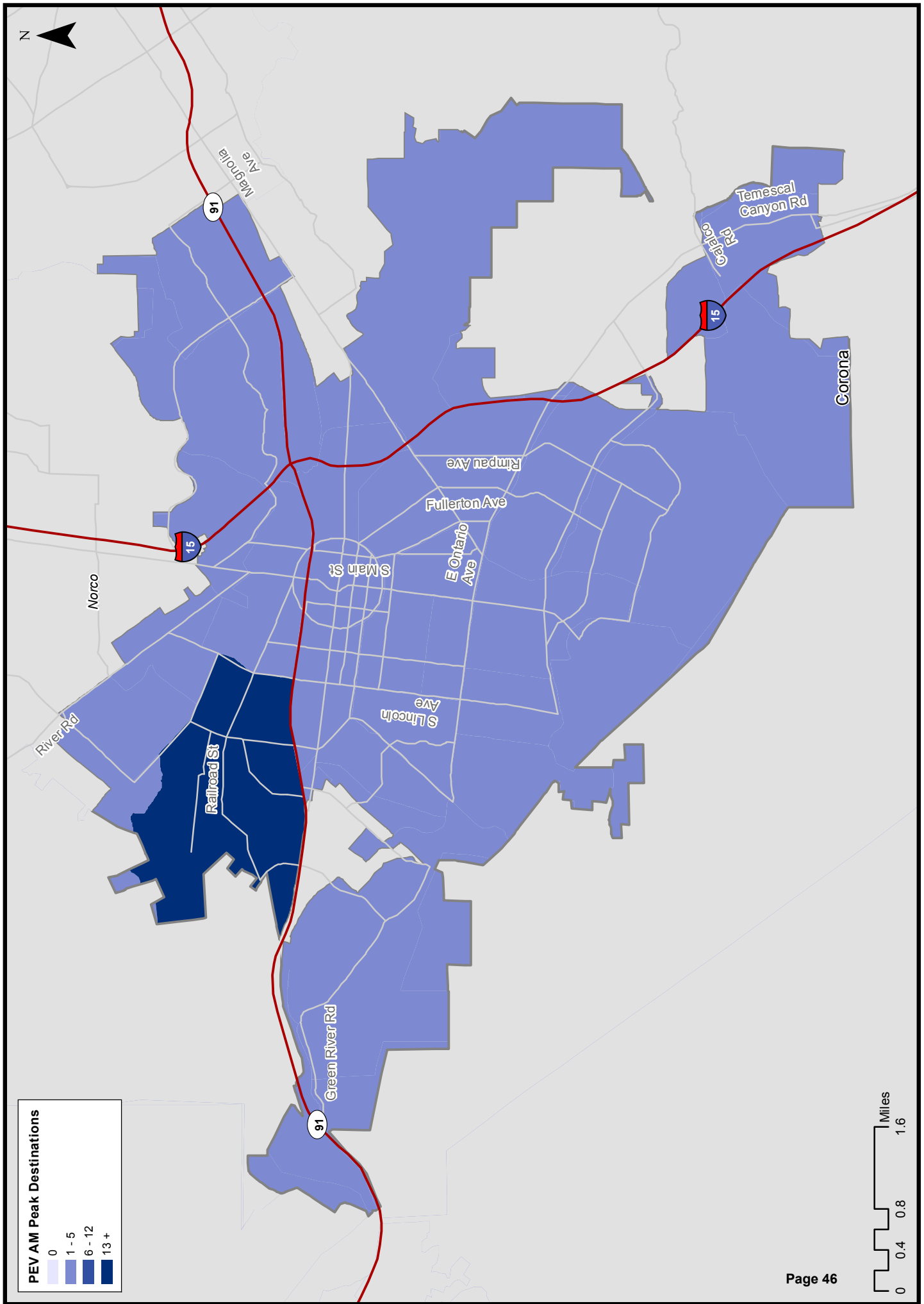
Corona: Multi-Unit Residential and PEV Registrations



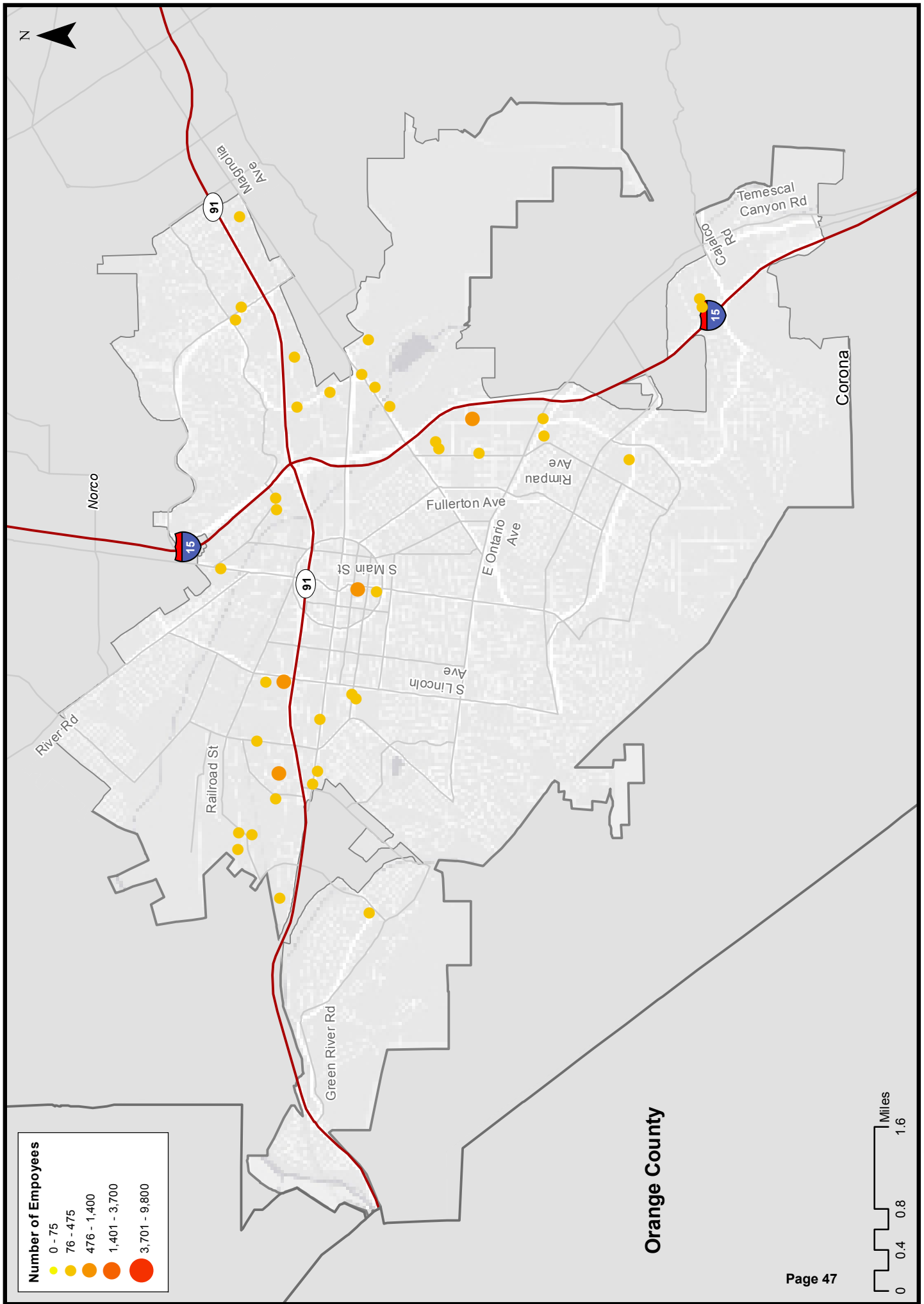
Corona: Top Multi-Unit Dwellings

City	Address	Number of units	Condo?	Unit value	Year built	PEV density
Corona	590 N MCKINLEY ST	492	N	\$66,357		
Corona	1530 VIA SANTIAGO ST	412	N	\$108,050	1987	
Corona	2235 TREEHOUSE LN	336	N	\$88,734		
Corona	890 HOTSPRING ST	320	N	\$163,412		
Corona	2215 E LAKESIDE PL	316	N	\$104,638		
Corona	1000 VISTA DEL CERRO	305	Y	\$243,363	1991	
Corona	1849 BAYWOOD DR	228	N	\$210,236		
Corona	788 SPRINGWOOD ST	228	N	\$87,710		
Corona	801 S MAGNOLIA AVE	217	N	\$60,428		
Corona	1906 FULLERTON AVE	200	N	\$56,055		
Corona	827 RIVER RD	180	N	\$89,416		
Corona	851 RIVER RD	180	N	\$92,919		
Corona	828 AVENIDA DEL VISTA	160	N	\$113,487		
Corona	770 S SHERMAN ST	133	N	\$89,876		
Corona	7290 MARILYN DR	130	N	\$10,010		
Corona	350 RICHEY CIR	96	N	\$133,401		
Corona	133 PARKRIDGE AVE	88	N	\$110,111		
Corona	910 SAMAR CT	88	N	\$47,371		
Corona	905 S SMITH ST	83	N	\$109,956		
Corona	1211 W 6TH ST	76	N	\$90,165		
Corona	2680 S MAIN ST	75	N	\$63,687		

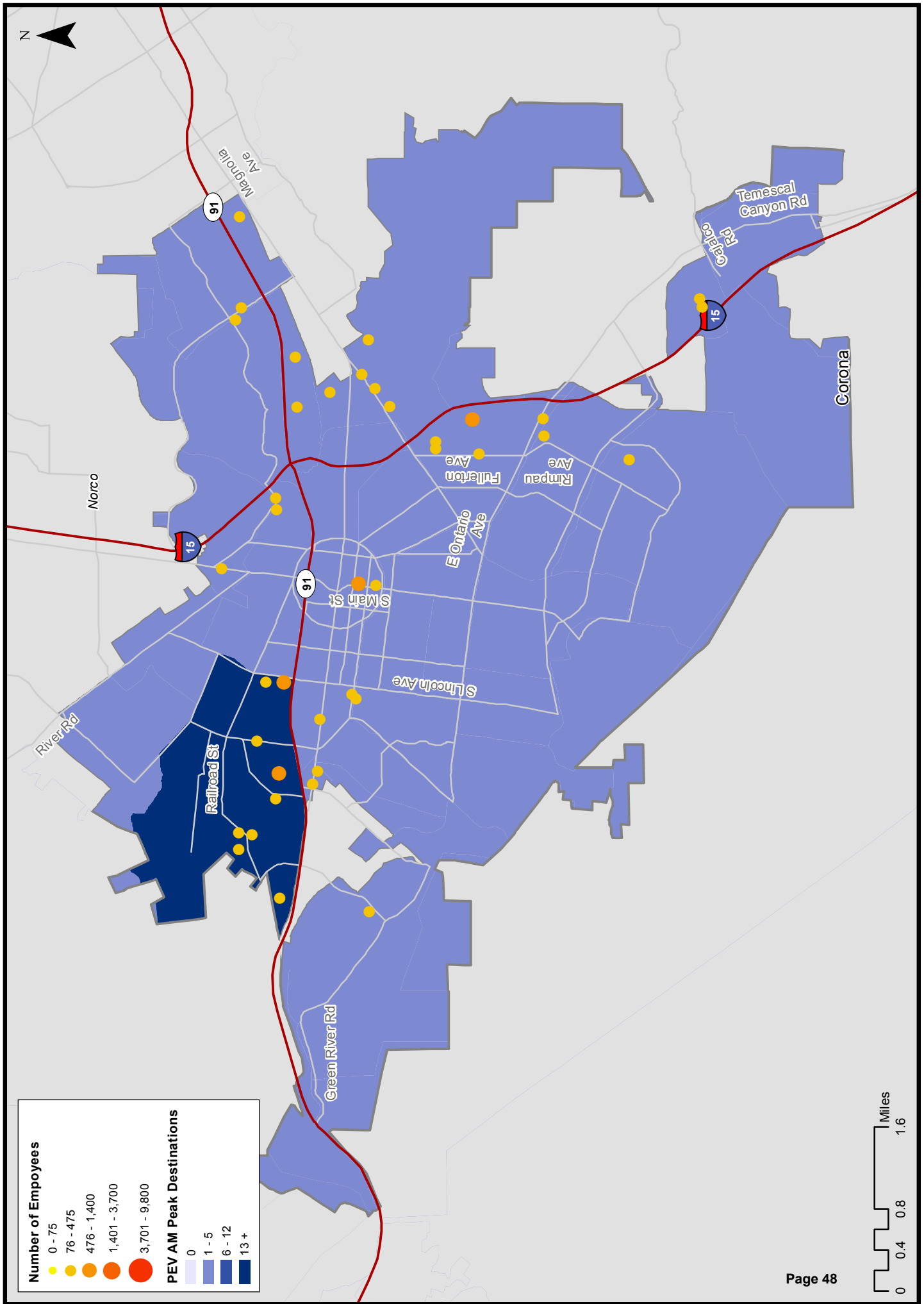
Corona: Plug-in Electric Vehicle Morning Peak Destinations



Corona: Top Workplaces by Number of Employees

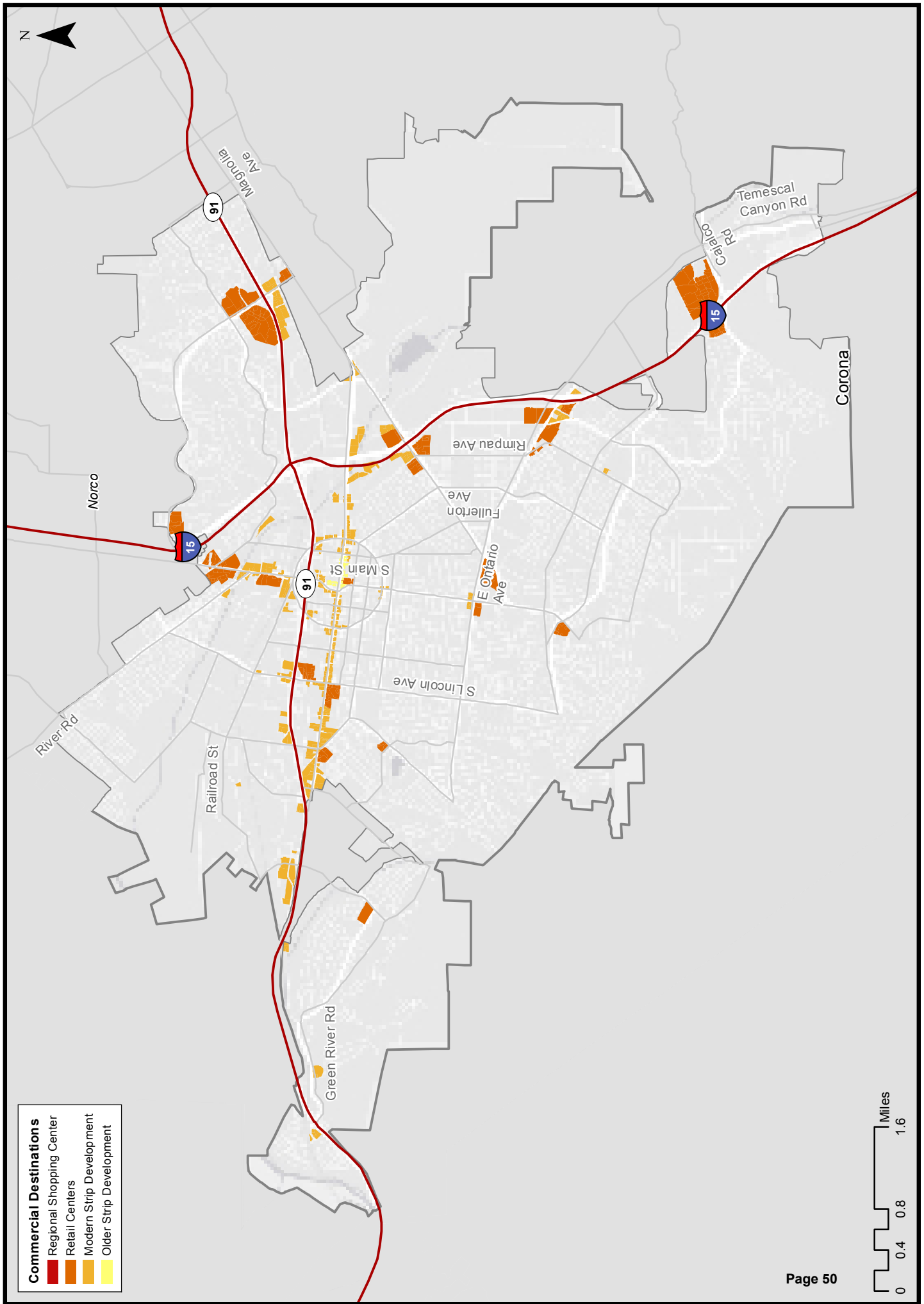


Corona: PEV Morning Peak Destinations and Top Workplaces

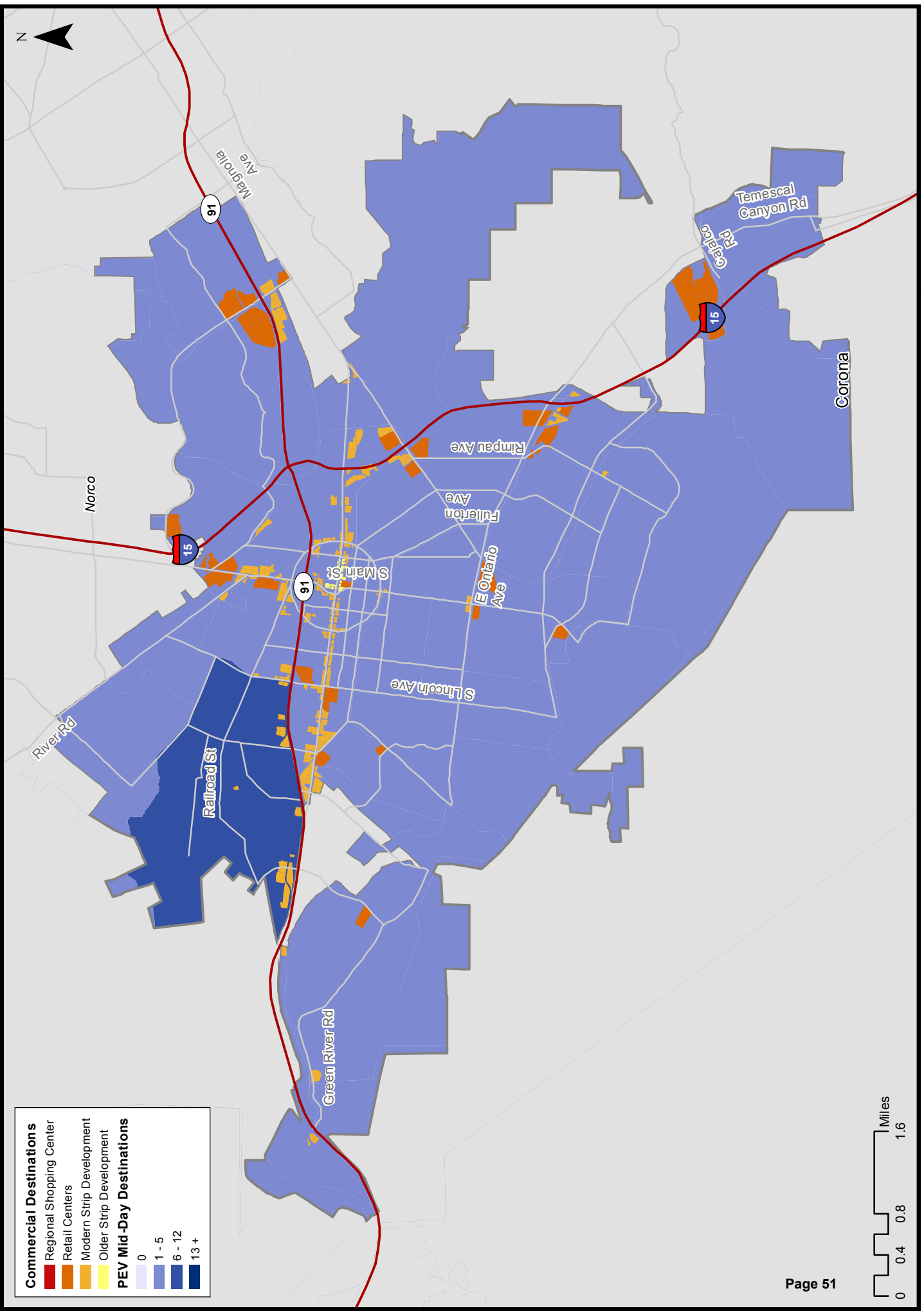


Corona: Top Workplaces			Number of employees	High-tech?	White-collar?	PEV AM density
City	Employer	Address				
Corona	UHS-CORONA INC/CORONA REGIONAL MED CTR	800 S MAIN ST	1104	N	Y	
Corona	CAL ST, INST FOR WOMEN	16756 CHINO-CORONA RD	919			
Corona	WATSON LABORATORIES	132 BUSINESS CENTER DR	960	Y	Y	H
Corona	KAISER PERMANENTE	1830 CALIFORNIA AVE	514	N	Y	
Corona	WAL-MART #2842	1290 E ONTARIO	351	N	N*	
Corona	WAL-MART #1912	479 MCKINLEY ST	350	N	N*	
Corona	FENDER MUSICAL INST	1163 POMONA RD	653	N	N	H
Corona	COSTCO WHOLESale CORPORATION #432	480 MCKINLEY ST	266	N	N*	
Corona	DART CONTAINER CORP OF CALIFORNIA	150 S MAPLE ST	426	N	Y	H
Corona	Corona Norco Unified Sch Dist	1150 W 10th St	250	N	Y	
Corona	Santiago High School	1395 Foothill Pkwy	240	N	Y	
Corona	Smittybilt Automotive Inc	1550 Magnolia Ave	227	N	Y	
Corona	THERMAL STRUCTURES INC.	2362 RAILROAD ST	271	Y	N	H
Corona	Core-Mark Intl Inc	353 Meyer Cir	210	N	N	
Corona	Kohl's Department Store	2489 Tuscan St	205	N	N*	
Corona	Amerisource Bergen	1851 California Ave	200	N	Y	
Corona	Chief Protective Svc Inc	1344 W 6th St	200	N	Y	
Corona	Century Blinds Inc	796 E Harrison St	200	N	Y	
Corona	B J's Restaurant & Brewery	2520 Tuscan St	200	N	N	
Corona	Corona High School	1150 W 10th St	200	N	Y	
Corona	Hood Plumbing Inc	341 N Delilah St	200	N	N	
Corona	Imperial Commercial Cooking	1128 Sherborn St	200	N	Y	
Corona	Circle Seal Controls Inc	2301 Wardlow Cir	250	Y	N	H
Corona	Mission Rubber Co	1660 Leeson Ln	200	N	N	
Corona	Prudential California Realty	1181 California Ave # 204	200	N	Y	
Corona	Quality Toyota Truck Ctr	1685 W 6th St	200	N	Y	
Corona	Signature Interiors Inc	1587 E Bentley Dr	200	N	N	
Corona	Smith & Noble LLC	1181 California Ave	200	N	Y	
Corona	Tarbell Realtors	2641 Green River Rd	200	N	N	
Corona	Uniweb Inc	222 S Promenade Ave	200	N	N	
Corona	Woman's Improvement Club	1101 S Main St	200	N	N	
Corona	Waste Management Inc	800 S Temescal St	190	N	Y	
Corona	Centennial High School	1820 Rimpau Ave	185	N	Y	
Corona	R W Lyall & Co Inc	2665 Research Dr	220	N	N	H
Corona	Home Depot	1355 E Ontario Ave	185	N	N*	
Corona	Excel Cabinets Inc	225 Jason Ct	180	N	N	
Corona	Mervyns	720 N Main St	180	N	N*	
Corona	Quality Toyota	1700 W 6th St	180	N	Y	
Corona	Brasscraft Manufacturing Co	215 N Smith Ave	200	N	N	H
Corona	Appa Fine Foods Inc	135 Klug Cir	200	N	N	H
Corona	Minka-Aire	1151 Bradford Cir	200	N	N	H
Corona	ATK Space Systems & Sensors	250 Klug Cir	185	Y*	Y*	H

Corona: Commercial (Retail) Destinations



Corona: PEV Mid-Day Destinations and Commercial (Retail) Locations

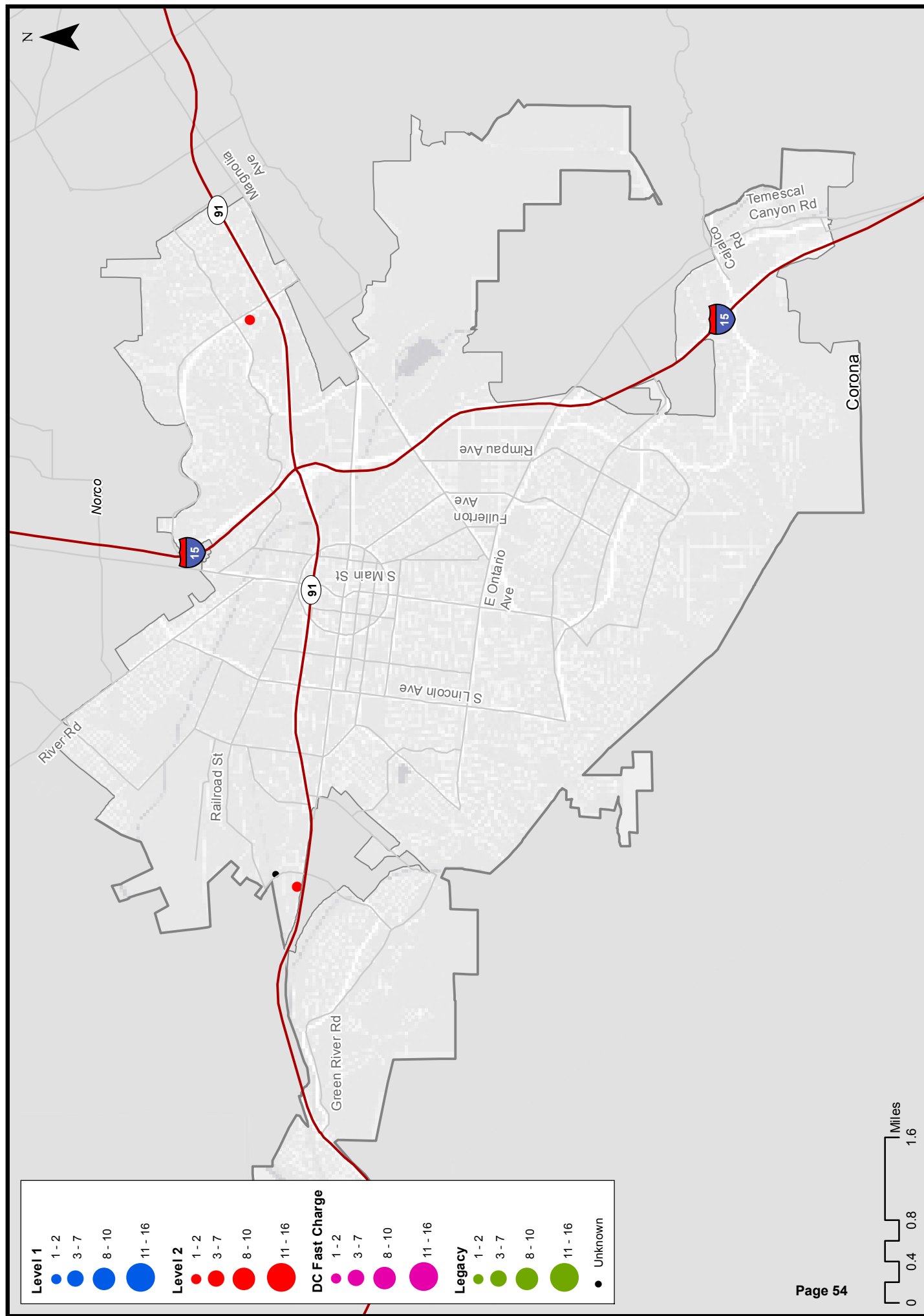


Corona: Top Retailers

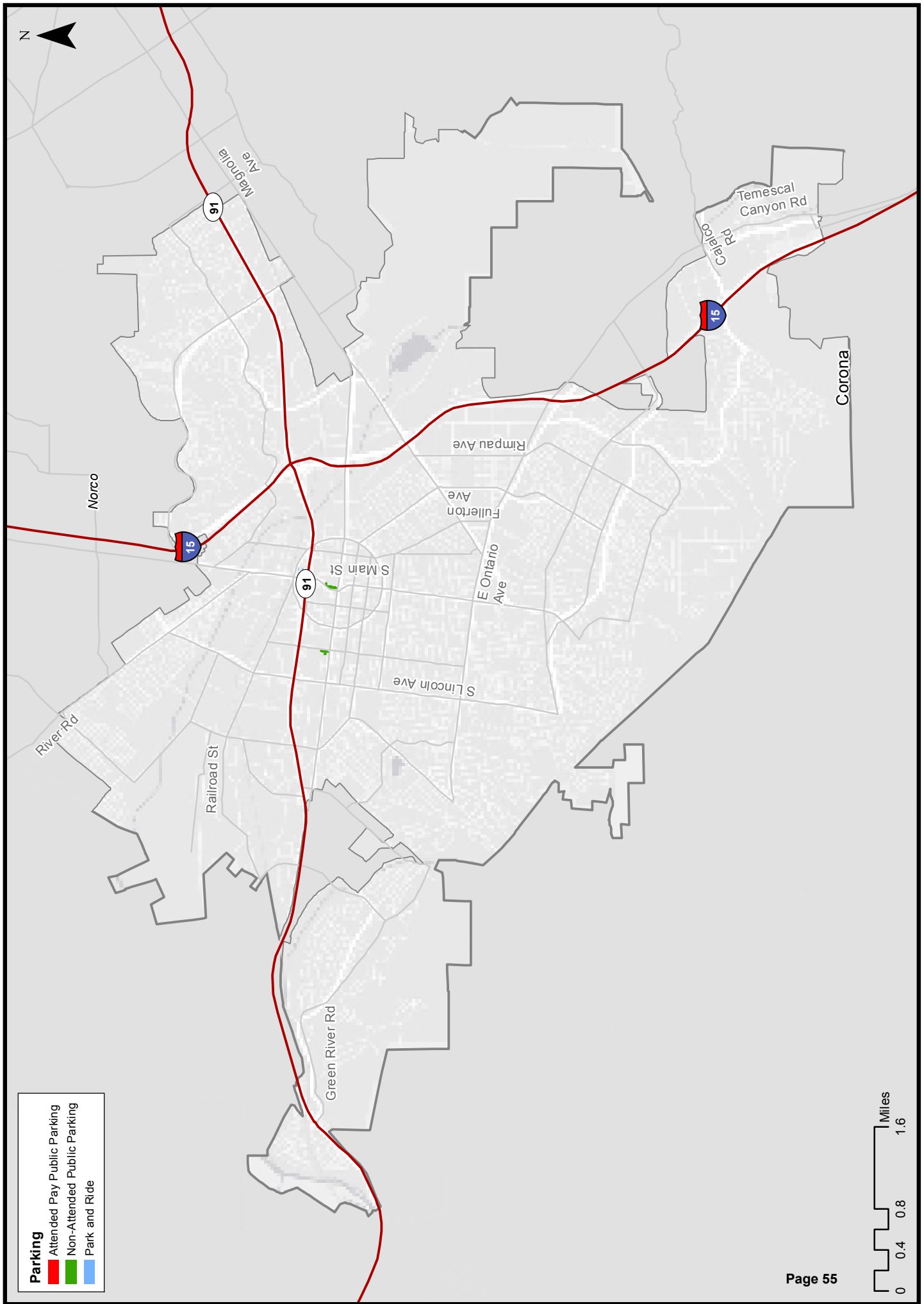
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Quality Toyota Truck Ctr	1685 W 6th St	New Car Dealers	\$171,800	
Quality Toyota	1700 W 6th St	New Car Dealers	\$154,620	
Honda Cars	1080 Pomona Rd	New Car Dealers	\$103,080	
Corona Nissan	2575 Wardlow Rd	New Car Dealers	\$76,451	M
Wal-Mart	479 N Mckinley St	Department Stores, Except Discount	\$50,220	
Wal-Mart	1290 E Ontario Ave	Department Stores, Except Discount	\$48,600	
Newport Boats	900 El Sobrante Rd	Boat Dealers	\$42,390	
Best Buy	2430 Tuscany St	Automotive Parts & Accessories Stores	\$40,375	
Imperial Commercial Cooking	1128 Sherborn St	Store Retailers Not Specified Elsewhere	\$40,200	
Aircraft Spruce & Specialty Co	225 Airport Cir	All Other Motor Vehicle Dealers	\$39,060	M
Doorway Sales Inc	232 Granite St	Other Building Material Dealers	\$38,700	
Century Blinds Inc	796 E Harrison St	Window Treatment Stores	\$38,000	
Kohl's Department Store	2489 Tuscany St	Department Stores, Except Discount	\$33,210	
C & R Systems Inc	1835 Capital St	Radio, TV & Other Electronics Stores	\$32,300	M
Vons	535 N Mckinley St	Supermarkets & Other Grocery Stores	\$29,640	
Mervyns	720 N Main St	Department Stores, Except Discount	\$29,160	
Victor Buick GMC	2525 Wardlow Rd	New Car Dealers	\$26,000	M
Millennium Garage Doors Inc	555 S Promenade Ave	Other Building Material Dealers	\$25,800	
Westile Roofing PRODUCTS	1745 Sampson Ave	Other Building Material Dealers	\$25,800	
Power Volkswaggon	2603 Wardlow Rd	New Car Dealers	\$25,770	M
Mighty Mover Trailers	224 N Sherman Ave	Recreational Vehicle Dealers	\$25,600	M
Giant RV	180 N Sherman Ave	Recreational Vehicle Dealers	\$25,600	M
Giant RV	2200 Frontage Rd	Recreational Vehicle Dealers	\$25,600	
Albertsons	1260 E Ontario Ave	Supermarkets & Other Grocery Stores	\$24,453	
Albertsons	260 W Foothill Pkwy	Supermarkets & Other Grocery Stores	\$24,453	
Stater Bros Markets	1193 Magnolia Ave	Supermarkets & Other Grocery Stores	\$24,206	
Henry's Farmers Markets	120 W Ontario Ave	Supermarkets & Other Grocery Stores	\$23,465	
Kohl's Department Store	470 Hidden Valley Pkwy	Department Stores, Except Discount	\$21,060	
Vons	369 Magnolia Ave	Supermarkets & Other Grocery Stores	\$19,760	
Air Technologies Inc	1295 E Ontario Ave	Automotive Parts & Accessories Stores	\$19,500	
Stater Bros Markets	2243 Eagle Glen Pkwy	Supermarkets & Other Grocery Stores	\$19,266	
Stater Bros Markets	550 Hidden Valley Pkwy	Supermarkets & Other Grocery Stores	\$19,266	
Stater Bros Markets	1288 Border Ave	Supermarkets & Other Grocery Stores	\$17,784	

Jet Manufacturing Inc	13445 Estelle St	All Other Motor Vehicle Dealers	\$17,360	
Corona HS Swimming Pool	1150 W 10th St	Fitness & Recreational Sports Centers	\$16,800	
Woman's Improvement Club	1101 S Main St	Fitness & Recreational Sports Centers	\$16,800	
El Tapatio Foods 4	1560 W 6th St	Supermarkets & Other Grocery Stores	\$14,820	
Bosch Kia Isuzu of Corona	2683 Wardlow Rd	New Car Dealers	\$14,603	M
Ganahl DO It Best Lumber	150 W Blaine St	Other Building Material Dealers	\$14,160	
Giant RV	1301 Pomona Rd	Recreational Vehicle Dealers	\$14,080	M

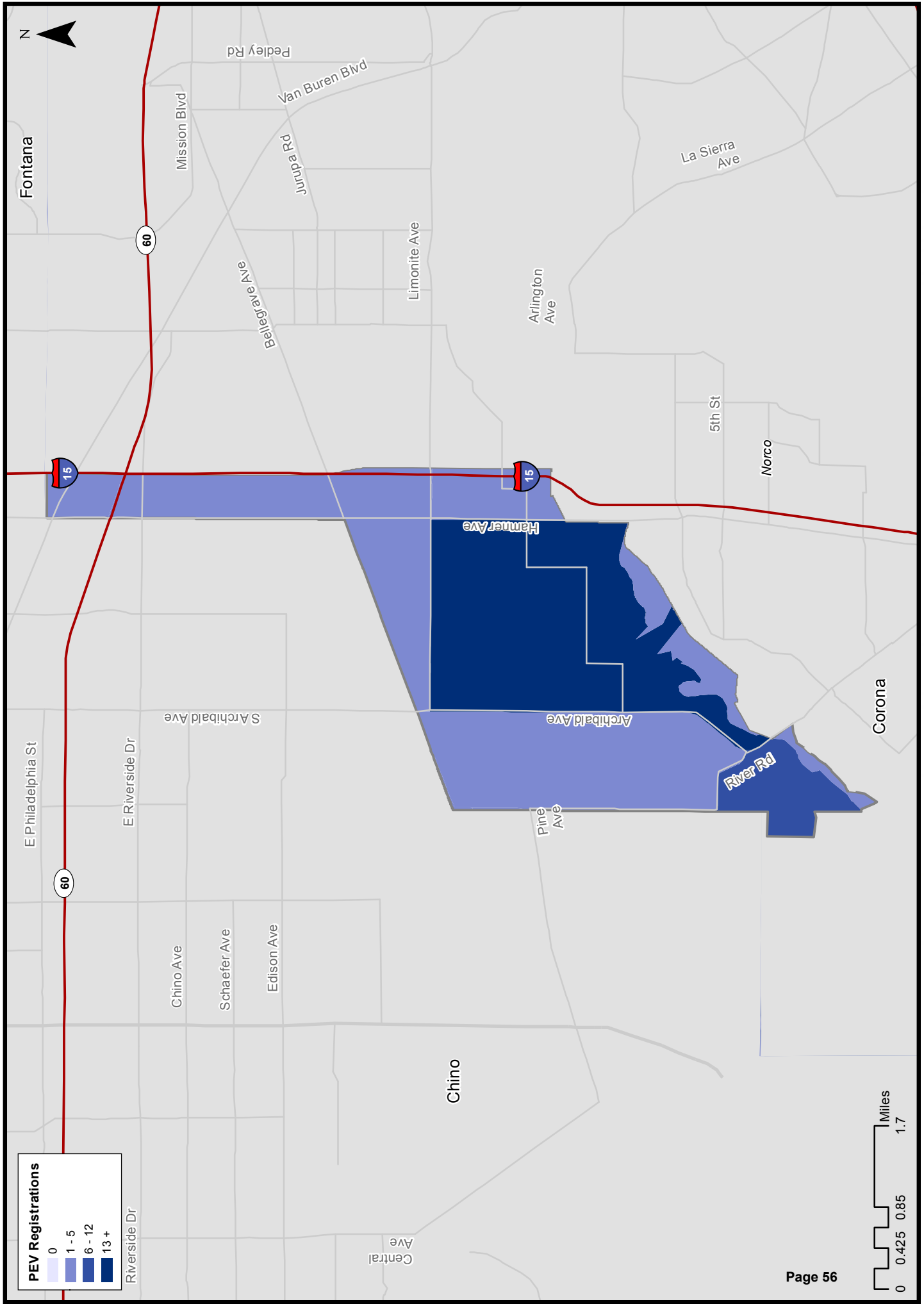
Corona: Publicly-Accessible Charging Stations (Summer/Fall 2012)



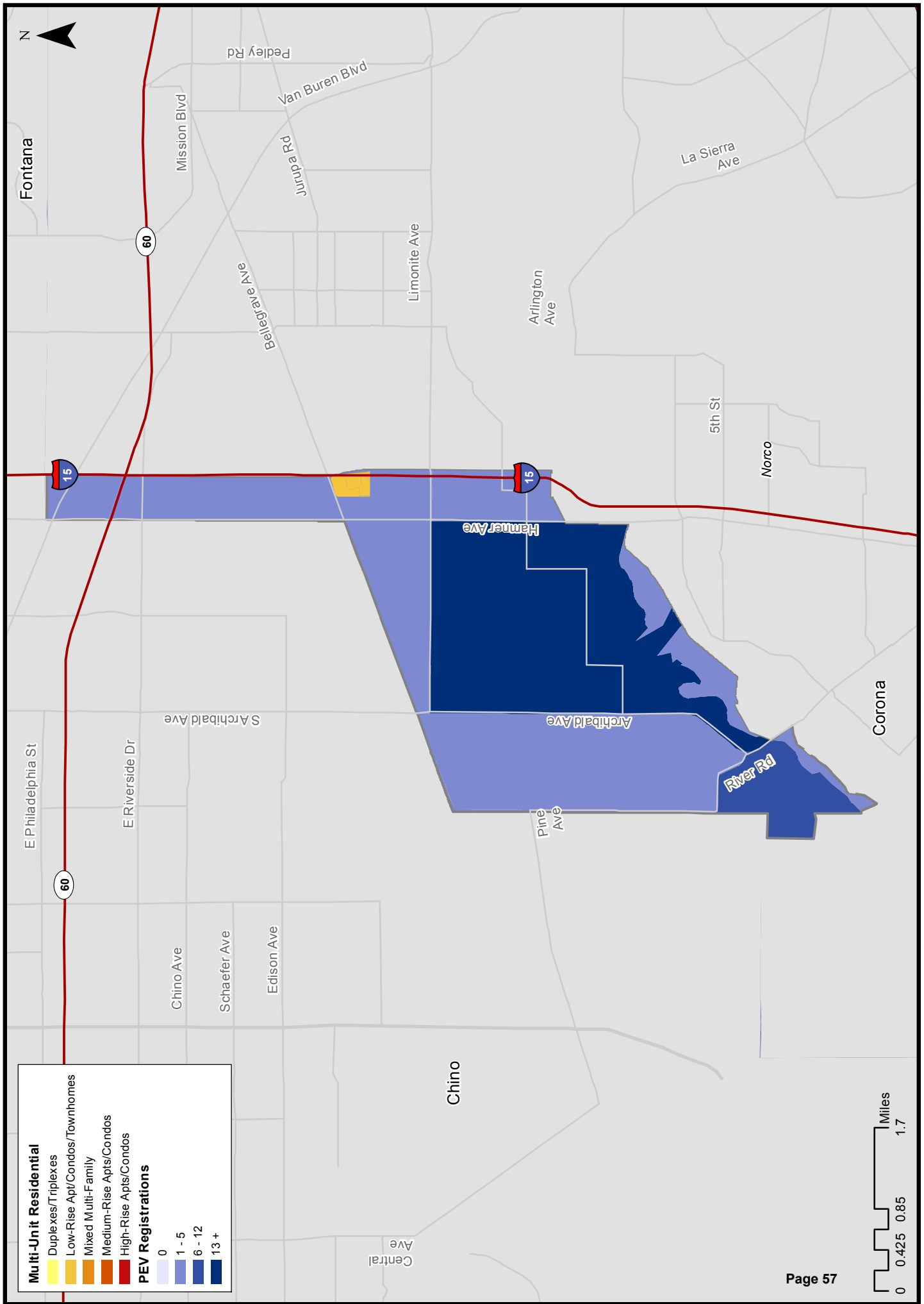
Corona: Stand-alone Parking Facilities



Eastvale: Plug-in Electric Vehicle Registrations

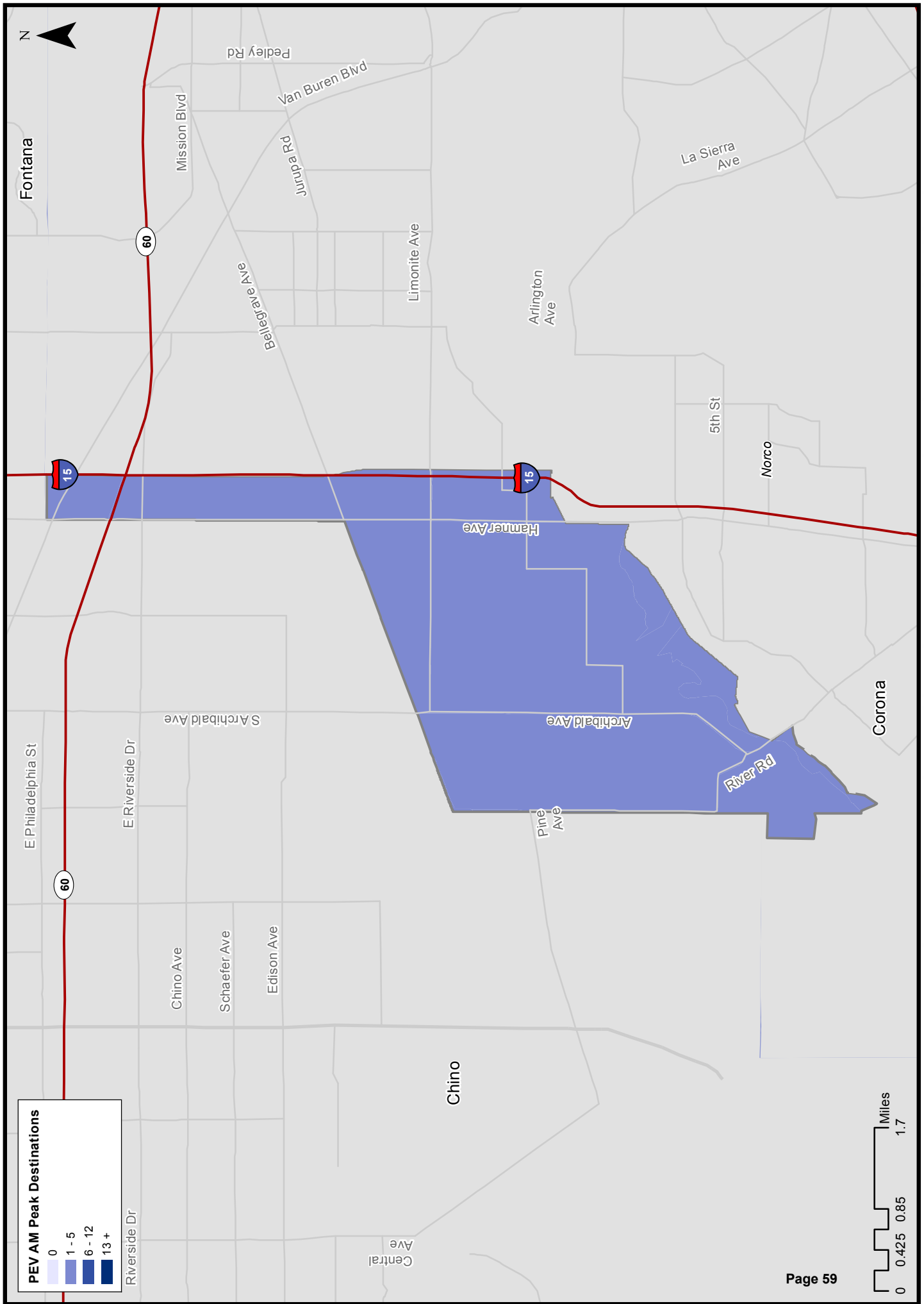


Eastvale: Multi-Unit Residential and PEV Registrations

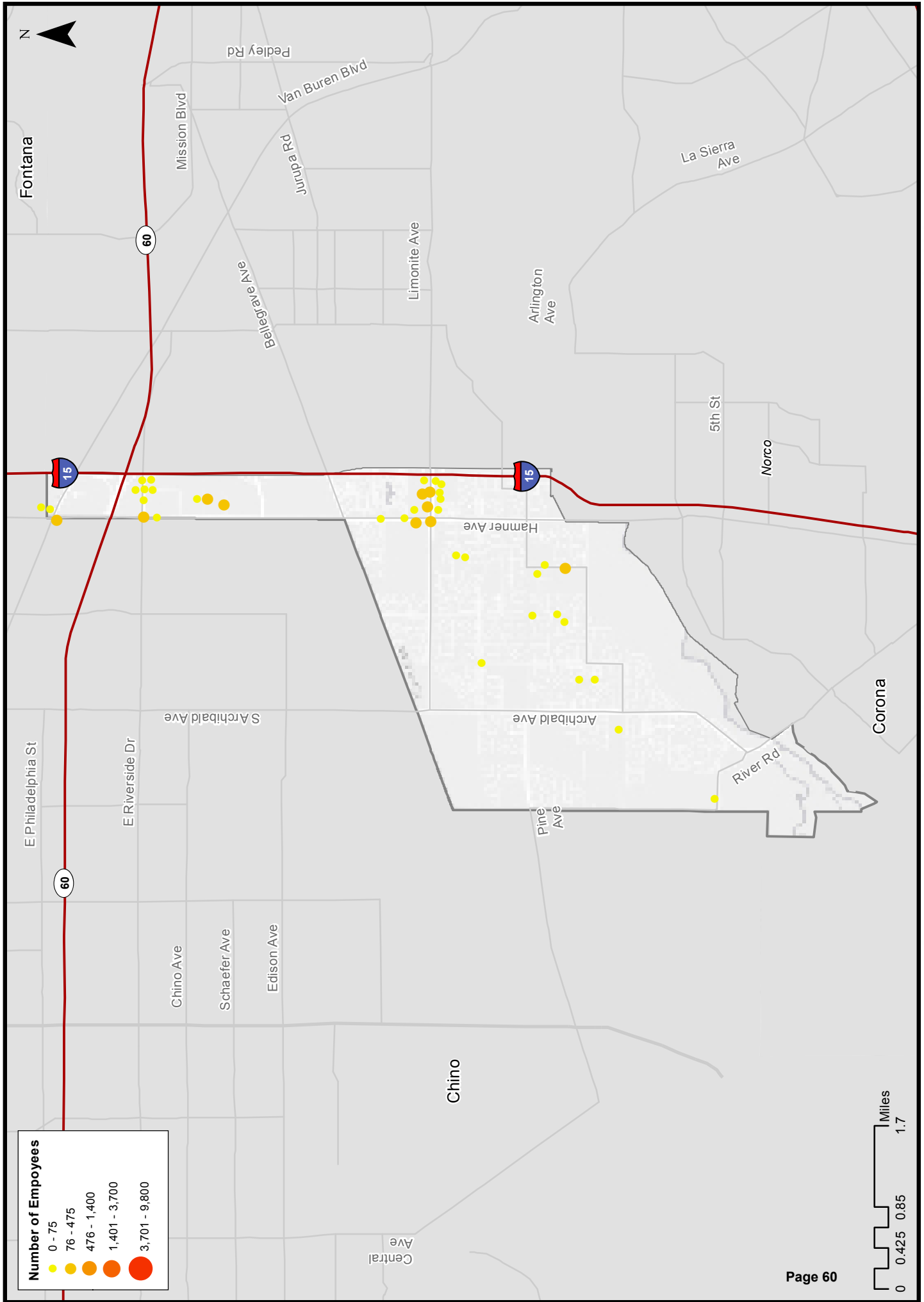


Eastvale: Top Multi-Unit Dwellings									
City	Address	Number of units	Condo?	Unit value	Year built	Attached/detached garage	Carpport?	PEV density	
Eastvale	5464 W HOMECOMING CIR	738	N	\$175,039	2005				
Eastvale	14225 CHANDLER ST	3	N	\$24,385	1950	D			
Eastvale	14555 CHANDLER ST	3	N	\$27,974	1950	D			
Eastvale	7637 HALL AVE	3	N	\$37,559	1954	D			
Eastvale	7755 HALL AVE	3	N	\$112,328	1954	D	Y		

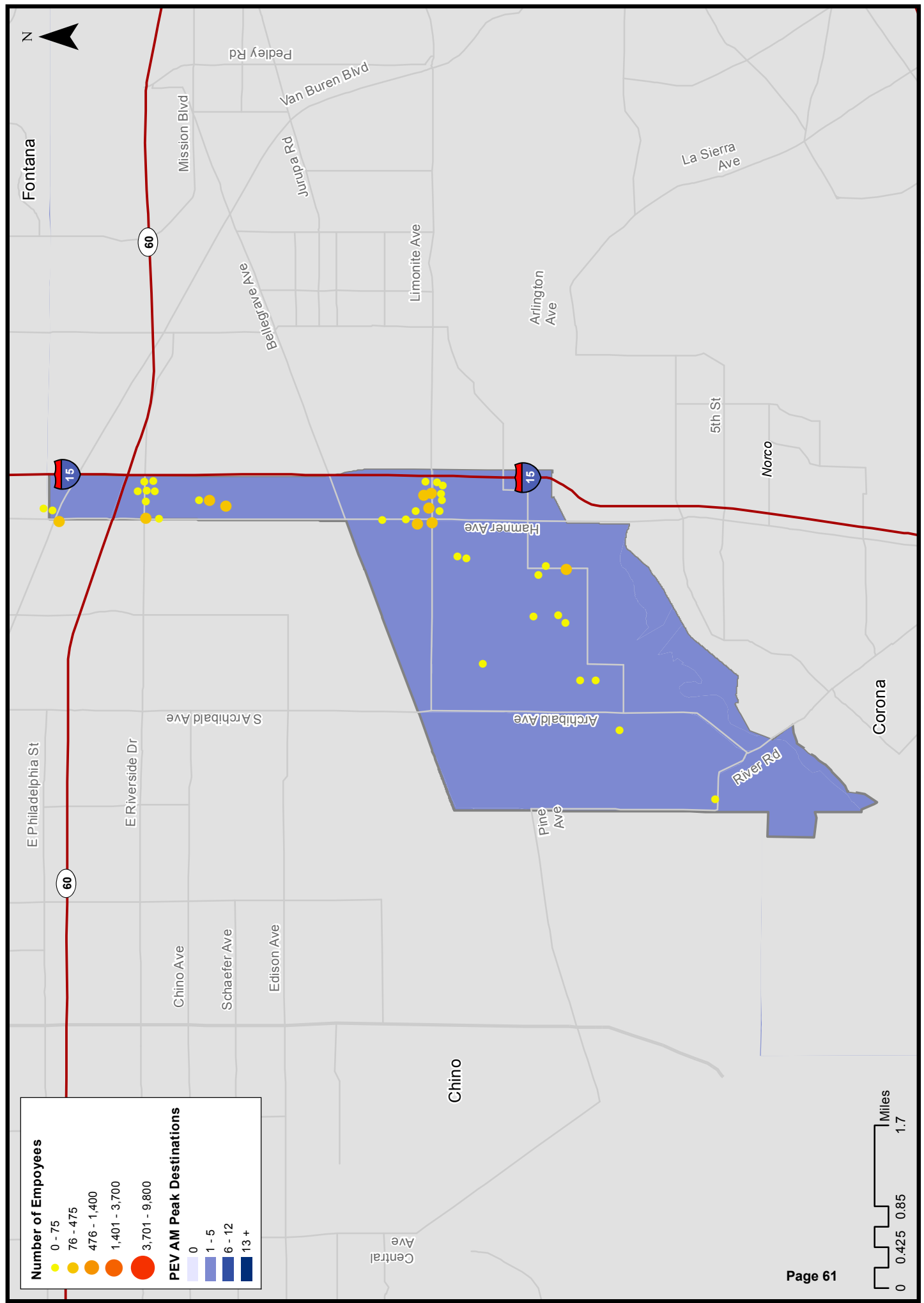
Eastvale: Plug-in Electric Vehicle Morning Peak Destinations



Eastvale: Top Workplaces by Number of Employees

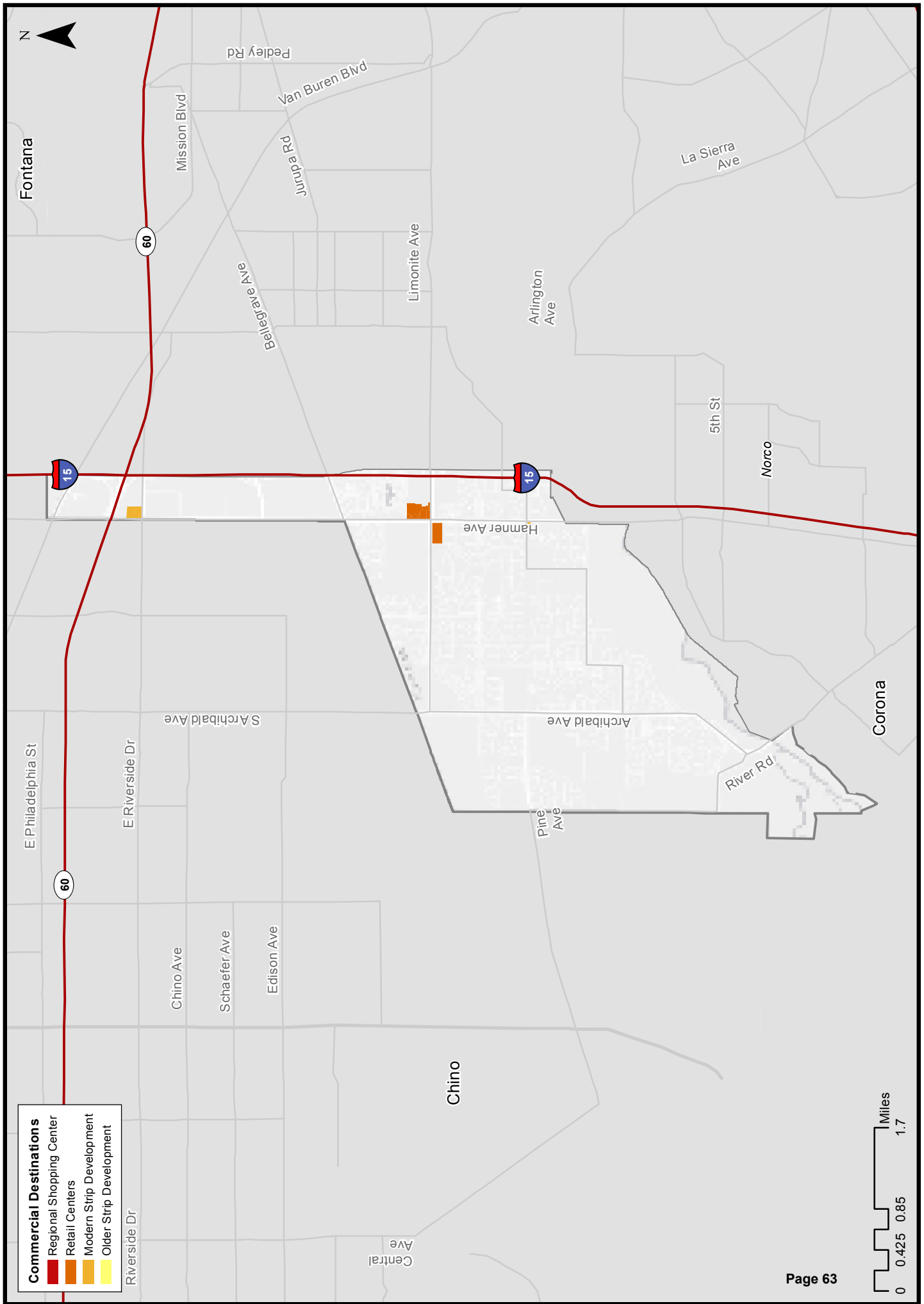


Eastvale: PEV Morning Peak Destinations and Top Workplaces

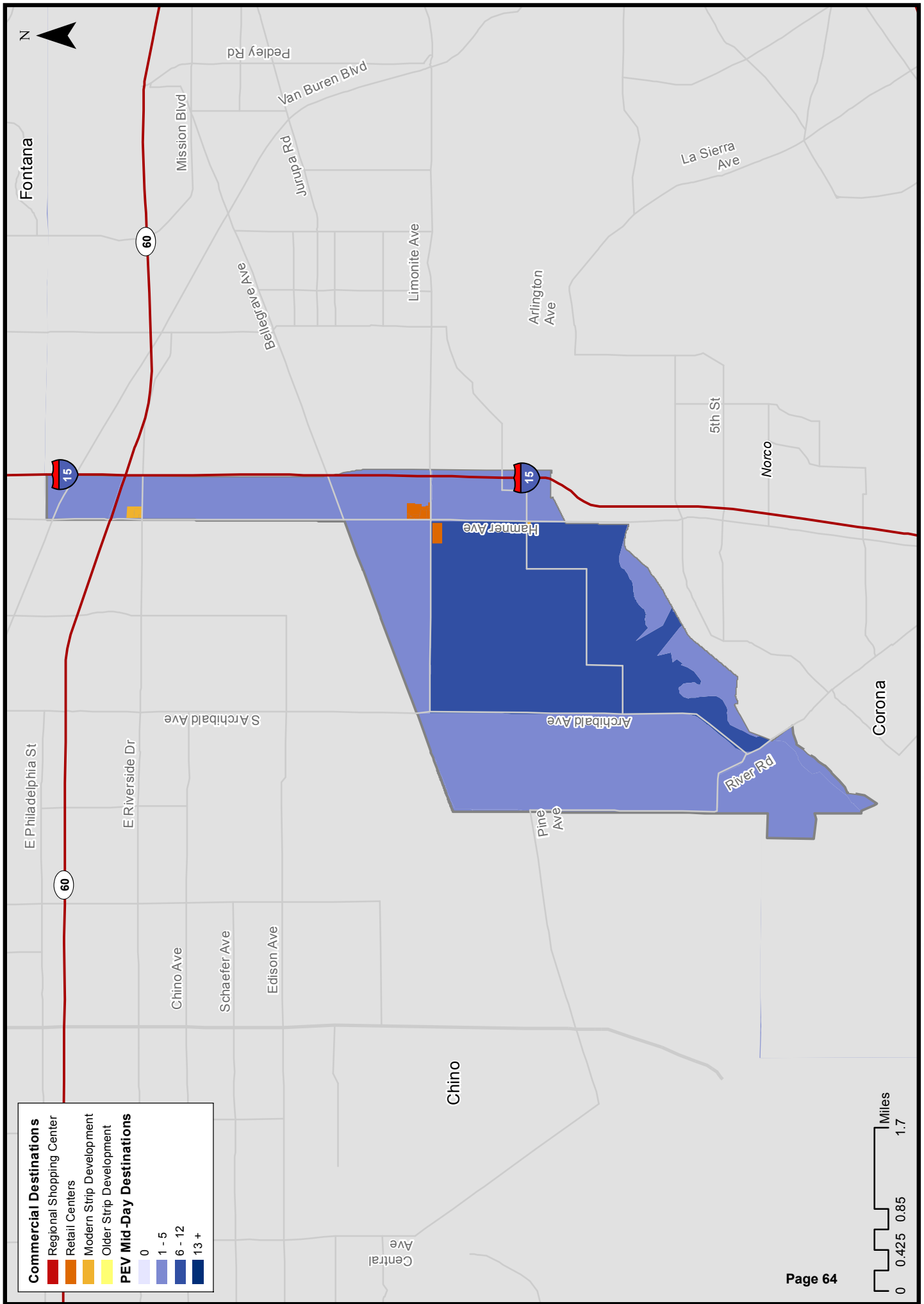


Eastvale: Top Workplaces						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Eastvale	TARGET CORP, #T-1961	12471 LIMONITE AVE	263	N	Y	
Eastvale	INGRAM MICRO, INC.	12510 MICRO DR	378	Y	Y	
Eastvale	Home Depot	6140 Hamner Ave	170	N	N*	
Eastvale	Ferguson Enterprises Inc	12455 Harvest Dr	135	N	Y	
Eastvale	Applebee's Neighborhood Grill	12375 Limonite Ave	130	N	N	
Eastvale	Kohl's Department Store	12315 Limonite Ave	130	N	N*	
Eastvale	Roosevelt High School	7447 Cleveland Ave	100	N	Y	
Eastvale	Snapware Corp	3900 Hamner Ave	100	N	N	
Eastvale	Kmart	3100 Milliken Ave	90	N	N*	
Eastvale	Vons	6170 Hamner Ave	80	N	N*	
Eastvale	Harada Elementary School	12884 Oakdale St	75	N	Y	
Eastvale	Consolidated Garments	12450 Philadelphia Ave	75	N	Y	
Eastvale	Silvercrest Realty	6080 Hamner Ave # 105	72	N	Y	
Eastvale	River Heights Intermediate	7227 Cleveland Ave	70	N	Y	
Eastvale	Barton Elementary School	7437 Corona Valley Ave	65	N	Y	
Eastvale	Ralphs	12660 Limonite Ave	60	N	N*	
Eastvale	Tarbell Corona	12648 Limonite Ave # 2g	60	N	Y	
Eastvale	T J Maxx	12387 Limonite Ave	60	N	Y	
Eastvale	Eastvale Elementary School	13031 Orange St	55	N	Y	
Eastvale	Jim Aartman Inc	14325 Chandler St	55	N	N	
Eastvale	Rosa Park Elementary School	6701 Harrison Ave	50	N	Y	
Eastvale	Pacific Apparel Express	12450 Philadelphia Ave	50	N	Y	
Eastvale	Swan Lake Mobile Country Ests	5800 Hamner Ave	50	N	Y	
Eastvale	Corona Norco Unified Sch Dist	12884 Oakdale St	45	N	Y	
Eastvale	Joyful Honda	3778 Milliken Ave	40	N	Y	
Eastvale	Orbital Holdings Inc	3187 Cornerstone Dr	40	N	N	
Eastvale	Hi-Speed Trucking	3788 Milliken Ave # 2a	36	N	N	
Eastvale	Linens 'N Things	12351 Limonite Ave	35	N	N*	
Eastvale	Royal Range of California	3245 Corridor Dr	35	N	N	
Eastvale	Sunshine Growers Nursery	13130 S Milliken Ave	35	N	Y	
Eastvale	Wendy's	12614 Limonite Ave	29	N	N	
Eastvale	Martin Feed & Cattle	7080 Sumner Ave	25	N	Y	
Eastvale	UPS Freight	12455 Harvest Dr	24	N	Y	
Eastvale	California Industrial	3197 Cornerstone Dr	23	N	N	
Eastvale	Tutor Time Learning Ctr	6020 Hamner Ave	22	N	Y	
Eastvale	Staple the Office Superstore	12495 Limonite Ave	21	Y	Y	
Eastvale	Gabco Painting Inc	14140 Crystal Pool Ct	20	N	N	
Eastvale	Pacific Hay Co	7360 Sumner Ave	20	N	Y	
Eastvale	PTI Sand & Gravel Inc	14925 River Rd	20	N	N	
Eastvale	Trimark Pacific	7577 Corona Valley Ave	20	N	N	
Eastvale	Crossroads American	12421 Riverside Dr # A	20	N	Y	

Eastvale: Commercial (Retail) Destinations



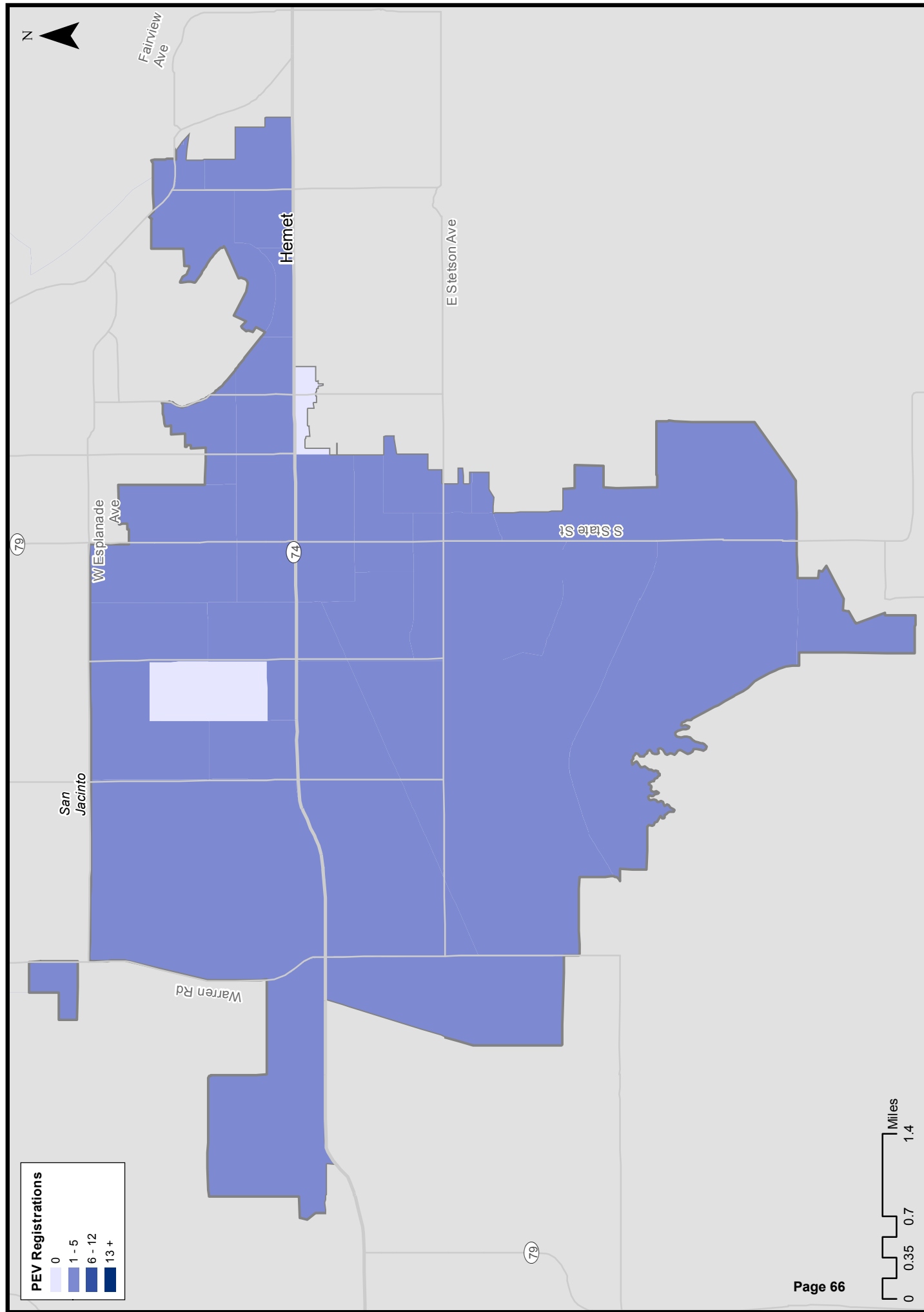
Eastvale: PEV Mid-Day Destinations and Commercial (Retail) Locations



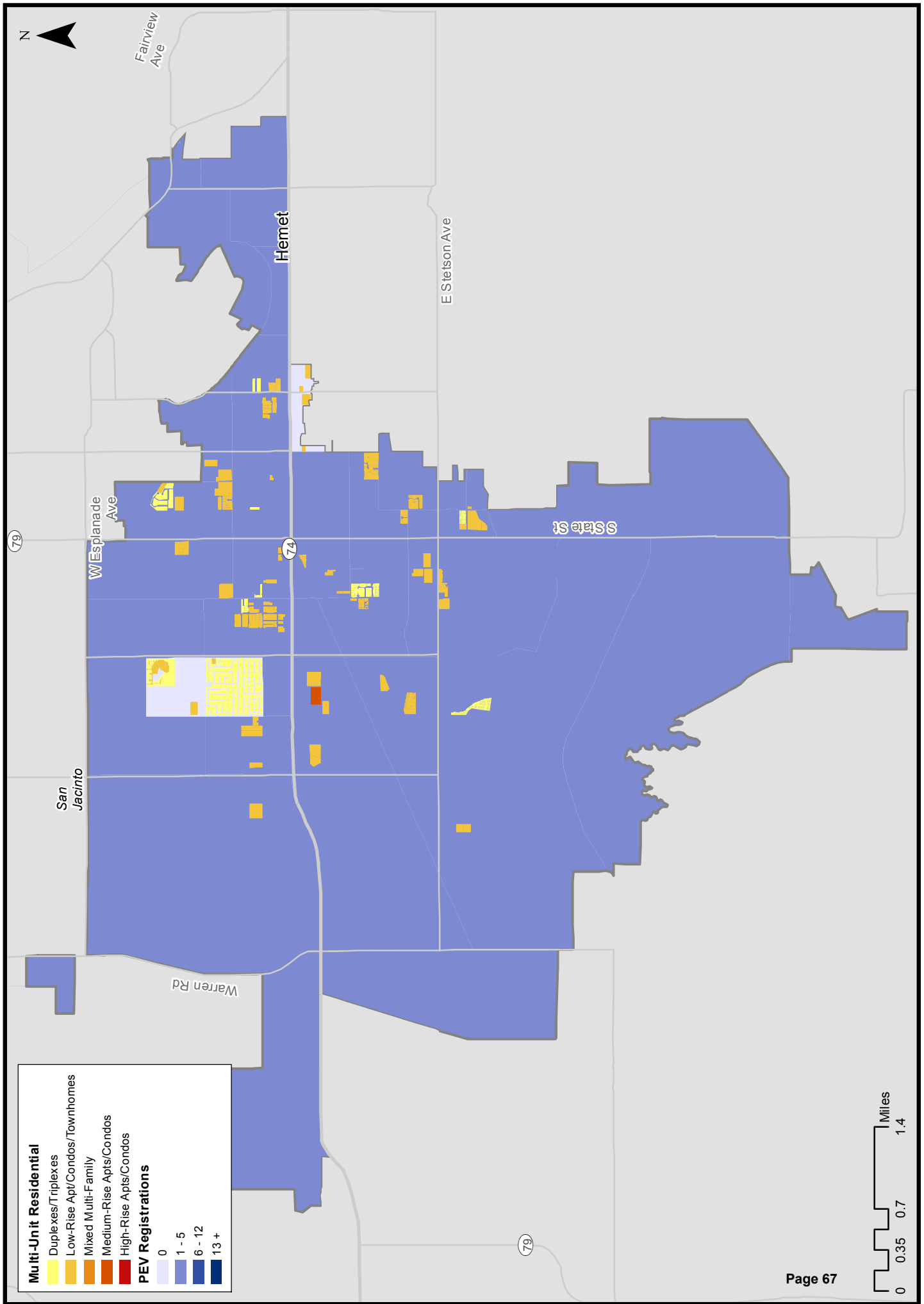
Eastvale: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Joyful Honda	3778 Milliken Ave	New Car Dealers	\$34,360	
Swan Lake Mobile Country Ests	5800 Hamner Ave	Manufactured, Mobile, Home Dealers	\$22,550	
Kohl's Department Store	12315 Limonite Ave	Department Stores, Except Discount	\$21,060	
Vons	6170 Hamner Ave	Supermarkets & Other Grocery Stores	\$19,760	
Ralphs	12660 Limonite Ave	Supermarkets & Other Grocery Stores	\$14,820	
T J Maxx	12387 Limonite Ave	Department Stores, Except Discount	\$9,720	
Linens 'N Things	12351 Limonite Ave	All Other Home Furnishings Stores	\$6,510	
Applebee's Neighborhood Grill	12375 Limonite Ave	Limited-Service Restaurants	\$5,200	
Best Buy Mira Loma	12281 Limonite Ave	Automotive Parts & Accessories Stores	\$3,773	
Alinvent	3778 Milliken Ave # C	Furniture Stores	\$3,060	
Frontline Motors	5939 Maycrest Ave	Used Car Dealers	\$2,684	
Pets Mart	12483 Limonite Ave	Pet Care, Except Veterinary, Svcs	\$2,669	
Ingram Micro	12510 Micro Dr	Computer & Software Stores	\$2,058	
Fritschnet Inc-Hostgo	6934 Cottonwood Cir	Electronic Shopping	\$1,628	M
Essence Entertainment	5800 Hamner Ave	Independent Artists, Writers, & Performers	\$1,500	
Eagle Memory Products	7111 Tawny Owl Ct	Computer & Software Stores	\$1,372	M
Community Mobile Home Sales	5800 Hamner Ave	Manufactured, Mobile, Home Dealers	\$1,353	
Blockbuster Video	12523 Limonite Ave	Prerecorded Tape, CD, & Record Stores	\$1,330	
Cinematec Home Theater	13430 Cascade Ct	Radio, TV & Other Electronics Stores	\$1,292	M
Target	12471 Limonite Ave	Department Stores, Except Discount	\$1,281	
Brazil's Market	14449 Chandler St	Supermarkets & Other Grocery Stores	\$1,235	
Wendy's	12614 Limonite Ave	Limited-Service Restaurants	\$1,160	
Ultimate Gear	12523 Limonite Ave # 420	Men's Clothing Stores	\$1,158	
Net Runner Global	7318 Silverwood Dr	Computer & Office Machine Repair	\$1,141	M
Ritz Camera Ctr	12459 Limonite Ave	Camera & Photographic Supplies Store	\$972	
Star Nails & Spa	12523 Limonite Ave	Nail Salons	\$900	
Hair Elegance	12523 Limonite Ave # 470	Beauty Salons	\$880	
Red Brick Pizza	12569 Limonite Ave	Limited-Service Restaurants	\$840	
A & K Railroad Materials Inc	12180 Mission Blvd	Nursery, Garden, & Farm Supply Stores	\$819	
Stork News-the Inland Empire	12752 Hungarian St	Children's & Infants' Clothing Stores	\$644	M
Starbucks	12700 Limonite Ave	Snack & Nonalcoholic Beverage Bars	\$640	
Sashi Bear LLC	6310 Golden Bit St	Store Retailers Not Specified Elsewhere	\$603	M
Pick Up Stix	12571 Limonite Ave # 200	Limited-Service Restaurants	\$600	
Mary's Hallmark	12523 Limonite Ave # 400	Gift, Novelty, & Souvenir Stores	\$590	
Wholesale Hyperformance	12532 Blue Rock Ct	Automotive Parts & Accessories Stores	\$585	
Golden Spoon Frozen Yogurt	12732 Limonite Ave	All Other Specialty Food Stores	\$575	
Syann Dairy	14900 River Rd	All Other Specialty Food Stores	\$575	
Coffee Bean & Tea Leaf	12569 Limonite Ave	Snack & Nonalcoholic Beverage Bars	\$560	
A G Organics	7215 Woodpigeon Rd	Nursery, Garden, & Farm Supply Stores	\$546	M
Lake Mart	5800 Hamner Ave	Convenience Stores	\$494	

Hemet: Plug-in Electric Vehicle Registrations

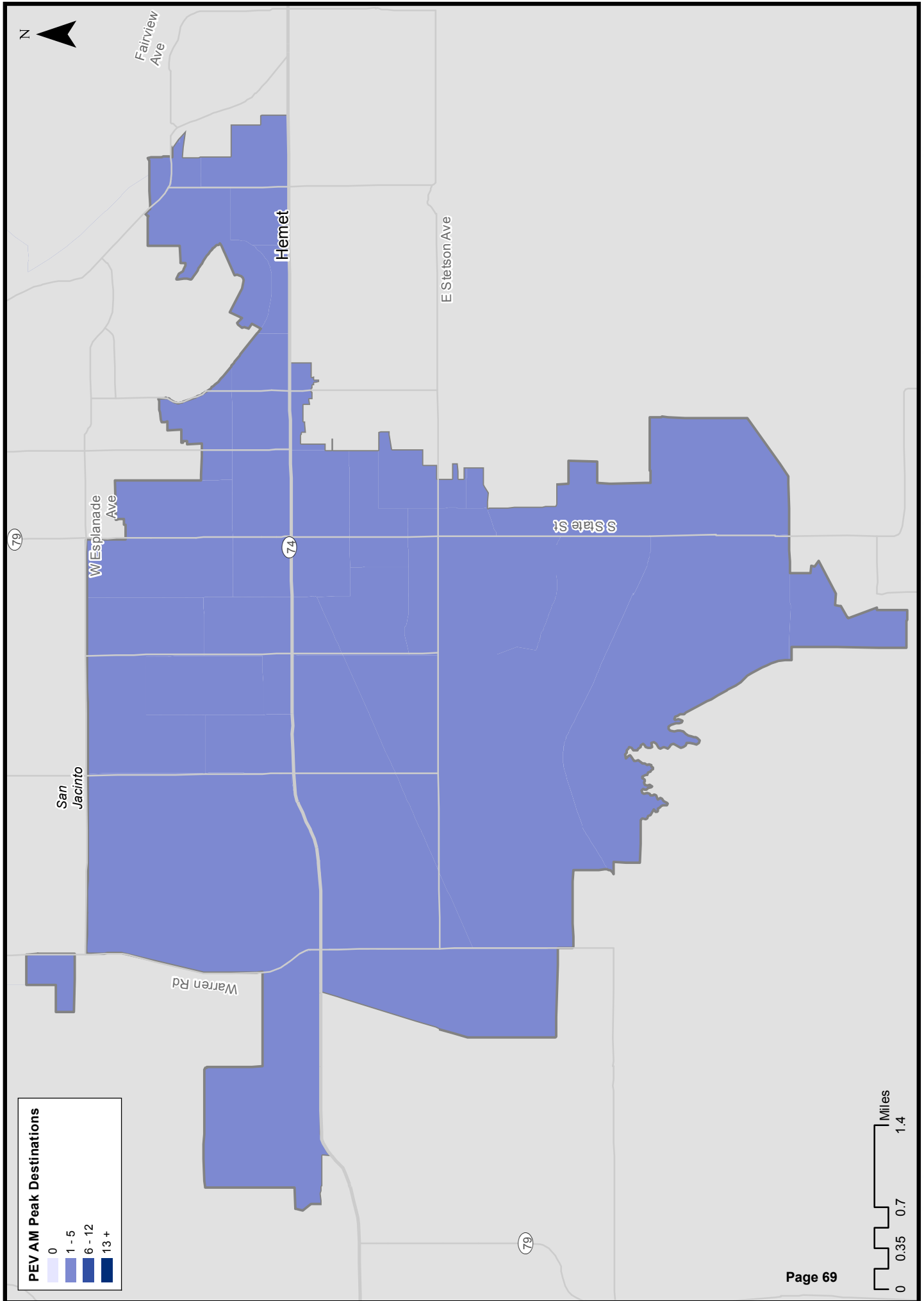


Hemet: Multi-Unit Residential and PEV Registrations

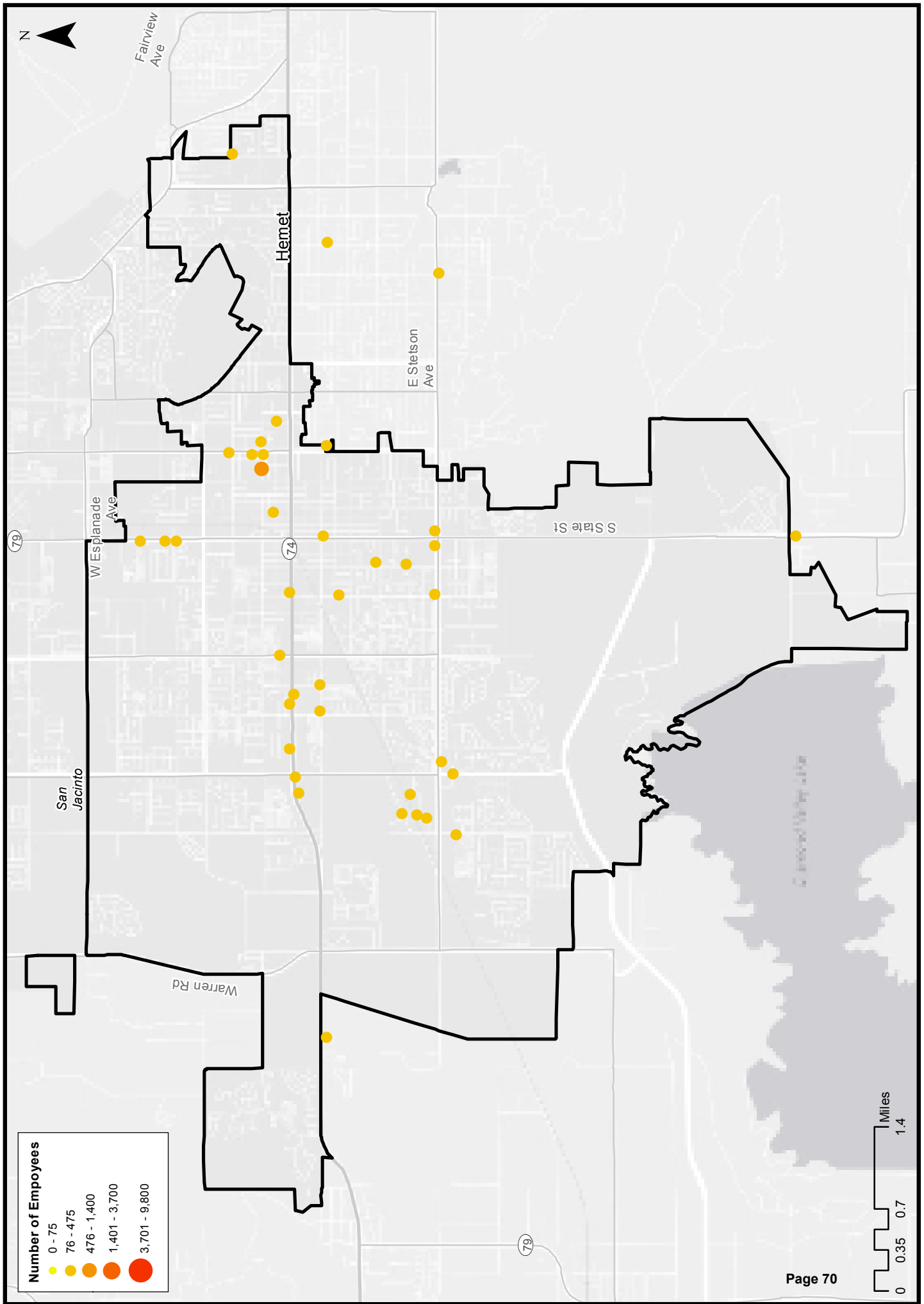


Hemet: Top Multi-Unit Dwellings									
City	Address		Number of units	Condo?	Unit value	Attached/detached garage	Carpport?	Year built	PEV density
Hemet	551 SANTA FE	ST	320	N	\$29,375				
Hemet	2770 DEVONSHIRE	AVE	276	N	\$65,572				
Hemet	3030 ACACIA	AVE	200	N	\$34,064				
Hemet	3800 DEVONSHIRE	AVE	200	N	\$68,004				
Hemet	409 THORTON	AVE	194	N	\$47,694				
Hemet	1900 ACACIA	AVE	180	N	\$88,419			1982	
Hemet	1000 GILBERT	ST	177	N	\$69,492				
Hemet	201 COLUMBIA	ST	152	N	\$36,189				
Hemet	555 FRUITVALE	AVE	140	N	\$99,369				
Hemet	1025 GILBERT	ST	136	N	\$55,132				
Hemet	40389 MAYBERRY	AVE	88	N	\$45,800				
Hemet	1005 GILBERT	ST	65	N	\$94,801	D		1937	
Hemet	200 YALE	ST	60	N	\$31,029				
Hemet	43235 ANDRADE	AVE	58	Y	\$54,100			1989	
Hemet	1100 WHITTIER	AVE	56	N	\$41,188				
Hemet	333 KIRBY	ST	54	N	\$48,875				
Hemet	801 STETSON	AVE	54	N	\$49,533				
Hemet	1250 CAWSTON	AVE	48	N	\$120,224				
Hemet	4100 CAWSTON	AVE	48	N	\$120,224				
Hemet	178 YALE	ST	48	N	\$53,977				
Hemet	190 YALE	ST	44	N	\$48,396				

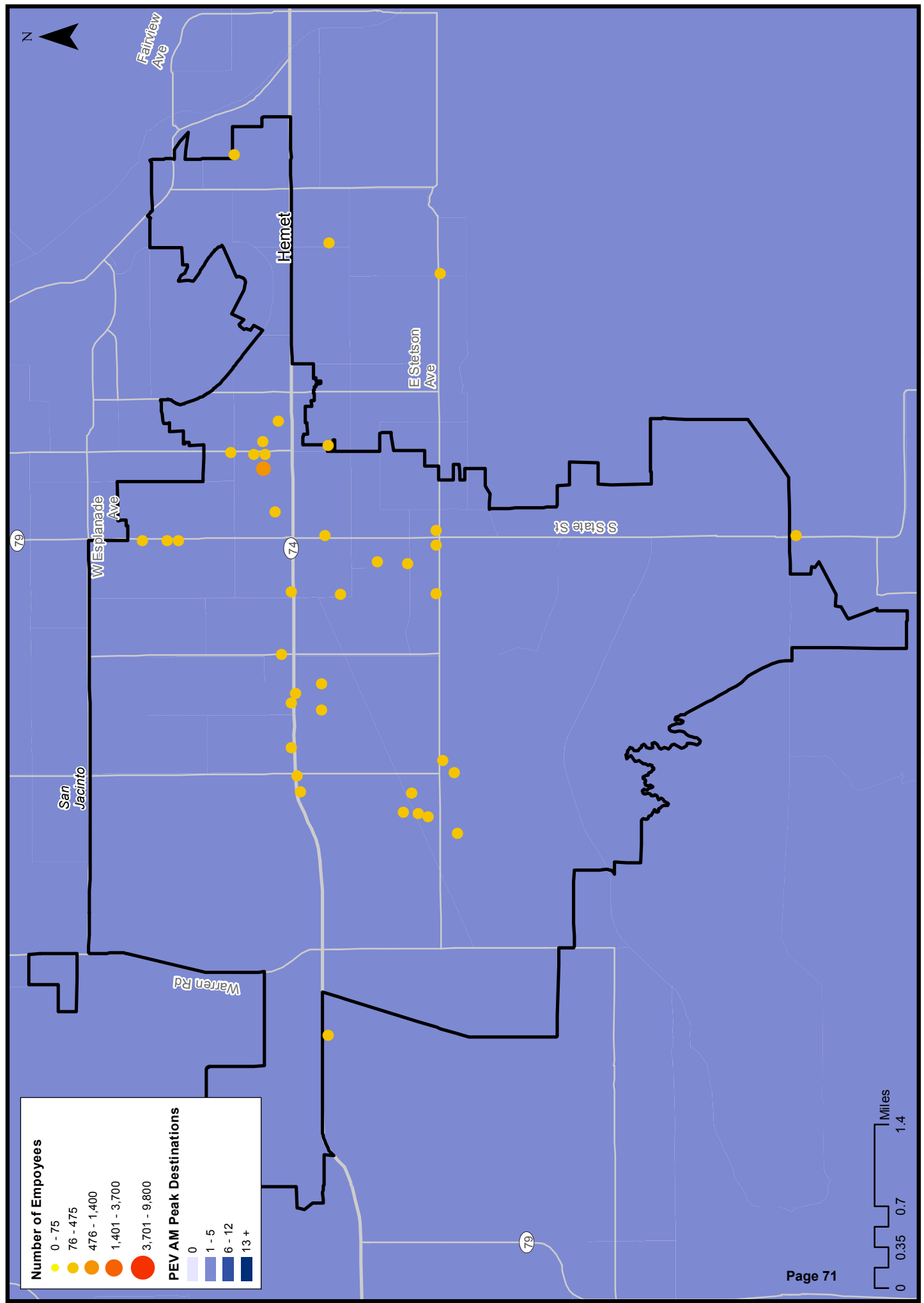
Hemet: Plug-in Electric Vehicle Morning Peak Destinations



Hemet: Top Workplaces by Number of Employees

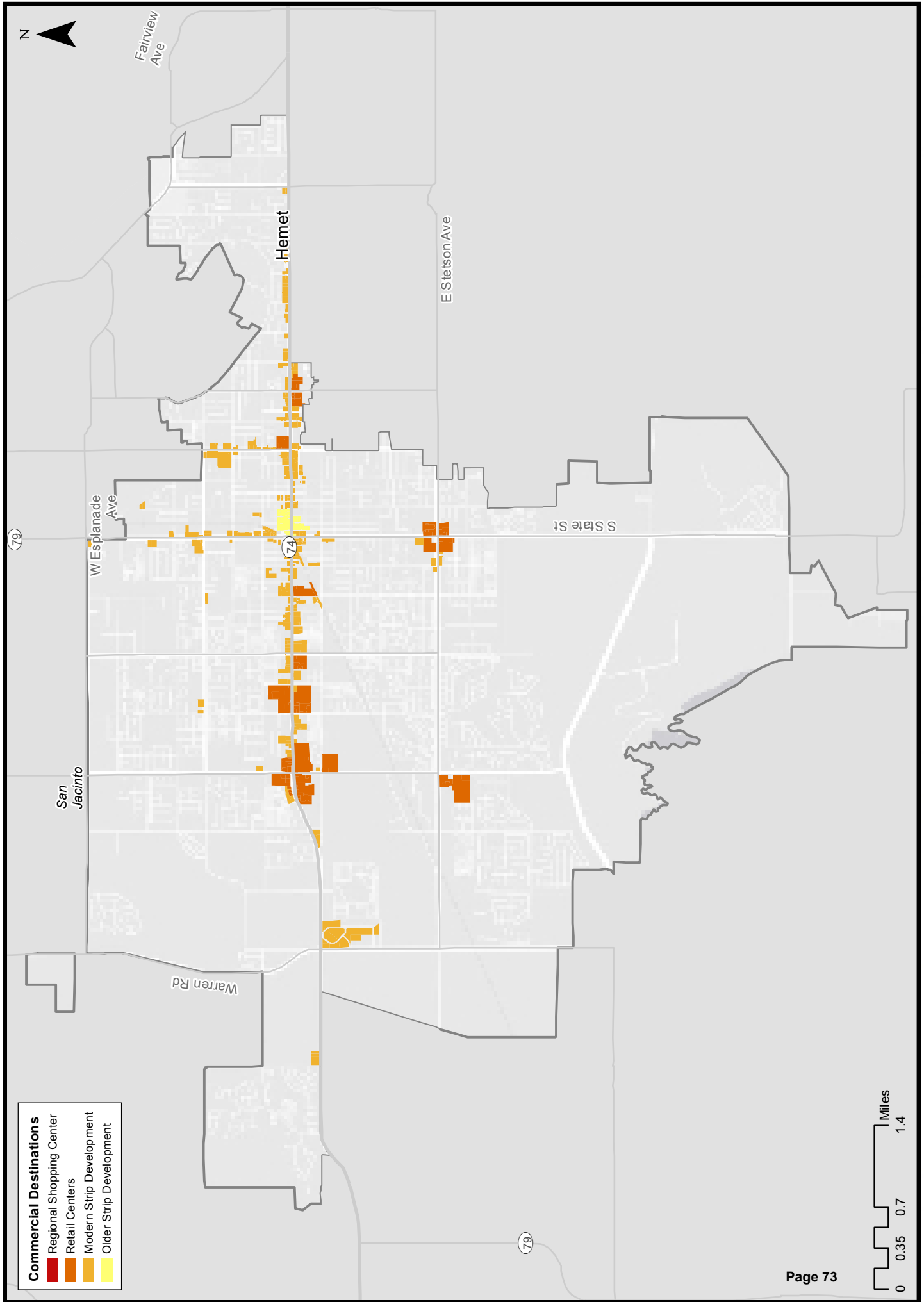


Hemet: PEV Morning Peak Destinations and Top Workplaces

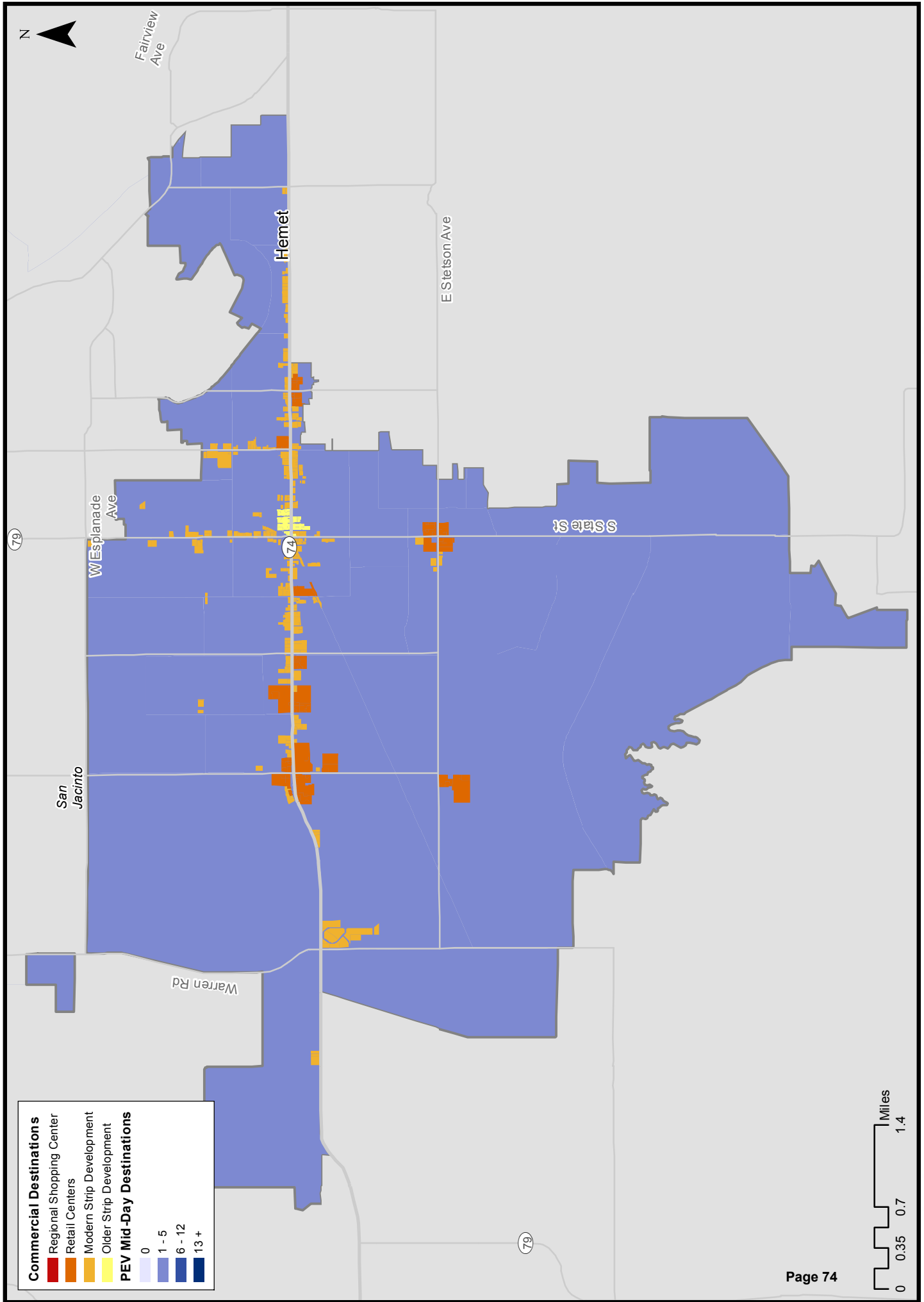


City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Hemet	HEMET VALLEY MEDICAL CENTER	1117 E DEVONSHIRE AVE	874	N	Y	
Hemet	WALMART # 1853	1231 S SANDERSON	373	N	N*	
Hemet	RIVERSIDE COUNTY	541 N SAN JACINTO ST	250	N	N	
Hemet	Home Depot	3400 W Florida Ave	230	N	N	
Hemet	Ramona Vna & Hospice	890 W Stetson Ave # A	210	N	Y	
Hemet	Deutsch Defense/Areospace Oper	5733 W Whittier Ave	200	Y	N	
Hemet	West Valley High School	3401 Mustang Way	180	N	Y	
Hemet	Mc Crometer Inc	3255 W Stetson Ave	160	N	Y	
Hemet	Hemet High School	41701 Stetson Ave	150	N	Y	
Hemet	Lowe's	350 S Sanderson Ave	150	N	Y	
Hemet	Target	3527 W Florida Ave	150	N	Y	
Hemet	Village Healthcare Retire Ctr	2200 W Acacia Ave	150	N	Y	
Hemet	California Family Life Ctr	930 N State St	140	N	N	
Hemet	US Post Office	324 S State St	140	N	N	
Hemet	Hemet Valley Healthcare Ctr	371 N Weston Pl	140	N	Y	
Hemet	Deutsch Co/Industrial Products	3850 Industrial Ave	130	Y	N	
Hemet	Ramona Manor Nursing Rehab Ctr	485 W Johnston Ave	130	N	Y	
Hemet	Stater Bros Markets	210 E Stetson Ave	125	N	N*	
Hemet	Village Health Care Ctr	2400 W Acacia Ave	115	N	Y	
Hemet	Hemet Police Dept	450 E Latham Ave	110	N	N	
Hemet	Whittier Elementary School	400 W Whittier Ave	109	N	Y	
Hemet	Assistance League	180 N Girard St	100	N	Y	
Hemet	Devonshire Care Ctr	1350 E Devonshire Ave	100	N	Y	
Hemet	Diamond Valley Middle School	291 W Chambers Ave	100	N	Y	
Hemet	Hemet Public Works Dept	3777 Industrial Ave	100	N	N	
Hemet	Little Lake Elementary School	26091 Meridian St	100	N	Y	
Hemet	Polly's Bakery Cafe	2204 W Florida Ave	100	N	N	
Hemet	Riverside Crnty Sheriff's Dept	910 N State St	100	N	Y	
Hemet	Sears Roebuck & Co	2200 W Florida Ave	100	Y	Y	
Hemet	Skyline Corp	425 S Palm Ave	100	N	N	
Hemet	Cloverleaf Health Care	275 N San Jacinto St	95	N	Y	
Hemet	Bautista Creek Elementary Schl	441 N Lake St	90	N	Y	
Hemet	Albertsons	869 W Florida Ave	90	N	N*	
Hemet	Hemet Redi Mix & Materials	1130 N State St	90	N	Y	
Hemet	Kmart	220 W Stetson Ave	90	N	N*	
Hemet	La Fogata Mexican Restaurant	2940 W Florida Ave	90	N	N	
Hemet	Transit Ways Inc	3750 Wentworth Dr	90	N	Y	
Hemet	Insurance Data Svc	151 N Lyon Ave	85	N	Y	
Hemet	Ramko Manufacturing Inc	3500 Tanya Ave	85	N	N	
Hemet	Acacia Middle School	1200 E Acacia Ave	84	N	Y	

Hemet: Commercial (Retail) Destinations



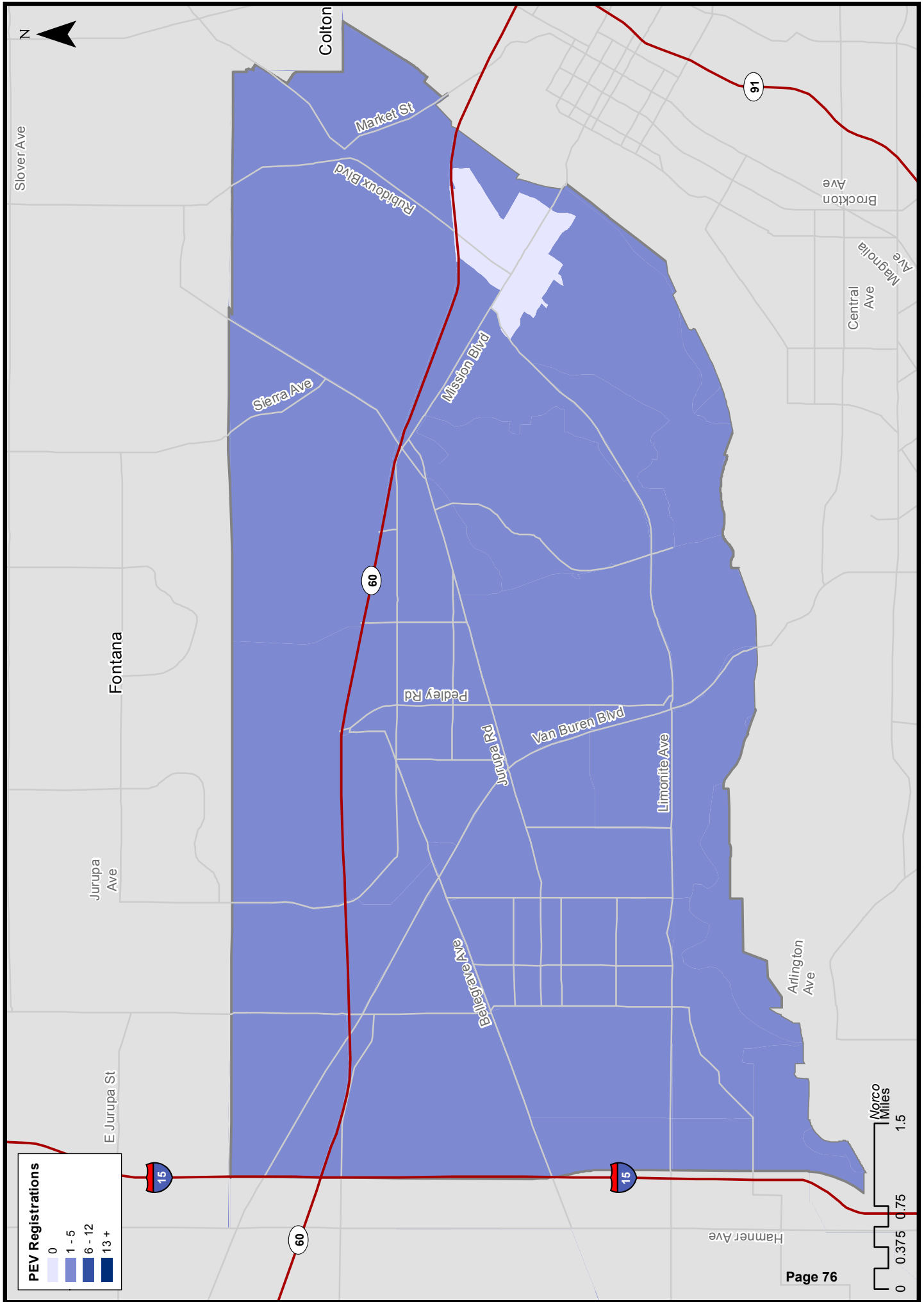
Hemet: PEV Mid-Day Destinations and Commercial (Retail) Locations



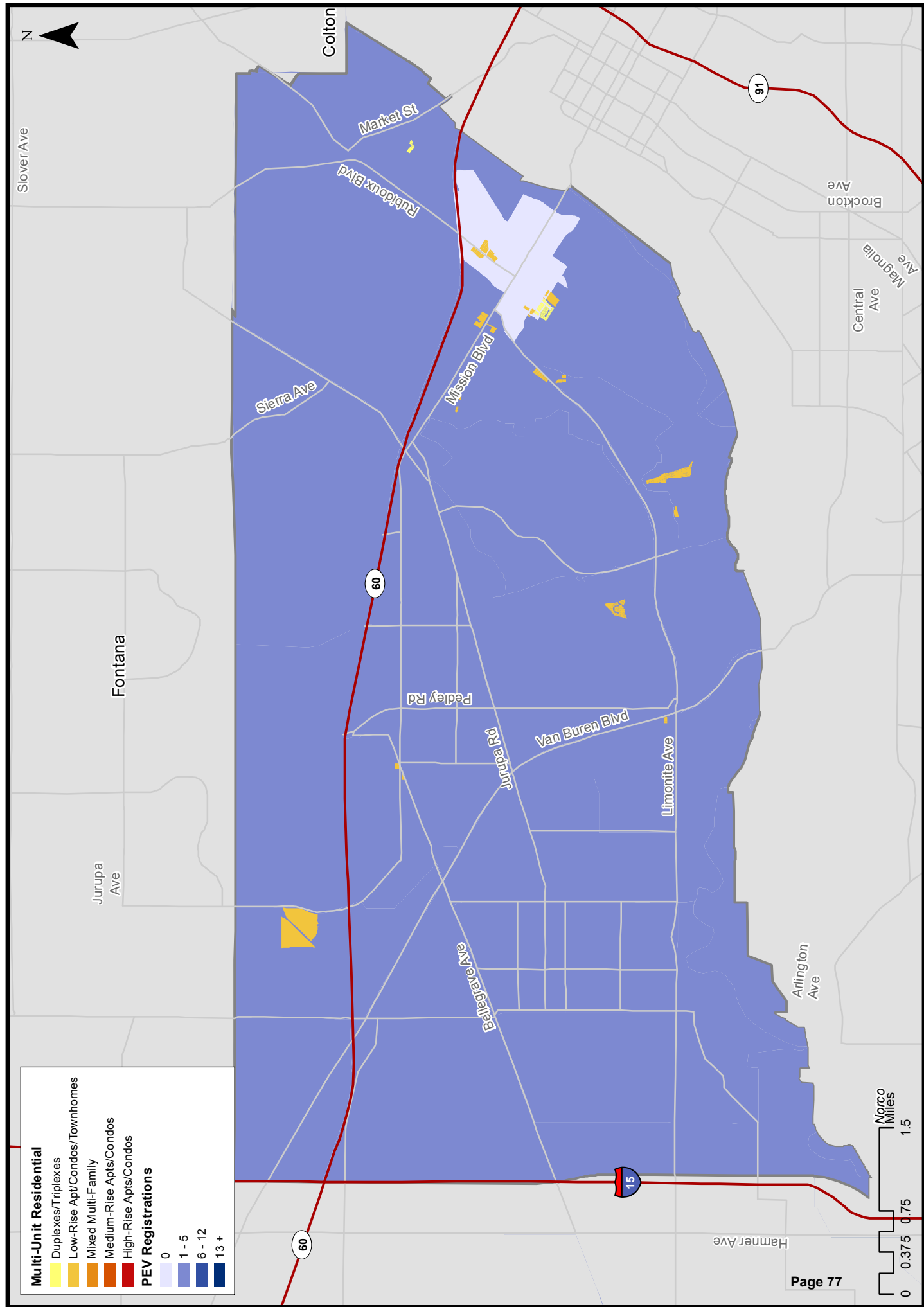
Hemet: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Gosch Ford-Lincoln-Mercury	150 Carriage Cir	New Car Dealers	\$687,200	
Gosch Toyota	450 Carriage Cir	New Car Dealers	\$515,400	
Wal-Mart Supercenter	1231 S Sanderson Ave	Department Stores, Except Discount	\$113,400	
Diamond Valley Honda	300 Carriage Cir	New Car Dealers	\$55,835	
Inland Chevrolet-Oldsmobile	350 Carriage Cir	New Car Dealers	\$51,540	
Hemet Chrysler Ctr	200 Carriage Cir	New Car Dealers	\$41,232	
Hemet Suzuki	240 Carriage Cir	New Car Dealers	\$34,360	
Stater Bros Markets	210 E Stetson Ave	Supermarkets & Other Grocery Stores	\$30,875	
Target	3527 W Florida Ave	Department Stores, Except Discount	\$27,450	
Gosch Nissan-Hyundai	150 Carriage Cir	New Car Dealers	\$25,770	
Albertsons	869 W Florida Ave	Supermarkets & Other Grocery Stores	\$22,230	
Manor Care Health Svc	1717 W Stetson Ave	Hotels & Motels, Except Casino Hotels	\$19,250	
Vons	3125 W Florida Ave	Supermarkets & Other Grocery Stores	\$16,796	
Sears Roebuck & Co	2200 W Florida Ave	Department Stores, Except Discount	\$16,200	
Dalal Inc	2050 E Florida Ave	Fish & Seafood Markets	\$15,015	
Stater Bros Markets	41849 Florida Ave	Supermarkets & Other Grocery Stores	\$14,820	
Kmart	220 W Stetson Ave	Department Stores, Except Discount	\$14,580	
Henry's Marketplace	1295 S State St	Supermarkets & Other Grocery Stores	\$14,326	
Gottschalks	2200 W Florida Ave # 600	Department Stores, Except Discount	\$12,960	
J C Penney Co	2200 W Florida Ave	Department Stores, Except Discount	\$12,960	
Xpress Truck Sales	4291 W Florida Ave	Department Stores, Except Discount	\$12,885	
Spirit RV	1417 Mesa View St	New Car Dealers	\$11,520	
Walgreens	1661 W Florida Ave	Recreational Vehicle Dealers	\$9,150	
Sail Drug & Discount Ctr	156 N Harvard St	Pharmacies & Drug Stores	\$8,052	
Pep Boys	2050 W Florida Ave	Supermarkets & Other Grocery Stores	\$7,800	
Hemet Family Auto Sales	3634 E Florida Ave	Automotive Parts & Accessories Stores	\$7,381	
Valle Vista Ace Home Ctr	42951 State Highway 74	Used Car Dealers	\$6,903	
Hemet Mobile & Manufacturer Hms	2143 Florida Ave	Hardware Stores	\$6,765	
Marshalls	2771 W Florida Ave	Manufactured, Mobile, Home Dealers	\$6,480	
Longs Drugs	43418 Florida Ave	Department Stores, Except Discount	\$6,405	
Miller-Jones Mortuary & Crmtry	1501 W. Florida Ave	Pharmacies & Drug Stores	\$6,307	
Inland Eye Clinic Medical Grp	361 N San Jacinto St	Cemeteries & Crematories	\$5,970	
Hemet Valley Recovery Ctr	371 N Weston Pl	Optical Goods Stores	\$5,800	
Carniceria Los Altos Number 2	126 N Carmalita St	Other Social Advocacy Organizations	\$5,681	
Ross Dress for Less	3001 W Florida Ave	Supermarkets & Other Grocery Stores	\$5,670	
Longs Drugs	43418 State Highway 74	Department Stores, Except Discount	\$5,490	
Longs Drugs	110 E Stetson Ave	Pharmacies & Drug Stores	\$4,941	
Big Lots	2097 E Florida Ave	Pharmacies & Drug Stores	\$4,896	
Pets Mart	2771 W Florida Ave	Department Stores, Except Discount	\$4,710	
Gas Plus Shell	5771 W Florida Ave	Pet & Pet Supplies Stores	\$4,640	
		Other Gasoline Stations		

Jurupa Valley: Plug-in Electric Vehicle Registrations

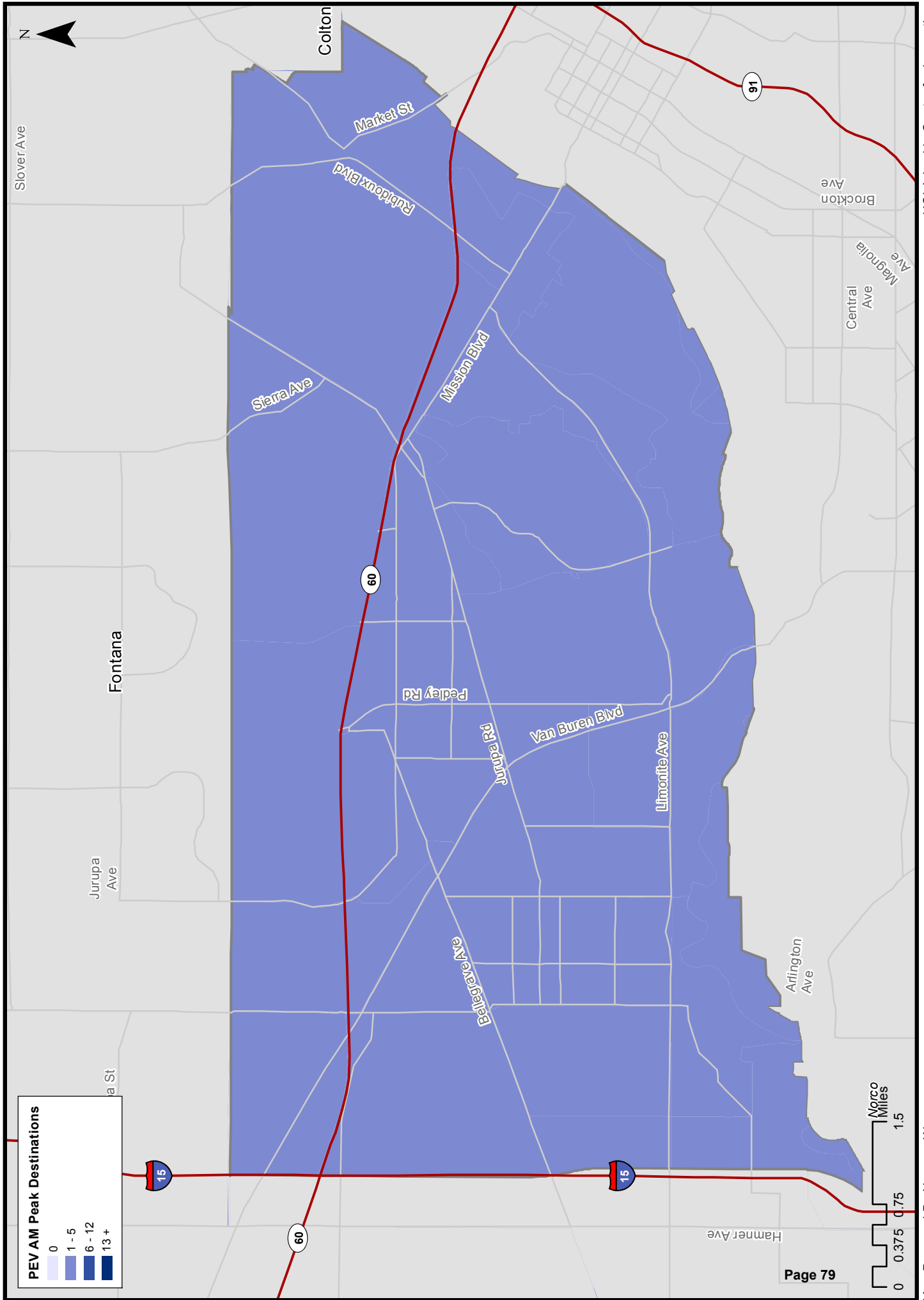


Jurupa Valley: Multi-Unit Residential and PEV Registrations

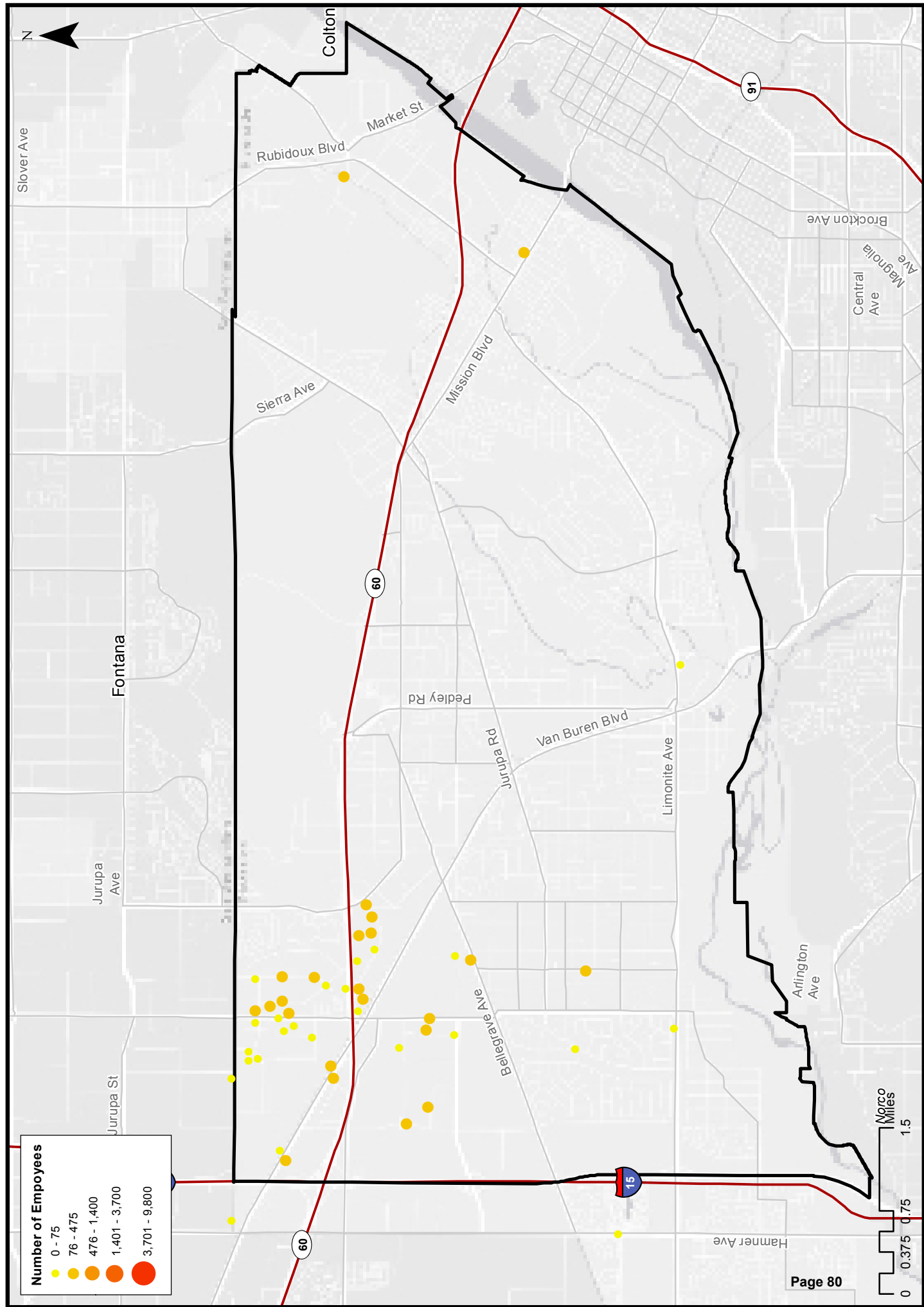


City		Jurupa Valley: Top Multi-Unit Dwellings				Jurupa Valley: Top Multi-Unit Dwellings			
Address	Number of units	Condo?	Unit value	Attached/detached garage	Carport?	Year built	PEV density		
10250 Jurupa Valley	1228	N	\$11,184			1965			
3390 Jurupa Valley	261	N	\$175,378						
11630 Jurupa Valley	6	N	\$153,944						
10270 Jurupa Valley	6	N	\$94,213						
10918 Jurupa Valley	4	N	\$89,974						
10631 Jurupa Valley	3	N	\$22,064		Y	1953			
10916 Jurupa Valley	3	N	\$92,364			1941			
6436 Jurupa Valley	3	N	\$59,197	A		1958			
4830 Jurupa Valley	3	N	\$91,730	D		1953			

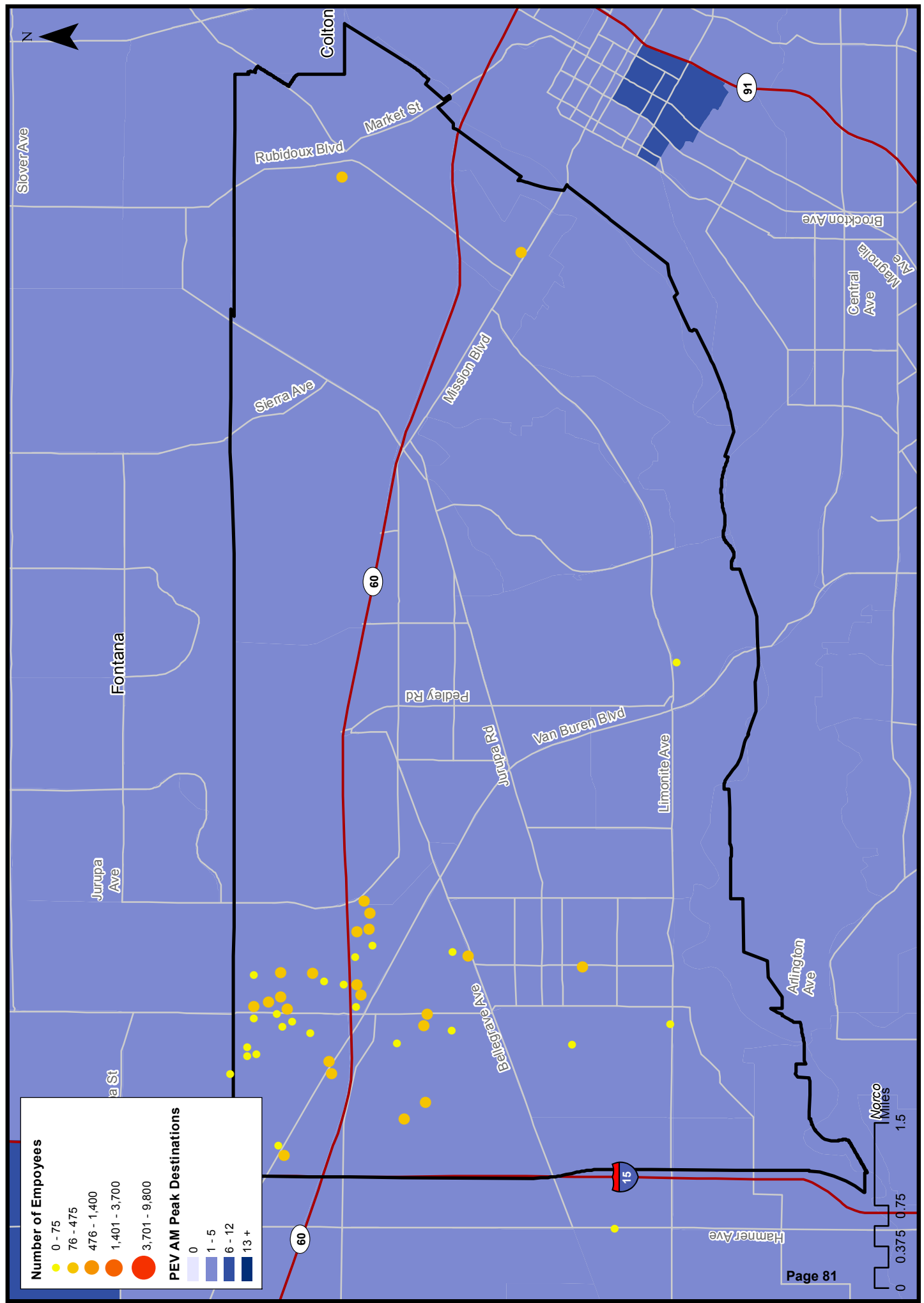
Jurupa Valley: Plug-in Electric Vehicle Morning Peak Destinations



Jurupa Valley: Top Workplaces by Number of Employees



Jurupa Valley: PEV Morning Peak Destinations and Top Workplaces

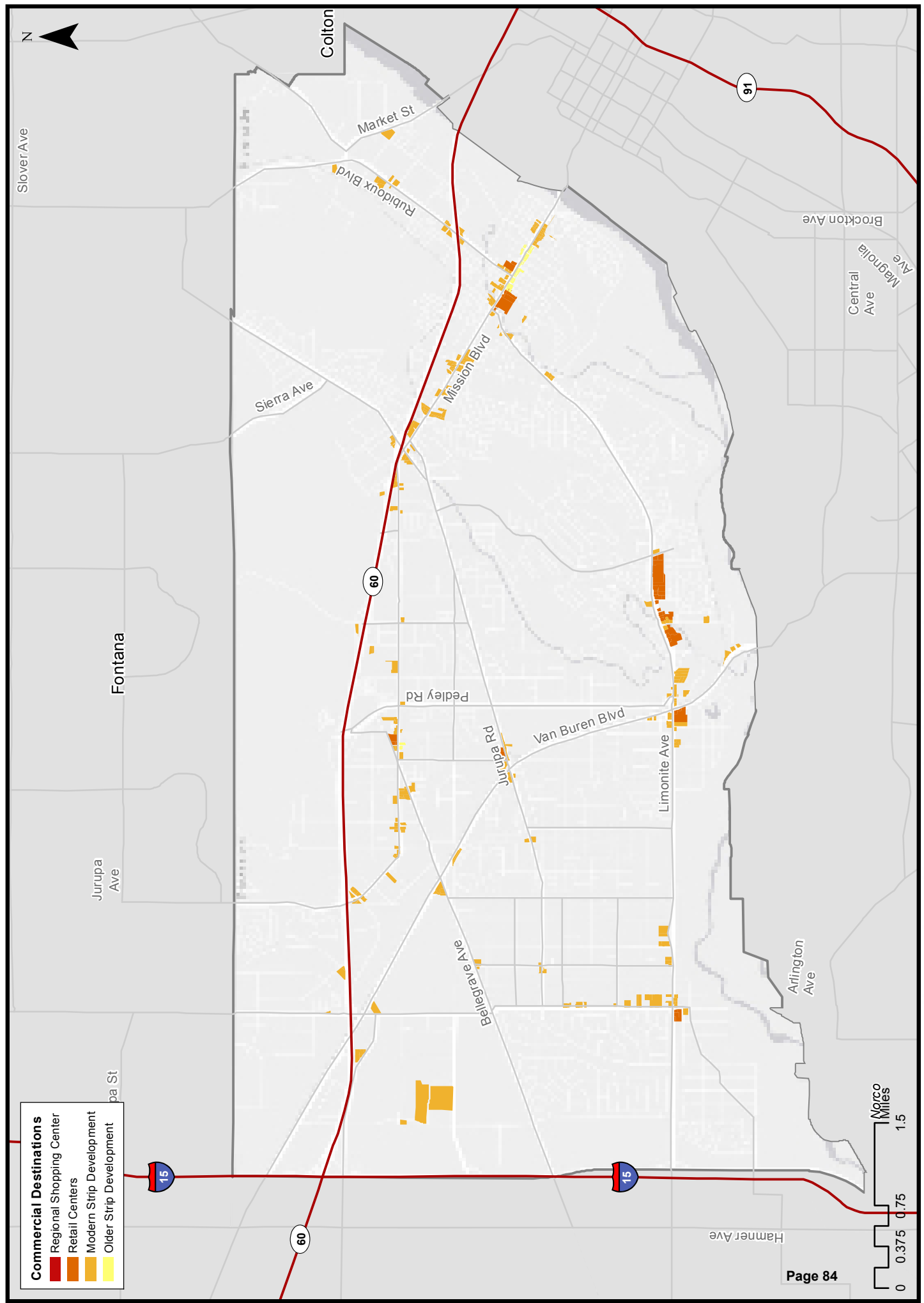


City		Jurupa Valley: Top Workplaces		Jurupa Valley: Top Workplaces		
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Jurupa Valley	RIVERSIDE COUNTY (RX 5008)	5473 MISSION BLVD	317	N	N	
Jurupa Valley	Hadley Auto Transport	4500 Etiwanda Ave	250	N	N	
Jurupa Valley	Jurupa Valley High School	10551 Bellegrave Ave	215	N	Y	
Jurupa Valley	ADESA Los Angeles	11625 Nino Way	200	N	Y	
Jurupa Valley	FMI	3355 Dulles Dr	200	N	Y	
Jurupa Valley	Galasso's Bakery	10820 San Sevaine Way	200	N	N	
Jurupa Valley	Galleano Winery	4231 Wineville Ave	200	N	N	
Jurupa Valley	NYK Logistics Americas	3285 De Forest Cir	200	N	Y	
Jurupa Valley	Universal Forest Products Inc	2100 Avalon St	200	N	Y	
Jurupa Valley	Metal Container Corp	10980 Inland Ave	170	N	N	
Jurupa Valley	Mc Grath Rentcorp	11450 Mission Blvd	160	N	Y	
Jurupa Valley	Ruskin Co	3847 Wabash Dr	120	N	Y	
Jurupa Valley	Eliminator Boats Inc	10795 San Sevaine Way	105	N	N	
Jurupa Valley	Central Freight Lines Inc	11888 Mission Blvd	100	N	N	
Jurupa Valley	CPS Express Inc	3401 Etiwanda Ave # 1110	100	N	N	
Jurupa Valley	Milliard Refrigerated Svc	3251 De Forest Cir	100	N	N	
Jurupa Valley	Mitchell Rubber Products Inc	10220 San Sevaine Way	100	N	N	
Jurupa Valley	Mobile Modular Management Corp	11450 Mission Blvd	100	N	Y	
Jurupa Valley	S P Richards Co	10235 San Sevaine Way	100	Y	Y	
Jurupa Valley	Highland Plastics	3650 Dulles Dr	89	N	N	
Jurupa Valley	Troth Street Elementary School	5565 Troth St	82	N	Y	
Jurupa Valley	Complete Food Svc	3815 Wabash Dr	80	N	N	
Jurupa Valley	Christian Brothers Heating	11140 Thurston Ln	80	N	N	
Jurupa Valley	Complete Logistics Co	11450 Philadelphia Ave	75	N	N	
Jurupa Valley	A M Ortega Construction Inc	6291 Pedley Rd	75	N	N	
Jurupa Valley	Jurupa Community Svc	11201 Harrell St	73	N	Y	
Jurupa Valley	Big League Dreams Sports Parks	10550 Galena St	70	N	Y	
Jurupa Valley	Aluminum Die Casting Co Inc	10775 San Sevaine Way	70	N	N	
Jurupa Valley	Del Real Foods	11041 Inland Ave	60	N	Y	
Jurupa Valley	Evad	11201 Iberia St	60	N	Y	
Jurupa Valley	Lynam Industries Inc	11186 Venture Dr	60	N	N	
Jurupa Valley	Penn Co	11199 Inland Ave	60	N	N	
Jurupa Valley	Sky Country Elementary School	5520 Lucretia Ave	60	N	Y	
Jurupa Valley	Swift Transportation	11888 Mission Blvd	60	N	N	
Jurupa Valley	Stater Bros Markets	11070 Limonite Ave	57	N	N*	
Jurupa Valley	Le Vecke Corp	10810 Inland Ave	55	N	Y	
Jurupa Valley	California Packaging	3401 Etiwanda Ave # 1011d	50	N	N	
Jurupa Valley	C A Schroeder Inc	3401 Etiwanda Ave # 911a	50	N	N	
Jurupa Valley	Bestbuy Automotive & Electric	10427 San Sevaine Way # C	50	N	Y	
Jurupa Valley	Adam Nutrition Inc	11010 Hopkins St # B	50	N	Y	
Jurupa Valley	Pacific Apparel Express	12450 Philadelphia Ave	50	N	Y	
Jurupa Valley	Precise Distribution Inc	11180 Cantu Galleano Ranch Rd	50	N	N	
Jurupa Valley	Ronpak	10900 San Sevaine Way	50	N	N	
Jurupa Valley	Southwest Material Handling	PO Box 1070	50	N	Y	

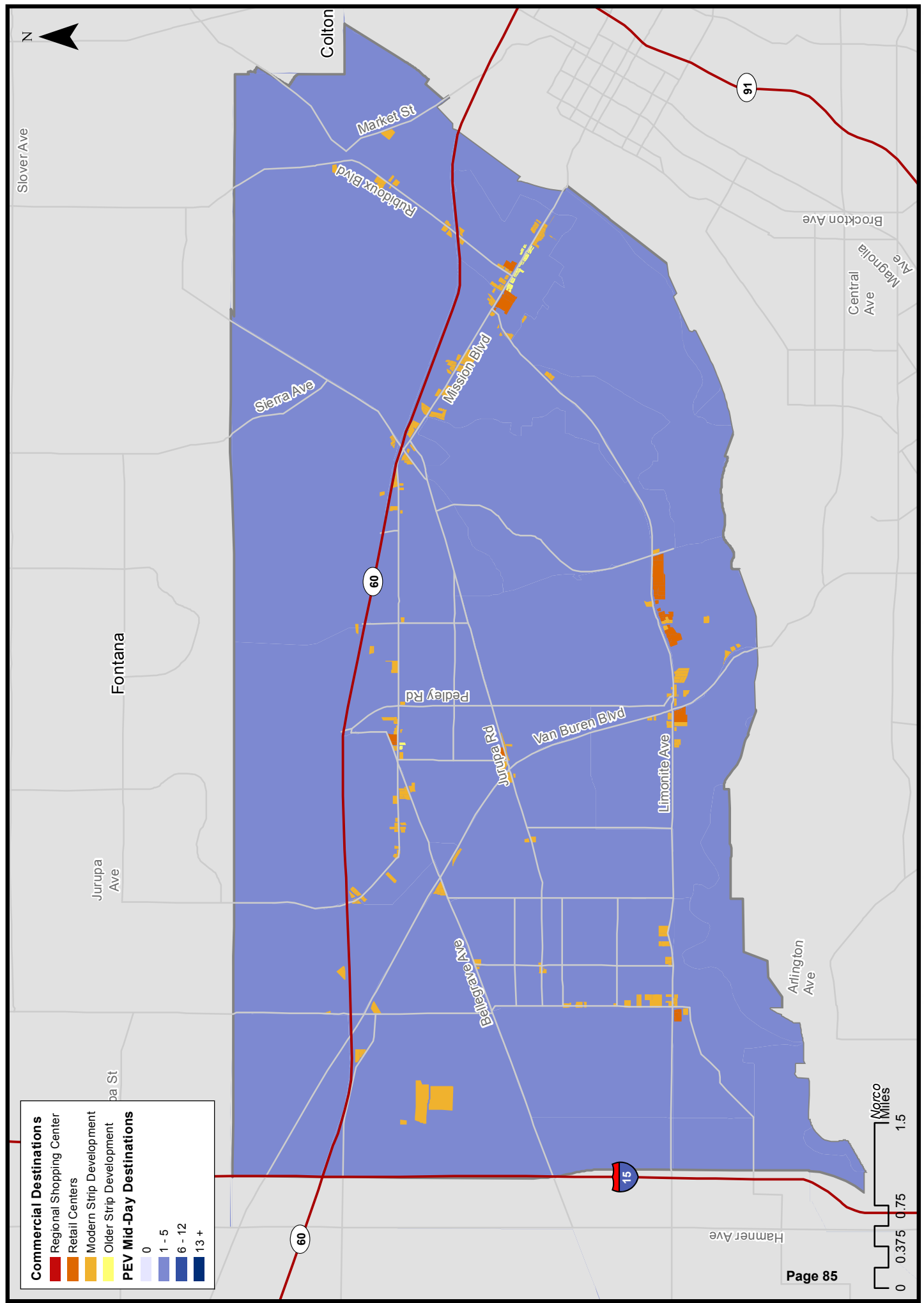
Jurupa Valley	Swan Lake Mobile Country Ests	5800 Hammer Ave	50	N	Y
Jurupa Valley	Time & Alarm Systems	3828 Wacker Dr	50	N	Y
Jurupa Valley	Valley Power Products Inc	11300 Inland Ave	50	N	Y

*Reclassified by Luskin Center

Jurupa Valley: Commercial (Retail) Destinations



Jurupa Valley: PEV Mid-Day Destinations and Commercial (Retail) Locations

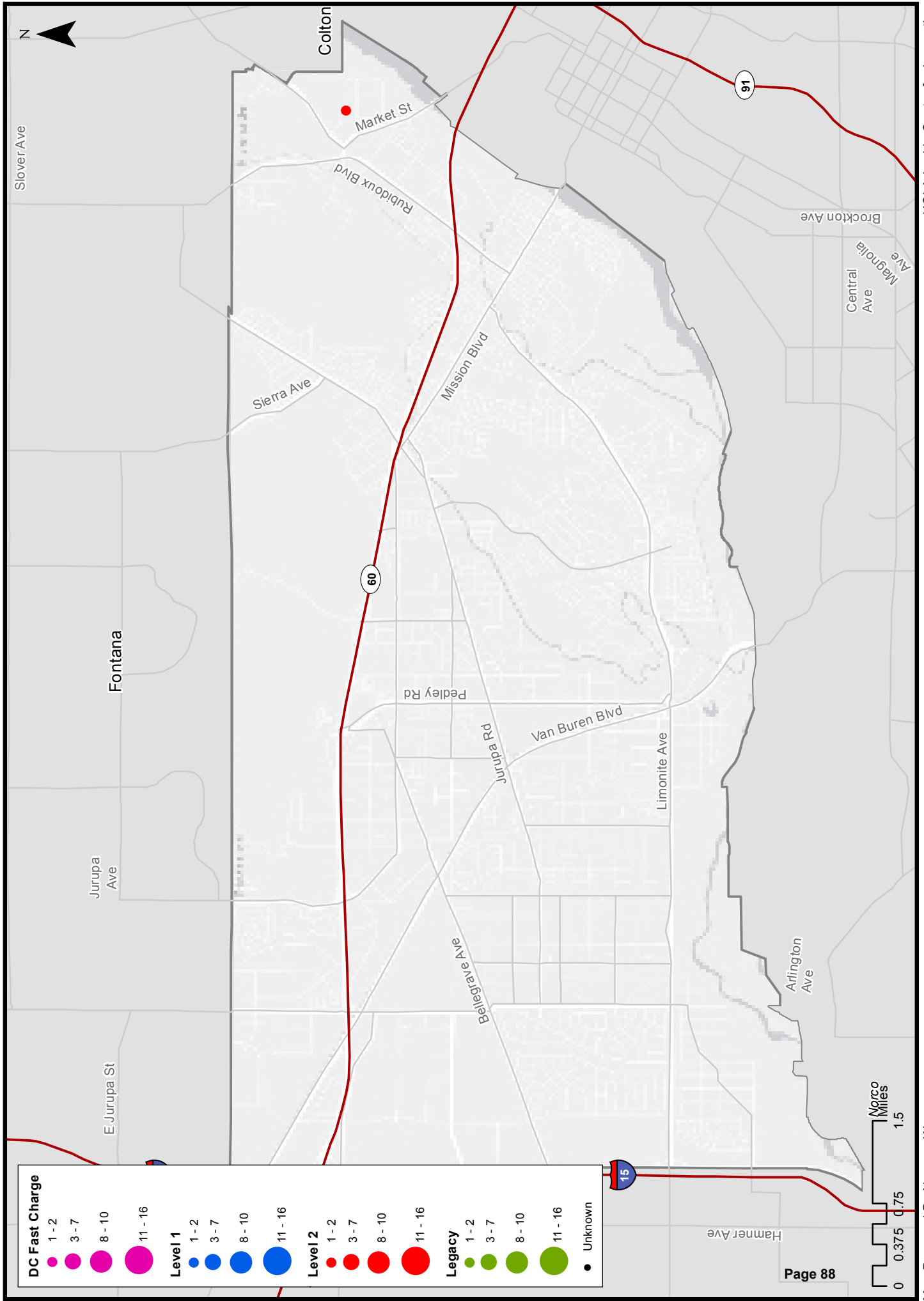


Jurupa Valley: Top Retailers

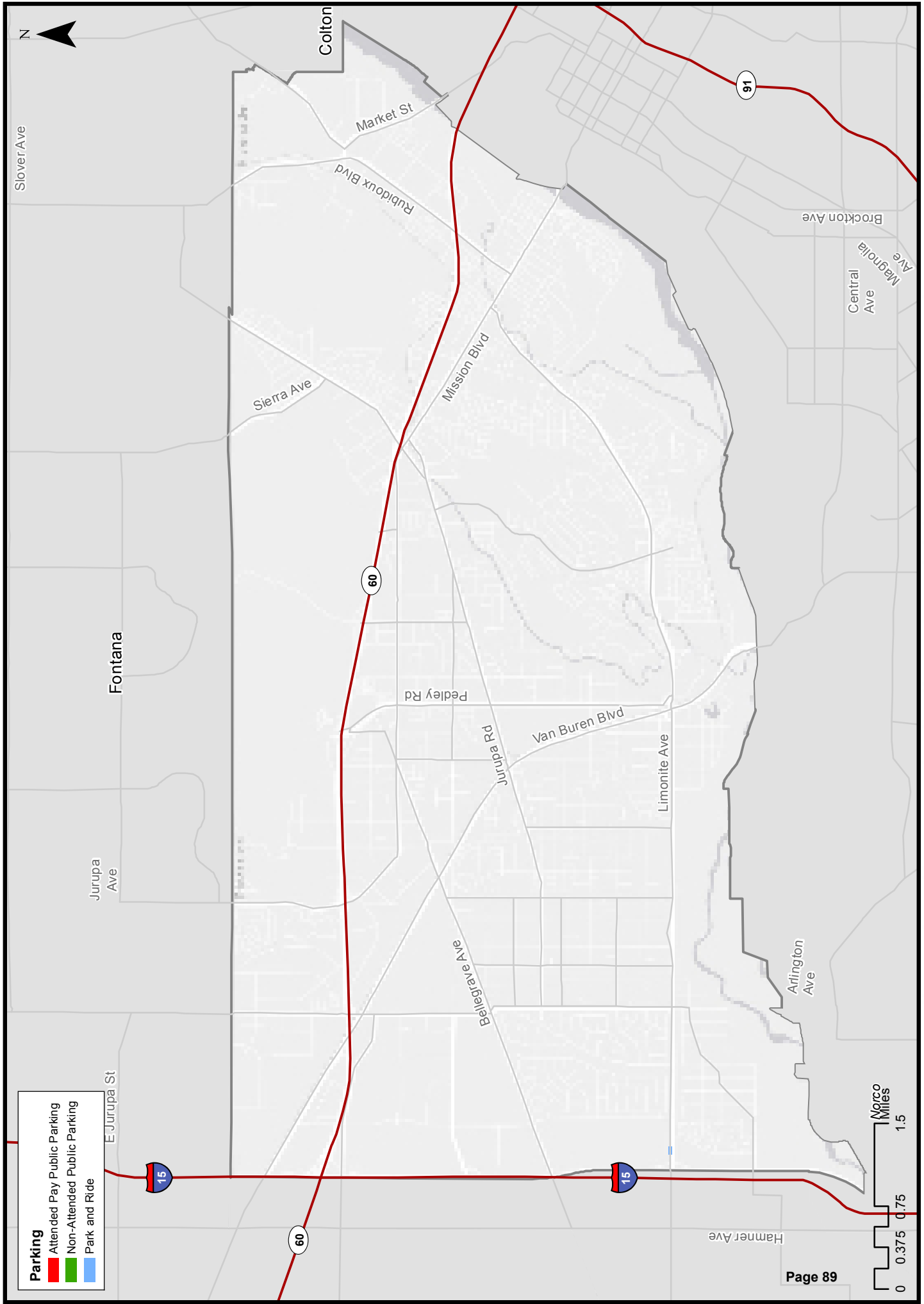
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Oca Inc	11040 Inland Ave	General Automotive Repair	\$40,250	
Hadley Auto Transport	4500 Etiwanda Ave	All Other Automotive Repair & Maintenance	\$35,250	
S P Richards Co	10235 San Sevaine Way	Computer & Software Stores	\$34,300	
FMI	3355 Dulles Dr	Shoe Stores	\$28,800	
Big League Dreams Sports Parks	10550 Galena St	Promoters With Facilities	\$18,130	
Bravo Trailers Inc	3832 Wacker Dr	Recreational Vehicle Dealers	\$16,000	
Del Real Foods	11041 Inland Ave	Supermarkets & Other Grocery Stores	\$14,820	
Stater Bros Markets	11070 Limonite Ave	Supermarkets & Other Grocery Stores	\$14,079	
Mad Catz Inc	12160 Philadelphia Ave	Radio, TV & Other Electronics Stores	\$12,920	
Bestbuy Automotive & Electric	10427 San Sevaine Way # C	Other Building Material Dealers	\$12,900	
Jurupa Community Svc	11201 Harrell St	All Other Specialty Food Stores	\$8,395	
Reclamation Center	10225 San Sevaine Way	Supermarkets & Other Grocery Stores	\$7,410	
Complete Food Svc	3815 Wabash Dr	Caterers	\$5,200	
Diversified Truck Ctr	3777 De Forest Cir	General Automotive Repair	\$4,600	
Standard Ready Mix	10420 Bellegrave Ave	Other Building Material Dealers	\$3,096	
Goose Creek Golf Club	11418 68th St	Golf Courses & Country Clubs	\$2,352	
RPIBSR West	3834 Wacker Dr	Automotive Parts & Accessories Stores	\$2,340	
Atlantic Pacific Automotive	10385 San Sevaine Way	Automotive Parts & Accessories Stores	\$2,145	
Circle K	6190 Etiwanda Ave	Convenience Stores	\$2,016	
Barr's Furniture	5664 Mission Blvd	Furniture Stores	\$1,836	
Autozone	11020 Limonite Ave	Automotive Parts & Accessories Stores	\$1,755	
Babe's Sports Pub	5216 Etiwanda Ave	Drinking Places, Alcoholic Beverages	\$1,675	
Footstar Inc	3355 Dulles Dr	Shoe Stores	\$1,440	
Jack in the Box	10960 Limonite Ave	Limited-Service Restaurants	\$1,400	
Circle K	10597 Jurupa Rd	Convenience Stores	\$1,344	
Picnic People	3815 Wabash Dr	Caterers	\$1,300	
Food Gas & Go Market	3710 Etiwanda Ave	Convenience Stores	\$1,235	
Jennifer Convertibles	10888 San Sevaine Way	Furniture Stores	\$1,224	
Martins Furniture Inc	4401 Etiwanda Ave	Furniture Stores	\$1,224	
WGE	11093 Venture Dr	Food, Health, Supplement Stores	\$1,208	
Parker Pumper Helmet Co	3834 Wacker Dr	Automotive Parts & Accessories Stores	\$1,170	
Pilkington North America Inc	10888 San Sevaine Way	General Automotive Repair	\$1,150	
El Torito Meat Market	10851 Limonite Ave	Meat Markets	\$1,128	

Round Table Pizza	7732 Limonite Ave	Limited-Service Restaurants	\$1,120
Truck Tub	10855 San Sevaine Way	Car Washes	\$1,083
Overhead Door Systems	4442 Parkhurst St	Other Building Material Dealers	\$1,032
Farmer Boys Restaurant	4020 Etiwanda Ave	Limited-Service Restaurants	\$1,000
Mercado Los Montes	10810 Limonite Ave	Supermarkets & Other Grocery Stores	\$988
W Lim Corp	11095 Inland Ave	Pet & Pet Supplies Stores	\$942
Marck & Assoc Inc	3401 Etiwanda Ave # 921c	All Other Home Furnishings Stores	\$930

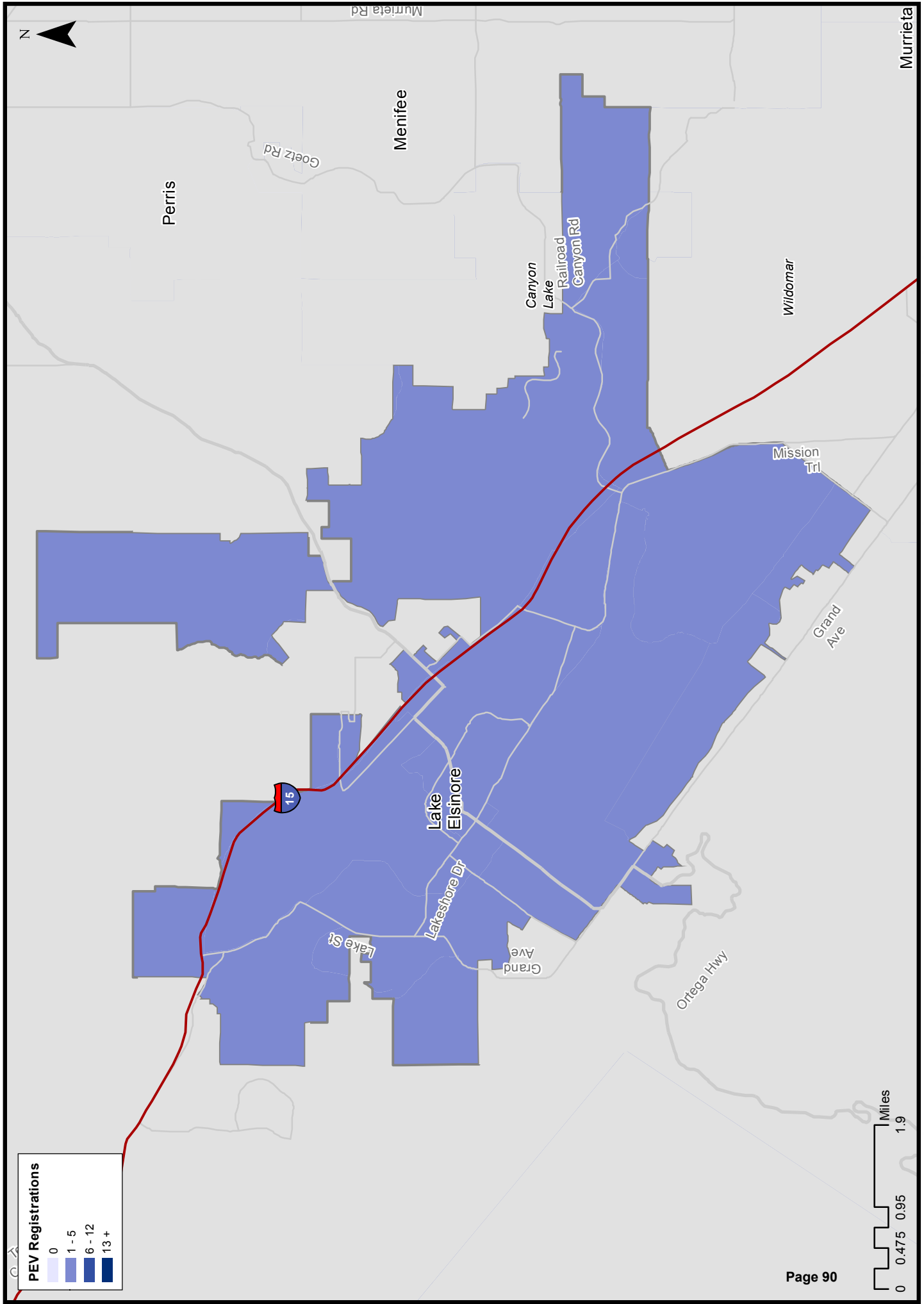
Jurupa Valley: Publicly-Accessible Charging Stations (Summer/Fall 2012)



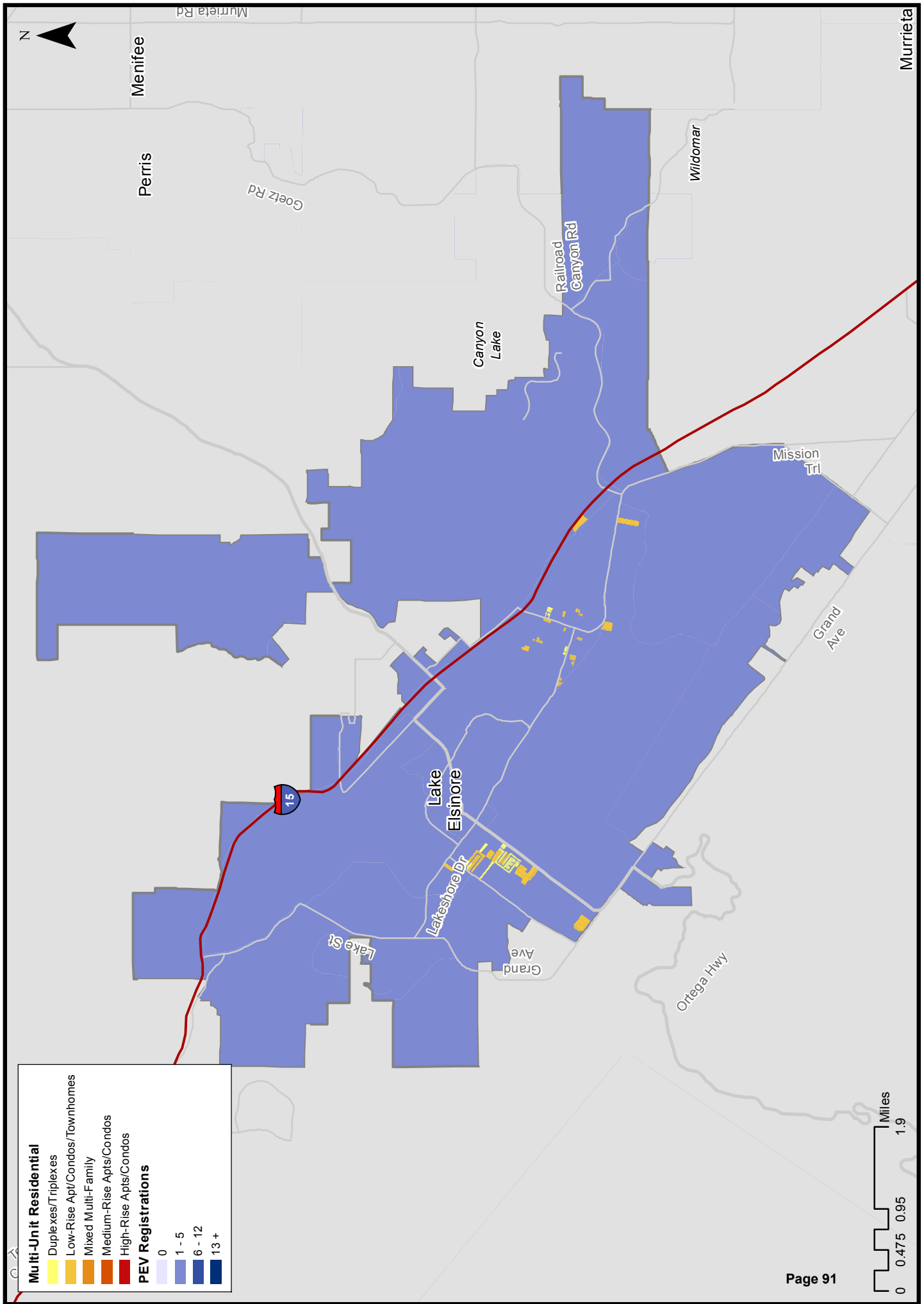
Jurupa Valley: Stand-alone Parking Facilities



Lake Elsinore: Plug-in Electric Vehicle Registrations

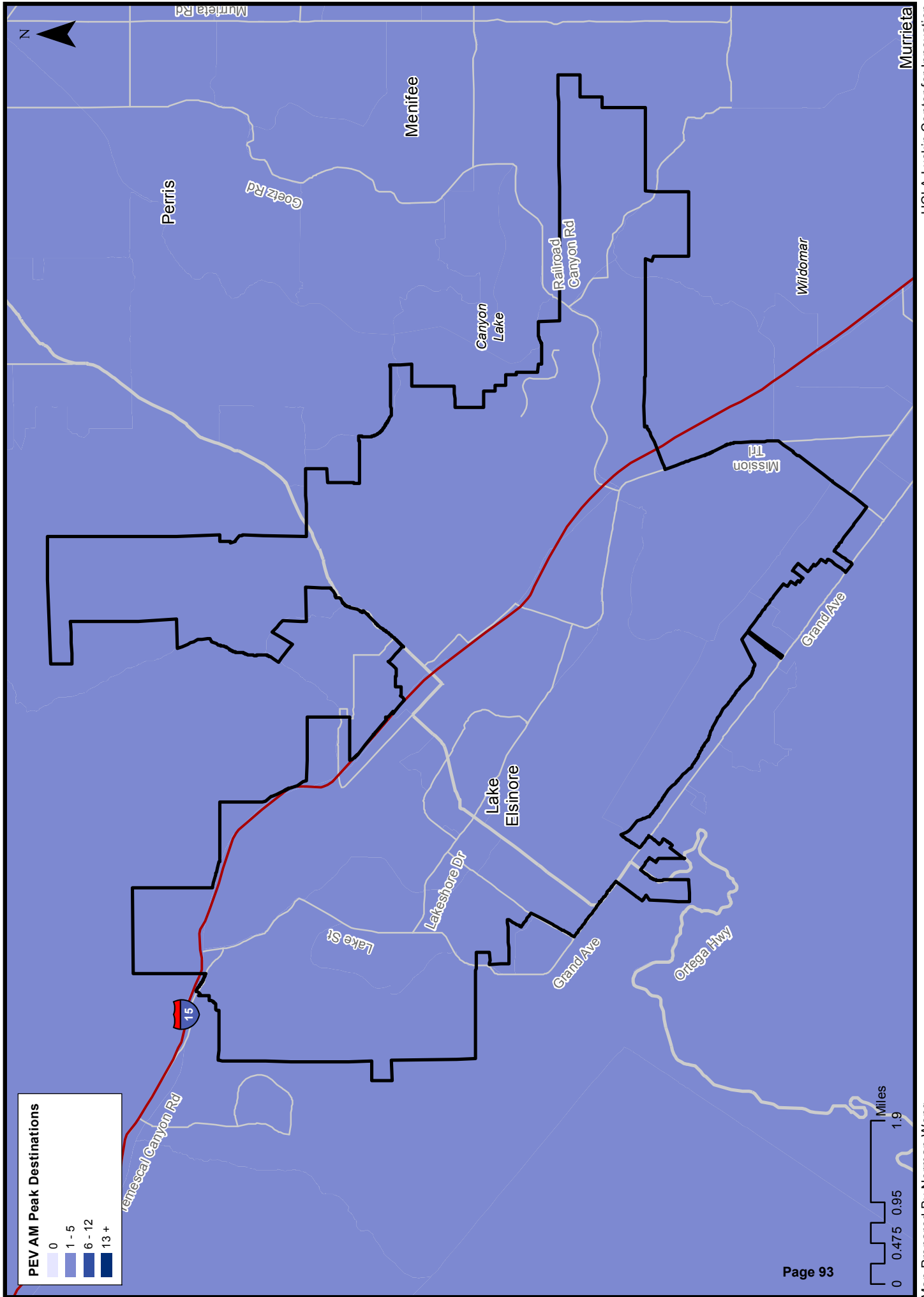


Lake Elsinore: Multi-Unit Residential and PEV Registrations

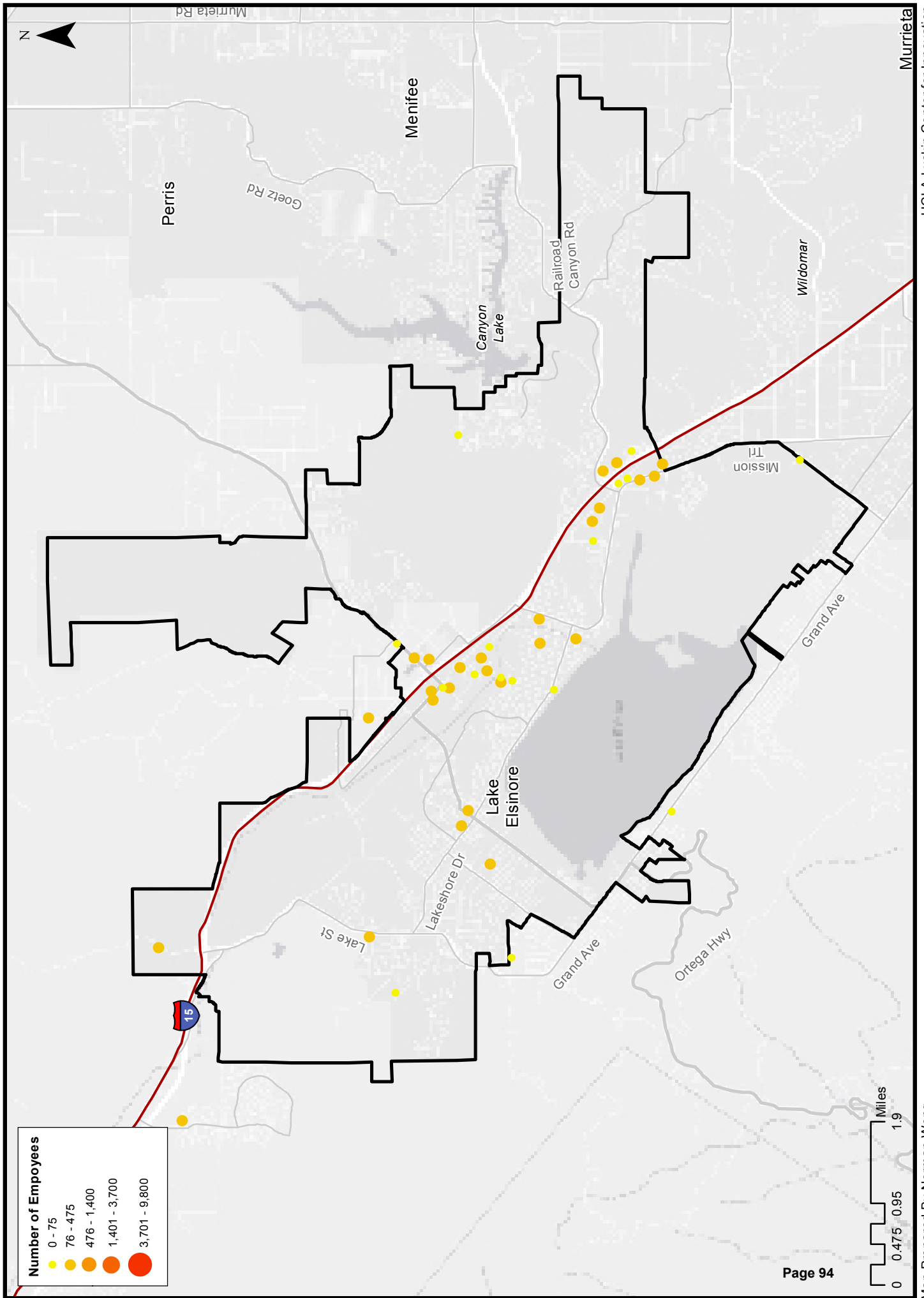


Lake Elsinore: Top Multi-Unit Dwellings									
City	Address	Number of units	Condo?	Unit value	Year built	Attached/detached garage	Carpport?	PEV density	
Lake Elsinore	15162 GRAND AVE	150	N	\$93,278					
Lake Elsinore	31300 AUTO CENTER DR	126	N	\$57,271					
Lake Elsinore	15195 LINCORN ST	112	N	\$97,479					
Lake Elsinore	15177 LINCORN ST	81	N	\$62,407	1977	A			
Lake Elsinore	150 LAKESHORE DR	72	Y	\$54,121	1964				
Lake Elsinore	16460 JOY ST	63	N	\$41,960	1964				
Lake Elsinore	16377 LAKESHORE DR	56	Y	\$55,181	2005				
Lake Elsinore	16465 JOY ST	32	N	\$76,854					
Lake Elsinore	16347 GRAND AVE	22	N	\$66,714	1925	D			
Lake Elsinore	315 LOOKOUT ST	20	N	\$37,856					
Lake Elsinore	33071 SANTA ROSA DR	18	N	\$49,669					
Lake Elsinore	1410 MORRO WAY	16	N	\$88,326					
Lake Elsinore	15197 LINCORN ST	16	N	\$120,623					
Lake Elsinore	32986 BLACKWELL BLV	14	N	\$28,877					
Lake Elsinore	113 SPRING ST	13	N	\$47,063					
Lake Elsinore	240 GRAHAM AVE	12	N	\$95,199					
Lake Elsinore	116 LAKESHORE DR	11	N	\$60,847					
Lake Elsinore	313 MAIN ST	11	N	\$32,092					
Lake Elsinore	226 PECK ST	10	N	\$21,384					
Lake Elsinore	16459 JOY ST	10	N	\$89,974					
Lake Elsinore	123 LAKESHORE DR	9	N	\$21,216					
Lake Elsinore	232 GRAHAM AVE	9	N	\$25,904					

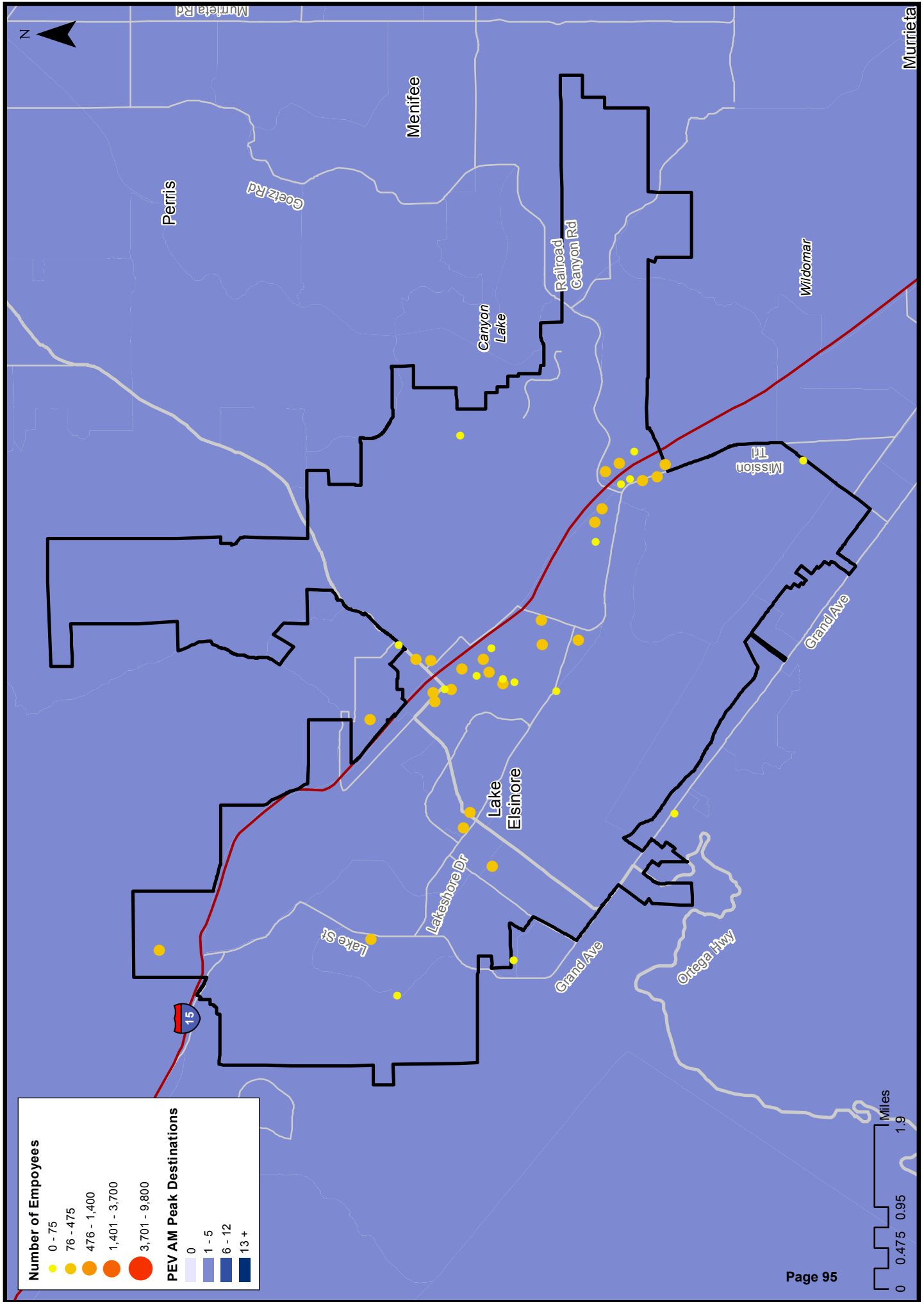
Lake Elsinore: Plug-in Electric Vehicle Morning Peak Destinations



Lake Elsinore: Top Workplaces by Number of Employees



Lake Elsinore: PEV Morning Peak Destinations and Top Workplaces



Lake Elsinore: Top Workplaces						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Lake Elsinore	RIVERSIDE COUNTY	575 CHANEY ST	339	N	N	
Lake Elsinore	WALMART CORP #2077	31700 GRAPE ST	276	N	Y	
Lake Elsinore	Lake Elsinore Storm	500 Diamond Drive	200	N	Y	
Lake Elsinore	Costco	29315 Central Ave	200	N	N*	
Lake Elsinore	Lake Elsinore Unified School	545 Chaney St	200	N	Y	
Lake Elsinore	Lowe's	29335 Central Ave	170	N	N*	
Lake Elsinore	Innovative Merchandising Svc	424 N Spring St	160	N	Y	
Lake Elsinore	Lake Elsinore Hotel & Casino	20930 Malaga Rd	150	N	N	
Lake Elsinore	Parts Plus	18531 Collier Ave	137	N	Y	
Lake Elsinore	Home Depot	18282 Collier Ave	130	N	N	
Lake Elsinore	Temescal Canyon High School	28755 El Toro Rd	125	N	Y	
Lake Elsinore	Elsinore Valley Water District	31315 Chaney St	120	N	N	
Lake Elsinore	Lake Chevrolet	31400 Auto Center Dr	116	N	Y	
Lake Elsinore	Lake Elsinore Ford	31500 Auto Center Dr	110	N	Y	
Lake Elsinore	Lake Elsinore Police Dept	333 W Limited St	100	N	N	
Lake Elsinore	Ortega High School	520 Chaney St	100	N	Y	
Lake Elsinore	Pacific Clay Products Inc	14741 Lake St	100	N	N	
Lake Elsinore	Terra Cotta Middle School	29291 Lake St	100	N	Y	
Lake Elsinore	Albertsons	32281 Mission Trl	99	N	Y	
Lake Elsinore	Charles R Williams Enterprises	18301 Collier Ave	94	N	N	
Lake Elsinore	Albertsons	30901 Riverside Dr	90	N	N*	
Lake Elsinore	Elsinore Elementary School	512 W Summer Ave	85	N	Y	
Lake Elsinore	Stater Bros Markets	31952 Mission Trl	85	N	Y	
Lake Elsinore	Vons	31564 Grape St	85	N	N	
Lake Elsinore	Orange County Probation	39251 Ortega Hwy	83	N	N	
Lake Elsinore	Machado Elementary School	15150 Joy St	82	N	Y	
Lake Elsinore	Los Pinos Forestry Amp	39251 Ortega Hwy	80	N	N	
Lake Elsinore	Stater Bros Markets	16750 Lakeshore Dr	80	N	Y	
Lake Elsinore	Tarbell Lake Elsinore	600 Central Ave # D	80	N	Y	
Lake Elsinore	Butterfield Elementary School	16257 Grand Ave	75	N	Y	
Lake Elsinore	Elsinore Middle School	1203 W Graham Ave	75	N	Y	
Lake Elsinore	Rice Canyon Elementary School	29535 Westwind Dr	75	N	Y	
Lake Elsinore	Chili's Grill & Bar	29233 Central Ave	70	N	N	
Lake Elsinore	Railroad Canyon Elem School	1300 Mill St	70	N	Y	
Lake Elsinore	Withrow Elementary School	30100 Audelo St	68	N	Y	
Lake Elsinore	Tuscany Hills Elementary Schl	23 Ponte Russo	60	N	Y	
Lake Elsinore	Don Jose' Mexican Restaurant	31712 Casino Dr	57	N	N	
Lake Elsinore	Quality Foam Packaging Inc	31855 Corydon Rd	53	N	N	
Lake Elsinore	Vertigo	20590 Cereal St Ste 100	50	Y	Y	
Lake Elsinore	Coldwell Banker	600 Central Ave # E	50	N	Y	
Lake Elsinore	American Woodcrafters LLC	558 Birch St # 1	50	N	Y	
Lake Elsinore	Denny's	31760 Grape St	50	N	N	
Lake Elsinore	K Squared Metals	508 Chaney St	50	N	Y	
Lake Elsinore	Rightway Portable Toilets	653 W Minthorn St	50	N	Y	

Lake Elsinore
Lake Elsinore

Sizzler
Stull Industries Inc

31724 Casino Dr
1315 W Flint St

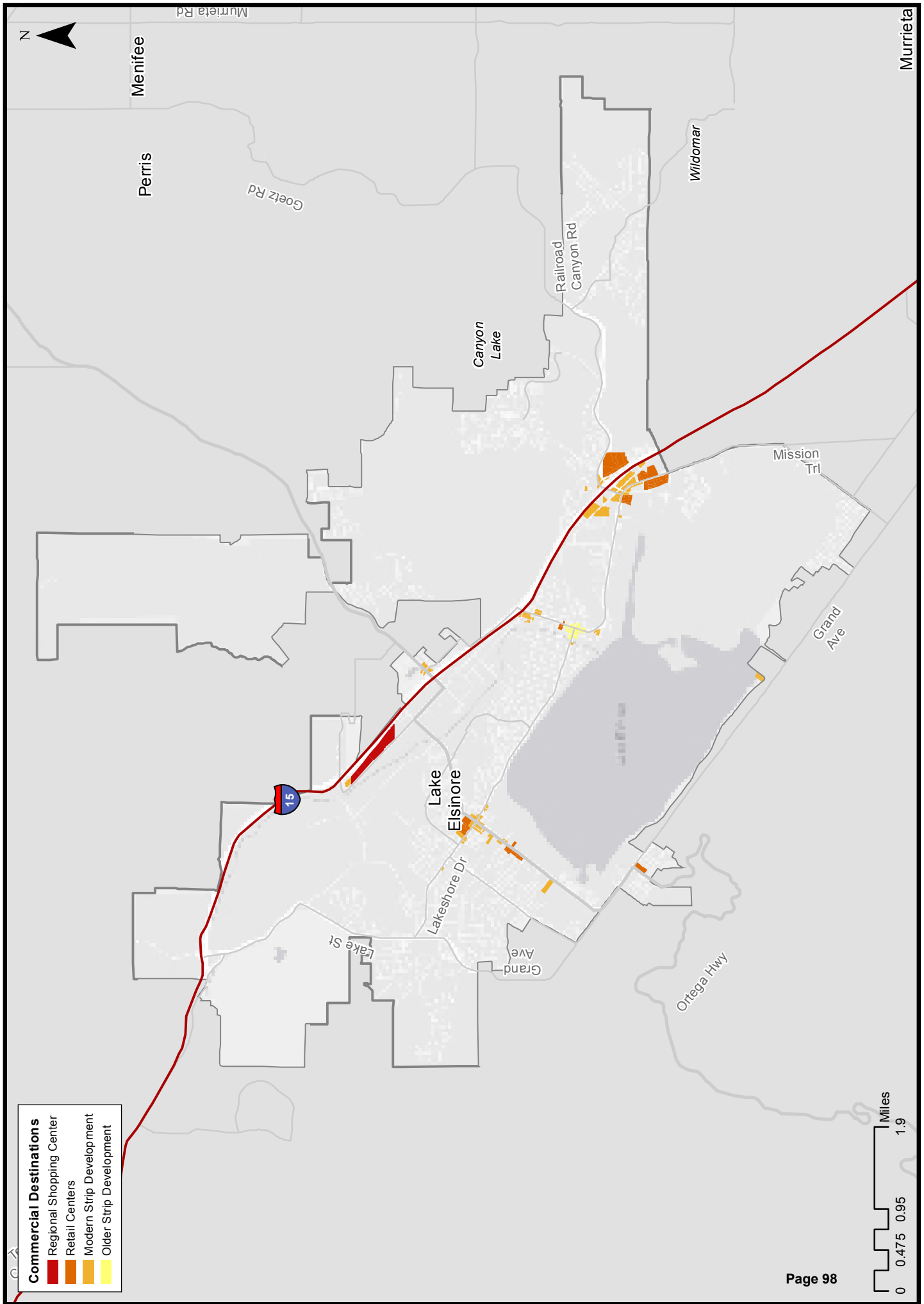
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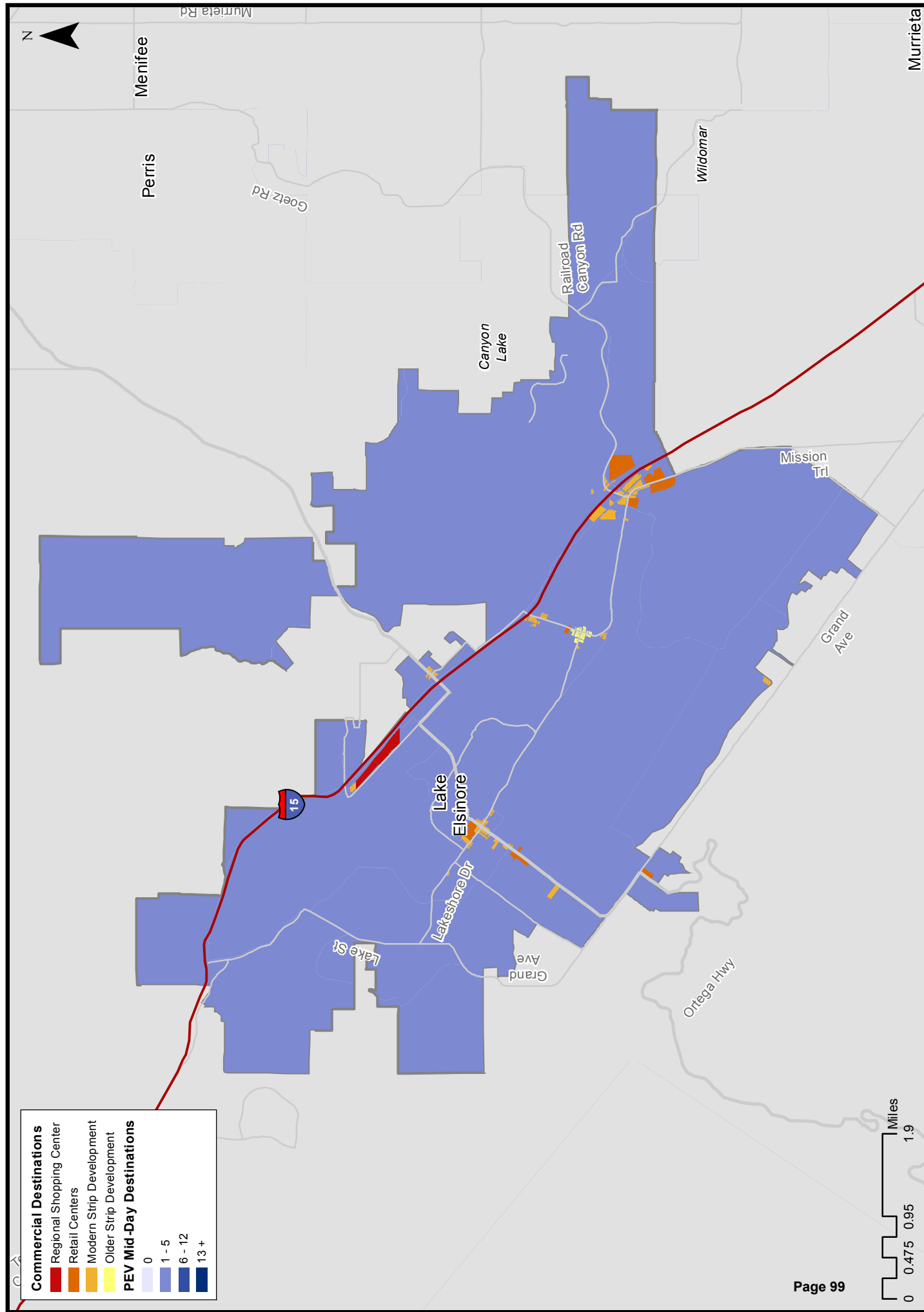
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*Reclassified by Luskin Center

Lake Elsinore: Commercial (Retail) Destinations



Lake Elsinore: PEV Mid-Day Destinations and Commercial (Retail) Locations

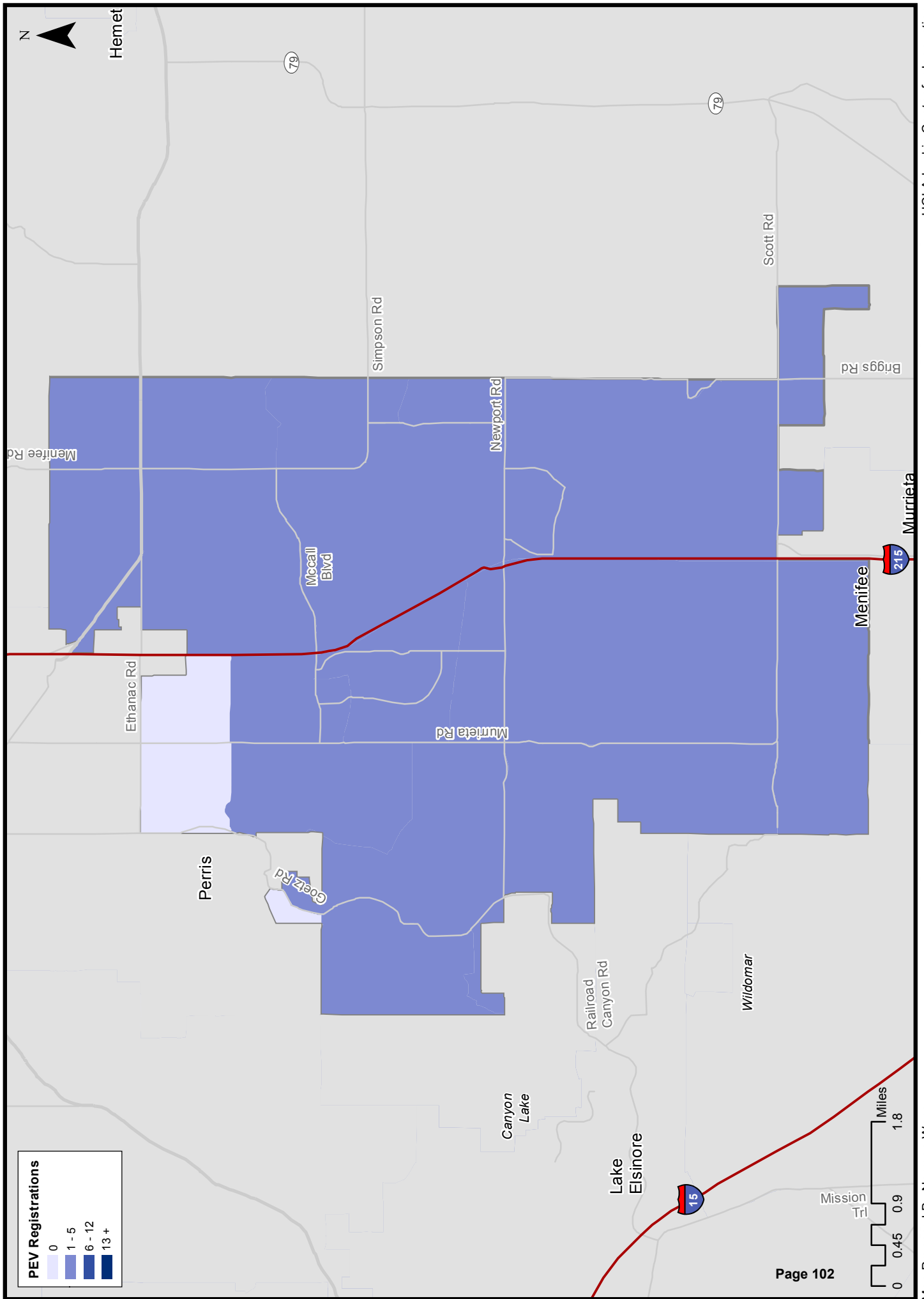


Lake Elsinore: Top Retailers

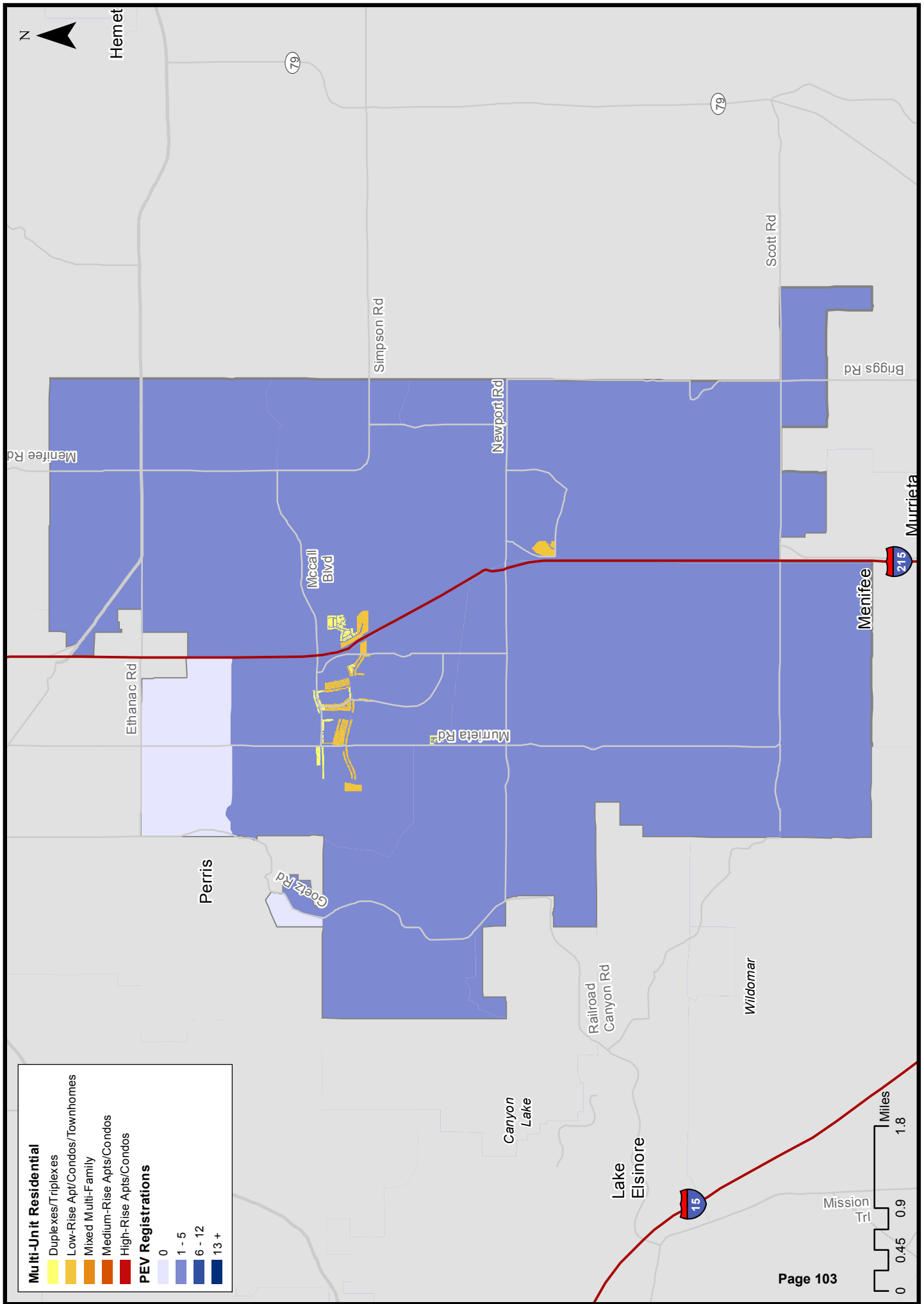
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Lake Chevrolet	31400 Auto Center Dr	New Car Dealers	\$99,644	
Lake Elsinore Ford	31500 Auto Center Dr	New Car Dealers	\$94,490	
Costco	29315 Central Ave	Department Stores, Except Discount	\$32,400	
Wal-Mart Supercenter	31700 Grape St	Department Stores, Except Discount	\$32,400	
Lake Buick Pontiac GMC	31400 Auto Center Dr	New Car Dealers	\$30,065	
Parts Plus	18531 Collier Ave	Automotive Parts & Accessories Stores	\$26,715	
Albertsons	32281 Mission Trl	Supermarkets & Other Grocery Stores	\$24,453	
Albertsons	30901 Riverside Dr	Supermarkets & Other Grocery Stores	\$22,230	
Stater Bros Markets	31952 Mission Trl	Supermarkets & Other Grocery Stores	\$20,995	
Vons	31564 Grape St	Supermarkets & Other Grocery Stores	\$20,995	
Stater Bros Markets	16750 Lakeshore Dr	Supermarkets & Other Grocery Stores	\$19,760	
Lake Elsinore Hotel & Casino	20930 Malaga Rd	Limited-Service Restaurants	\$14,700	
Labada Wheels	29910 Ohana Cir	Automotive Parts & Accessories Stores	\$7,800	
California DO It Ctr	32241 Mission Trl	Hardware Stores	\$7,080	
MWI Inc	18785 Collier Ave	Other Building Material Dealers	\$6,450	
VF Factory Outlet	17600 Collier Ave # J195	Family Clothing Stores	\$5,952	
Precision Sports	29910 Ohana Cir	Sporting Goods Stores	\$5,920	
Old Navy Outlet	17600 Collier Ave # A11	Family Clothing Stores	\$5,580	
Longs Drugs	29985 Canyon Hills Rd	Pharmacies & Drug Stores	\$5,490	
American Pacific Truss Inc	29150 Riverside Dr	Other Building Material Dealers	\$5,418	
Crest Door & Trim	506 W Minthorn St	Other Building Material Dealers	\$5,160	
J S Technologies	18650 Collier Ave # A	Musical Instrument & Supplies Stores	\$5,152	
Lake Elsinore Outlet Ctr	17600 Collier Ave	Store Retailers Not Specified Elsewhere	\$4,905	
Kayo Oil Co	31805 Grape St	Other Gasoline Stations	\$4,640	
Thermal Electronics	403 W Minthorn St	Radio, TV & Other Electronics Stores	\$4,522	
Gap Outlet	17600 Collier Ave	Family Clothing Stores	\$4,464	
Perfection Glass	554 3rd St	Other Building Material Dealers	\$4,020	
Ibarra's Market	217 N Main St	Supermarkets & Other Grocery Stores	\$3,952	
Rancho California Ready Mix	14741 Lake St	Other Building Material Dealers	\$3,870	
California Skier Mastercraft	18171 Collier Ave	Boat Dealers	\$3,768	
M B Boats	18560 Pasadena St	Boat Dealers	\$3,768	
Rite Aid	32261 Mission Trl	Food, Health, Supplement Stores	\$3,477	
Camsoft Corp	32295 Mission Trl # 8	Computer & Software Stores	\$3,430	

Lake Elsinore Chevron	16830 Lakeshore Dr	Other Gasoline Stations	\$3,248
Sony Factory Outlet	17600 Collier Ave # 170	Radio, TV & Other Electronics Stores	\$3,230
Golden Office Trailers Inc	18257 Grand Ave	Manufactured, Mobile, Home Dealers	\$3,157
Big Lots	2501 E Lakeshore Dr	Department Stores, Except Discount	\$3,060
Staples	29225 Central Ave	Office Supplies & Stationery Stores	\$3,025
Crower Power	532 3rd St	Motorcycle Dealers	\$2,904
Nike Factory Store	17600 Collier Ave # B119	Shoe Stores	\$2,880

Menifee: Plug-in Electric Vehicle Registrations

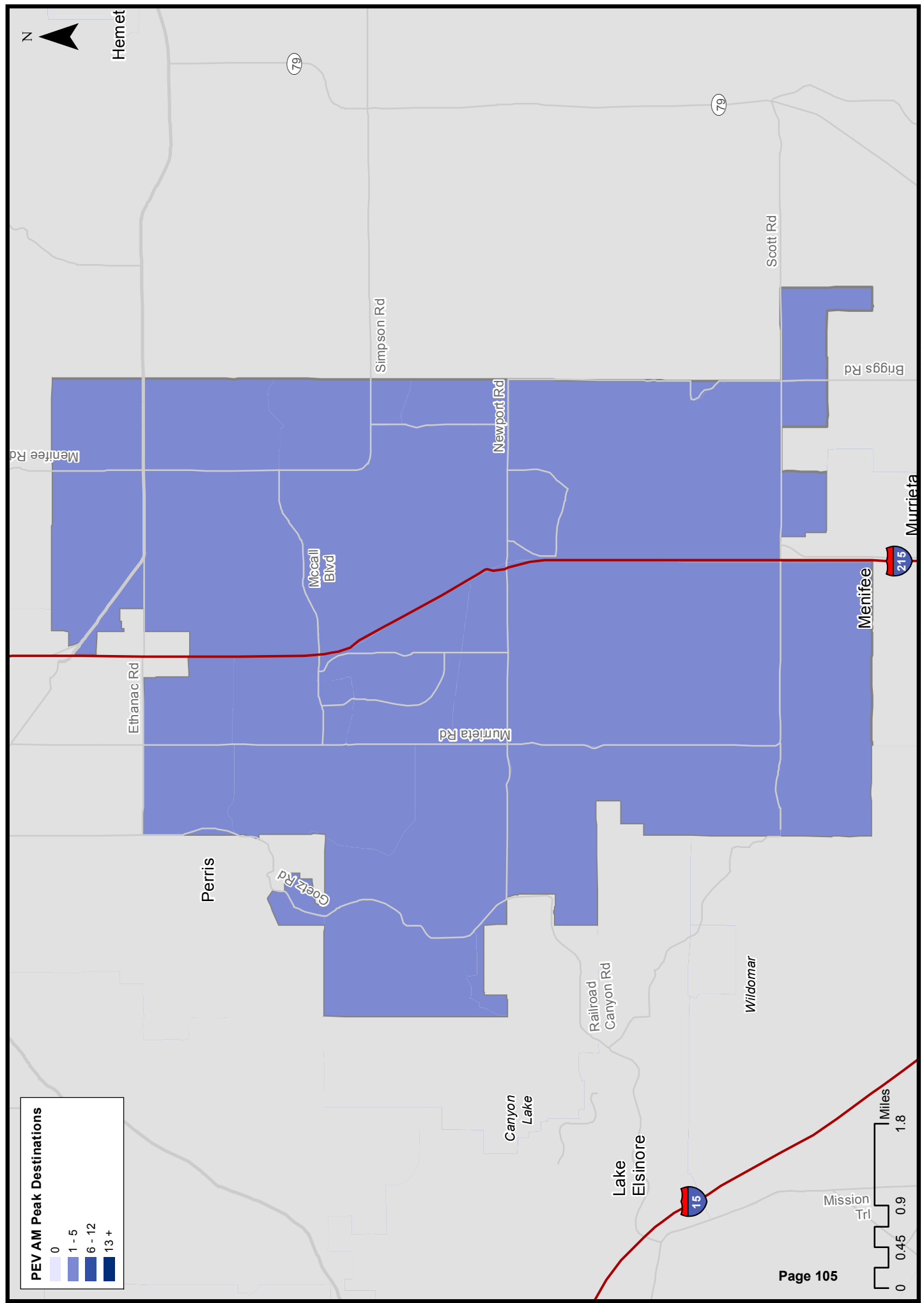


Menifee: Multi-Unit Residential and PEV Registrations

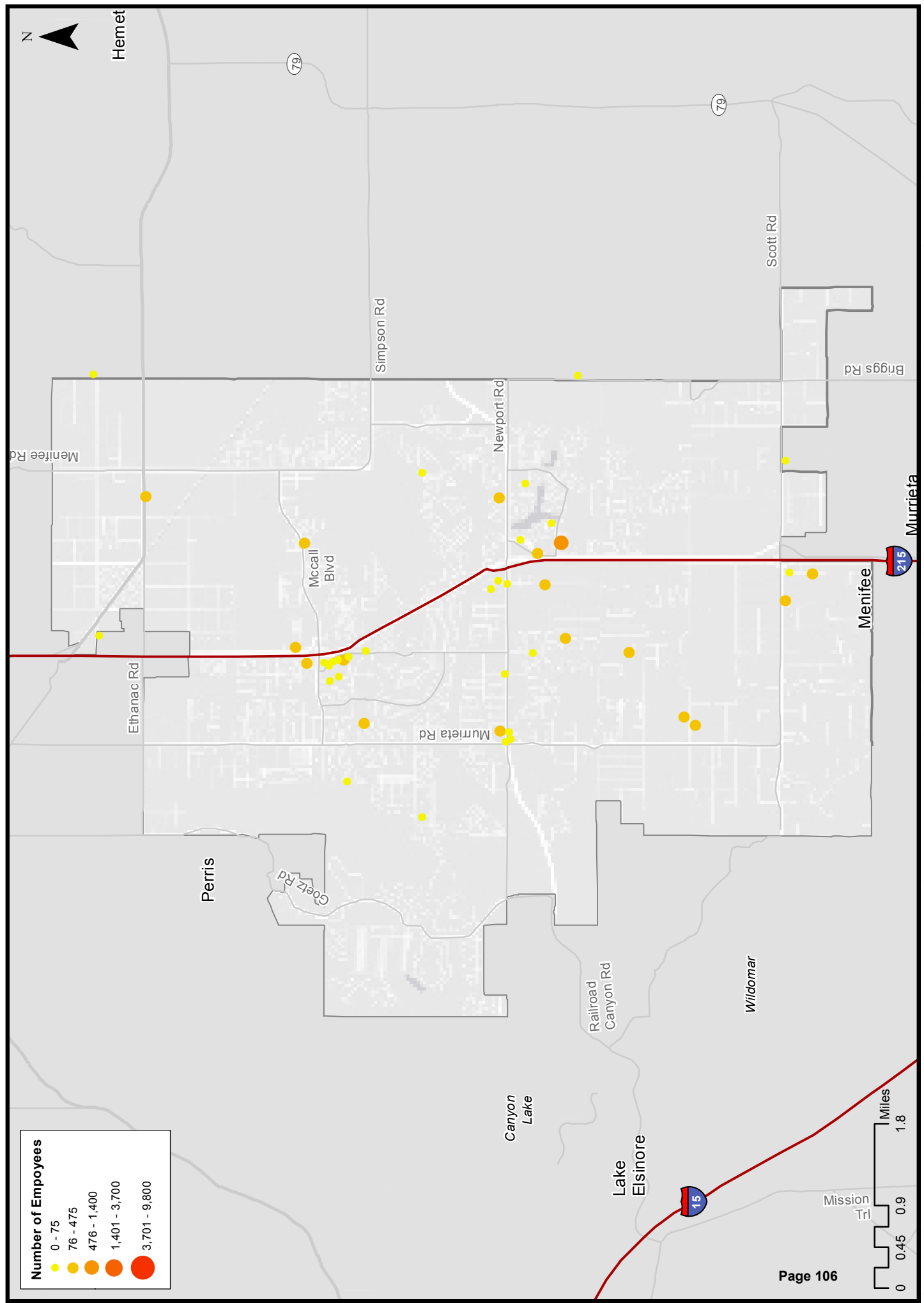


City		Menifee: Top Multi-Unit Dwellings									
		Address		Number of units	Condo?	Unit value	Year built	Attached/detached garage	Carpport?	PEV density	
Menifee	30951	HANOVER LN		230	N	\$161,844					
Menifee	28301	ENCANTO DR		108	N	\$81,698					
Menifee	28378	ENCANTO DR		34	N	\$82,231					
Menifee	28780	LORETTA AVE		4	Y	\$420,470	1995	A			

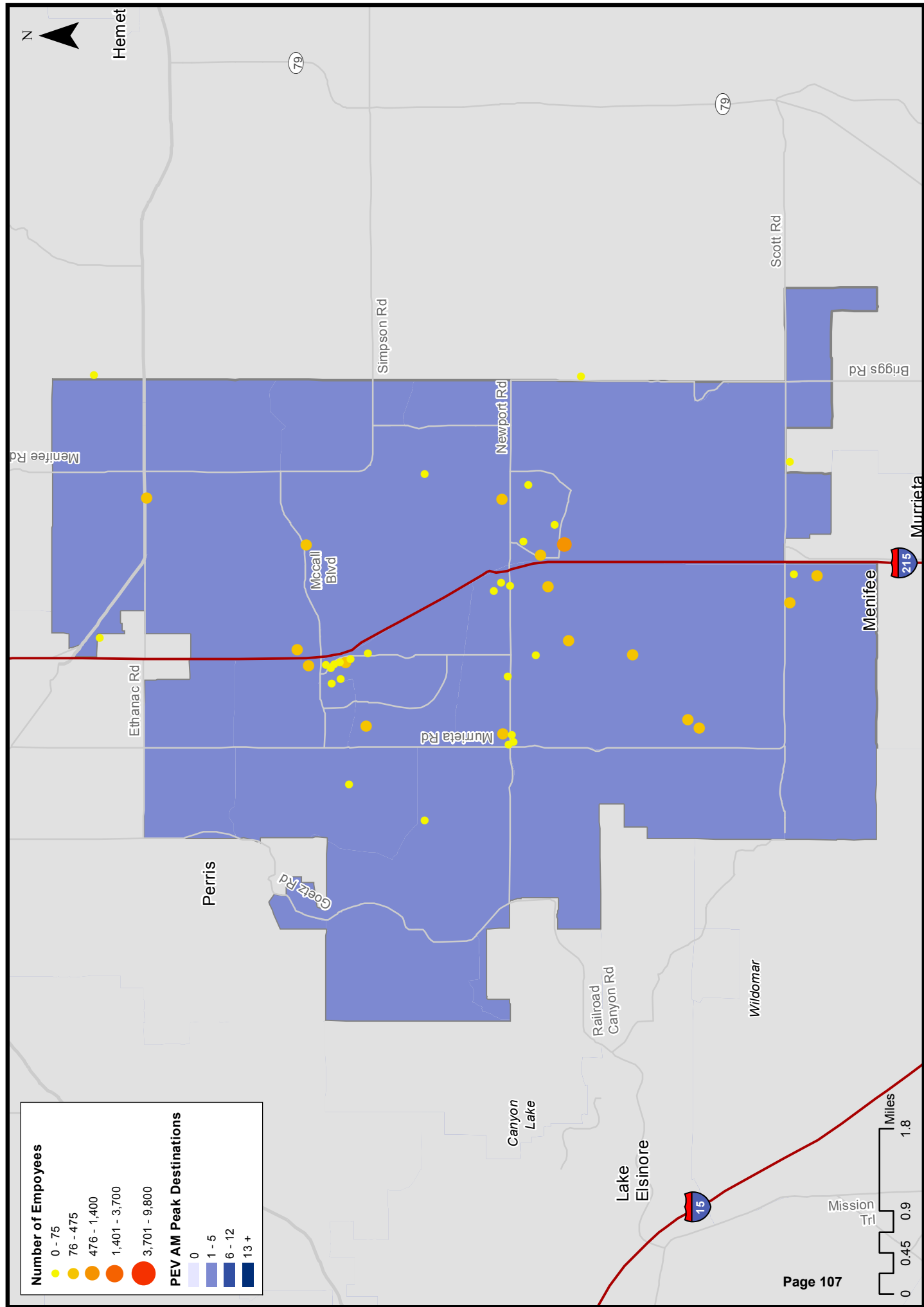
Menifee: Plug-in Electric Vehicle Morning Peak Destinations



Menifee: Top Workplaces by Number of Employees

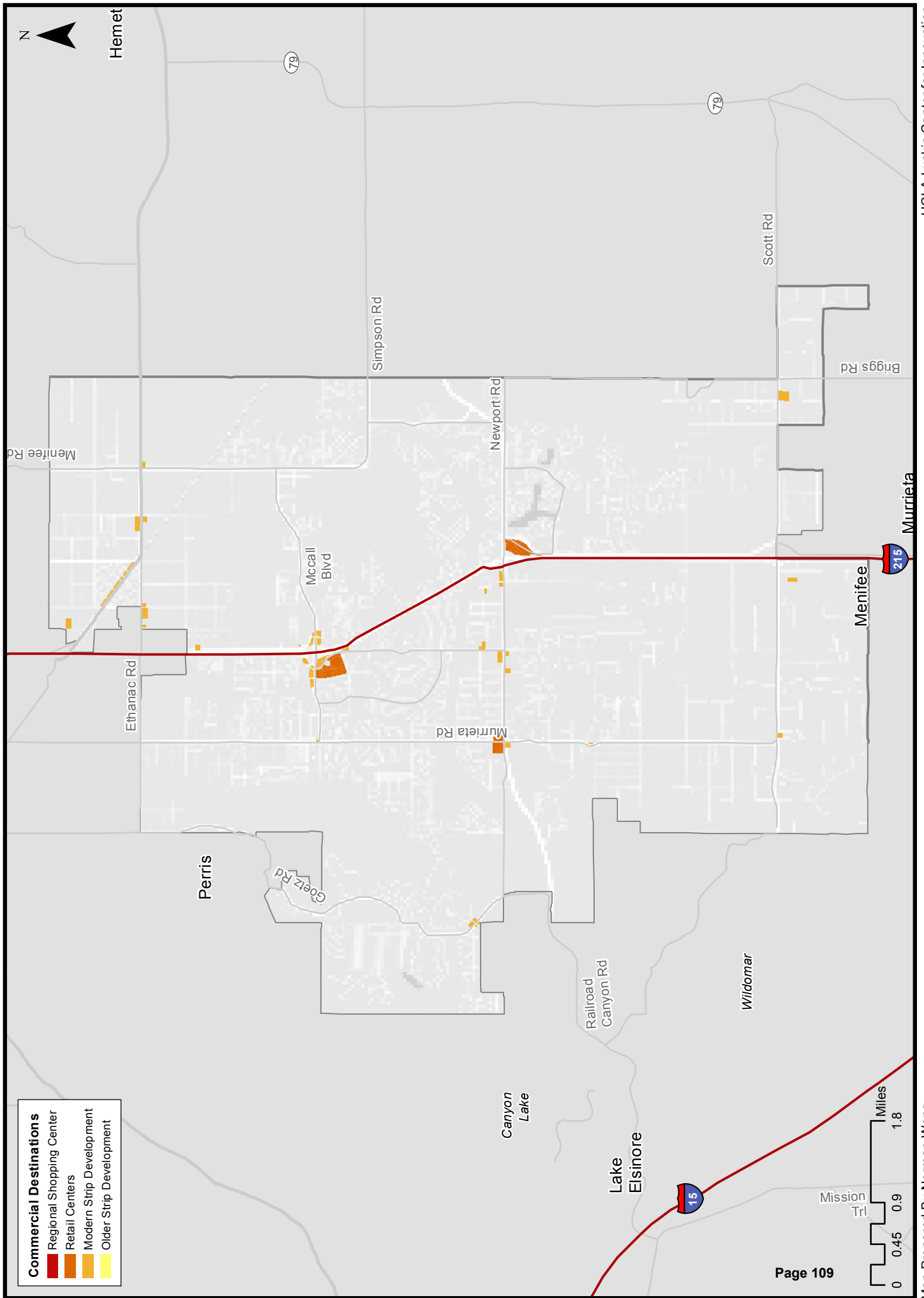


Menifee: PEV Morning Peak Destinations and Top Workplaces

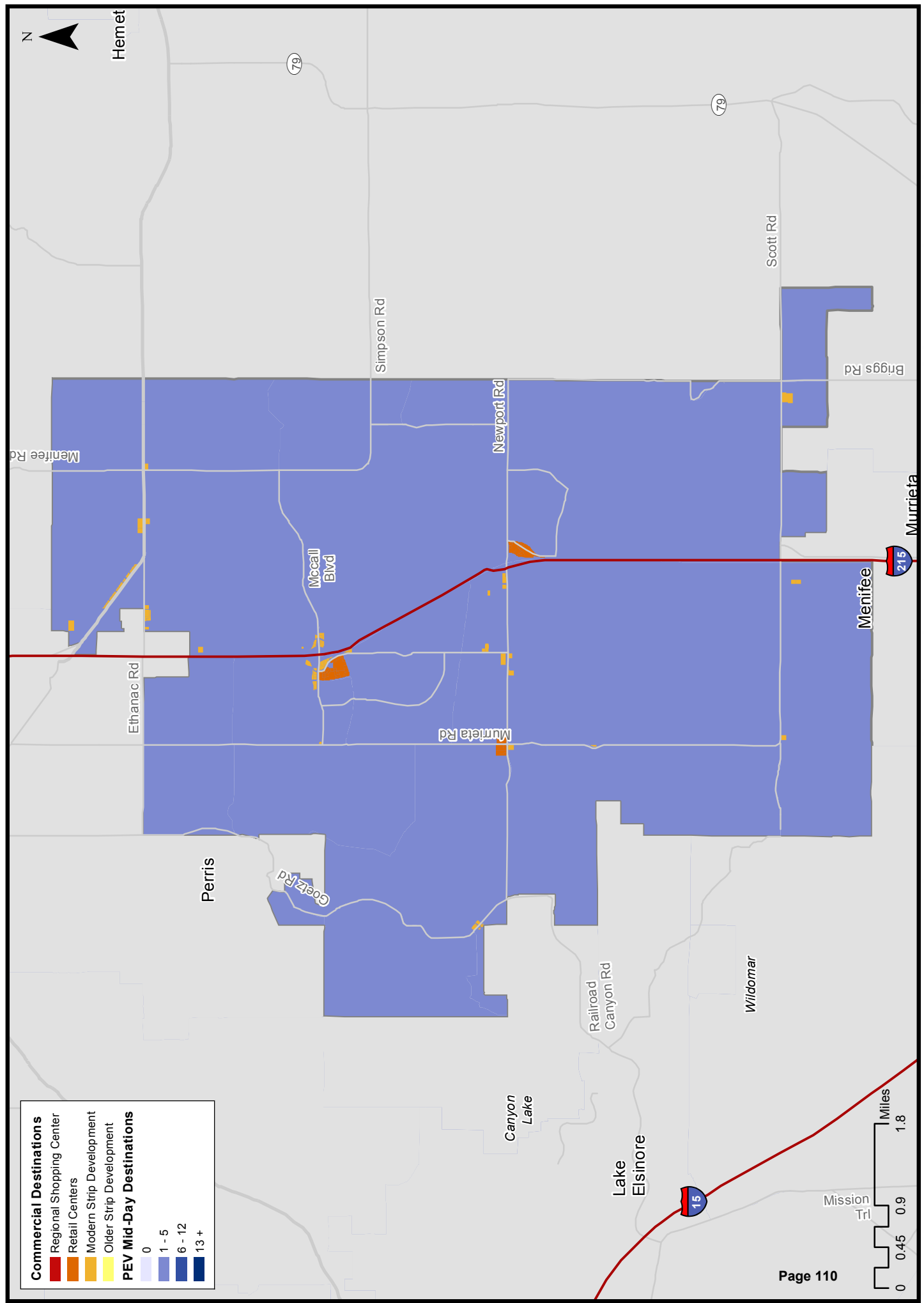


City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Menifee	MT SAN JACINTO COLLEGE	28237 LA PIEDRA RD	490	N	Y	
Menifee	MENIFEE VALLEY MEDICAL CENTER	28400 MCCALL BLVD	314	N	Y	
Menifee	TARGET STORE T-2471	30340 HAUN RD	265	N	N*	
Menifee	Paloma Valley High School	31375 Bradley Rd	175	N	Y	
Menifee	Target	30251 Antelope Rd	160	N	N*	
Menifee	Sun City Crime Watch	27851 Bradley Rd	135	N	N	
Menifee	Jeff Drost Plumbing	27112 Early Dawn Rd	112	N	Y	
Menifee	Sun City Convascent Ctr	27600 Encanto Dr	109	N	N	
Menifee	Mac Kenzie Landscape	33380 Bailey Park Blvd	100	N	N	
Menifee	Menifee Elementary School	26301 Garbani Rd	100	N	Y	
Menifee	Valley Pacific Concrete	27580 Tabb Ln	100	N	N	
Menifee	Menifee Lakes Country Club	29875 Menifee Lakes Dr	100	N	N	
Menifee	Albertsons	26100 Newport Rd # B	95	N	N*	
Menifee	Inland Urgent Care of Sun City	26926 Cherry Hills Blvd	90	N	Y	
Menifee	Menifee Valley Middle School	26255 Garbani Rd	85	N	Y	
Menifee	Ridgemoor School	255455 Ridgemoor Rd	85	N	Y	
Menifee	Amerimax Building Products Inc	28921 US Highway 74	80	N	N	
Menifee	Ralphs	30125 Antelope Rd	70	N	N*	
Menifee	Cherry Hills Club	28333 Valley Blvd	70	N	Y	
Menifee	Bell Mountain Middle School	29047 La Ladera Rd	70	N	Y	
Menifee	Grove Lumber & Bldg Supplies	27126 Watson Rd	70	N	Y	
Menifee	Freedom Crest Elementary Schl	29282 Menifee Rd	65	N	Y	
Menifee	Stater Bros Markets	27160 Sun City Blvd	65	N	N*	
Menifee	Chester W Morrison Elementary	30250 Bradley Rd	64	N	Y	
Menifee	Menifee Car Wash LP	26825 Newport Rd	60	N	N	
Menifee	Naco Wilderness Lakes	30605 Briggs Rd	60	N	N	
Menifee	Coco's Bakery Restaurant	27990 Bradley Rd	60	N	N	
Menifee	Harvest Valley Elementary Sch	29955 Watson Rd	60	N	Y	
Menifee	Sun City Gardens	28500 Bradley Rd	60	N	N	
Menifee	Vons	27220 Sun City Blvd	60	N	N*	
Menifee	Kirkpatrick Elementary School	28800 Reviere Dr	55	N	Y	
Menifee	Revival Christian Fellowship	29220 Scott Rd	50	N	Y	
Menifee	Hospice of the Valleys	28127 Bradley Rd	50	N	Y	
Menifee	Yellow Basket Restaurant	29966 Haun Rd # 1	50	N	N	
Menifee	Rancon Real Estate	29950 Haun Rd # 101	47	N	Y	
Menifee	Arizona Pipeline Co	33235 Bailey Park Blvd	45	N	N	
Menifee	Actor's Edge Academy	30609 Shoreline Dr	45	N	Y	
Menifee	Coldwell Banker	29737 New Hub Dr # 103	45	N	Y	
Menifee	Mc Donald's	28000 Bradley Rd	45	N	N	
Menifee	Century 21 Executive Property	26045 Newport Rd # A	40	N	Y	
Menifee	IHOP Restaurant	26035 Newport Rd	40	N	N	
Menifee	Tarbell Realtors	26100 Newport Rd # A6	40	N	Y	
Menifee	Coldwell Banker	28120 Bradley Rd	40	N	Y	
Menifee	Shella Case Management Svc	26836 Cherry Hills Blvd	40	N	Y	

Menifee: Commercial (Retail) Destinations



Menifee: PEV Mid-Day Destinations and Commercial (Retail) Locations

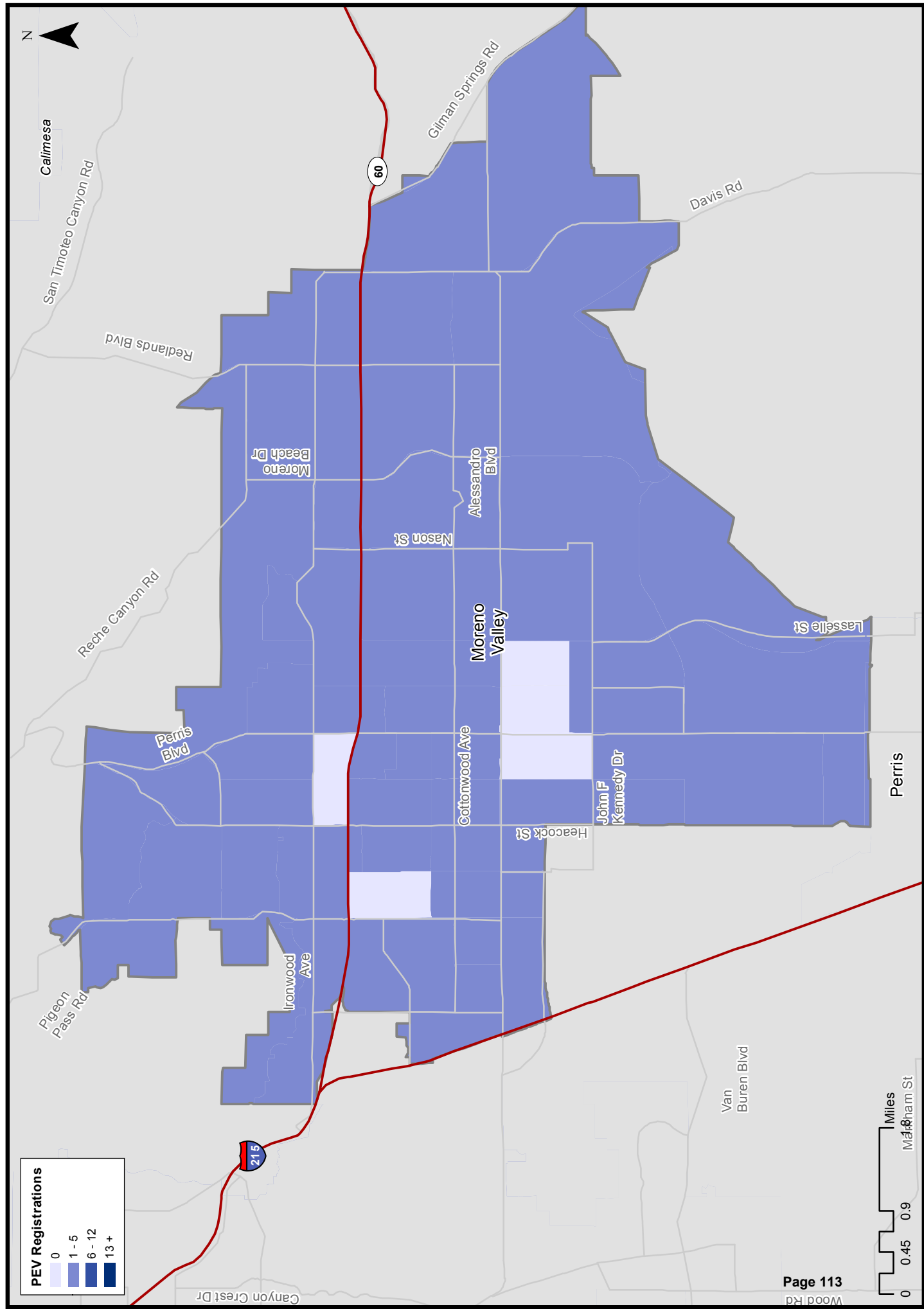


Menifee: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Target	30251 Antelope Rd	Department Stores, Except Discount	\$29,280	
Albertsons	26100 Newport Rd # B	Supermarkets & Other Grocery Stores	\$23,465	
Grove Lumber & Bldg Supplies	27126 Watson Rd	Other Building Material Dealers	\$18,060	
Ralphs	30125 Antelope Rd	Supermarkets & Other Grocery Stores	\$17,290	
Stater Bros Markets	27160 Sun City Blvd	Supermarkets & Other Grocery Stores	\$16,055	
Richardson's RV Ctr Inc	26786 Encanto Dr	Recreational Vehicle Dealers	\$16,000	
Vons	27220 Sun City Blvd	Supermarkets & Other Grocery Stores	\$14,820	
Menifee Lakes Country Club	29875 Menifee Lakes Dr	All Other Traveler Accommodation	\$8,400	
Naco Wilderness Lakes	30605 Briggs Rd	Recreational & Vacation Camps	\$7,620	
Ross Dress for Less	30141 Antelope Rd	Department Stores, Except Discount	\$5,670	
Walgreens	30251 Murrieta Rd	Pharmacies & Drug Stores	\$5,490	
Walgreens	27975 Bradley Rd	Pharmacies & Drug Stores	\$4,575	
Sun City Gardens	28500 Bradley Rd	Beauty Salons	\$4,020	
CAR Enterprises Inc	30107 Antelope Rd	Convenience Stores	\$3,712	
Rite Aid	27350 Sun City Blvd	Food, Health, Supplement Stores	\$3,660	
Best Pharmacy & Medical Supply	26930 Cherry Hills Blvd # A	Pharmacies & Drug Stores	\$3,477	
Empower Software Technologies	27851 Bradley Rd # 120	Computer & Software Stores	\$3,430	
Menifee Car Wash LP	26825 Newport Rd	Convenience Stores	\$3,420	
Sun City Chevron	26980 Mccall Blvd	Other Gasoline Stations	\$2,784	
Sun City Valero	27181 Mccall Blvd	Convenience Stores	\$2,784	
Soil Retention Products Inc	1765 Watson Rd	Outdoor Power Equip Stores	\$2,700	
Big O Tires	26920 Newport Rd # B	Tire Dealers	\$2,652	
Rite Aid	25906 Newport Rd	Food, Health, Supplement Stores	\$2,600	
Steve Richardson RV	26776 Encanto Dr	Recreational Vehicle Dealers	\$2,560	
California Golf & Art Cntry Cl	26583 Cherry Hills Blvd	Golf Courses & Country Clubs	\$2,520	
Hamshaw Farms	28380 US Highway 74	Supermarkets & Other Grocery Stores	\$2,470	
Coco's Bakery Restaurant	27990 Bradley Rd	Limited-Service Restaurants	\$2,400	
United Oil	1500 Patricia Ln	Other Gasoline Stations	\$2,320	
Valero	26730 Mccall Blvd	Other Gasoline Stations	\$2,320	
EB Games	30145 Antelope Rd # 103	Radio, TV & Other Electronics Stores	\$2,261	
Domino's Pizza	26920 Cherry Hills Blvd	Limited-Service Restaurants	\$2,016	
Yellow Basket Restaurant	29966 Haun Rd # 1	Limited-Service Restaurants	\$2,000	
Autozone	30121 Antelope Rd # L	Automotive Parts & Accessories Stores	\$1,950	

Canyon Hills Chevron	25361 Railroad Canyon Rd	Other Gasoline Stations	\$1,856
Sun City Pharmacy	27994 Bradley Rd	Pharmacies & Drug Stores	\$1,830
Mc Donald's	28000 Bradley Rd	Limited-Service Restaurants	\$1,800
Caveman Building Materials	29775 Scott Rd	Home Centers	\$1,750
Practice Golf Ctr	31750 Antelope Rd	Golf Courses & Country Clubs	\$1,680
IHOP Restaurant	26035 Newport Rd	Limited-Service Restaurants	\$1,600
North Golf Course	26660 Mccaill Blvd	Golf Courses & Country Clubs	\$1,596

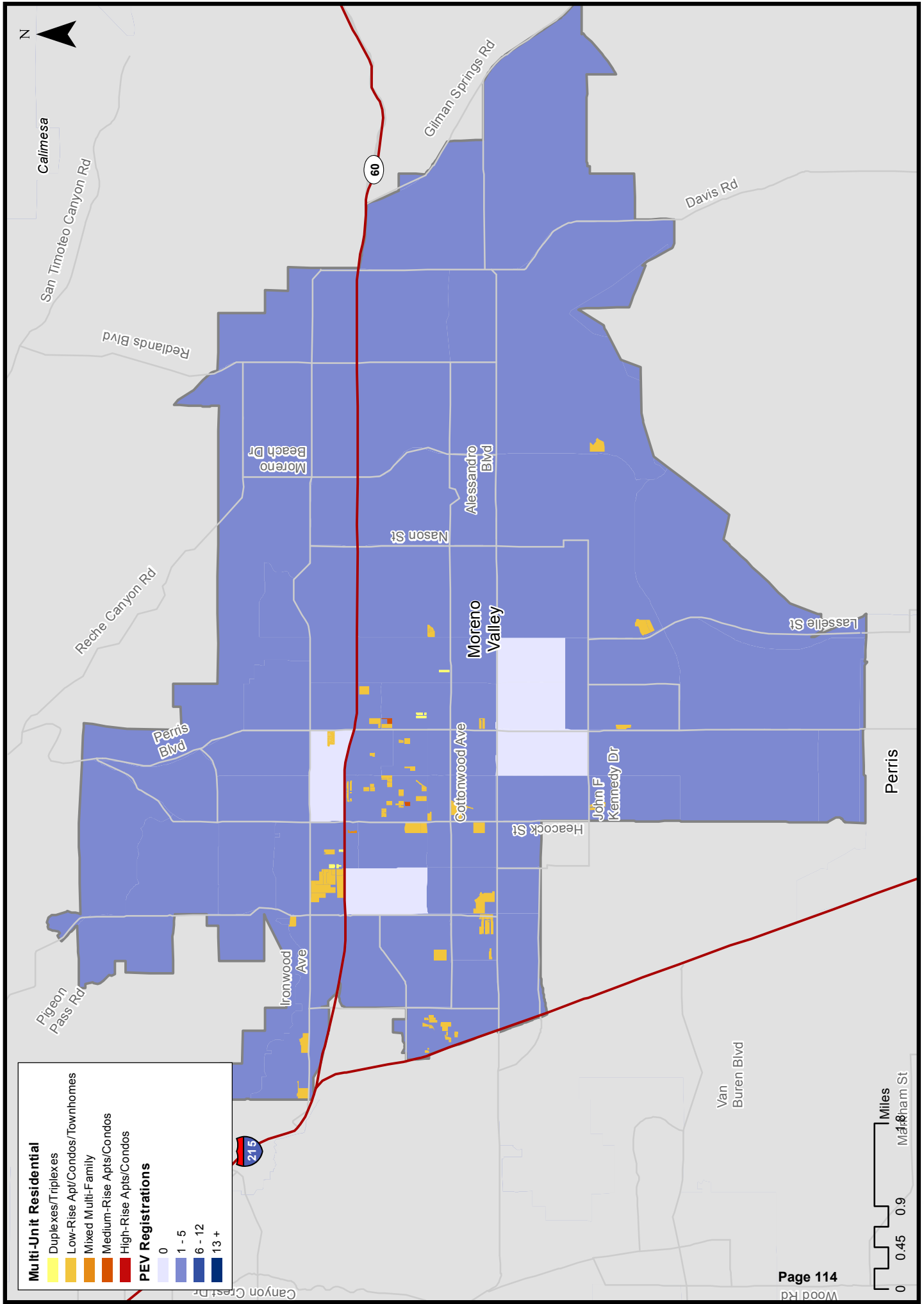
Moreno Valley: Plug-in Electric Vehicle Registrations



PEV Registrations

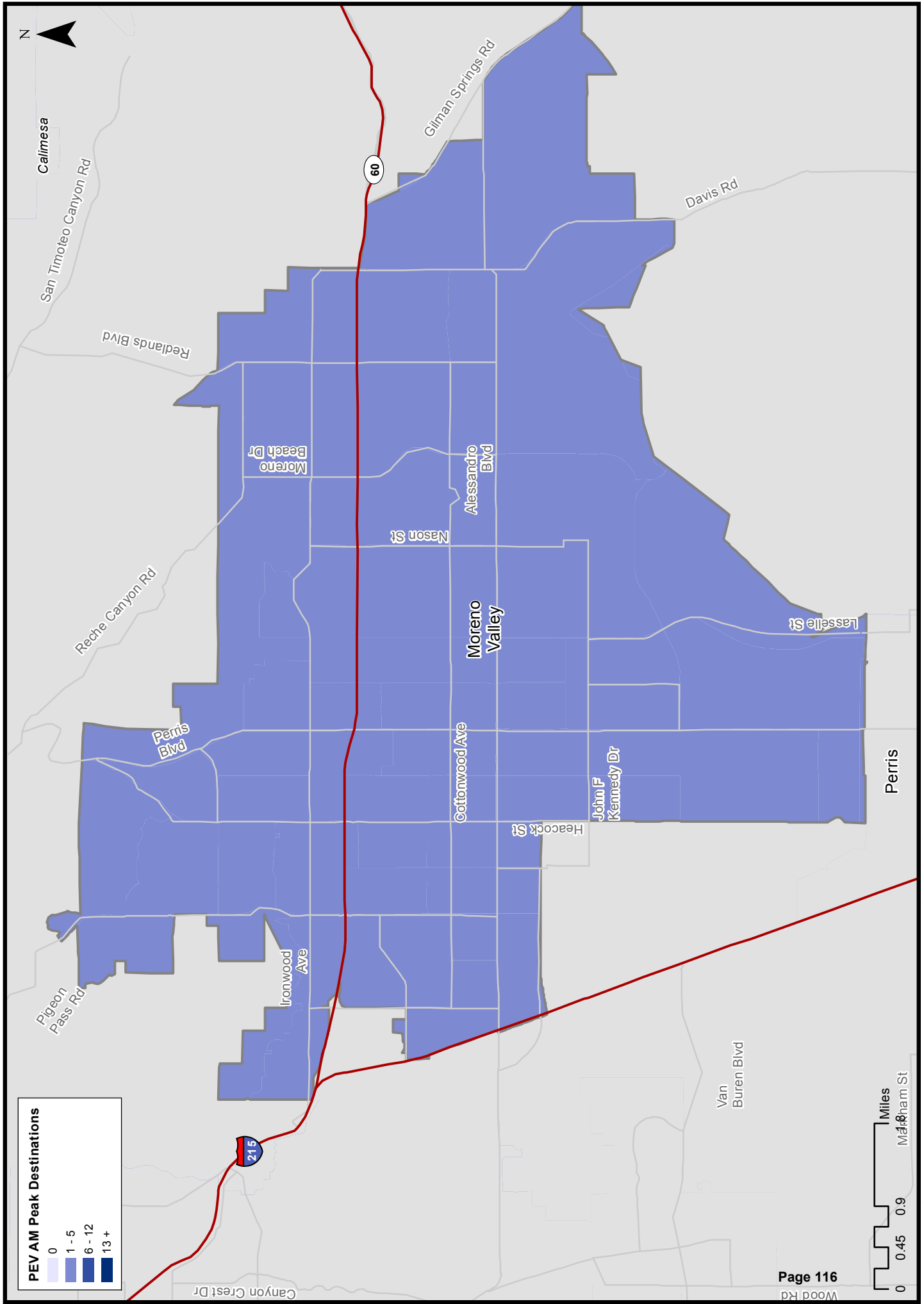
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Moreno Valley: Multi-Unit Residential and PEV Registrations

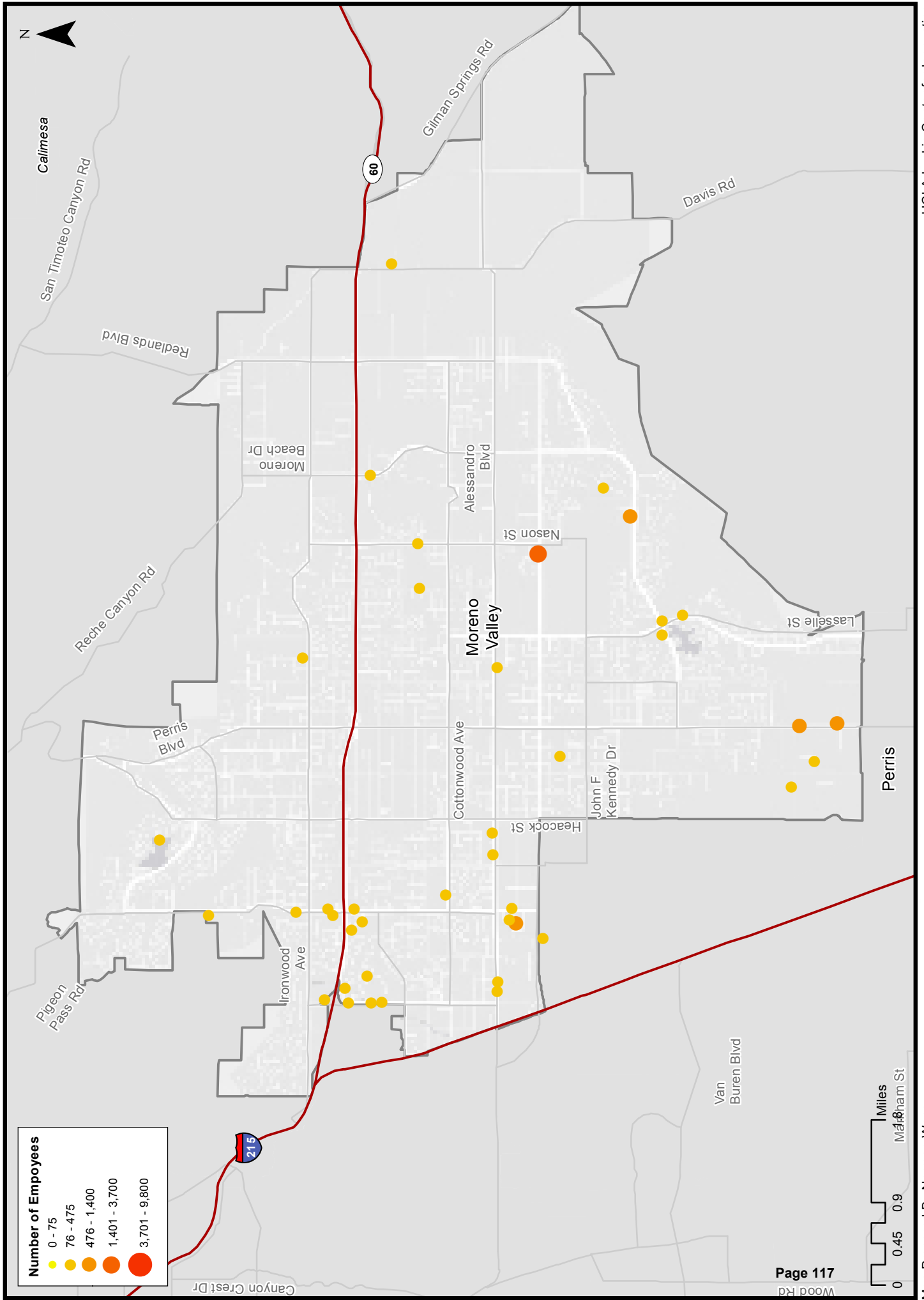


Moreno Valley: Top Multi-Unit Dwellings						
City	Address	Number of units	Condo?	Unit value	Year built	PEV density
Moreno Valley	12640 MEMORIAL WAY	552	N	\$152,657	2006	
Moreno Valley	13933 CHAGALL CT	384	N	\$86,695	1987	
Moreno Valley	15700 LASSELLE ST	304	N	\$173,400		
Moreno Valley	27625 TRAIL RIDGE WAY	246	N	\$174,080		
Moreno Valley	12963 MORENO BEACH DR	236	N	\$174,463		
Moreno Valley	13400 ELSWORTH ST	227	N	\$124,615		
Moreno Valley	21550 BOX SPRINGS RD	212	N	\$91,354		
Moreno Valley	15100 MORENO BEACH DR	176	N	\$146,436		
Moreno Valley	13125 HEACOCK ST	140	N	\$62,930		
Moreno Valley	25445 SUNNYMEAD BLV	136	N	\$129,425		
Moreno Valley	13325 HEACOCK ST	120	N	\$80,196		
Moreno Valley	25070 FIR AVE	82	N	\$82,989		
Moreno Valley	12315 GRAHAM ST	80	N	\$60,674		
Moreno Valley	25105 JOHN F KENNEDY DR	79	N	\$47,928		
Moreno Valley	23650 HEMLOCK AVE	76	N	\$108,285		
Moreno Valley	13256 LASSELLE ST	74	Y	\$95,959	1993	
Moreno Valley	24169 EUALYPTUS AVE	70	N	\$91,111		
Moreno Valley	25055 DELPHINIUM AVE	64	N	\$155,176		
Moreno Valley	12760 PERRIS BLV	50	Y	\$47,754	1980	
Moreno Valley	23145 IRONWOOD AVE	47	N	\$154,138		

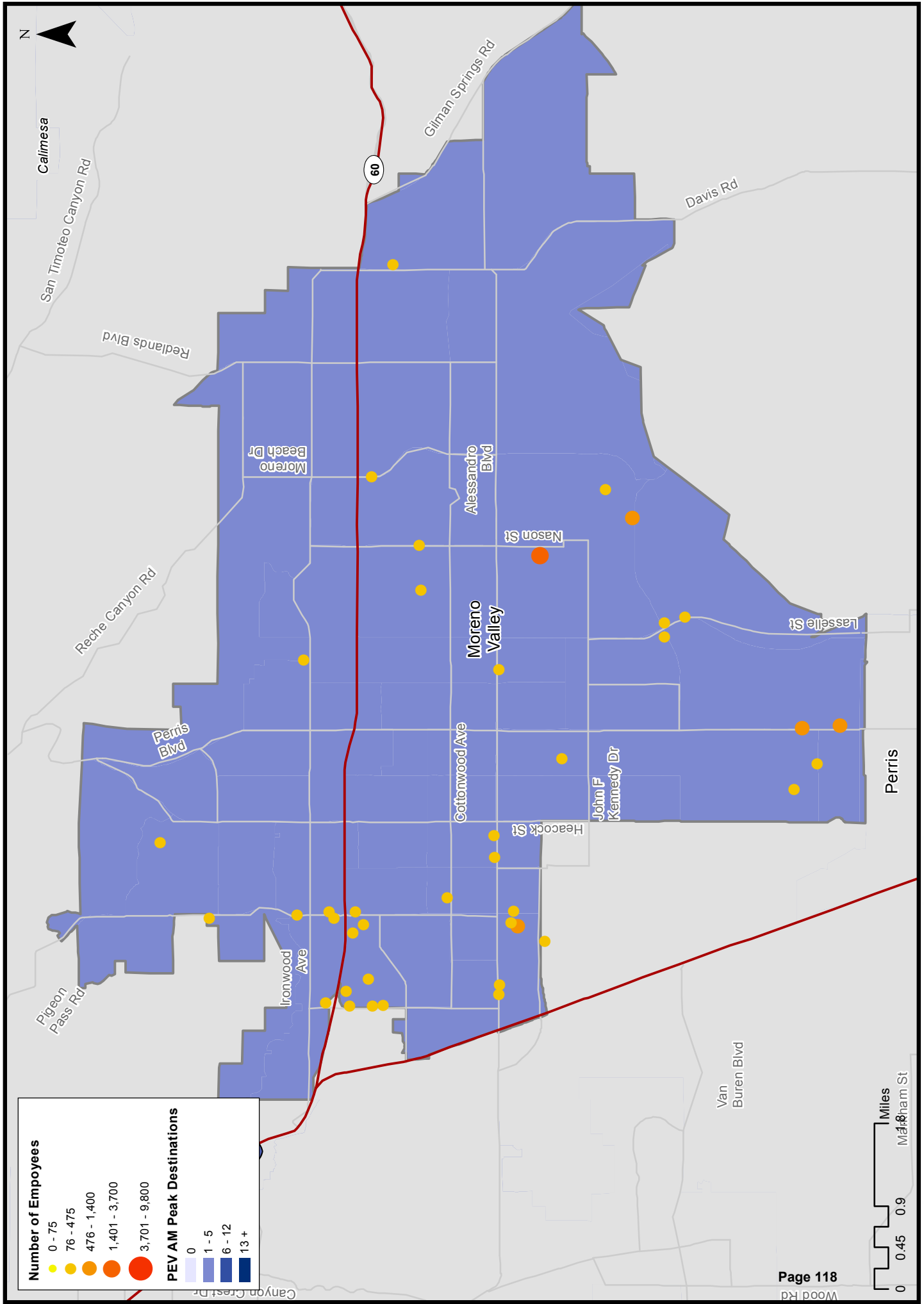
Moreno Valley: Plug-in Electric Vehicle Morning Peak Destinations



Moreno Valley: Top Workplaces by Number of Employees



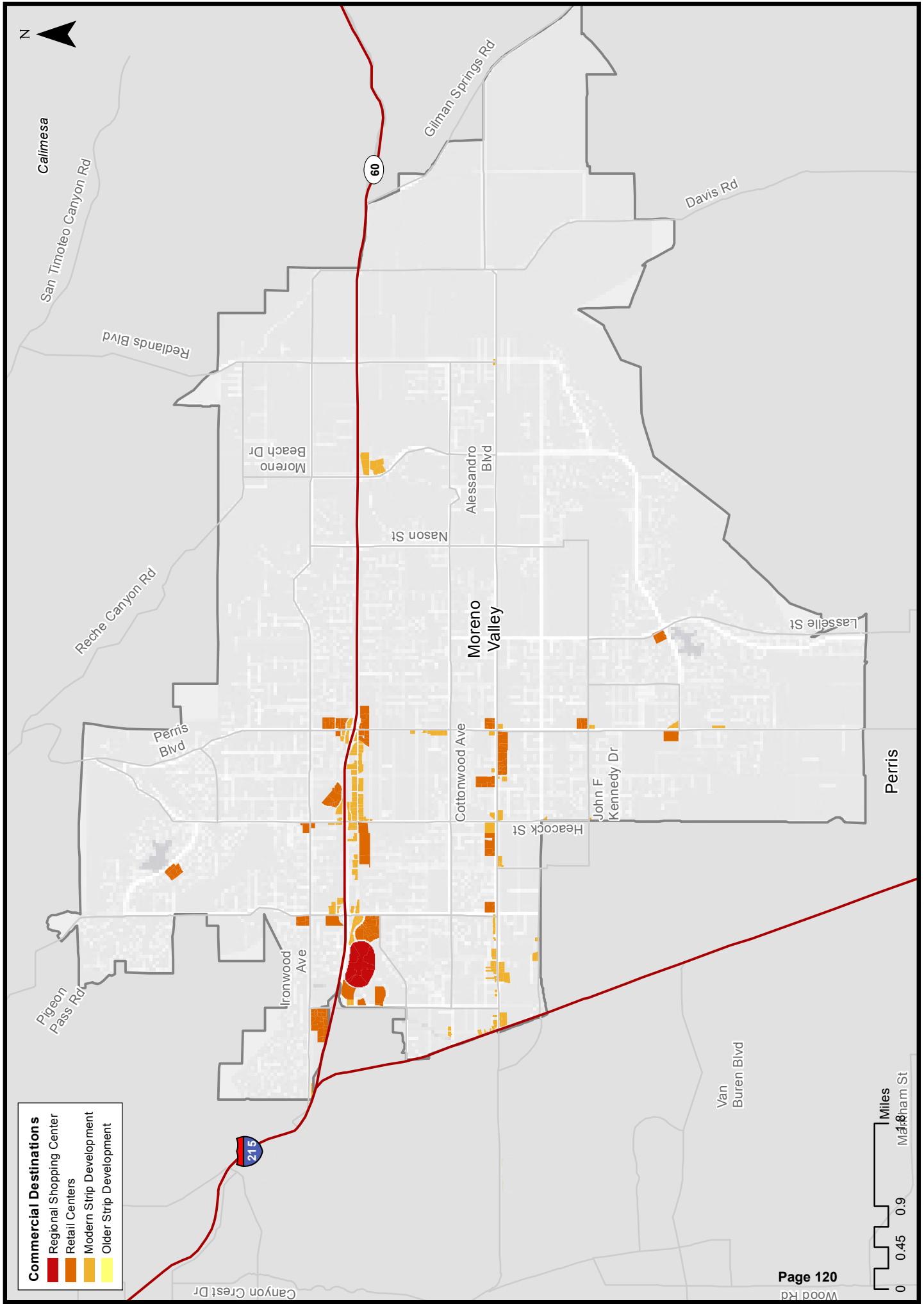
Moreno Valley: PEV Morning Peak Destinations and Top Workplaces



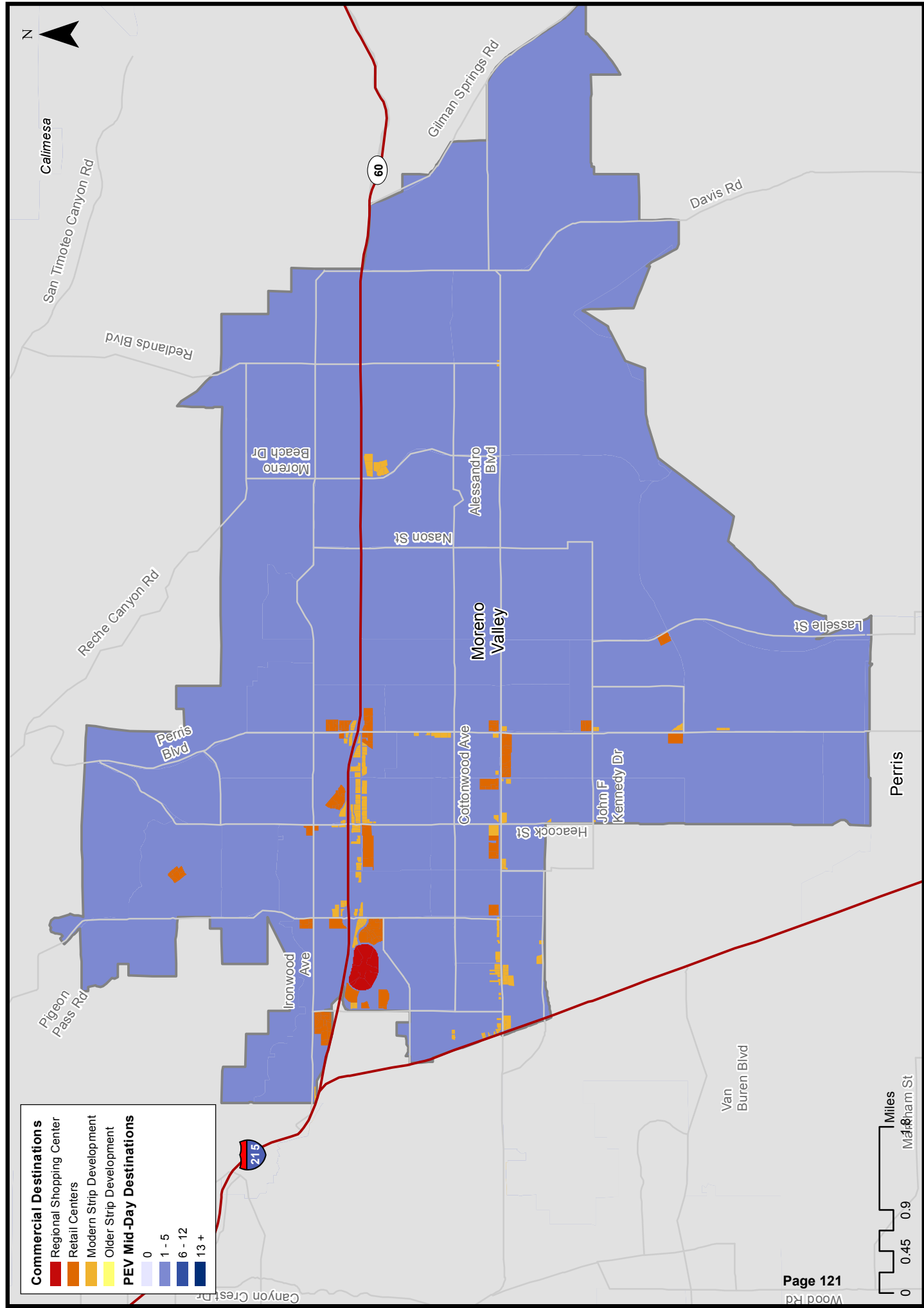
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Moreno Valley	COUNTY OF RIVERSIDE REGIONAL MEDICAL CTR	26520 CACTUS AVE	2421	N	Y	
Moreno Valley	KAISER FOUNDATION HOSPITAL - MORENO VALL	27300 IRIS AVE	659	N	N	
Moreno Valley	WALGREEN CO.	17500 PERRIS BLVD	587	N	N*	
Moreno Valley	ROSS DRESS FOR LESS INC.	17800 PERRIS BLVD	578	N	N*	
Moreno Valley	RIVERSIDE COUNTY SHERIFF'S OFFICE	22850 CALLE SAN JUAN DE LOS LAGOS	493	N	N	
Moreno Valley	O'REILLY AUTOMOTIVE DISTRIBUTORS	24520 SAN MICHELE RD	385	N	N	
Moreno Valley	WAL-MART	12721 MORENO BEACH DM	365	N	N*	
Moreno Valley	MORENO VALLEY CAMPUS	16130 LASSELLE ST	364	N	Y	
Moreno Valley	MORENO VALLEY DPSS, COUNTY OF RIVERSIDE	23119 COTTONWOOD AVE BLDG C	345			
Moreno Valley	SKECHERS	29800 EUCALYPTUS AVE	284			
Moreno Valley	Valley View High School	13135 Nason St	250	N	Y	
Moreno Valley	Supreme Truck Bodies	22135 Alessandro Blvd	213	N	N	
Moreno Valley	Moreno Valley Police Dept	22850 Calle San Juan De Los	200	N	N	
Moreno Valley	Moreno Valley School Dist Adm	25634 Alessandro Blvd	200	N	Y	
Moreno Valley	Costco	12700 Day St	185	N	N*	
Moreno Valley	Canyon Springs High School	23100 Cougar Canyon Dr	180	N	Y	
Moreno Valley	J.C Penney Co	22450 Town Cir	175	N	N*	
Moreno Valley	Macy's	22400 Town Cir	175	N	N*	
Moreno Valley	Mimi's Cafe	12580 Day St	160	N	N	
Moreno Valley	B J's Restaurant & Brewhouse	22920 Centerpoint Dr	152	N	N	
Moreno Valley	CLP Resources Inc	12220 Pigeon Pass Rd # T	150	N	Y	
Moreno Valley	Albertsons	11875 Pigeon Pass Rd # A	150	N	N*	
Moreno Valley	Home Depot	12255 Pigeon Pass Rd	150	N	N	
Moreno Valley	Lowe's	12400 Day St	150	N	N*	
Moreno Valley	Modular Metal Fabricators Inc	24600 Nandina Ave	150	N	N	
Moreno Valley	Riverside Community College	16130 Lasselle St	150	N	Y	
Moreno Valley	Riverside County Waste Mgmt	14310 Frederick St	140	N	N	
Moreno Valley	US Post Office	23580 Alessandro Blvd	139	N	N	
Moreno Valley	Supreme Truck Bodies	22201 Alessandro Blvd	138	N	N	
Moreno Valley	Badger Springs Middle School	24750 Delphinium Ave	130	N	Y	
Moreno Valley	Olive Garden Italian Rstrnt	22880 Centerpoint Dr	130	N	N	
Moreno Valley	Serta Mattress Co	23532 Brodiaea Ave	125	N	Y	
Moreno Valley	Chili's Grill & Bar	12525 Frederick St # A	120	N	N	
Moreno Valley	Palm Middle School	11900 Sawson Ave	120	N	Y	
Moreno Valley	Stater Bros Markets	25900 Iris Ave	120	N	N*	
Moreno Valley	Mountain View Middle School	13130 Morrison St	117	N	Y	
Moreno Valley	Landmark Middle School	15261 Legendary Dr	115	N	Y	
Moreno Valley	Prudential California Realty	12125 Day St # E301	115	N	Y	
Moreno Valley	Dorf Corp	10369 Shore Crest Ter	110	N	Y	
Moreno Valley	Santec Corp	22690 Cactus Ave # 300	110	N	Y	

*Reclassified by LuskIn Center

Moreno Valley: Commercial (Retail) Destinations



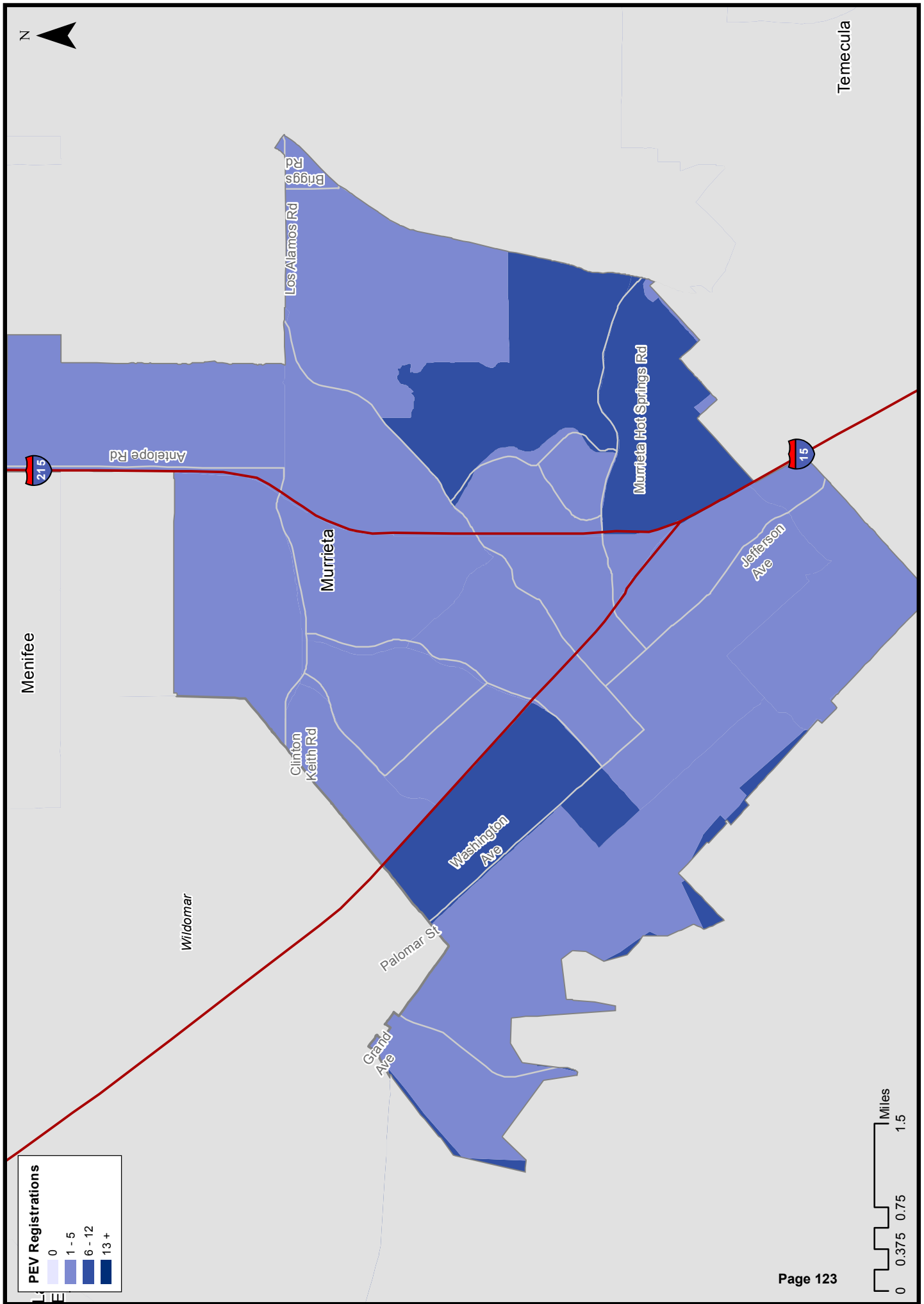
Moreno Valley: PEV Mid-Day Destinations and Commercial (Retail) Locations



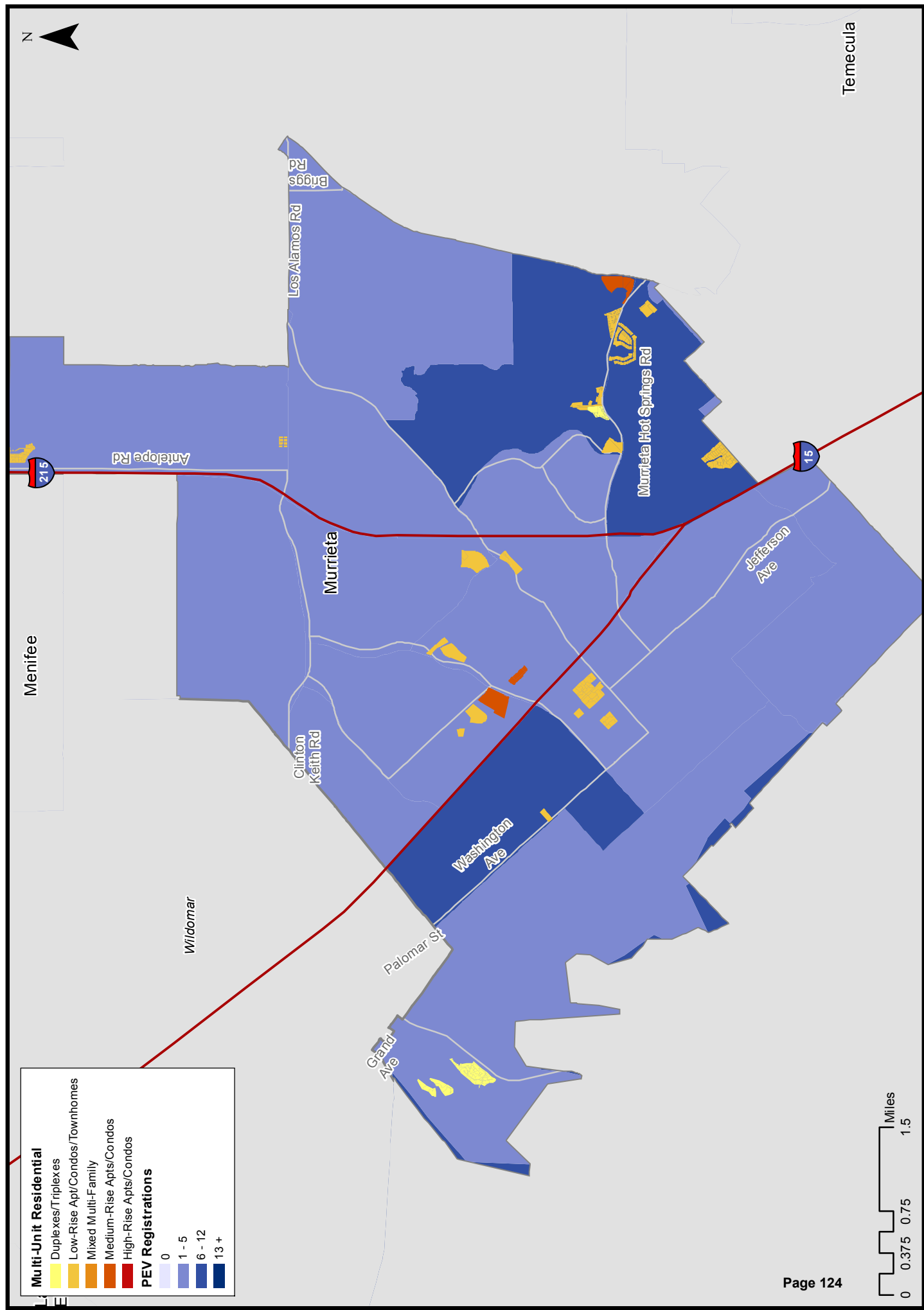
Moreno Valley: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Moreno Valley Hyundai	22750 Eucalyptus Ave	New Car Dealers	\$85,900	
Moreno Valley Pontiac Buick	12630 Motor Way	New Car Dealers	\$60,130	
Moreno Valley Chevrolet	12625 Auto Mall Dr	New Car Dealers	\$51,540	
Serta Mattress Co	23532 Brodiaea Ave	Furniture Stores	\$38,250	
Albertsons	11875 Pigeon Pass Rd # A	Supermarkets & Other Grocery Stores	\$37,050	
Wal-Mart	12721 Moreno Beach Dr	Department Stores, Except Discount	\$35,640	
Stater Bros Markets	25900 Iris Ave	Supermarkets & Other Grocery Stores	\$29,640	
J C Penney Co	22450 Town Cir	Department Stores, Except Discount	\$28,350	
Macy's	22400 Town Cir	Department Stores, Except Discount	\$28,350	
Moreno Valley Toyota	27990 Eucalyptus Ave	New Car Dealers	\$26,000	
Moreno Valley Dodge Honda Hynd	27910 Eucalyptus Ave	New Car Dealers	\$25,000	
Albertsons	25050 Alessandro Blvd	Supermarkets & Other Grocery Stores	\$24,700	
Food 4 Less	12200 Perris Blvd	Supermarkets & Other Grocery Stores	\$24,700	
Stater Bros Markets	24595 Alessandro Blvd	Supermarkets & Other Grocery Stores	\$24,700	
Circuit City	12530 Day St	Radio, TV & Other Electronics Stores	\$22,610	
Vons	12656 Perris Blvd	Supermarkets & Other Grocery Stores	\$19,760	
Stater Bros Markets	24831 Sunnymead Blvd	Supermarkets & Other Grocery Stores	\$17,290	
Ralphs	12625 Frederick St	Supermarkets & Other Grocery Stores	\$16,055	
Mervyns	12625 Frederick St	Department Stores, Except Discount	\$14,904	
Food 4 Less	24440 Alessandro Blvd	Supermarkets & Other Grocery Stores	\$12,350	
Ralphs	23575 Sunnymead Ranch Pkwy	Supermarkets & Other Grocery Stores	\$12,350	
Gottschalks	22650 Town Cir	Department Stores, Except Discount	\$11,340	
D D's Discounts	12320 Perris Blvd	Department Stores, Except Discount	\$10,530	
Cardenas Meat Market	23920 Ironwood Ave	Meat Markets	\$10,528	
Longs Drugs	25070 Alessandro Blvd	Pharmacies & Drug Stores	\$9,882	
Rancho Market	14930 Perris Blvd	Supermarkets & Other Grocery Stores	\$9,880	
Ross Dress for Less	12625 Frederick St # C	Department Stores, Except Discount	\$8,100	
American Cynergy Corp	22640 Goldencrest Dr # 103	Other Building Material Dealers	\$7,740	
Moreno Valley Ranch Golf Club	28095 John F Kennedy Dr	Limited-Service Restaurants	\$7,560	
Longs Drugs	26180 Iris Ave	Pharmacies & Drug Stores	\$7,320	
Pep Boys	23470 Sunnymead Blvd	Automotive Parts & Accessories Stores	\$7,020	
Toys R US	12125 Day St	Hobby, Toy, & Game Stores	\$6,760	
Moreno Valley Parks & Rec	14075 Frederick St	Nature Parks & Other Similar Institutions	\$6,525	
Mimi's Cafe	12580 Day St	Limited-Service Restaurants	\$6,400	
Sav-On Drugs	12280 Perris Blvd	Pharmacies & Drug Stores	\$6,222	
B J's Restaurant & Brewhouse	22920 Centerpoint Dr	Limited-Service Restaurants	\$6,080	
Ross Dress for Less	17800 Perris Blvd	Department Stores, Except Discount	\$5,994	
Marjon R V's Inc Truck Acces	21085 Box Springs Rd	Recreational Vehicle Dealers	\$5,760	
Walgreens	12275 Perris Blvd	Pharmacies & Drug Stores	\$5,673	
99 Cents Only Stores	24899 Alessandro Blvd	Discount Department Stores	\$5,670	

Murrieta: Plug-in Electric Vehicle Registrations



Murrieta: Multi-Unit Residential and PEV Registrations

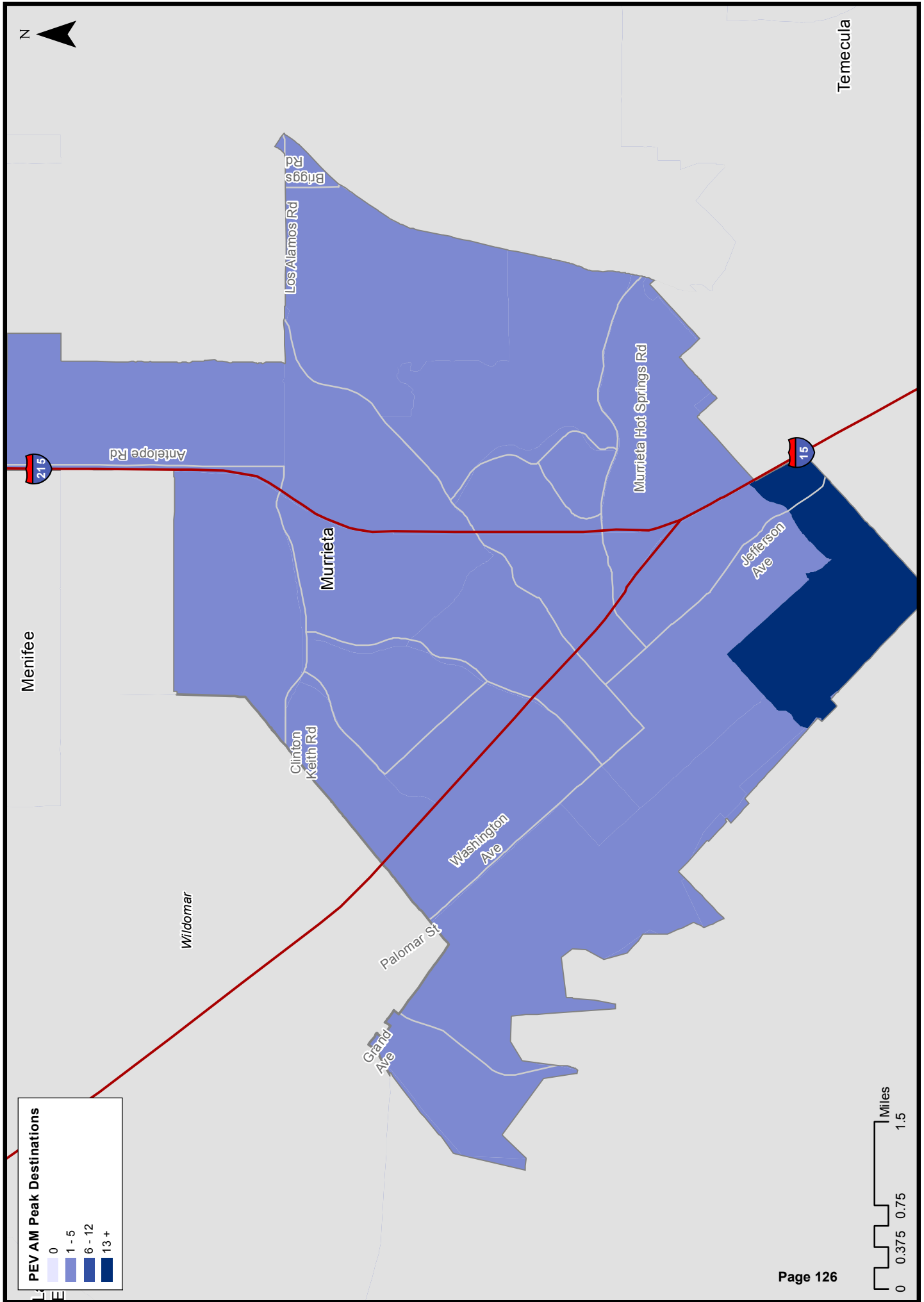


Multi-Unit Residential	
	Duplexes/Triplexes
	Low-Rise Apt/Condos/Townhomes
	Mixed Multi-Family
	Medium-Rise Apts/Condos
	High-Rise Apts/Condos
PEV Registrations	
	0
	1 - 5
	6 - 12
	13 +

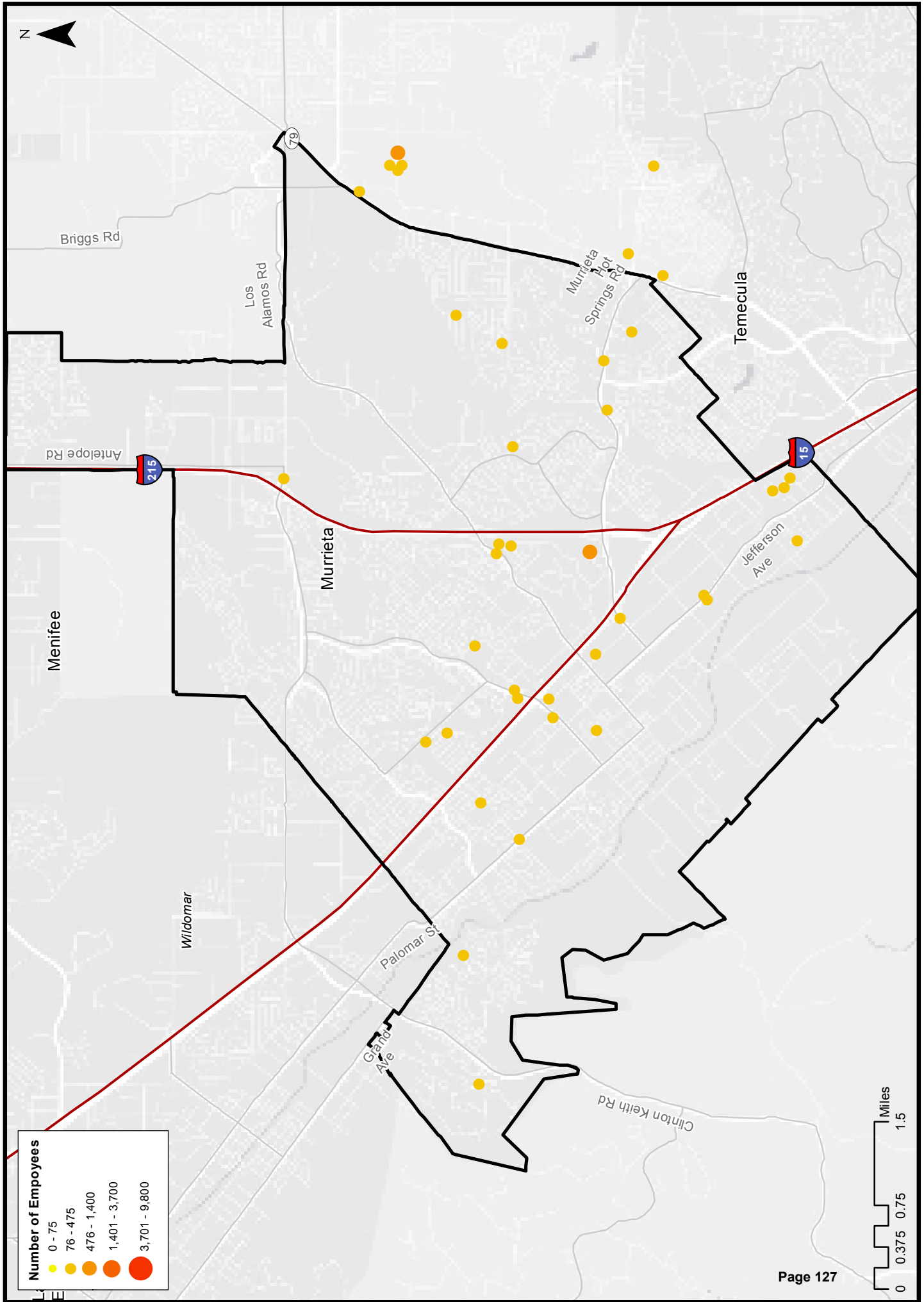


Murrieta: Top Multi-Unit Dwellings						
City	Address	Number of units	Condo?	Unit value	Year built	PEV density
Murrieta	25100 VISTA MURRIETA RD	492	N	\$122,617	2006	
Murrieta	24375 JACKSON AVE	460	N	\$117,743	1989	
Murrieta	24850 HANCOCK AVE	420	N	\$120,141		
Murrieta	24909 MADISON AVE	329	Y	\$123,196	2002	
Murrieta	24323 JACKSON AVE	264	N	\$122,761		
Murrieta	41410 JUNIPER ST	218	Y	\$237,260	2005	
Murrieta	40125 LOS ALAMOS RD	200	N	\$103,180		
Murrieta	33600 MAPLETON AVE	194	N	\$4,407		
Murrieta	39930 WHITEWOOD RD	180	N	\$199,268		M
Murrieta	26900 WINCHESTER CREEK AVE	175	N	\$168,441		M
Murrieta	40680 WALSH CENTER DR	144	N	\$200,907		
Murrieta	39060 AGUA VISTA	36	N	\$89,327		M
Murrieta	39011 AGUA VISTA ST	32	N	\$92,974		M
Murrieta	38981 CALLE HERMOSA	24	N	\$51,536		M
Murrieta	28239 VIA PRINCESSA	16	N	\$54,611		M
Murrieta	40800 SUNFLOWER RD	15	N	\$760,716		
Murrieta	39078 AGUA VISTA RD	12	N	\$23,384		M

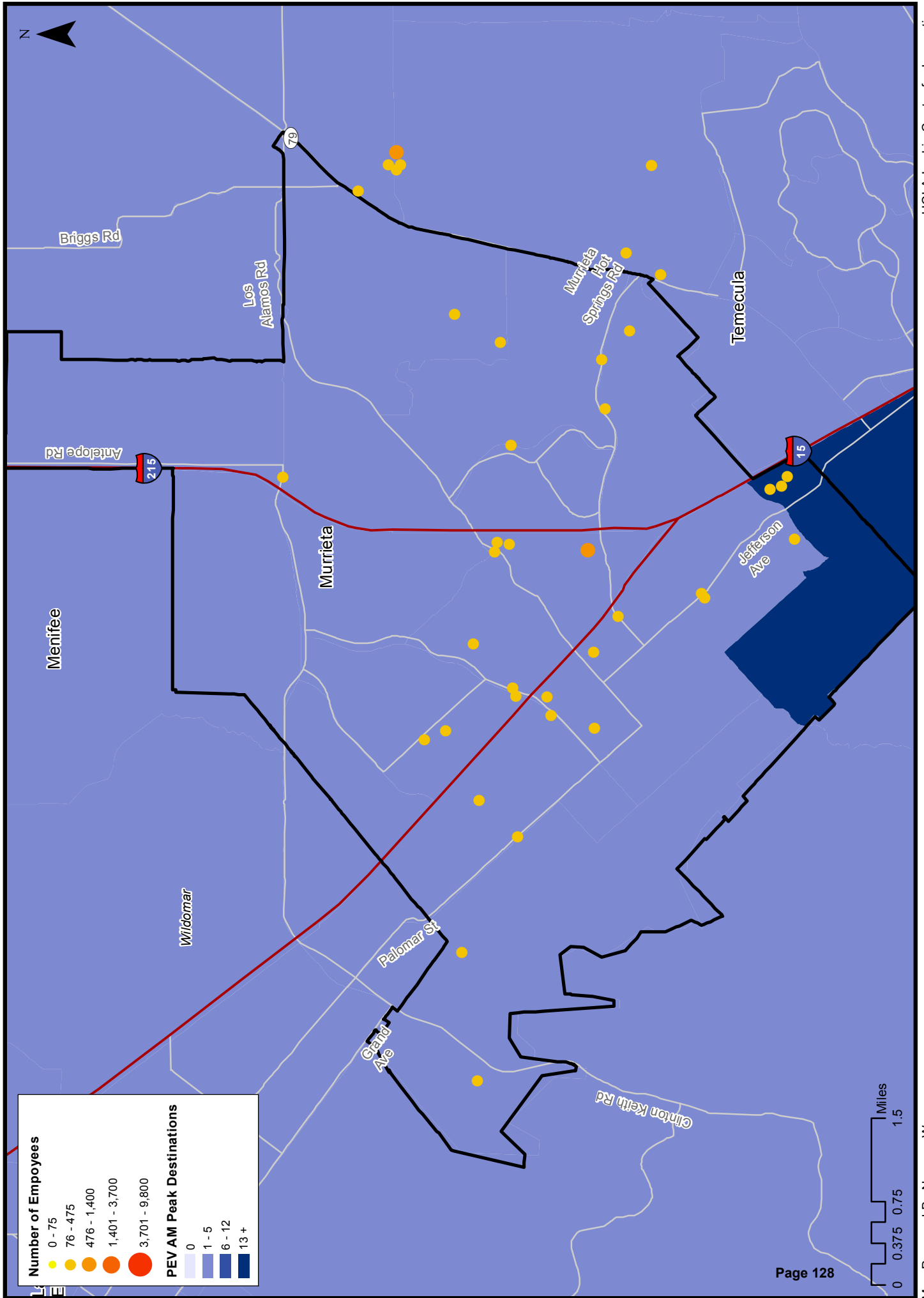
Murrieta: Plug-in Electric Vehicle Morning Peak Destinations



Murrieta: Top Workplaces by Number of Employees

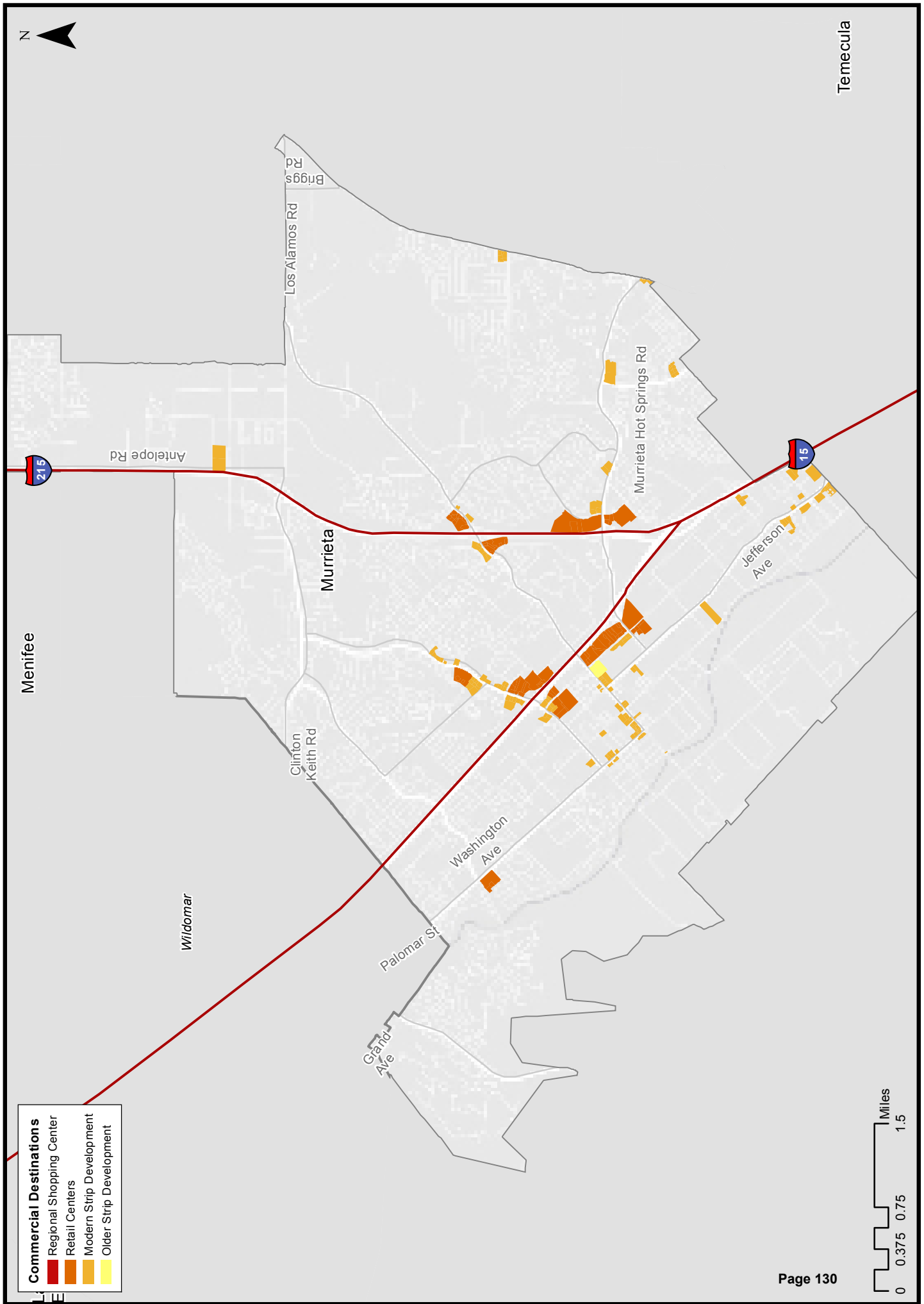


Murrieta: PEV Morning Peak Destinations and Top Workplaces

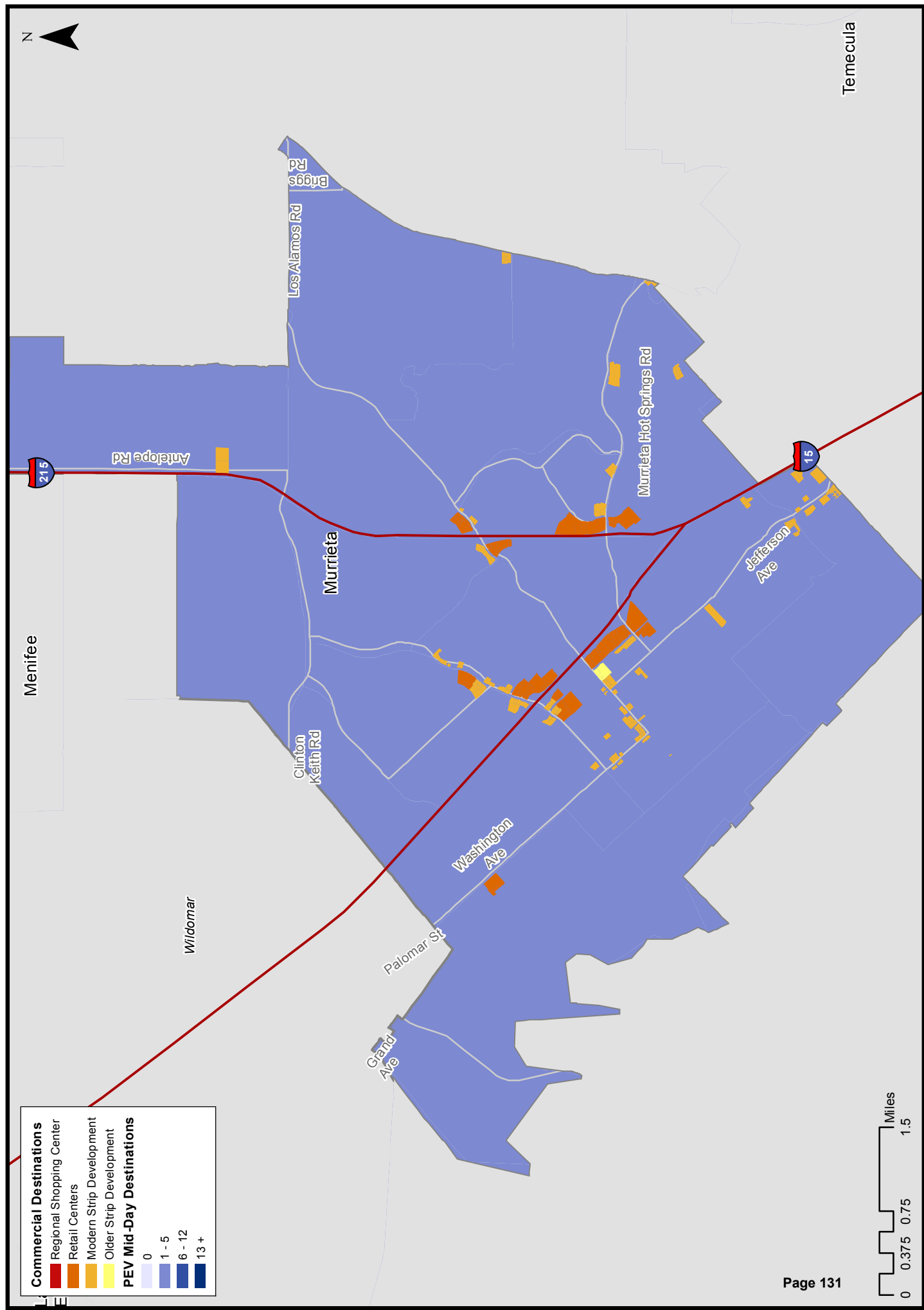


City	Employer	Murrieta: Top Workplaces Address	Number of employees	High-tech?	White-collar?	PEV AM density
Murrieta	COUNTY OF RIVERSIDE GSA FLEET SERV	30755-V AULD RD	828	N	N	
Murrieta	RANCHO SPRINGS MEDICAL CENTER	25500 MEDICAL CENTER DR	718	N	Y	
Murrieta	ABBOTT CARDIOVASCULAR SYSTEMS	30590 COCHISE CIR	401	N	N	
Murrieta	WAL-MART #2952	41200 MURRIETA HOT SPRINGS RD	343	N	N*	
Murrieta	Murrieta Valley High School	42200 Nighthawk Way	220	N	Y	
Murrieta	Temecula Valley Drywall	41228 Raintree Ct	220	N	N	H
Murrieta	Sam's Club	6363 Va	193	N	Y	
Murrieta	Albertsons	39140 Winchester Rd	150	N	N*	
Murrieta	Stater Bros Markets	25050 Hancock Ave	150	N	N*	
MURRIETA	US Border Patrol	25762 Madison Ave	130	N	N	
Murrieta	Southwest County Detention Ctr	30755 Auld Rd # B	130	N	N	
Murrieta	Best Buy	25080 Madison Ave	125	Y	Y	
Murrieta	Country Villa	24100 Monroe Ave	120	N	Y	
Murrieta	Shivela Middle School	24515 Lincoln Ave	120	N	Y	
Murrieta	American Industrial Mfg Svc	41673 Corning Pl	115	N	N	
Murrieta	Albertsons	41000 California Oaks Rd	110	N	N*	
Murrieta	Warm Springs Middle School	39245 Calle De Fortuna	106	N	Y	
Murrieta	Calvary Chapel Conference Ctr	39405 Murrieta Hot Springs Rd	100	N	Y	
Murrieta	E Hale Curran School	40855 Chaco Canyon Rd	100	N	Y	
Murrieta	Kohl's Department Store	24661 Madison Ave	100	N	N*	
Murrieta	Monte Vista Elementary School	37420 Via Mira Mosa	100	N	Y	
Murrieta	R J's Sizzlin Steer	41401 Kalmia St	100	N	N	
Murrieta	Real Estate Loan Ctr Corp	39755 Murrieta Hot Springs Rd	100	N	N	
Murrieta	Vista Murrieta High School	28251 Clinton Keith Rd	100	N	Y	
Murrieta	Albertsons	28047 Scott Rd	99	N	N*	
Murrieta	Albertsons	41000 California Oaks Rd	99	N	N*	
Murrieta	Crown House of Murrieta	39869 S Creek Cir	93	N	Y	
Murrieta	Avel Corp	25720 Jefferson Ave	90	N	N	
Murrieta	Riverside County Sheriff	30755d Auld Rd # A	90	N	N	
Murrieta	Temecula Police Dept	30755d Auld Rd # A	90	N	N	
Murrieta	Cole Canyon Elementary School	23750 Via Alisol	85	N	Y	
Murrieta	California Veterinary Spclsts	25100 Hancock Ave # 116	85	N	Y	
Murrieta	Bear Creek Golf Club	22640 Bear Creek Dr N	85	N	N	
Murrieta	Heritage Senior Care Inc	25060 Hancock Ave # 103-189	85	N	Y	
Murrieta	Alta Murrieta School	39475 Whitewood Rd	80	N	Y	
Murrieta	Murrieta Police Dept	24071 Jefferson Ave	80	N	N	
Murrieta	Murrieta School	24725 Adams Ave	80	N	Y	
Murrieta	Vons	38995 Sky Canyon Dr	80	N	N*	
Murrieta	Cryoquip Inc	25720 Jefferson Ave	79	N	N	
Murrieta	Star Trac Strength Inc	41180 Raintree Ct	150	N	N	H
Murrieta	Open Solutions FDSI	41188 Sandalwood Cir	80	N	N	H

Murrieta: Commercial (Retail) Destinations



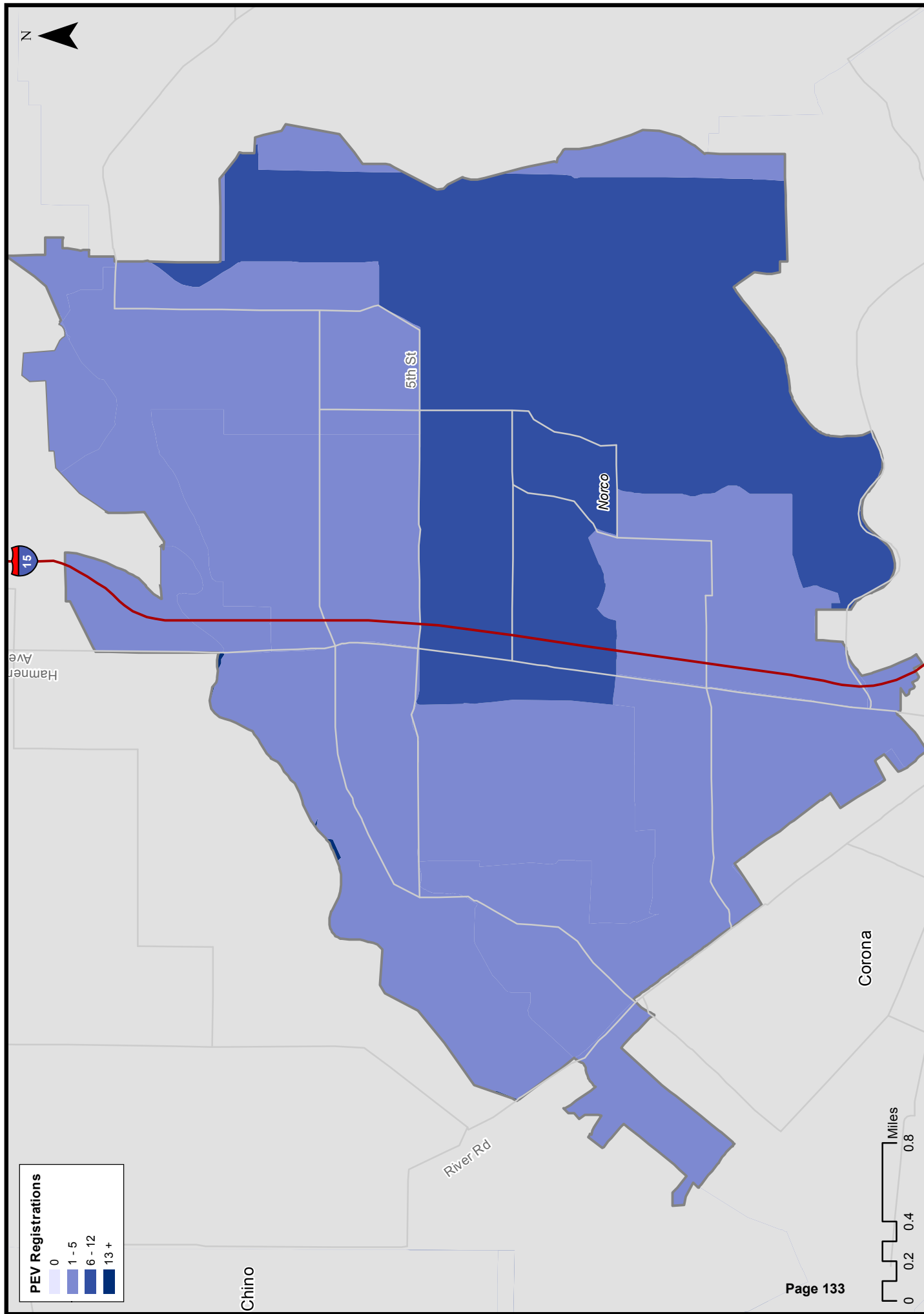
Murrieta: PEV Mid-Day Destinations and Commercial (Retail) Locations



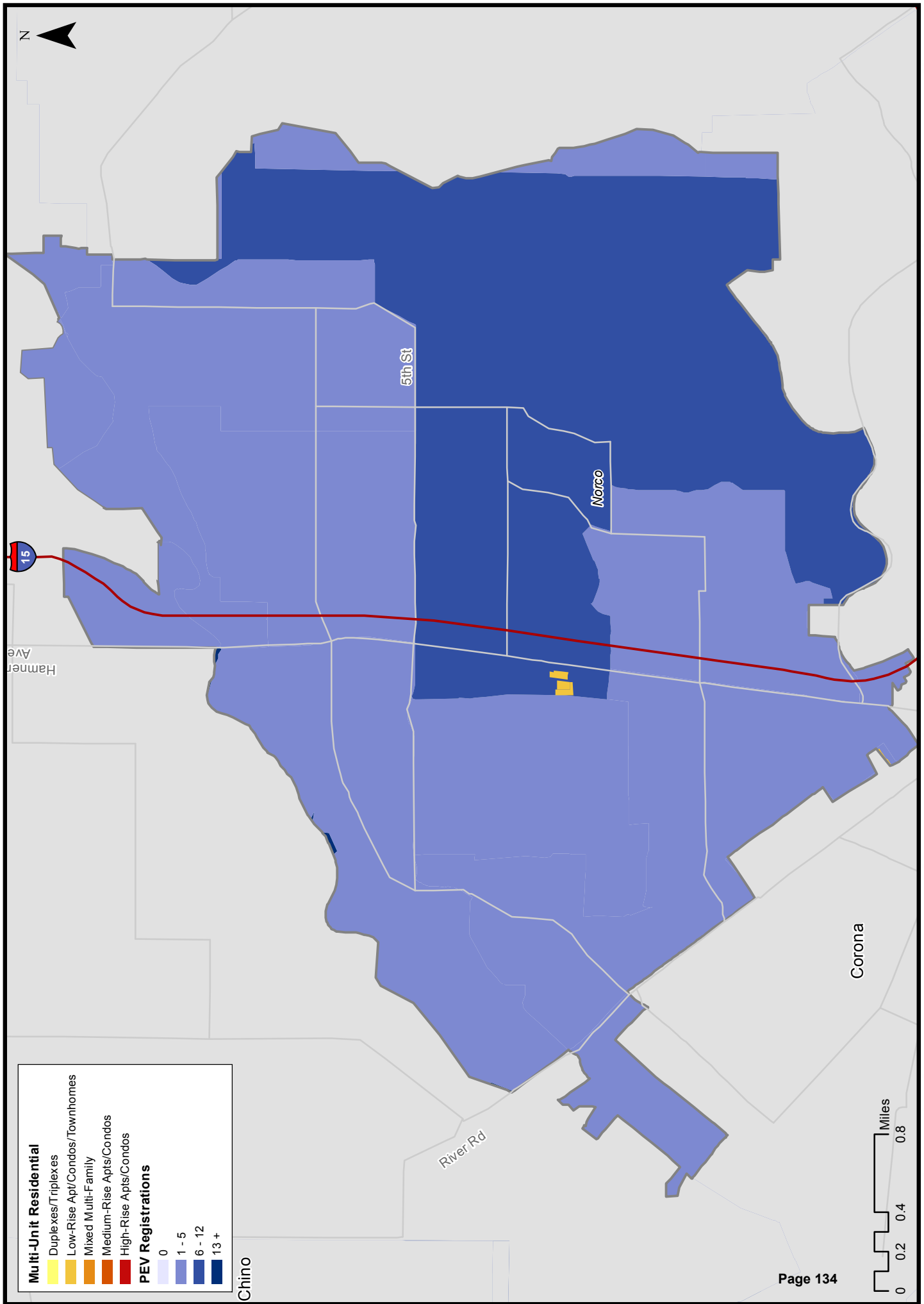
Murrieta: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Murrieta Valley Suzuki	26825 Auto Mall Pkwy	New Car Dealers	\$42,950	
Albertsons	39140 Winchester Rd	Supermarkets & Other Grocery Stores	\$37,050	
Stater Bros Markets	25050 Hancock Ave	Supermarkets & Other Grocery Stores	\$37,050	
Wal-Mart Supercenter	41200 Murrieta Hot Springs Rd	Department Stores, Except Discount	\$35,640	
Kia World	24961 Washington Ave	New Car Dealers	\$34,360	
Albertsons	41000 California Oaks Rd	Supermarkets & Other Grocery Stores	\$27,170	
Murrieta Volkswagen	41300 Date St	New Car Dealers	\$25,770	
Albertsons	28047 Scott Rd	Supermarkets & Other Grocery Stores	\$24,453	
Albertsons	41000 California Oaks Rd	Supermarkets & Other Grocery Stores	\$24,453	
Vons	38995 Sky Canyon Dr	Supermarkets & Other Grocery Stores	\$19,760	
Ralphs	23801 Washington Ave	Supermarkets & Other Grocery Stores	\$17,290	
Compusa	25125 Madison Ave	Computer & Software Stores	\$17,150	
Ralphs	40545 California Oaks Rd	Supermarkets & Other Grocery Stores	\$16,549	
Kohl's Department Store	24661 Madison Ave	Department Stores, Except Discount	\$16,200	
Ashley Furniture Homestore	25125 Madison Ave # 106	Furniture Stores	\$12,852	
Giant RV	24700 Madison Ave	Recreational Vehicle Dealers	\$12,800	
Ralphs	40473 Murrieta Hot Springs Rd	Supermarkets & Other Grocery Stores	\$11,115	
Sears Roebuck & Co	41296 Magnolia St	Department Stores, Except Discount	\$10,530	
Windshield Pros	26881 Jefferson Ave # A	Other Building Material Dealers	\$10,050	
Faith Quality Auto Body	41130 Nick Ln	Automotive Body & Interior Repair	\$7,910	
Wickes Furniture	39825 Avenida Acacias	Furniture Stores	\$7,650	
Black's Auto Repair	25760 Washington Ave	General Automotive Repair	\$7,360	
Bear Creek Golf Club	22640 Bear Creek Dr N	Golf Courses & Country Clubs	\$7,140	
Sak's Furniture Superstore	25310 Madison Ave	Furniture Stores	\$6,732	
Executive Auto Sale	25086 Jefferson Ave	Used Car Dealers	\$6,710	
Empire Shutters	26690 Madison Ave # 101	Other Building Material Dealers	\$6,450	
Inland Eye Clinic	25395 Hancock Ave # 100	Optical Goods Stores	\$5,970	
Ross Dress for Less	39845 Alta Murrieta Dr	Department Stores, Except Discount	\$5,184	
4 Tech Computer Co Inc	26692 Pierce Cir # C	Computer & Software Stores	\$5,053	
Mc Call's Country Canning Inc	41735 Cherry St	Store Retailers Not Specified Elsewhere	\$5,025	
Pets Mart	25290 Madison Ave	Pet Care, Except Veterinary, Svcs	\$5,024	
R K Sport Inc	26900 Jefferson Ave	Automotive Parts & Accessories Stores	\$4,875	
Care Rite Recreational Svc	26372 Deere Ct # H	Human Rights Organizations	\$4,680	
Cal Oaks Shell	40981 California Oaks Rd	Other Gasoline Stations	\$4,640	
Extra Mile	24625 Madison Ave	Other Gasoline Stations	\$4,640	
Mobil	39850 Los Alamos Rd	Other Gasoline Stations	\$4,640	
Big Lots	25260 Madison Ave	Discount Department Stores	\$4,590	
Walgreens	40420 Murrieta Hot Springs Rd	Pharmacies & Drug Stores	\$4,575	
Magnolia Home Theatre	25080 Madison Ave	Radio, TV & Other Electronics Stores	\$4,522	
Staples	25070 Madison Ave	Office Supplies & Stationery Stores	\$4,477	

Norco: Plug-in Electric Vehicle Registrations

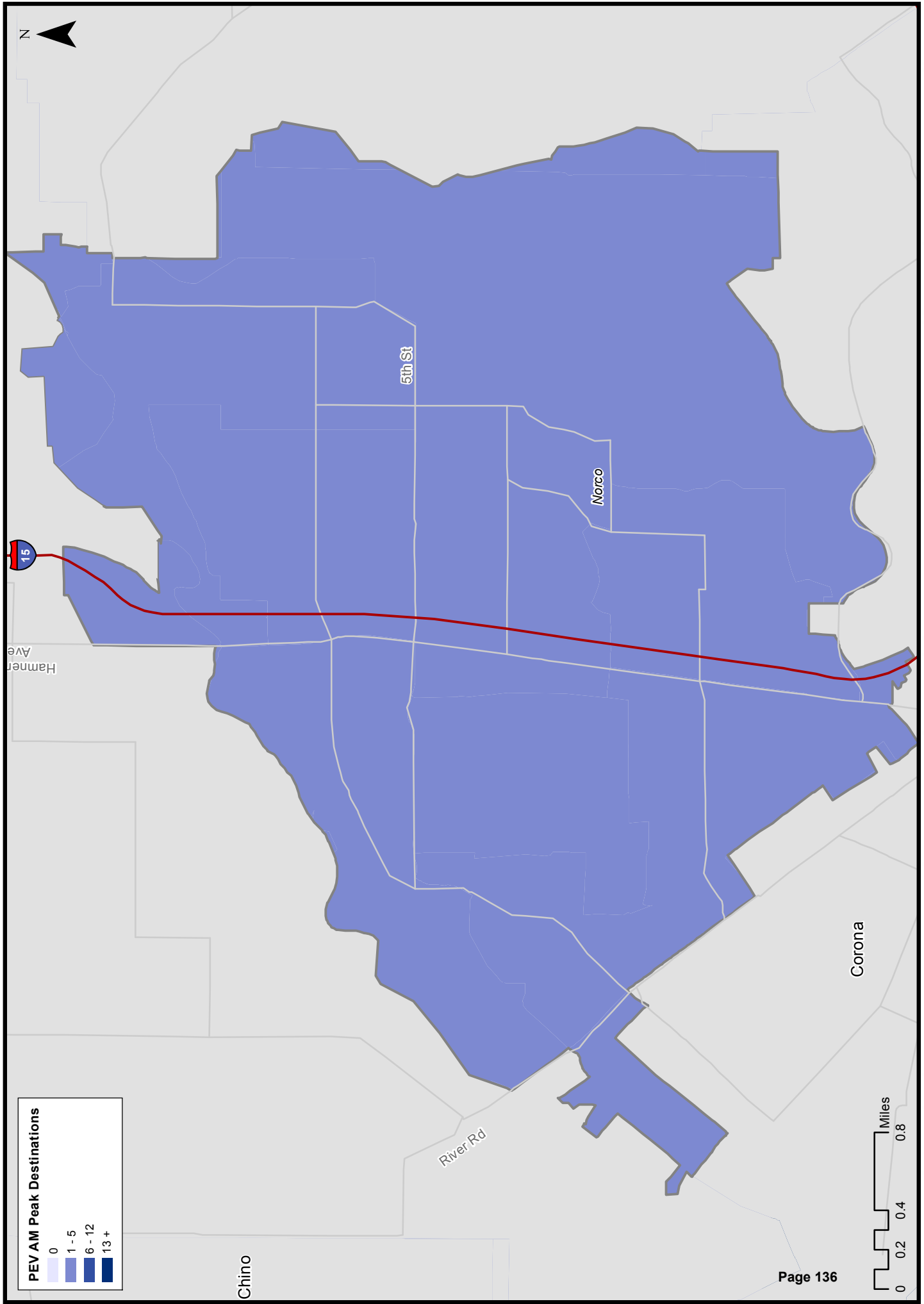


Norco: Multi-Unit Residential and PEV Registrations

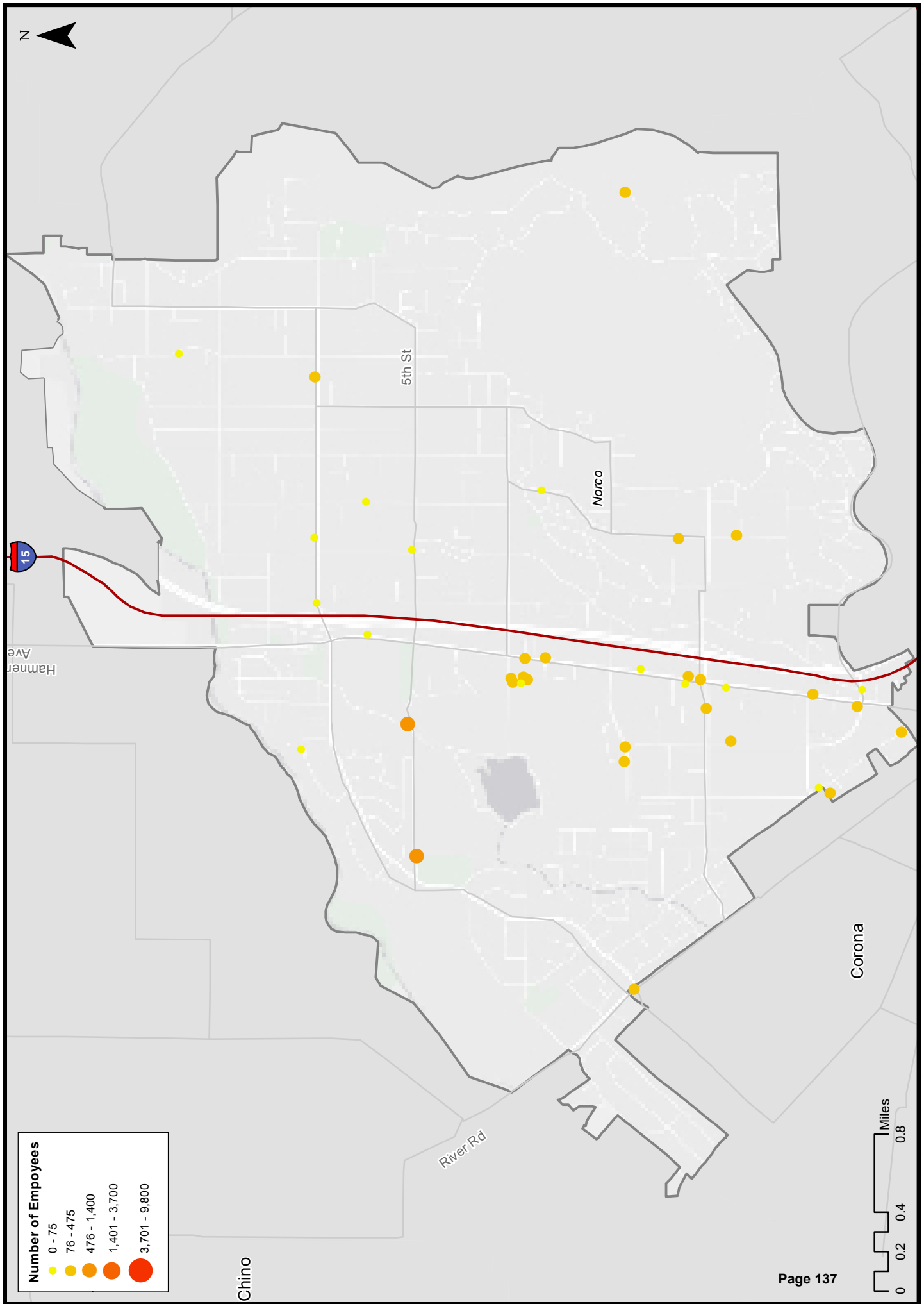


City		Norco: Top Multi-Unit Dwellings										PEV density	
Address		Number of units	Condo?	Unit value	Year built	Attached/detached garage	Carpport?			PEV density			
Norco	2660	CLARK AVE	40	N	\$67,559						M		
Norco	1396	DETROIT ST	6	N	\$8,250								
Norco	1758	HILLSIDE AVE	6	N	\$92,448								
Norco	1652	4TH ST	4	N	\$33,140						M		
Norco	1511	5TH ST	4	N	\$63,087								
Norco	529	6TH ST	4	N	\$88,345								
Norco	4272	CENTER AVE	4	N	\$33,886								
Norco	2843	VALLEY VIEW AVE	4	N	\$82,285						M		
Norco	4243	WOODWARD AVE	4	N	\$66,055								
Norco	1470	6TH ST	3	N	\$153,170								
Norco	434	7TH ST	3	N	\$54,085			A	1961				
Norco	3783	CENTER AVE	3	N	\$286,685				1957				
Norco	3307	CORONA AVE	3	N	\$201,399			A	1950		M		
Norco	3344	CORONA AVE	3	N	\$54,101				1953		M		
Norco	3780	CORONA AVE	3	Y	\$904,421			D	1948				
Norco	4301	TEMESCAL AVE	3	N	\$146,427			D	1924				
Norco	3768	VALLEY VIEW AVE	3	N	\$52,303			A	1969				
Norco	3818	VALLEY VIEW AVE	3	N	\$78,617			A	1956				
Norco	4211	WOODWARD AVE	3	N	\$47,825			A	1956				
Norco	4241	WOODWARD AVE	3	N	\$74,468				1952				
Norco	4395	WOODWARD AVE	3	N	\$58,366				1957				

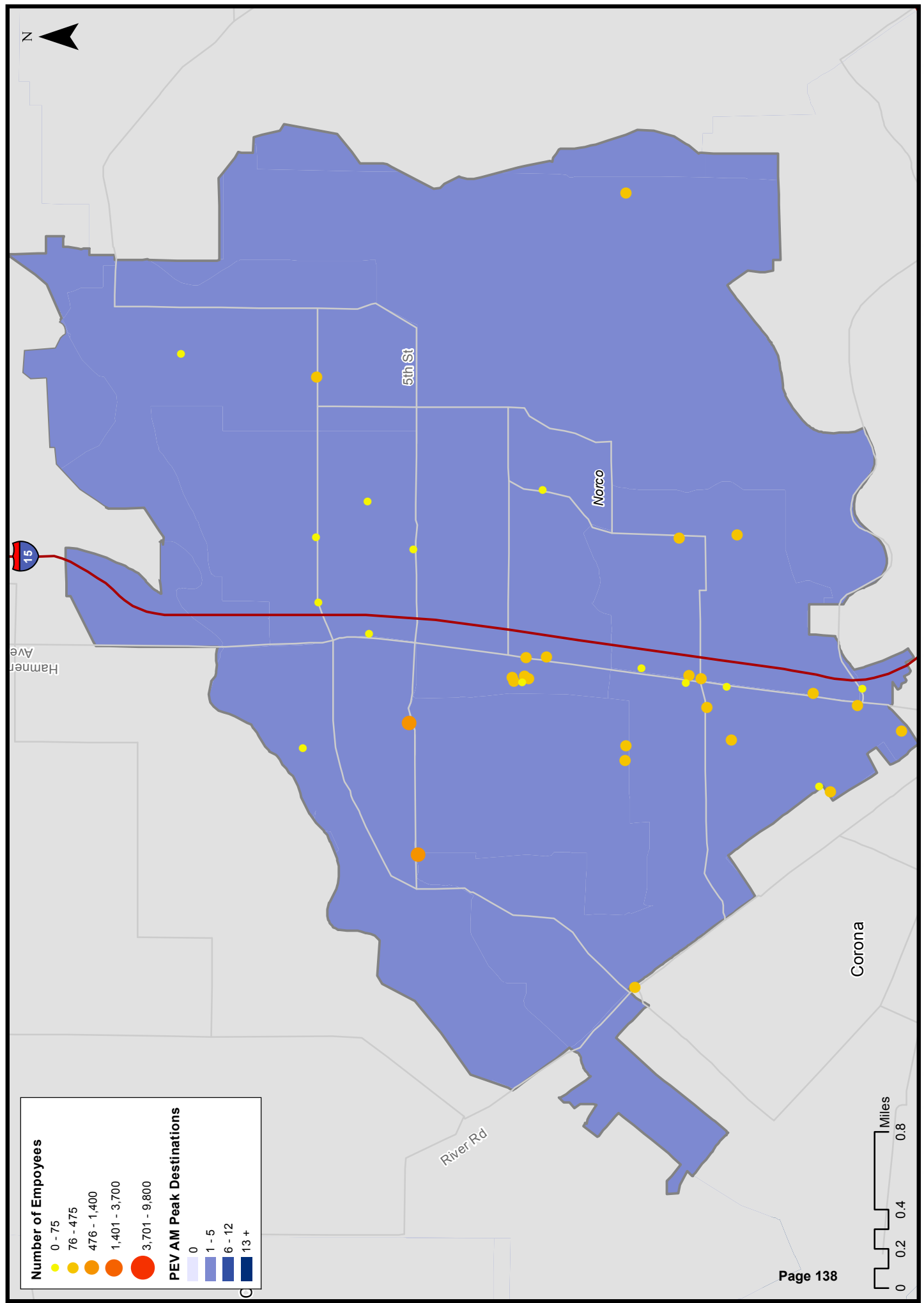
Norco: Plug-in Electric Vehicle Morning Peak Destinations



Norco: Top Workplaces by Number of Employees

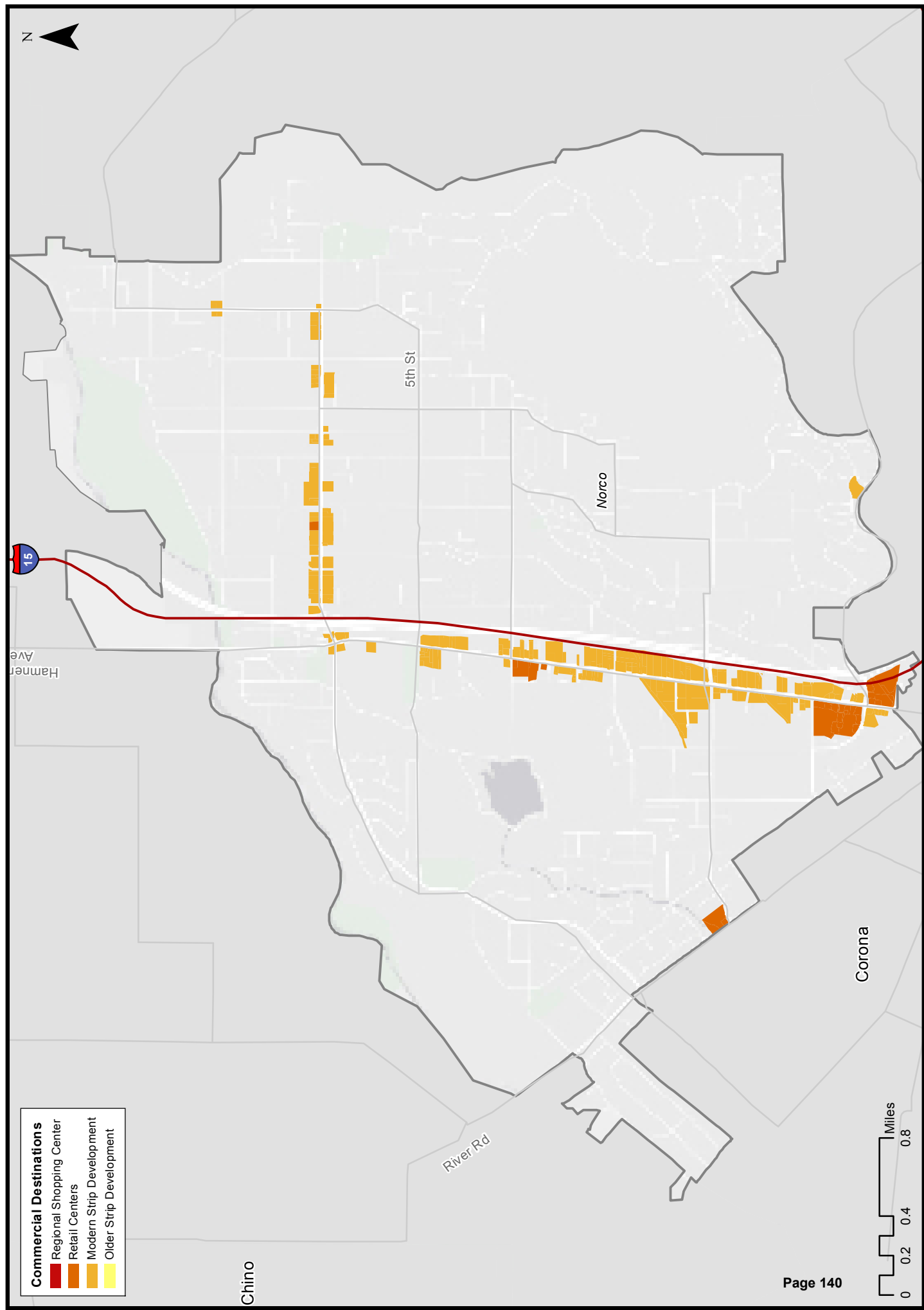


Norco: PEV Morning Peak Destinations and Top Workplaces



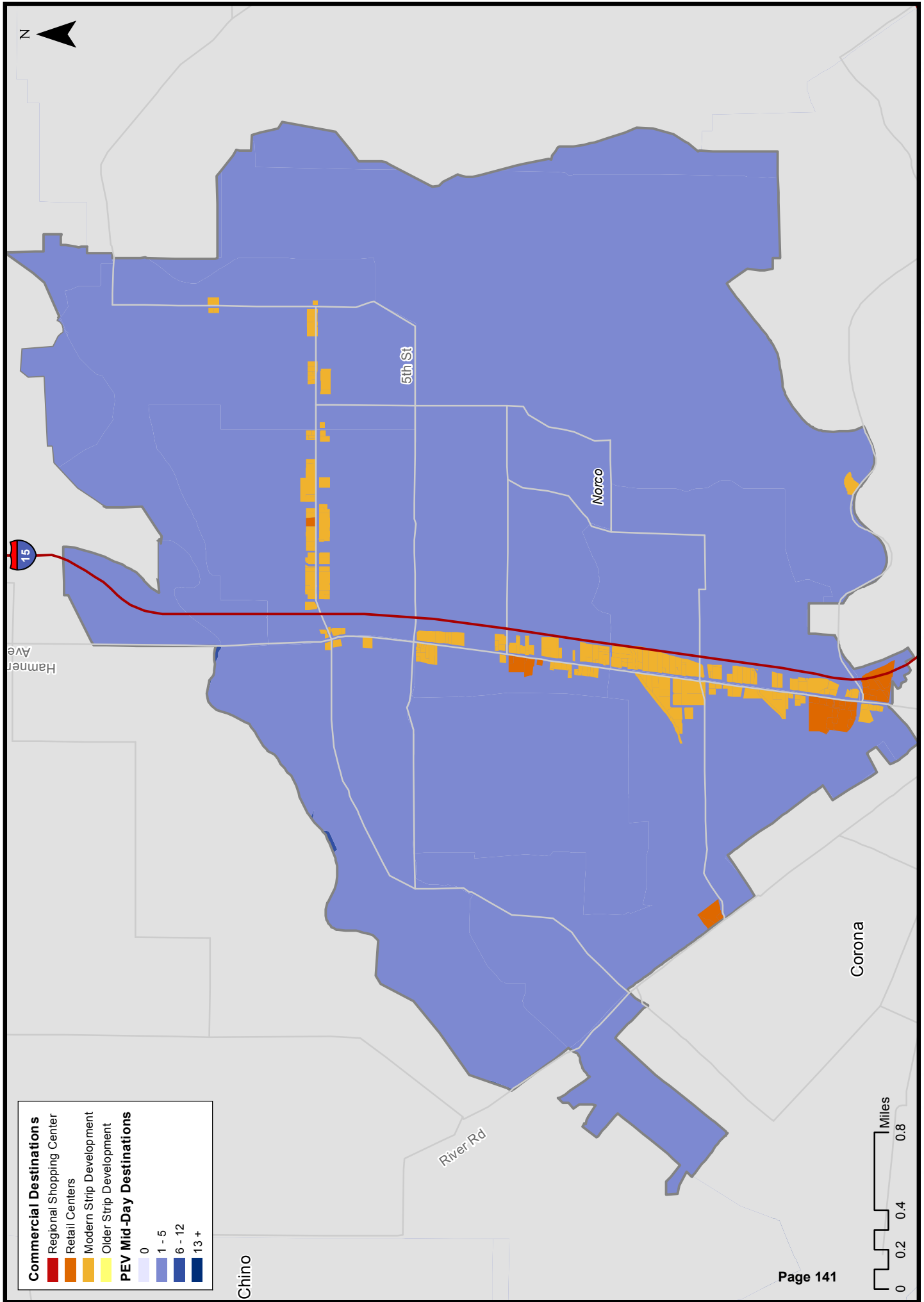
Norco: Top Workplaces						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Norco	ST CALIF DEPT CORRECTIONS,CAL REHAB CNTR	5TH & WESTERN ST	1119	N	N	
Norco	US GOVT, NAVAL SURFACE WARFARE CENTER	2300 5TH ST	874			
Norco	RCCD-NORCO COLLEGE	2001 THIRD ST	377			
Norco	Computer Sciences Corp	2727 Hammer Ave	250	Y	Y	
Norco	Norco Senior High School	2065 Temescal Ave	205	N	Y	
Norco	Corona-Norco Unified School	2820 Clark Ave	200	N	Y	
Norco	Hi Point Industries Lc	1811 Mountain Ave	200	N	N	
Norco	SE-Gi Products	1900 2nd St	151	N	N	
Norco	Kerduis Plastering Inc	575 6th St	150	N	N	
Norco	Norco City Accounts Payable	2870 Clark Ave	150	N	N	
Norco	Hemborg Ford Inc	1900 Hammer Ave	135	N	Y	
Norco	Quick Crete Products Corp	731 Parkridge Avenue	105	N	N	
Norco	Albertsons	1000 Hammer Ave	100	N	N*	
Norco	Denny's	1360 Hammer Ave	100	N	N	
Norco	Hidden Valley Golf Club	10 Clubhouse Dr	100	N	N	
Norco	Jeffrey Court Inc	620 Parkridge Ave	100	N	N	
Norco	Kennedy High School	2820 Clark Ave	100	N	Y	
Norco	Kennedy High School	1951 3rd	100	N	Y	
Norco	Norco Elementary	1700 Temescal Ave	100	N	Y	
Norco	Washington Elementary School	1220 Parkridge Ave	85	N	Y	
Norco	Qualified Mobile Inc	1720 Industrial Ave	80	N	N	
Norco	City of Norco City Hall	2870 Clark Ave	80	N	N	
Norco	Frahm Dodge	1983 Hammer Ave	80	N	Y	
Norco	Stater Bros Markets	1999 River Rd	78	N	N*	
Norco	Stater Bros Markets	2790 Hammer Ave	78	N	N*	
Norco	Norco Lions Club	1245 6th St	70	N	N	
Norco	Norco Intermediate	2711 Temescal Ave	65	N	Y	
Norco	Highland Elementary School	2301 Alhambra St	60	N	Y	
Norco	Riverview Elementary School	4600 Pedley Ave	60	N	Y	
Norco	Mc Donald's	150 Hidden Valley Pkwy	51	N	N	
Norco	Home Center Mortgage	3646 Hammer Ave	50	N	Y	
Norco	Norco City Public Works	1281 5th St	50	N	N	
Norco	Premier Plumbing Co	2259 Hammer Ave	50	N	N	
Norco	Roosevelt High School	2820 Clark Ave	50	N	Y	
Norco	Victress Bower Elementary SchI	1250 Parkridge Ave	50	N	Y	
Norco	Caliber Promotions	2000 Hammer Ave	45	N	Y	
Norco	Brunswick Classic Lanes	1800 Hammer Ave	45	N	N	
Norco	Corona Norco Unified Sch Dist	3560 Corona Ave	45	N	Y	
Norco	Mc Donald's	1511 6th St	45	N	N	

Norco: Commercial (Retail) Destinations



- Commercial Destinations**
- Regional Shopping Center
 - Retail Centers
 - Modern Strip Development
 - Older Strip Development

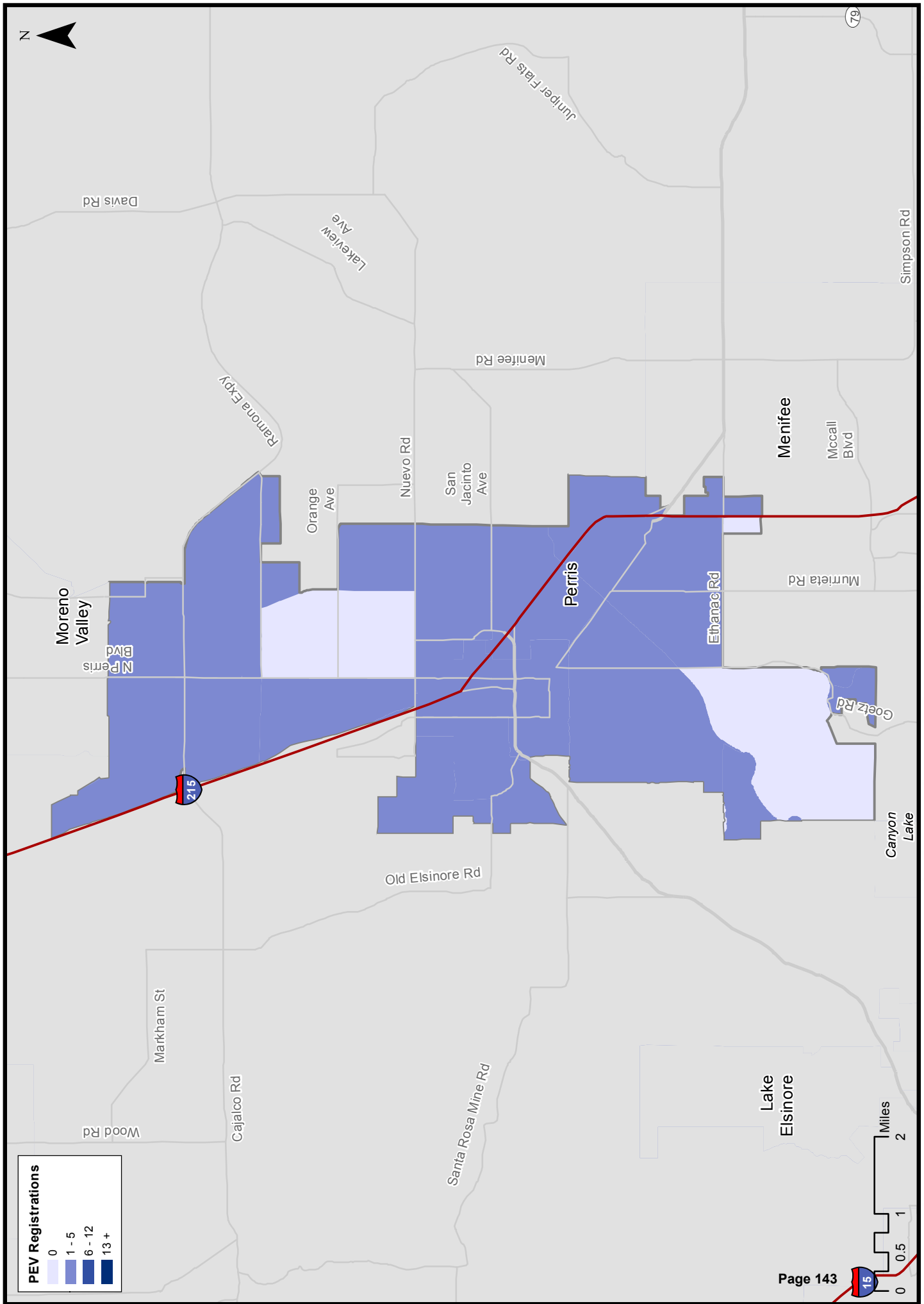
Norco: PEV Mid-Day Destinations and Commercial (Retail) Locations



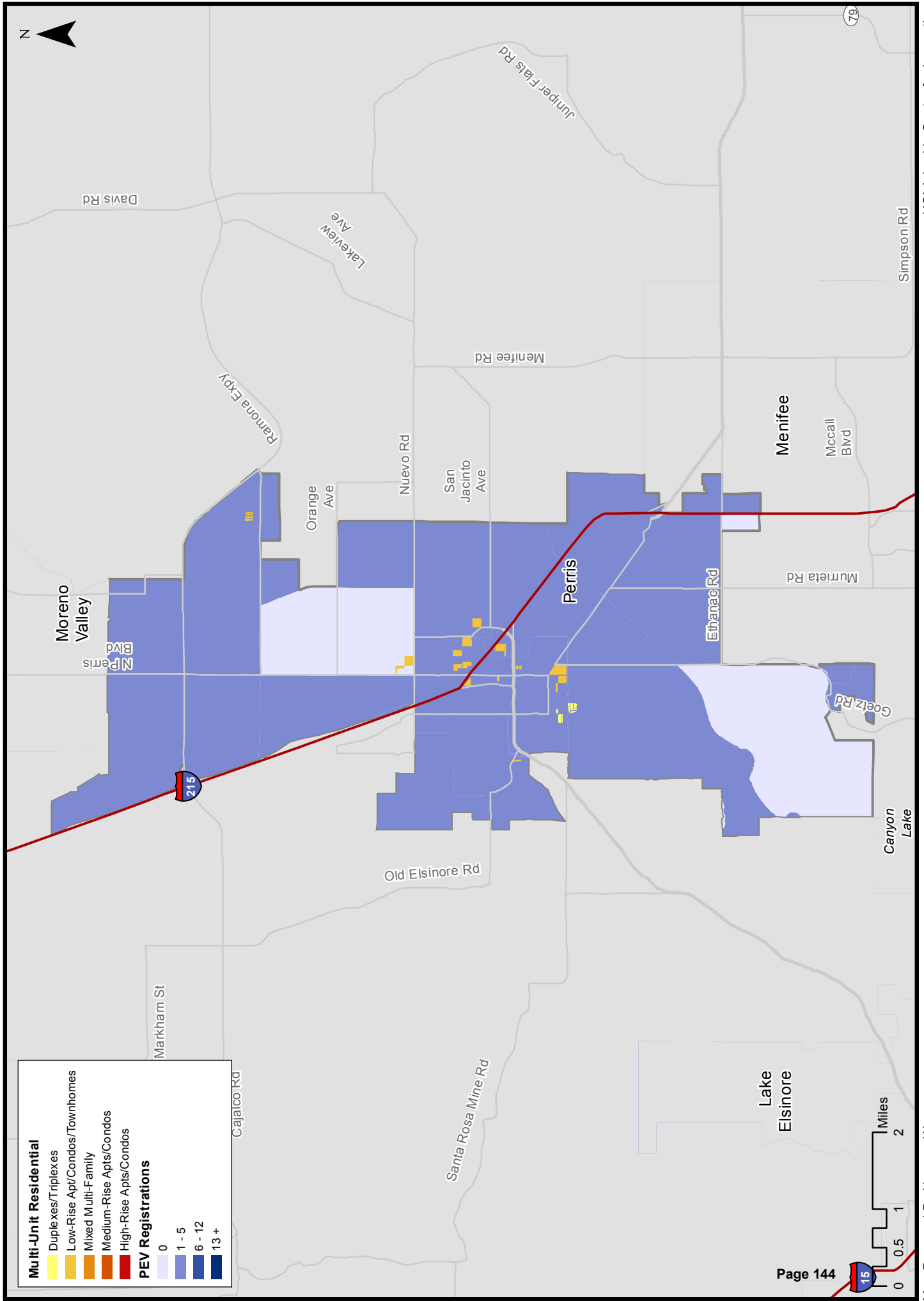
Norco: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Norco Mazda	2000 Hamner Ave	New Car Dealers	\$257,700	
Target	1290 Hamner Ave	Department Stores, Except Discount	\$73,200	
Frahm Dodge	1983 Hamner Ave	New Car Dealers	\$68,720	
Eggs West	1811 Mountain Avenue	All Other Specialty Food Stores	\$46,000	
Hemborg Ford Inc	1900 Hamner Ave	New Car Dealers	\$41,500	
Southwest Chrysler Jeep	2075 Hamner Ave	New Car Dealers	\$34,360	
Norco Mitsubishi	2100 Hamner Ave	New Car Dealers	\$25,770	
Albertsons	1000 Hamner Ave	Supermarkets & Other Grocery Stores	\$24,700	
Stater Bros Markets	1999 River Rd	Supermarkets & Other Grocery Stores	\$19,266	
Stater Bros Markets	2790 Hamner Ave	Supermarkets & Other Grocery Stores	\$19,266	
California Correct Craft	200 Hidden Valley Pkwy	Supermarkets & Other Grocery Stores	\$19,266	
Nautiques By California	200 Hidden Valley Pkwy	Boat Dealers	\$9,420	
Hidden Valley Golf Club	10 Clubhouse Dr	Boat Dealers	\$9,420	
Inland Auto Exchange	2503 Hamner Ave	Golf Courses & Country Clubs	\$8,400	
Sav-On Drugs	1100 Hamner Ave	Used Car Dealers	\$6,710	
ALL Roofing & Building	1606 Hamner Ave	Pharmacies & Drug Stores	\$5,673	
All American Trailer Inc	1374 6th St	Other Building Material Dealers	\$5,160	
Chevron	1501 6th St	All Other Motor Vehicle Dealers	\$4,774	
Qualified Mobile Inc	1720 Industrial Ave	Convenience Stores	\$4,640	
Norco Camper Co	1751 Hamner Ave	Car Washes	\$4,560	
America's Tire Co	1443 Hamner Ave	Recreational Vehicle Dealers	\$4,480	
Frahm Dodge Used Cars	2185 Hamner Ave	Automotive Parts & Accessories Stores	\$4,420	
Denny's	1360 Hamner Ave	Used Car Dealers	\$4,026	
Prestige Auto	2841 Hamner Ave	Limited-Service Restaurants	\$4,000	
Woody's Auto Ctr	2518 Hamner Ave	Used Car Dealers	\$3,355	
Norco Shell	1850 Hamner Ave	Used Car Dealers	\$3,355	
Shell	125 Hidden Valley Pkwy	Other Gasoline Stations	\$2,784	
United Oil	170 Hidden Valley Pkwy	Convenience Stores	\$2,784	
CVS Pharmacy	1101 Hidden Valley Pkwy	Other Gasoline Stations	\$2,784	
Norco Truck & Auto Barn	2549 Hamner Ave	Pharmacies & Drug Stores	\$2,745	
Unique Trucks	2333 Hamner Ave	Used Car Dealers	\$2,684	
Brunswick Classic Lanes	1800 Hamner Ave	Used Car Dealers	\$2,684	
Center Point	5th St & Western Ave	Bowling Centers	\$2,565	
Mike's 76	2807 Hamner Ave	Other Social Advocacy Organizations	\$2,320	
Parts Source	3311 Hamner Ave	Other Gasoline Stations	\$2,320	
CAR Spa	996 Mountain Ave	Automotive Parts & Accessories Stores	\$2,300	
Golden Sun Homes	2350 Hamner Ave	Car Washes	\$2,280	
Big O Tires	1787 Hamner Ave	Manufactured, Mobile, Home Dealers	\$2,255	
Norco Parks & Recreation	2870 Clark Ave	Tire Dealers	\$2,210	
Active Surf Snowboard	1295 Hamner Ave # B	Nature Parks & Other Similar Institutions	\$2,175	
		Shoe Stores	\$2,160	

Perris: Plug-in Electric Vehicle Registrations

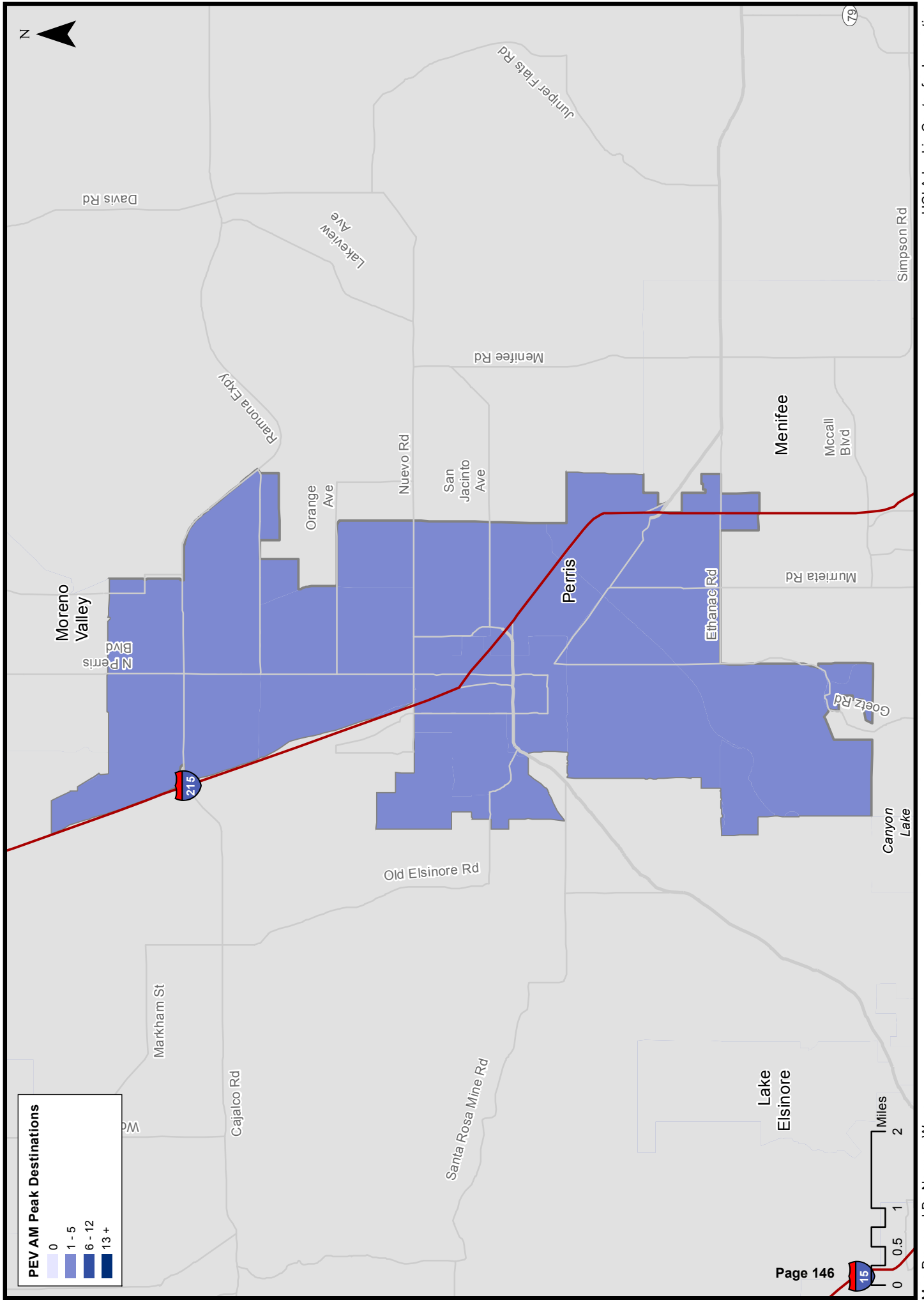


Perris: Multi-Unit Residential and PEV Registrations

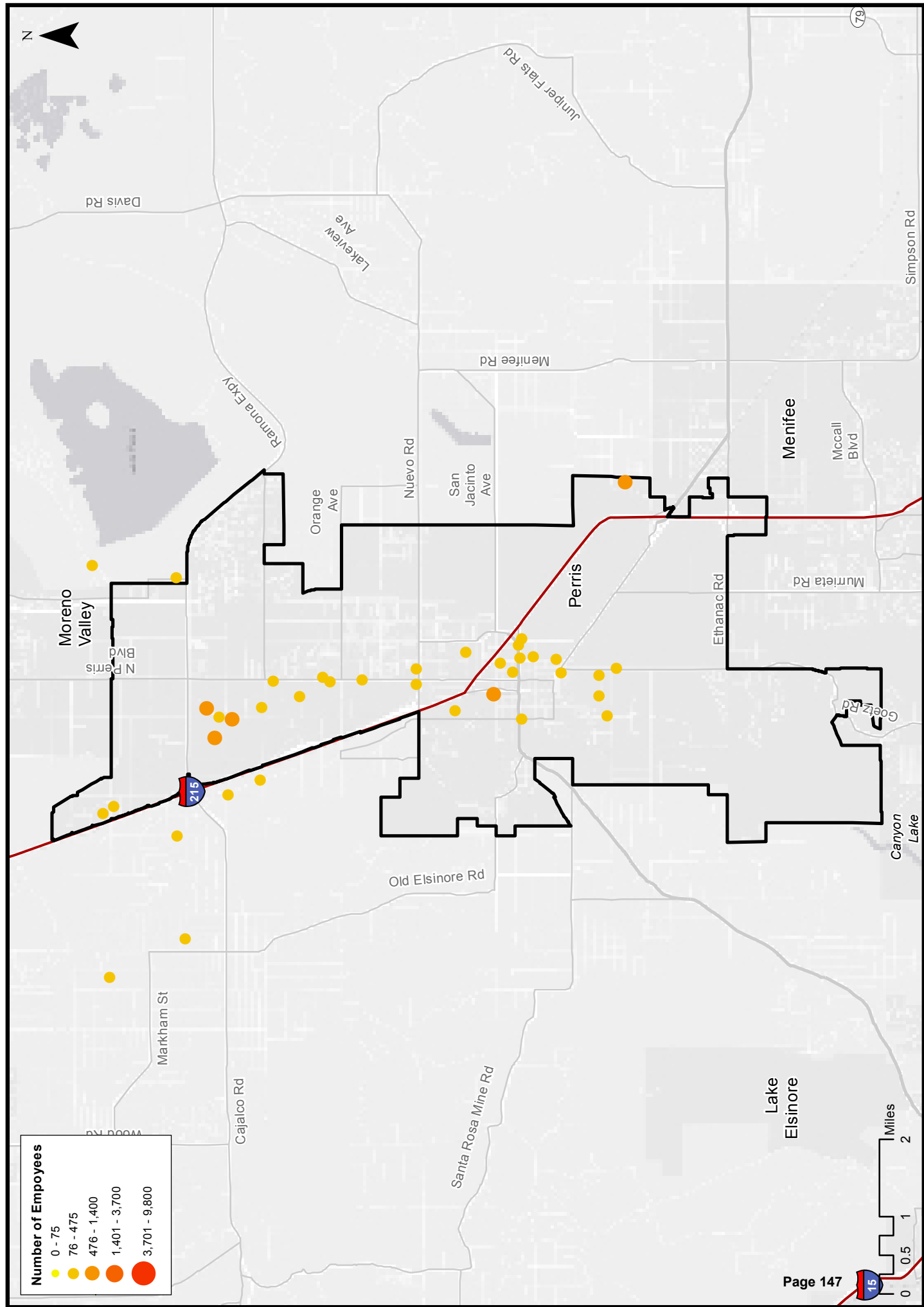


Perris: Top Multi-Unit Dwellings									
City	Address	Number of units	Condo?	Unit value	Year built	Attached/detached garage?	Carport?	PEV density	
Perris	342 DALE ST	324	N	\$38,976	2003				
Perris	290 WILSON AVE	200	N	\$71,730					
Perris	650 NUEVO RD	97	N	\$12,511					
Perris	87 JARVIS ST	70	N	\$59,910					
Perris	474 F ST	20	N	\$110,840					
Perris	30 HART LN	18	N	\$59,875					
Perris	155 10TH ST	12	N	\$57,639					
Perris	545 SIOUX DR	10	N	\$58,183					
Perris	21929 MARKHAM ST	8	N	\$73,223					
Perris	690 PERRIS BLV	5	N	\$21,823	1948	D			
Perris	265 2ND ST	4	N	\$49,393					
Perris	116 6TH ST	4	N	\$66,242					
Perris	223 6TH ST	4	N	\$47,754					
Perris	229 6TH ST	4	N	\$43,449					
Perris	370 6TH ST	4	N	\$45,440					
Perris	349 8TH ST	4	N	\$59,163					
Perris	729 A ST	4	N	\$39,744					
Perris	126 PEROU ST	4	N	\$100,983					
Perris	138 PEROU ST	4	N	\$61,019					
Perris	144 PEROU ST	4	N	\$97,156					
Perris	4439 WADE AVE	4	N	\$44,985					

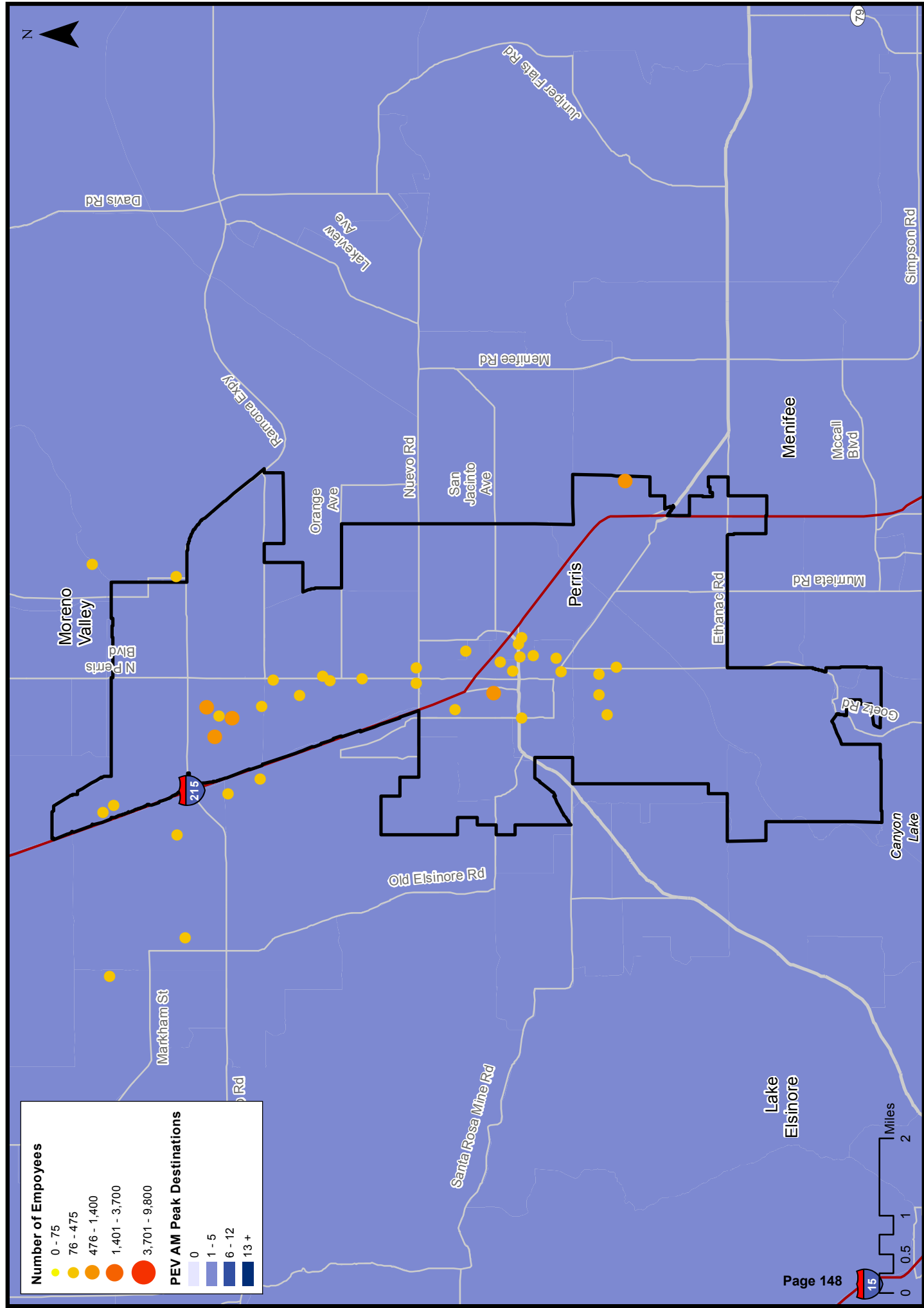
Perris: Plug-in Electric Vehicle Morning Peak Destinations



Perris: Top Workplaces by Number of Employees

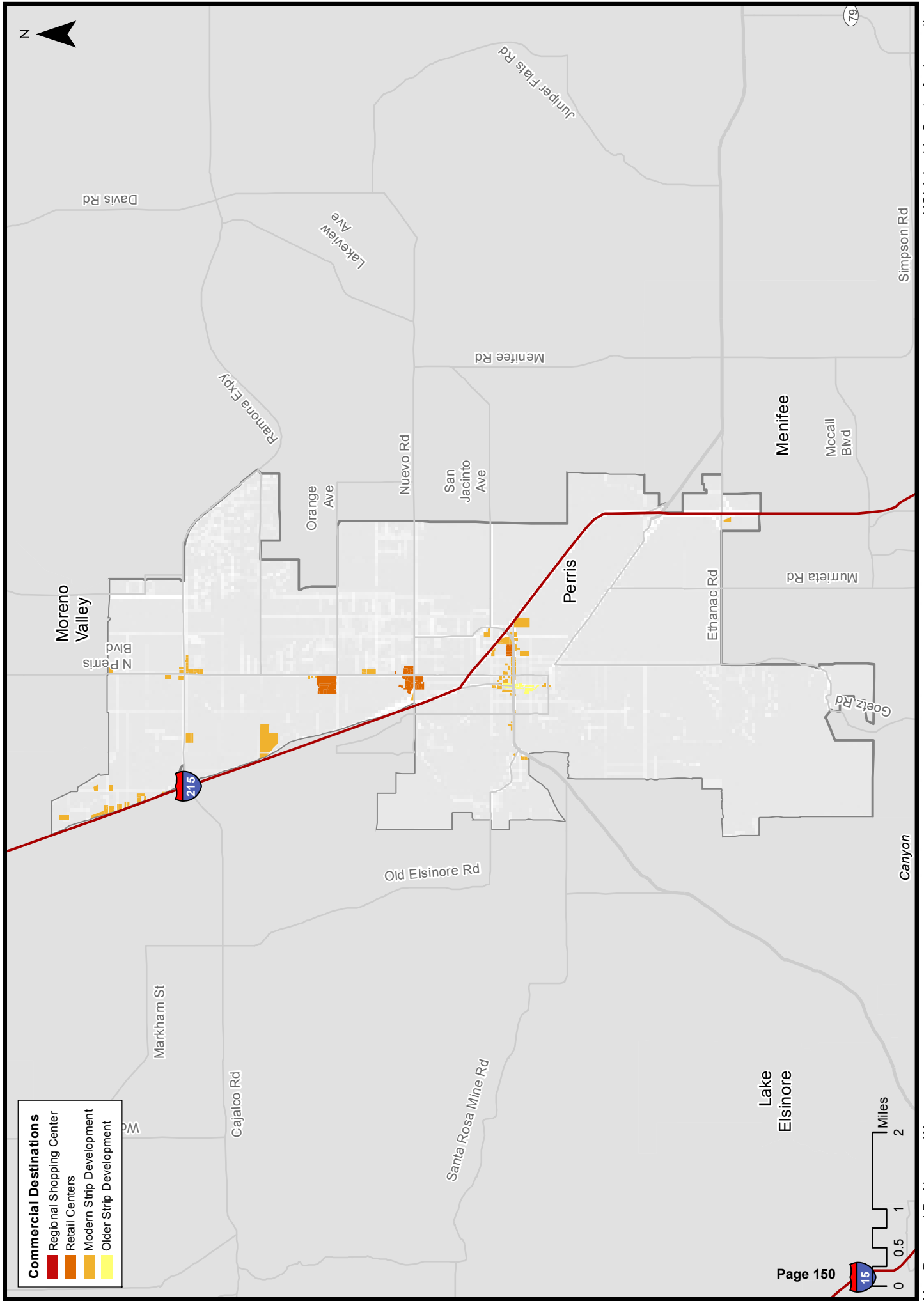


Perris: PEV Morning Peak Destinations and Top Workplaces

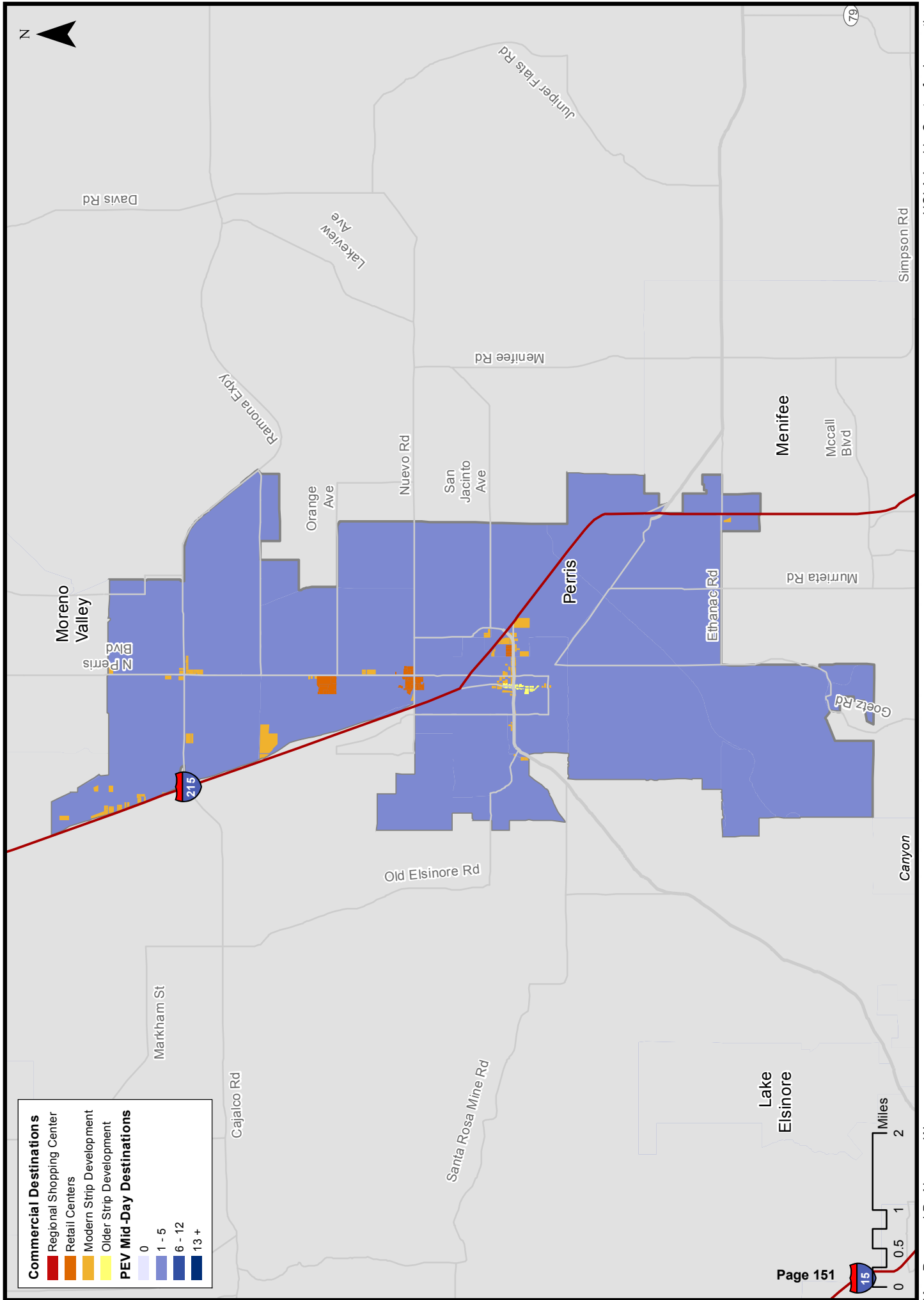


Perris: Top Workplaces						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Perris	ROSS STORES, INC.	3404 INDIAN AVE	1056	N	N*	
Perris	STARCREST PRODUCTS	19401 BRENNEN AVE	741	N	Y	
Perris	LOWES H I W OF PERRIS RDC	3984 INDIAN AVE	590	N	N*	
Perris	CO OF RIVERSIDE, PERRIS	210 W SAN JACINTO AVE	571	N	N	
Perris	EASTERN MUNICIPAL WATER DISTRICT	2270 TRUMBLE RD	550			
Perris	NFI INDUSTRIES	3700 INDIAN AVE	471			
Perris	WAL-MART	2560 W PERRIS BLVD	260	N	N*	
Perris	Golden West Homes	3100 N Perris Blvd	220	N	N	
Perris	C R & R Inc	1706 Goetz Rd	200	N	Y	
Perris	Perris Valley Skydiving	2091 Goetz Rd	200	N	N	
Perris	Vortex Whirlpool Systems	275 W Rider St	200	N	N	
Perris	Weekend Warrior Inc	1320 W Oleander Ave	200	N	N	
Perris	Perris High School	175 E Nuevo Rd	180	N	Y	
Perris	Pomeroy Corp	2020 Goetz Road	160	N	N	
Perris	Navigator Yachts	364 Malbert Rd	160	N	N	
Perris	California Truss Co Inc	23665 Cajalco Rd	150	N	Y	
Perris	Woodwork Creations	134 Malbert Rd	150	N	Y	
Perris	Stater Bros Markets	47 W Nuevo Rd	130	N	N*	
Perris	Glen View School	21200 Oleander Ave	127	N	Y	
Perris	Salvation Army	24201 Orange Ave	125	N	N	
Perris	PW Eagle Inc	23711 Rider St	120	N	N	
Perris	El Modeno Gardens Inc	15775 Lake Mathews Dr	110	N	Y	
Perris	California Parks & Recreation	17801 Lake Perris Dr	100	N	N	
Perris	Coreslab Structures	150 W Placentia Ave	100	N	N	
Perris	Ember Care Health Ctr	2225 N Perris Blvd	100	N	Y	
Perris	Pacific Hydrotech Corp	314 E 3rd St	100	N	N	
Perris	Perris Union High School Dist	515 E 7th St	100	N	Y	
Perris	Riverside County Sheriff Dept	403 E 4th St	100	N	N	
Perris	Southern California Fair	18700 Lake Perris Dr	100	N	N	
Perris	Southland Transit Inc	110 S G St	100	N	Y	
Perris	Albertsons	2560 N Perris Blvd	99	N	N*	
Perris	Pinacate Middle School	1990 S A St	97	N	Y	
Perris	Designer Sash & Door	18890 Seaton Ave	95	N	Y	
Perris	Chrysler Perris Valley Dodge	707 E 4th St # A	90	N	Y	
Perris	Laidlaw Transit Inc	300 W Metz Rd	85	N	N	
Perris	Palms Elementary School	255 E Jarvis St	85	N	Y	
Perris	Perris Elementary School	500 S A St	85	N	Y	
Perris	Quality Drive Away	1452 W Oleander Ave	85	N	N	
Perris	Imperial Steel & Tube Co Inc	1221 S G St	80	N	N	
Perris	Perris Valley Kia	707 E 4th St	80	N	N	
Perris	Tomas Rivera Middle School	21675 Martin St	80	N	Y	

Perris: Commercial (Retail) Destinations



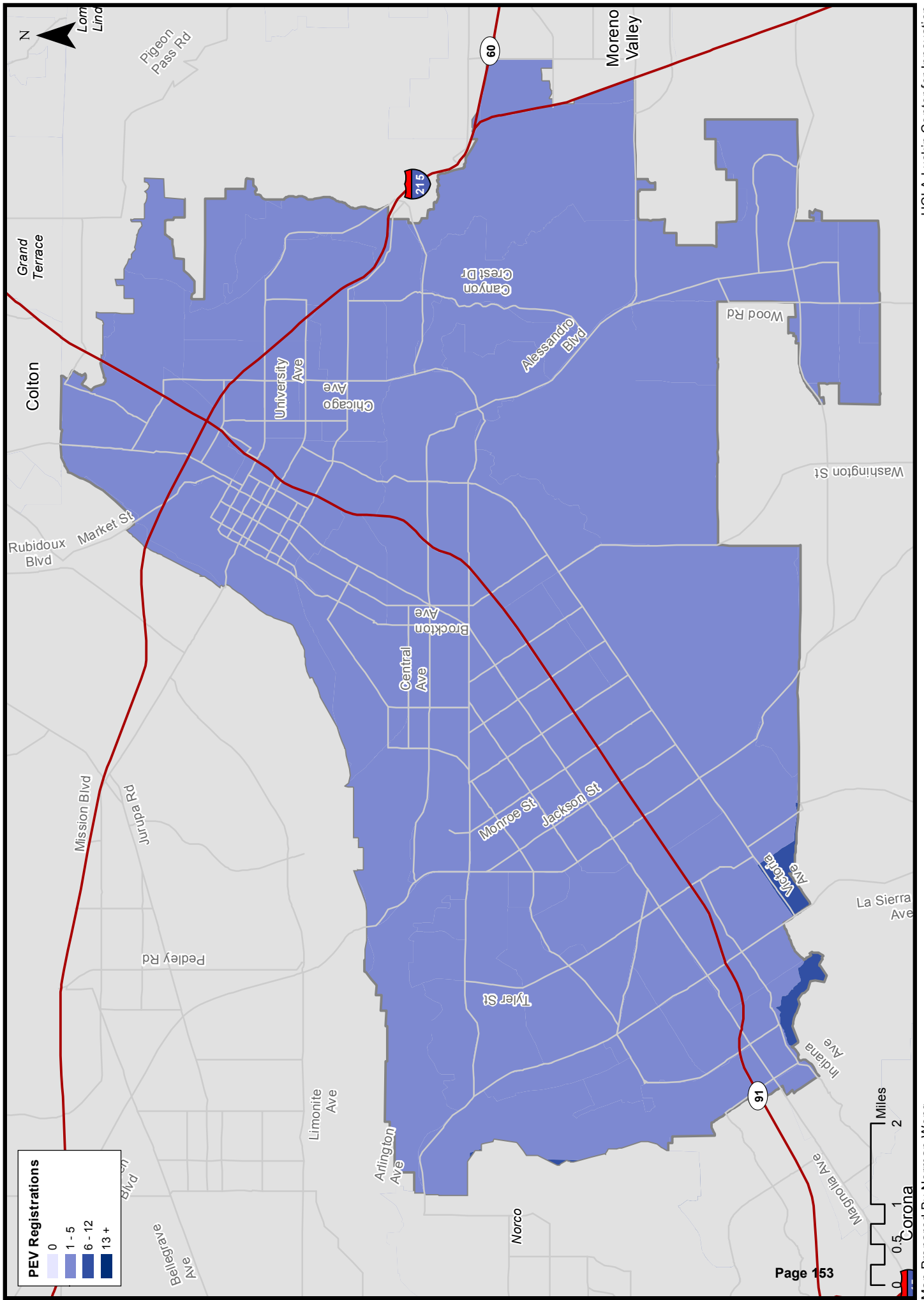
Perris: PEV Mid-Day Destinations and Commercial (Retail) Locations



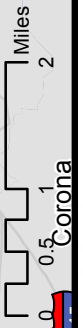
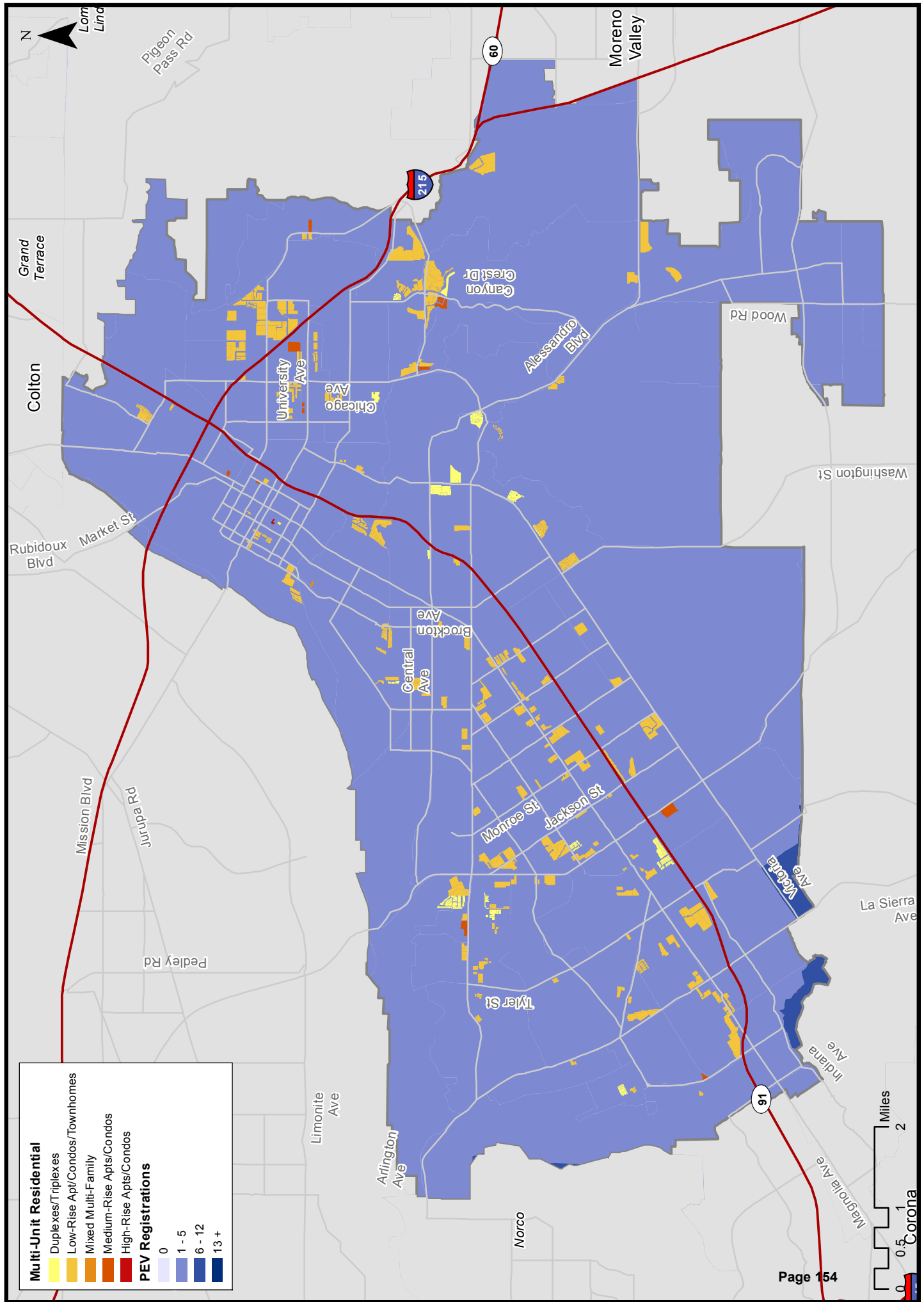
Perris: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
T Michael Intl	3660 Brennan Ave	Mail-Order Houses	\$610,500	
Starcrest Products-California Handsome Rewards Signatures	19465 Brennan Ave # 4000 3660 Brennan Ave 3660 Brennan Ave	Mail-Order Houses Mail-Order Houses Mail-Order Houses	\$590,150 \$447,700 \$447,700	
Starcrest Products-California Chrysler Perris Valley Dodge Perris Valley Kia	3660 Brennan Ave 707 E 4th St # A 707 E 4th St	Mail-Order Houses New Car Dealers New Car Dealers	\$447,700 \$77,310 \$68,720	
Woodwork Creations California Truss Co Inc	134 Malbert Rd 23665 Cajalco Rd	Furniture Stores Other Building Material Dealers	\$45,900 \$38,700	
Kia of Perris Valley Chrysler Dodge Jeep Perris Vly	711 E 4th St 711 E 4th St	New Car Dealers New Car Dealers	\$34,360 \$32,642	
Stater Bros Markets Jeep Perris Valley Dodge	47 W Nuevo Rd 711 E 4th St	Supermarkets & Other Grocery Stores New Car Dealers	\$32,110 \$30,924	
El Modeno Gardens Inc Designer Sash & Door Albertsons	15775 Lake Mathews Dr 18890 Seaton Ave 2560 N Perris Blvd	Nursery, Garden, & Farm Supply Stores Other Building Material Dealers Supermarkets & Other Grocery Stores	\$30,030 \$24,510 \$24,453	
Westcoast Motorsports Skylyn	3845 N Perris Blvd 224 Malbert Rd	Boat Dealers Boat Dealers	\$16,940 \$16,485	
Food 4 Less Inland Auto Boat & RV Sales Quality Drive Away	1688 N Perris Blvd # D 681 E San Jacinto Ave 1452 W Oleander Ave	Supermarkets & Other Grocery Stores Used Car Dealers All Other Automotive Repair & Maintenance	\$14,820 \$13,420 \$11,985	
California Parks & Recreation Southern California Fair Commander Boats	17801 Lake Perris Dr 18700 Lake Perris Dr 2282 Goetz Rd	All Other Traveler Accommodation Food Svc Contrs Boat Dealers	\$10,700 \$7,600 \$7,065	
CAR Enterprises Inc New Life Growers Inc Calaveras Standard Materials	4039 N Perris Blvd 21031 Old Elsinore Rd 1980 Goetz Rd	Convenience Stores Nursery, Garden, & Farm Supply Stores Other Building Material Dealers	\$6,960 \$4,914 \$4,644	
Rite Aid Ultraflight Perris Valley Arprt TNT Construction Svc	1688 N Perris Blvd 2091 Goetz Rd 4172 Brennan Ave	Food, Health, Supplement Stores All Other Motor Vehicle Dealers Manufactured, Mobile, Home Dealers	\$4,575 \$4,340 \$4,059	
Joe's 76 & Circle K Radio Shack	19248 Harvill Ave 1688 N Perris Blvd # F1	Other Gasoline Stations Radio, TV & Other Electronics Stores Automotive Parts & Accessories Stores	\$3,712 \$3,553 \$3,510	
Autozone Ace Hardware	401 E 4th St 180 W 4th St	Other Building Material Dealers Other Gasoline Stations	\$3,363 \$3,248	
Perris 76 Pacific Valley Homes	33 W Nuevo Rd 3100 N Perris Blvd	Other Gasoline Stations Manufactured, Mobile, Home Dealers	\$3,157 \$2,928	
Perris Hills Pharmacy Kragen Auto Parts	540 W 4th St # 1 119 W Nuevo Rd	Pharmacies & Drug Stores Automotive Parts & Accessories Stores	\$2,925 \$2,800	
Freeway Building Materials Framco Home Ctr	1569 Nandina Ave 180 W 4th St	Home Centers Hardware Stores	\$2,800 \$2,655	

Riverside: Plug-in Electric Vehicle Registrations

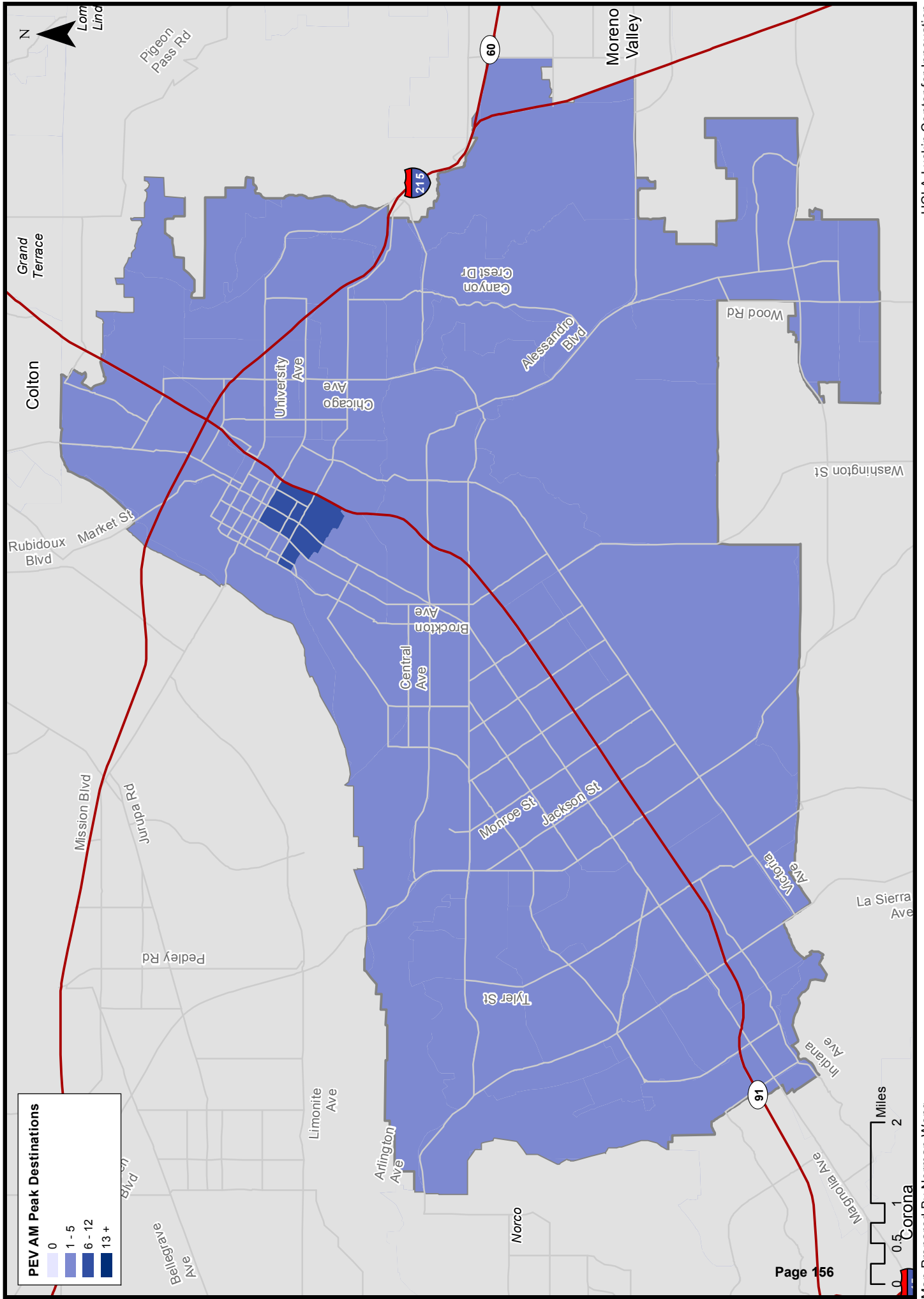


Riverside: Multi-Unit Residential and PEV Registrations

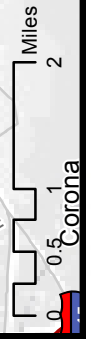
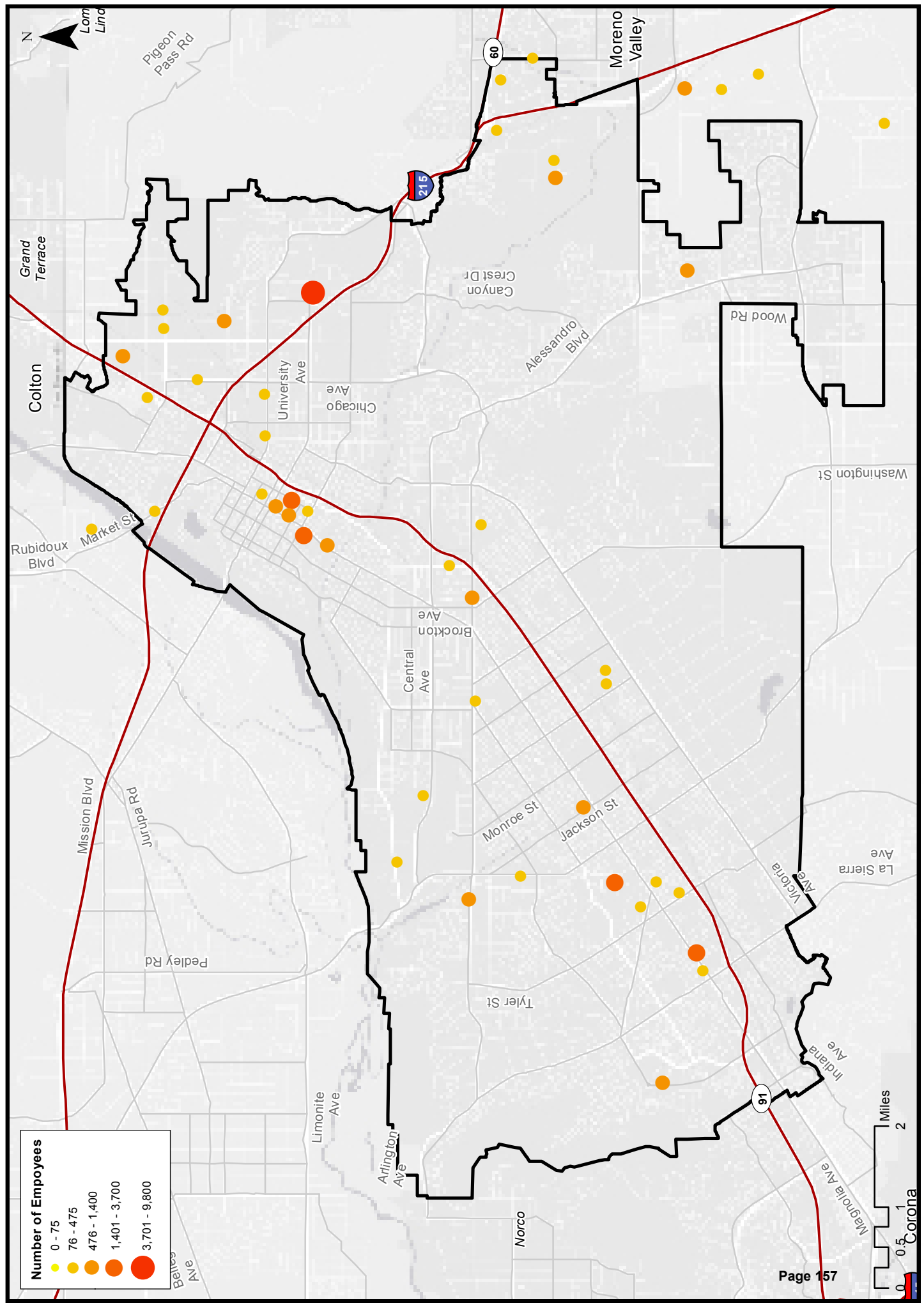


Riverside: Top Multi-Unit Dwellings						
City	Address	Number of units	Condo?	Unit value	Year built	PEV density
Riverside	3887 PIERCE ST	440	N	\$109,392		
Riverside	7450 NORTHROP DR	432	N	\$200,584		
Riverside	3697 MONROE ST	304	N	\$110,891		
Riverside	5880 FAIR ISLE DR	288	N	\$137,037		
Riverside	11413 MAGNOLIA AVE	274	N	\$109,879		
Riverside	5700 LOCHMOOR DR	272	N	\$143,137		
Riverside	2442 IOWA AVE	264	N	\$98,497		
Riverside	3100 VAN BUREN BLV	256	N	\$152,606		
Riverside	2801 ADAMS ST	240	N	\$69,392		
Riverside	5925 SYCAMORE CANYON BLV	240	N	\$142,161		
Riverside	4620 VAN BUREN BLV	224	N	\$64,554		
Riverside	4010 MADISON ST	216	N	\$151,950		
Riverside	3549 IOWA AVE	212	N	\$201,788		
Riverside	7871 S MISSION GROVE PKY	208	N	\$155,060		
Riverside	5059 QUAIL RUN RD	208	N	\$143,364		
Riverside	5100 QUAIL RUN RD	208	N	\$160,898		
Riverside	5590 42ND ST	200	N	\$52,902		
Riverside	3941 POLK ST	197	N	\$59,658		
Riverside	1245 LINDEN ST	192	N	\$31,824		
Riverside	375 CENTRAL AVE	186	Y	\$143,262	1997	
Riverside	3535 BANBURY DR	184	Y	\$153,334	1984	

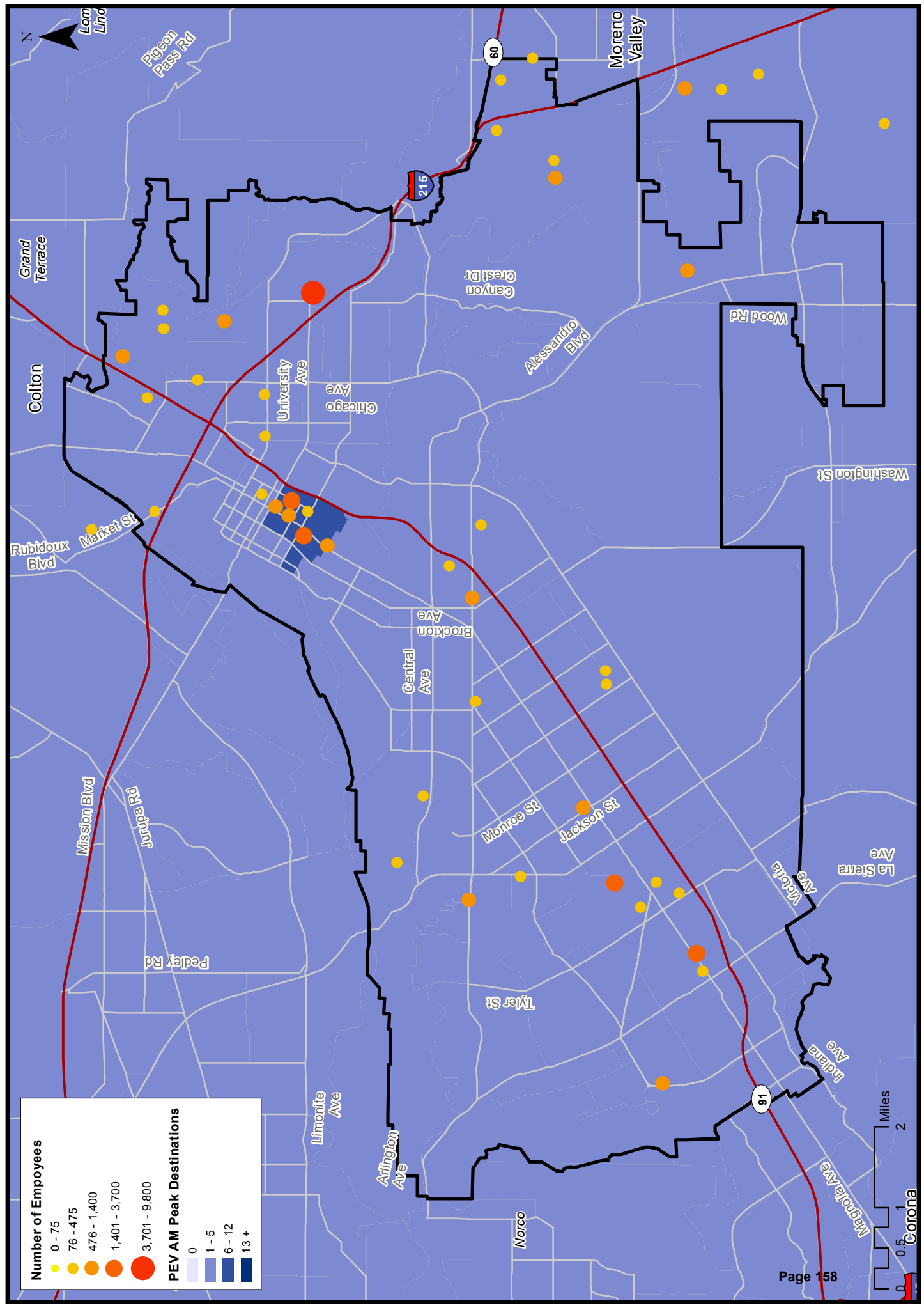
Riverside: Plug-in Electric Vehicle Morning Peak Destinations



Riverside: Top Workplaces by Number of Employees



Riverside: PEV Morning Peak Destinations and Top Workplaces



Riverside: Top Workplaces						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Riverside	UNIV CAL, RIVERSIDE	900 UNIVERSITY AVE	8954	N	Y	
Riverside	COUNTY OF RIVERSIDE (RV0905, RV1005)	4080 LEMON ST	3222	N	N	M
Riverside	KAISER FOUNDATION HOSPITAL	10800 MAGNOLIA AVE	2937	N	Y	
Riverside	RIVERSIDE COMMUNITY HOSPITAL	4445 MAGNOLIA AVE	1865	N	N	M
Riverside	RIVERSIDE CNTY - COUNTY FARM SITE	4060 COUNTY FARM RD	1812	N	N	
Riverside	RALPHS GROCERY CO	1500 EASTRIDGE AVE.	1339	N	N*	
Riverside	RIVERSIDE COMMUNITY COLLEGE DIST	4800 MAGNOLIA AVE	1149	N	Y	
Riverside	PARKVIEW COMM HOSP MEDICAL CENTER	3865 JACKSON ST	986	N	Y	
Riverside	COUNTY OF RIVERSIDE - SPRUCE ST	1111 SPRUCE ST	947	N	Y	
Riverside	LA SIERRA UNIVERSITY	4700 PIERCE ST	860	N	Y	
Riverside	RIVERSIDE CITY, CITY HALL	3900 MAIN ST.	739	N	N	M
Riverside	NATIONAL RAILROAD PASSENGER CORP-AMTRAK	7920 LINDBERGH DR	614			
Riverside	FRESH & EASY NEIGHBORHOOD MARKET, INC.	14800-50 INNOVATION DR	609			
Riverside	ROHR, INC.	8200 ARLINGTON AVE	608	N	N	
Riverside	K & N ENGINEERING INC	1455 CITRUS AVE	569	N	Y	
Riverside	COUNTY OF RIVERSIDE (RV0901)	4050 MAIN ST	543	N	N	M
Riverside	RIVERSIDE MEDICAL CLINIC	3660 ARLINGTON AVE	542	N	Y	
Riverside	PRESS-ENTERPRISE	3512 FOURTEENTH ST	461	N*	Y*	M
Riverside	MISSION INN	3649 MISSION INN AVE.	420	N	N	
Riverside	FRESH & EASY NEIGHBORHOOD MARKET	1730 EASTRIDGE AVE	393	N	Y	
Riverside	STATE COMPENSATION INSURANCE FUND	6301 DAY ST	379	N	Y	
Riverside	AIR FORCE VILLAGE WEST INC	17050 ARNOLD DR	367	N	Y	
Riverside	RIV CO FLOOD CONTROL DIST	1995 MARKET ST	366	N	N	
Riverside	RIVERSIDE CITY, GENERAL SERVICE DEPT.	8095 LINCOLN AVE	348	N	N	
Riverside	CAL ST, EDUCATION DEPT, SCH FOR THE DEAF	3044 HORACE ST	336	N	Y	
Riverside	WAL-MART STORES INC	5200 VAN BUREN BLVD	335	N	N*	
Riverside	CO OF RIVERSIDE, RIVERCREST	6147 RIVERCREST STE B, 1ST FLR	332			
Riverside	RIVERSIDE AUTO AUCTION	6446-C FREMONT AVE	329	N	Y	
Riverside	FRESH & EASY NEIGHBORHOOD MARKET, INC.	15555 MERIDIAN PKY	320	N	N*	
Riverside	MC LANE FOOD SERVICE, INC.	14813 MERIDIAN PKY	295			
Riverside	NORDSTROM 325	3601 TYLER	294	N	N*	
Riverside	CASTLE & COOKE COLD STORAGE	1001 COLUMBIA AVE	293			
Riverside	DEFENSE MEDIA CENTER	23755 Z ST	289			
Riverside	RIVERSIDE TRANSIT AGENCY	1825 THIRD ST	277	N	N	
Riverside	COUNTY OF RIVERSIDE	11060 MAGNOLIA AVE	250	N	N	
Riverside	WAL MART #1899	2663 CANYON SPRINGS	250	N	N*	
Riverside	CASTLE AND COOKE COLD STORAGE	2356 FLEETWOOD DR	243	N	N	
Riverside	Caddock Electronics	1717 Chicago Ave	250	Y	N	
Riverside	Bourns Inc	1200 Columbia Ave	250	N	Y	
Riverside	American Medical Response	1044 E La Cadena Dr	250	N	N	
Riverside	220 Laboratories Inc	2375 3rd St	250	N	N	
Riverside	J C Penney Co	3605 Galleria at Tyler	250	N	N*	
Riverside	Public Social Svc Dept	4060 County Circle Dr	250	N	N	
Riverside	Quality Supply Co	3524 Carlsbad Way	250	N	Y	

Riverside
Riverside
Riverside

Riverside Police Dept.-Patrol
Sears Roebuck & Co
Vertis

8181 Lincoln Ave
5261 Arlington Ave
7190 Jurupa Ave

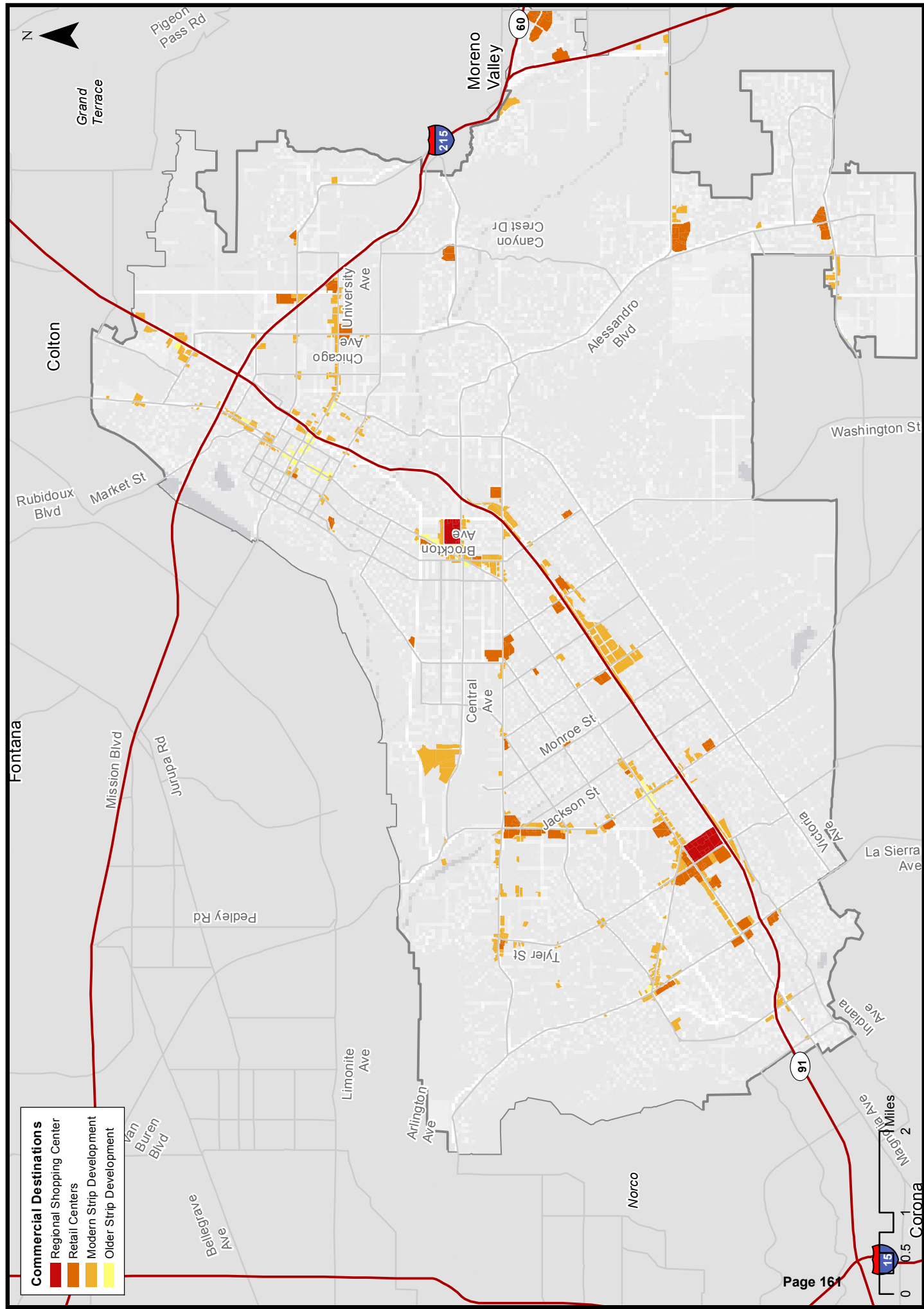
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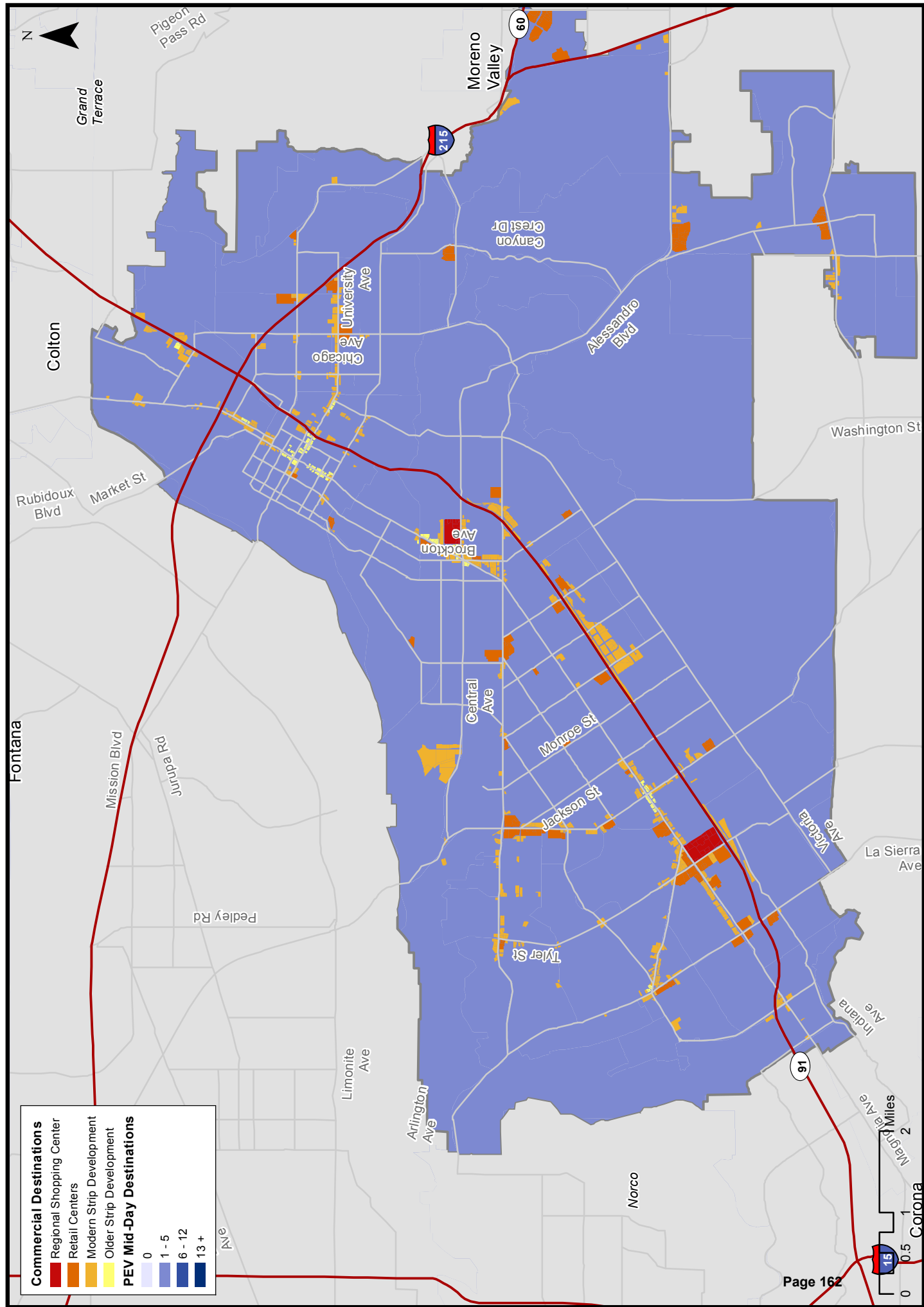
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Riverside: PEV Mid-Day Destinations and Commercial (Retail) Locations



Riverside: PEV Mid-Day Destinations and Commercial (Retail) Locations

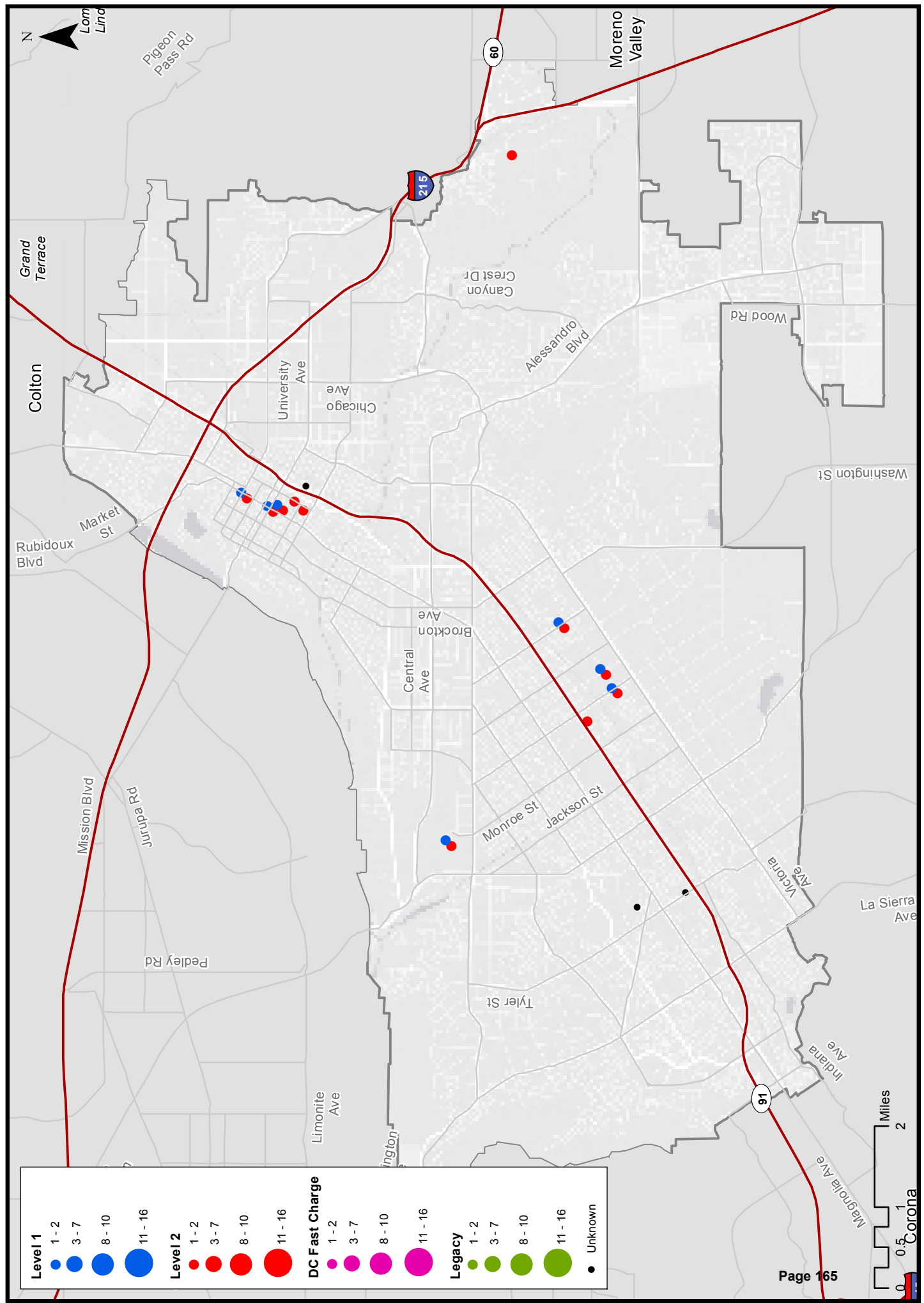


Riverside: Top Retailers

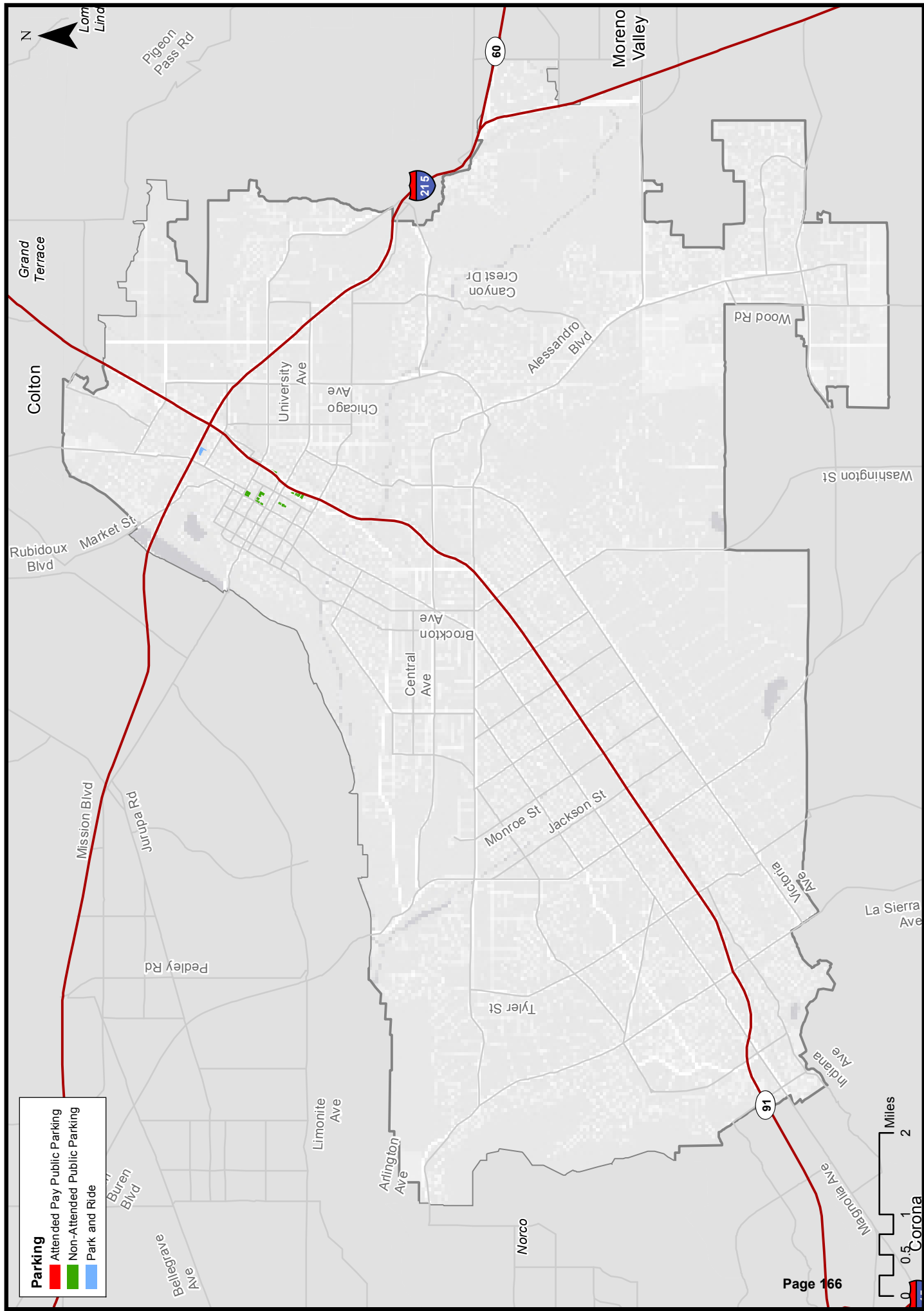
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Moss Brothers Dodge	8151 Auto Dr	New Car Dealers	\$257,700	
Riverside Hyundai	8330 Indiana Ave	New Car Dealers	\$257,700	
Fritts Ford	8000 Auto Dr	New Car Dealers	\$178,672	
BMW Of Riverside	3060 Adams St	New Car Dealers	\$133,145	
Dutton Motor Co	8201 Auto Dr	New Car Dealers	\$128,850	
K & N Engineering Inc	1455 Citrus St	Automotive Parts & Accessories Stores	\$97,500	
Ra'Gen Inc	16833 Krameria Ave	All Other Motor Vehicle Dealers	\$86,800	
GMC Trucks Sales & Svc	8201 Auto Dr	New Car Dealers	\$77,310	
Alvarez Jaguar Lincoln Mercury	8051 Auto Dr	New Car Dealers	\$68,720	
Acura of Riverside	8001 Auto Dr	New Car Dealers	\$64,425	
Advantage Performance Distr	930 Columbia Ave	Motorcycle Dealers	\$62,436	
Nordstrom	3601 Galleria at Tyler	Department Stores, Except Discount	\$58,320	
Toyota of Riverside	7870 Indiana Ave	New Car Dealers	\$56,700	
Wal-Mart Supercenter	2663 Canyon Springs Pkwy	Department Stores, Except Discount	\$56,700	
Dixieline	12212 Holly St	Home Centers	\$52,500	
Riverside Infiniti	3040 Adams St	New Car Dealers	\$51,540	
Raceway Ford	5900 Sycamore Canyon Blvd	New Car Dealers	\$50,000	
Lexus of Riverside	3150 Adams St	New Car Dealers	\$42,950	
Raceway Nissan	6030 Sycamore Canyon Blvd	New Car Dealers	\$42,950	
Riverside Chrysler Jeep	7979 Auto Dr	New Car Dealers	\$42,950	
Community Medical Group	4444 Magnolia Ave	Diet & Weight Reducing Centers	\$42,700	
Walter's Auto Sales & Svc	3210 Adams St	New Car Dealers	\$41,200	
J C Penney Co	3605 Galleria at Tyler	Department Stores, Except Discount	\$40,500	
Sears Roebuck & Co	5261 Arlington Ave	Department Stores, Except Discount	\$40,500	
Best Buy	3900 Tyler St	Automotive Parts & Accessories Stores	\$40,375	
Best Buy	2852 Canyon Springs Pkwy	Radio, TV & Other Electronics Stores	\$40,375	
Saturn Riverside	8101 Auto Dr	New Car Dealers	\$38,655	
El Tapatio Market	5800 Van Buren Blvd	Supermarkets & Other Grocery Stores	\$37,050	
Land Rover Riverside	3070 Adams St	New Car Dealers	\$34,360	
Riverside Mazda	8330 Indiana Ave	New Car Dealers	\$34,360	
Riverside Nissan	8330 Indiana Ave	New Car Dealers	\$34,360	
Riverside Volkswagen	8330 Indiana Ave	New Car Dealers	\$34,360	
Walters Auto Sales	8505 Indiana Ave	New Car Dealers	\$34,360	

Walter's Porsche	3210 Adams St	New Car Dealers	\$34,360
Macy's	3500 Tyler St	Department Stores, Except Discount	\$32,400
Richardson's Auto & RV Sales	10717 Indiana Ave	Recreational Vehicle Dealers	\$32,000
Skip Fordyce Motorcycle Ctr	7688 Indiana Ave	Motorcycle Dealers	\$31,460
Stater Bros Markets	17050 Van Buren Blvd	Supermarkets & Other Grocery Stores	\$28,652
Macy's	3700 Tyler Mall St	Department Stores, Except Discount	\$27,378
Growest Co & Rentrac	1700 Growest Ave	Nursery, Garden, & Farm Supply Stores	\$27,300

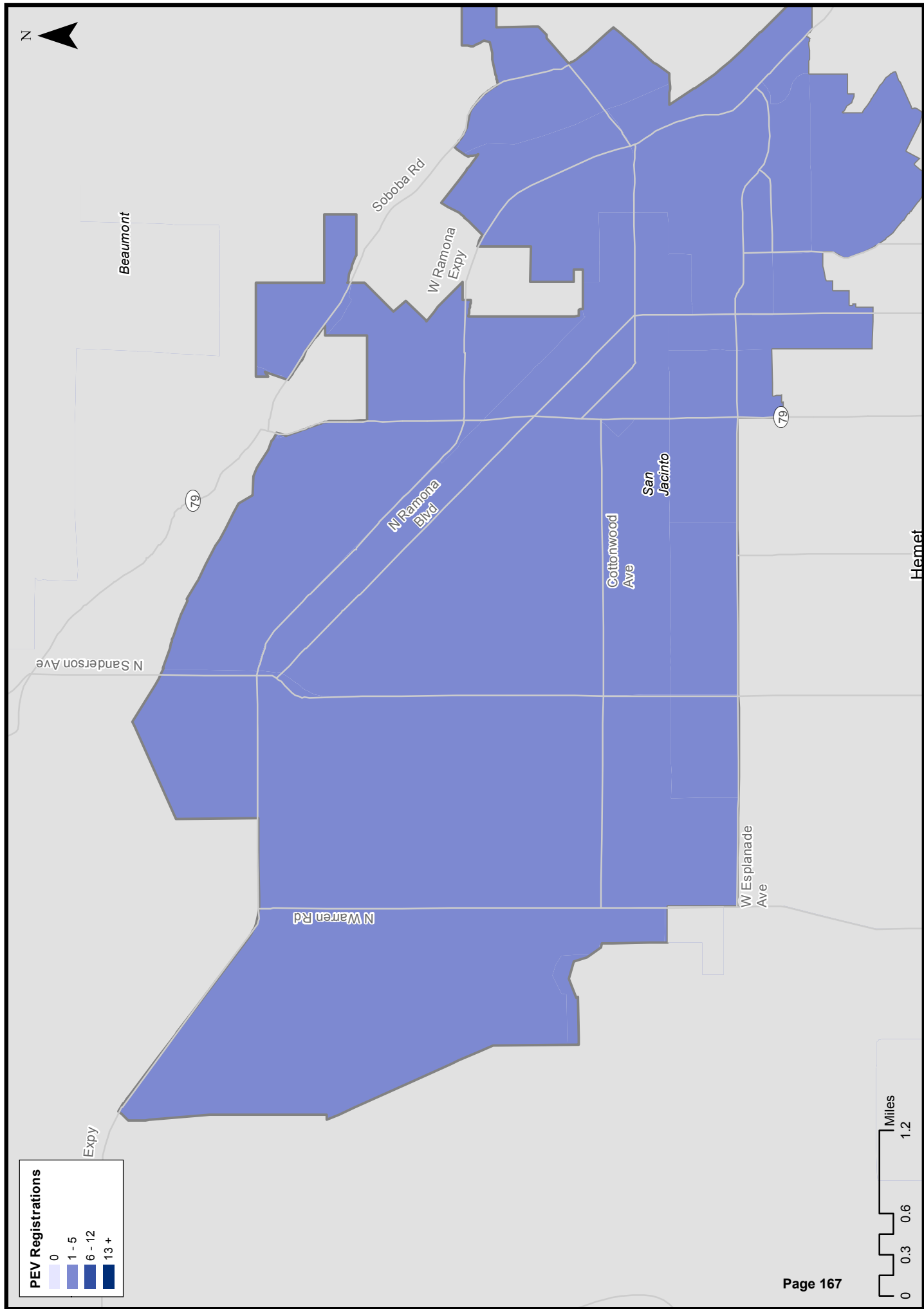
Riverside: Publicly-Accessible Charging Stations (Summer/Fall 2012)



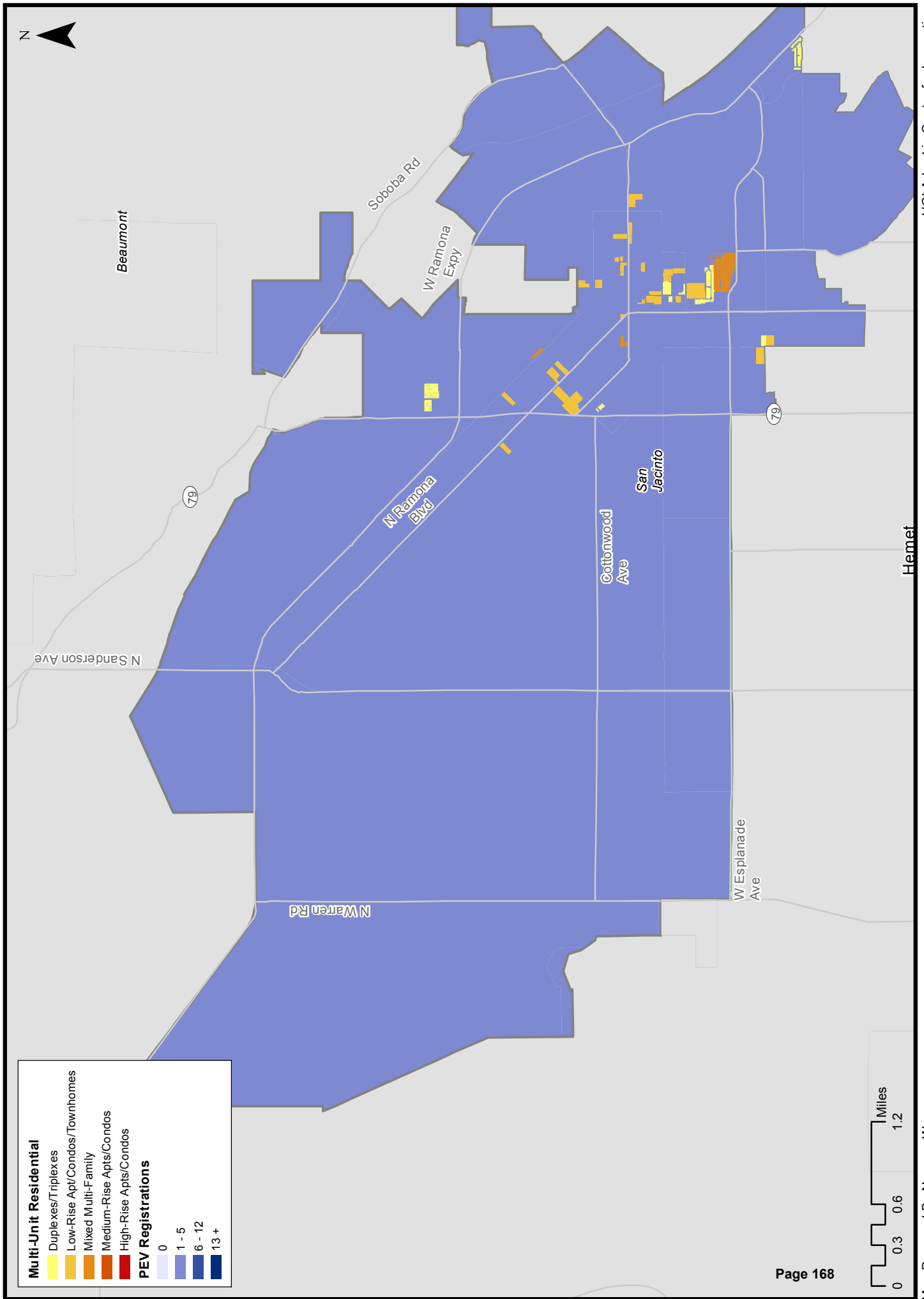
Riverside: Stand-alone Parking Facilities



San Jacinto: Plug-in Electric Vehicle Registrations

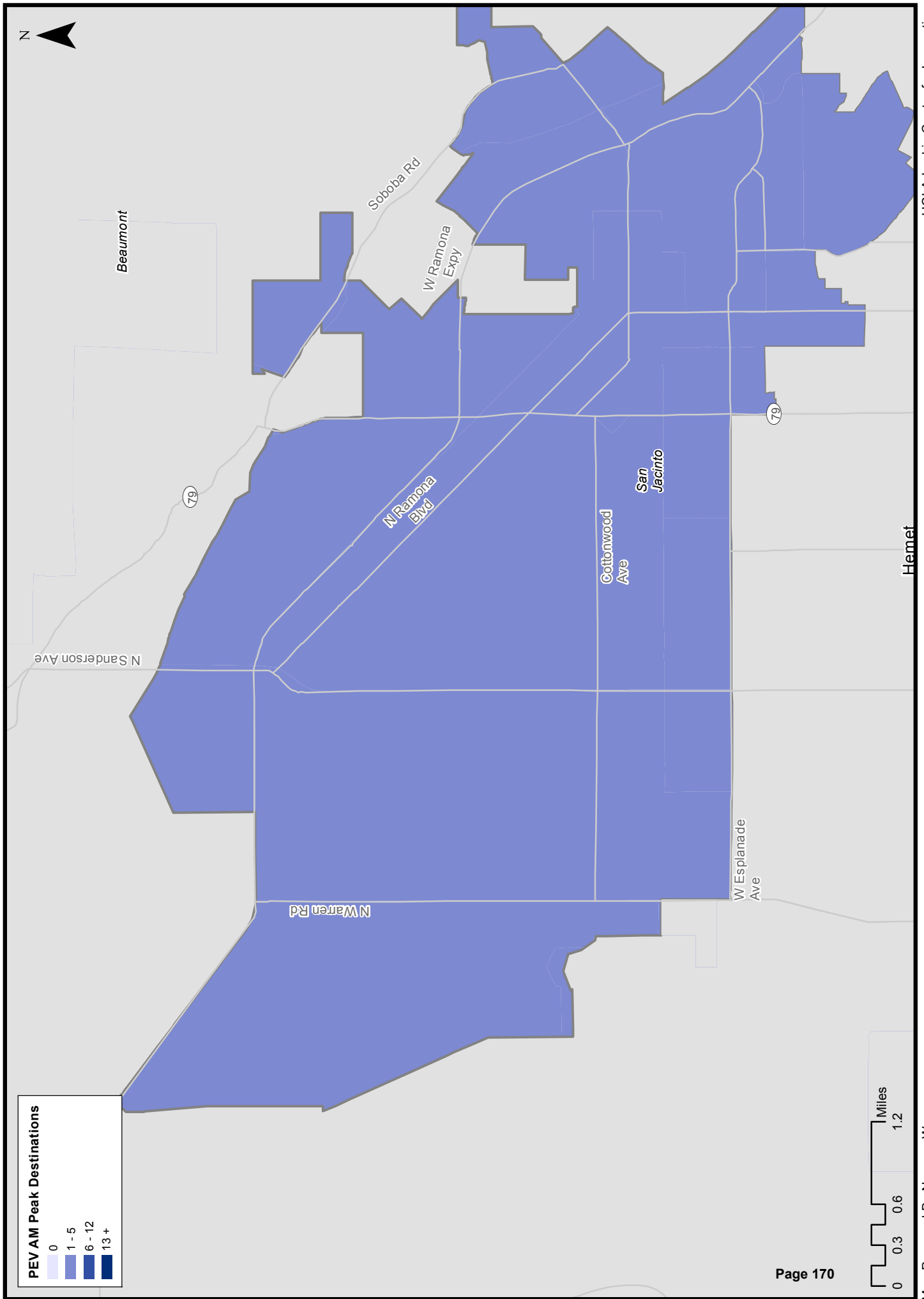


San Jacinto: Multi-Unit Residential and PEV Registrations

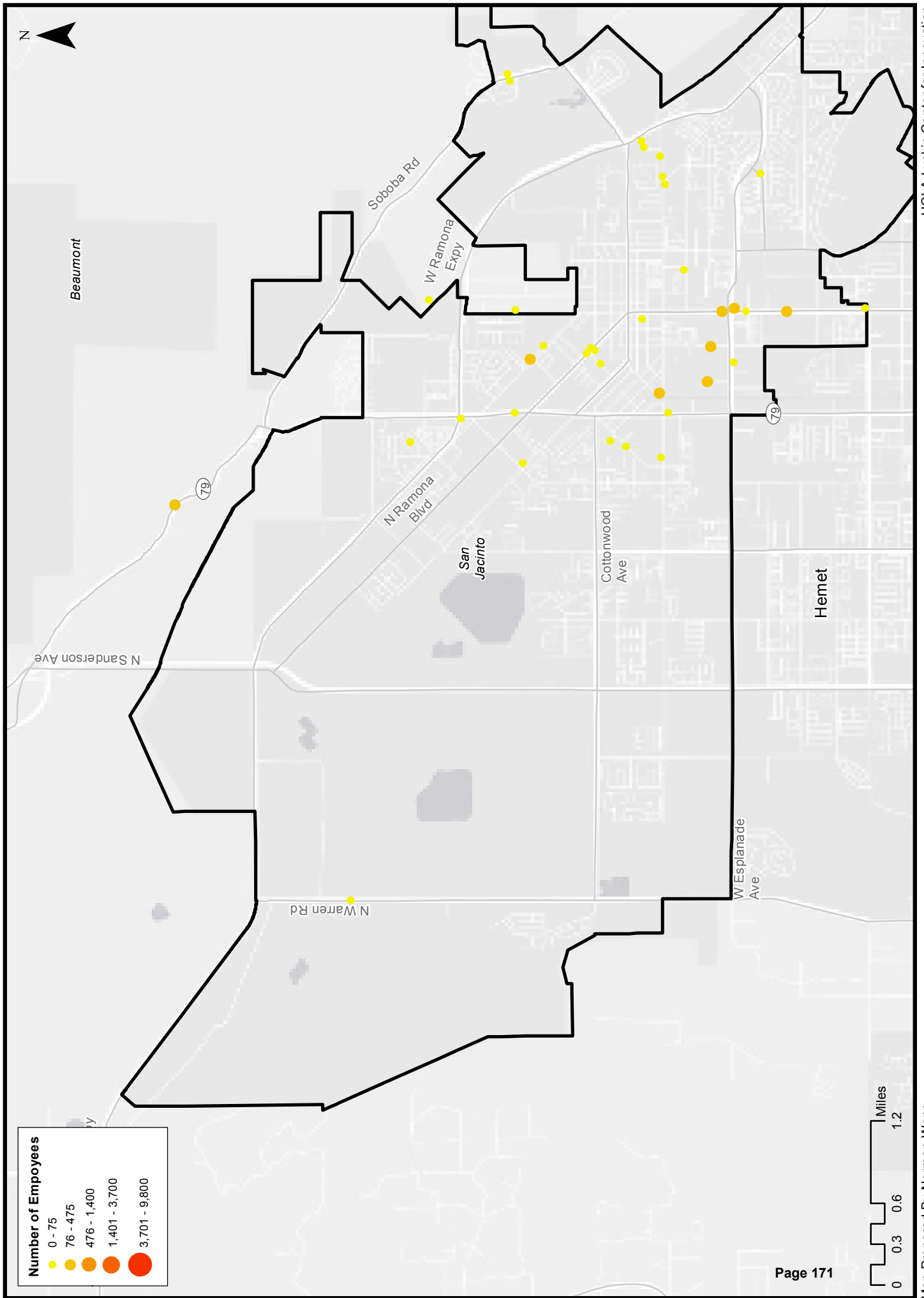


San Jacinto: Top Multi-Unit Dwellings										
City	Address	City	Address	Number of units	Condo?	Unit value	Year built	Attached/detached garage	Carpport?	PEV density
San Jacinto	1672		SANTE FE	66	N	\$63,735				
San Jacinto	652	N	RAMONA	53	N	\$72,402				
San Jacinto	685		DE ANZA	52	N	\$90,338				
San Jacinto	700		MINOR	50	N	\$26,327				
San Jacinto	800		MINOR	31	N	\$22,194				
San Jacinto	1843	S	SANTA FE	20	N	\$90,778				
San Jacinto	1775	S	SANTA FE	20	N	\$71,262	1991	A		
San Jacinto	789	S	STATE	20	N	\$49,939				
San Jacinto	850	E	MAIN	19	N	\$102,652				
San Jacinto	375		SANTO	18	N	\$20,610				
San Jacinto	640	S	JORDAN	13	N	\$43,768				
San Jacinto	160	N	WATEKA	13	N	\$16,782				
San Jacinto	700	E	MAIN	10	N	\$101,875				
San Jacinto	389		IDYLLWILD	9	N	\$53,984				
San Jacinto	740	S	JORDAN	8	N	\$42,806				
San Jacinto	648	E	MAIN	7	N	\$97,832				
San Jacinto	364	W	3RD	6	N	\$37,421				
San Jacinto	260	E	6TH	6	N	\$29,402				
San Jacinto	422	E	7TH	6	N	\$82,436				
San Jacinto	762	S	JORDAN	6	N	\$48,984				
San Jacinto	610	E	MAIN	6	N	\$93,327				
San Jacinto	387	W	MAIN	6	N	\$26,978				

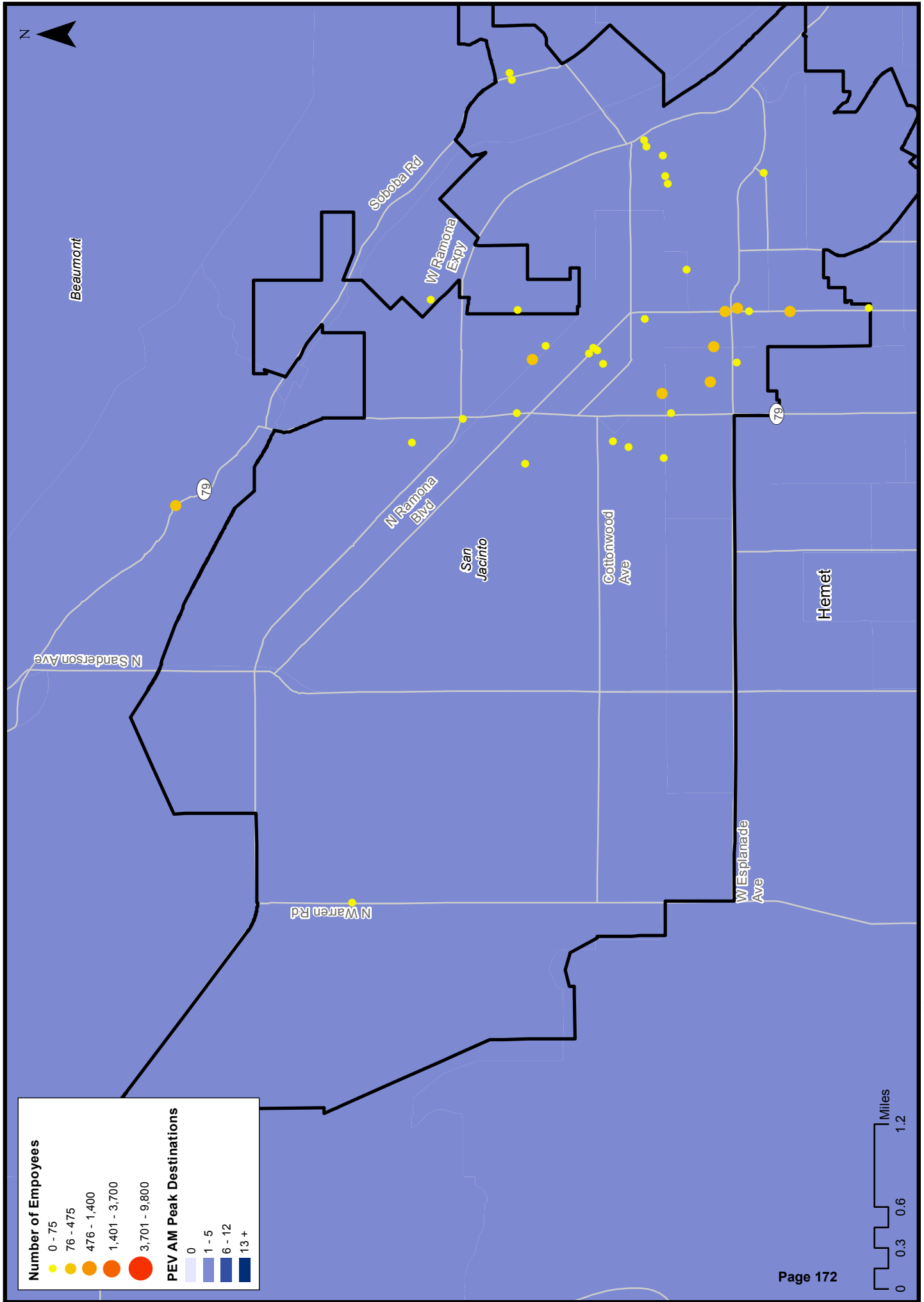
San Jacinto: Plug-in Electric Vehicle Morning Peak Destinations



San Jacinto: Top Workplaces by Number of Employees

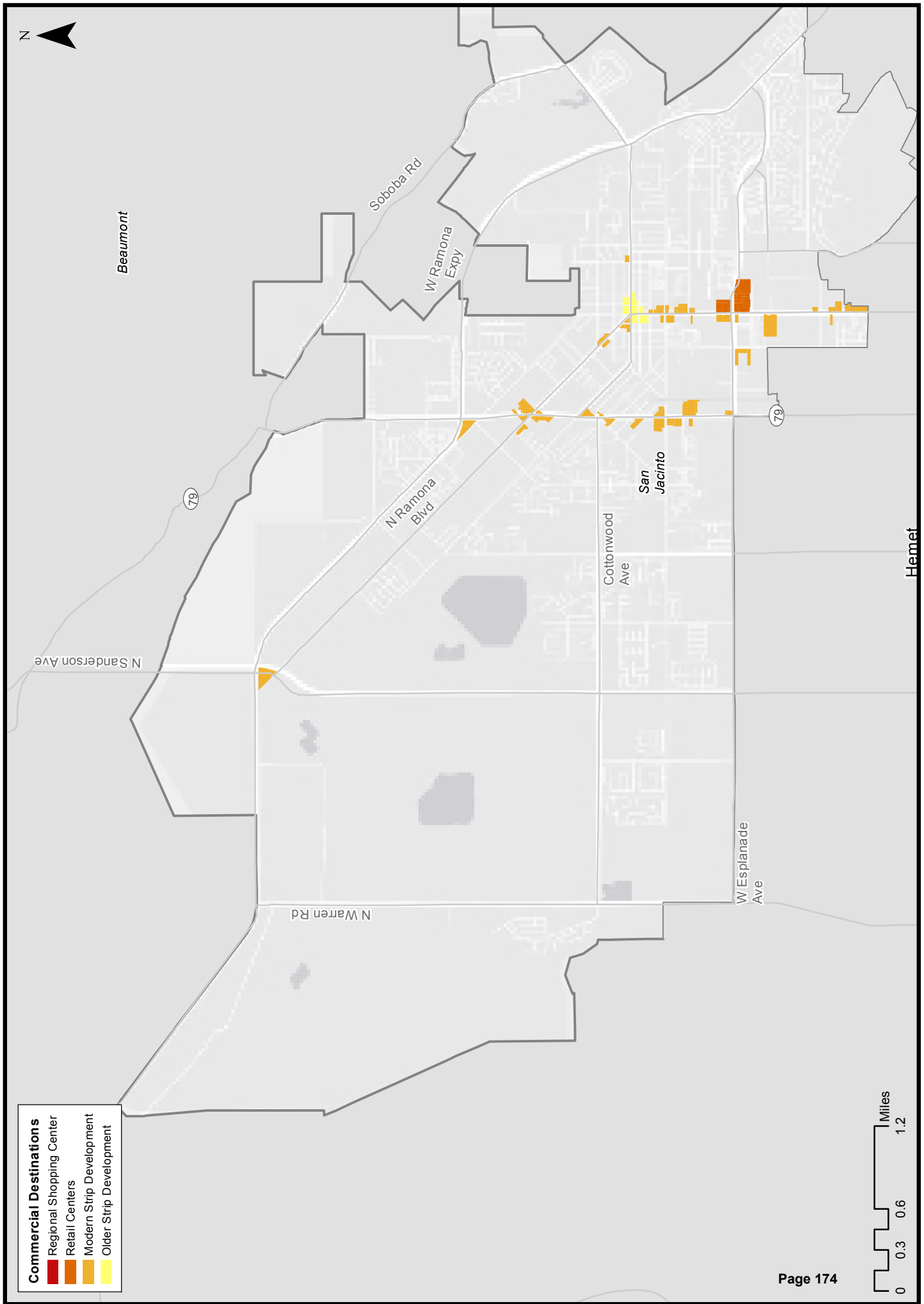


San Jacinto: PEV Morning Peak Destinations and Top Workplaces

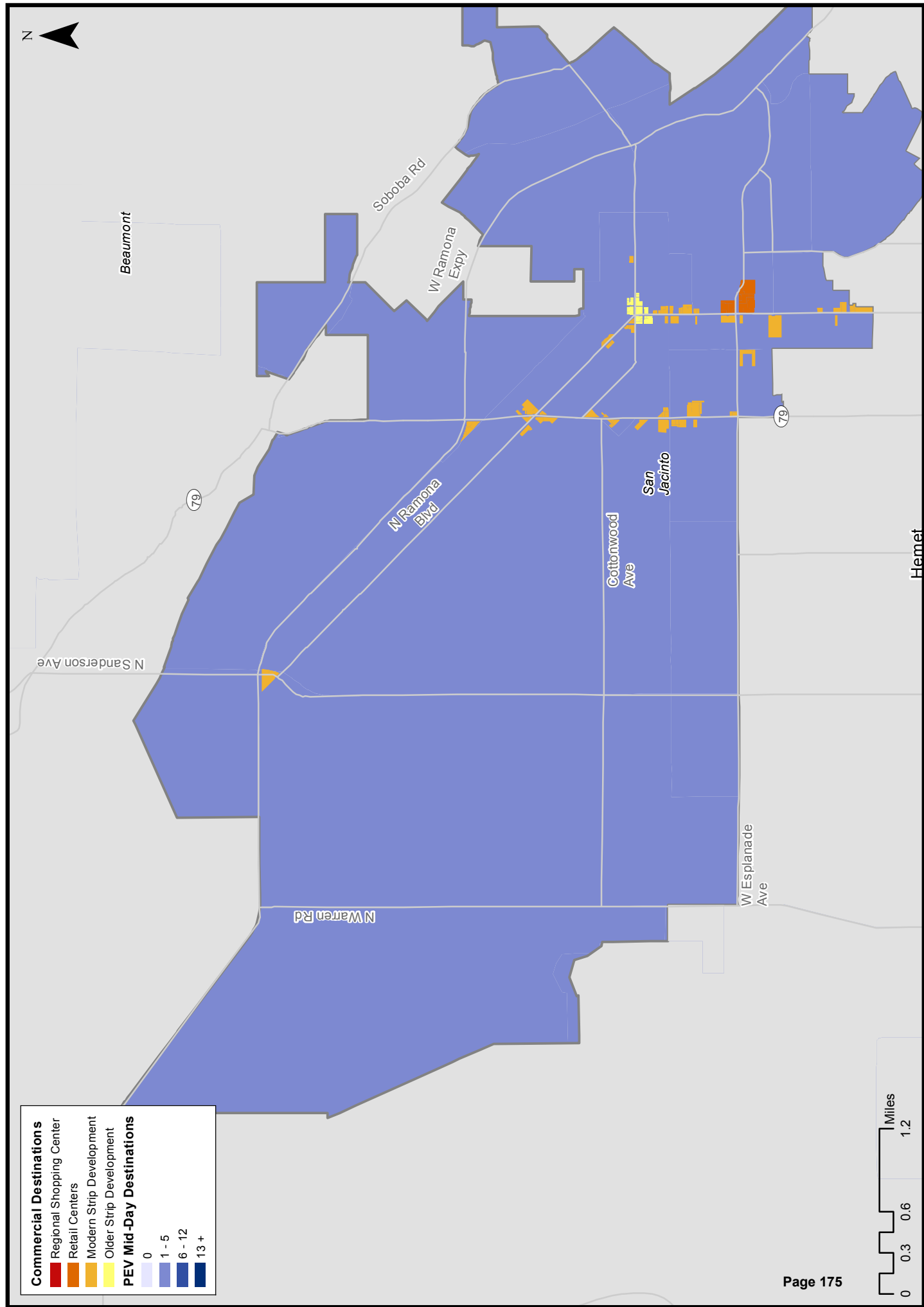


City		San Jacinto: Top Workplaces		Number of employees	High-tech?	White-collar?	PEV AM density
City	Employer	Address					
San Jacinto	GOLDEN ERA PRODUCTIONS	19625 GILMAN SPRINGS RD BLDG 1		440	N	Y	
San Jacinto	WAL-MART #5425	1861 S SAN JACINTO AVE		362	N	N	
San Jacinto	Skyline Homes Inc	499 W Esplanade Ave		250	N	N	
San Jacinto	Edelbrock Corp	1320 S Buena Vista St		180	N	N	
San Jacinto	Soboba Band of Luiseno Indians	23904 Soboba Rd		150	N	Y	
San Jacinto	Agri-Empire	630 W 7th St		150	N	N	
San Jacinto	San Jacinto High School	500 Idyllwild Dr		150	N	Y	
San Jacinto	Stater Bros Markets	1537 S San Jacinto Ave		100	N	N*	
San Jacinto	CIW General Contracting	1301 S Santa Fe Ave		80	N	N	
San Jacinto	Cardenas Market 13	1475 S San Jacinto Ave		80	N	N*	
San Jacinto	North Mountain Middle School	1202 E 7th St		75	N	Y	
San Jacinto	Hidden Villa Ranch	1455 N Warren Rd		70	N	N	
San Jacinto	Park Hill Elementary School	1157 E Commonwealth Ave		70	N	Y	
San Jacinto	De Anza Elementary School	1089 De Anza Dr		60	N	Y	
San Jacinto	Monte Vista Middle School	181 N Ramona Blvd		60	N	Y	
San Jacinto	Press-Enterprise Co	474 W Esplanade Ave		60	N	Y	
San Jacinto	San Jacinto Unified Sch Dist	1600 Malaga Dr		60	N	Y	
San Jacinto	Antonio Estudillo Elementary	900 Las Rosas Dr		55	N	Y	
San Jacinto	Soboba Springs Golf Course	1020 Soboba Rd		55	N	N	
San Jacinto	Bradley Garden Convalescent	980 W 7th St		50	N	Y	
San Jacinto	Acapulco Mexican Restaurant	2599 S San Jacinto Ave		50	N	N	
San Jacinto	Hvatt Elementary School	400 E Shaver St		50	N	Y	
San Jacinto	San Jacinto Unified Sch Dist	905 Industrial Way		45	N	Y	
San Jacinto	San Jacinto Unified Sch Dist	136 N Ramona Blvd		45	N	Y	
San Jacinto	San Jacinto Unified Sch Dist	221 Bissell Pl		45	N	Y	
San Jacinto	San Jacinto Unified Sch Dist	257 S Grand Army Ave		45	N	Y	
San Jacinto	San Jacinto Unified Sch Dist	900 Las Rosas Dr		45	N	Y	
San Jacinto	Mc Donald's	611 N State St		42	N	N	
San Jacinto	Noli School	24335 Soboba Rd		42	N	Y	
San Jacinto	San Jacinto Elementary School	136 N Ramona Blvd		42	N	Y	
San Jacinto	Heard & Holcomb Sewer & Septic	796 S State St		36	N	N	
San Jacinto	Alta Nursery Inc	21750 Alessandro Ave		35	N	Y	
San Jacinto	Talley Metal Fabrication	989 W 7th St		35	N	N	
San Jacinto	Jack in the Box	770 W Ramona Expy		35	N	N	
San Jacinto	San Jacinto Police Dept	160 W 6th St		35	N	N	
San Jacinto	Soboba Springs Royal Vista	1020 Soboba Rd		35	N	N	
San Jacinto	Mission Bell Resident Hotel	435 Idyllwild Dr		34	N	Y	
San Jacinto	San Jacinto Valley Academy	480 N San Jacinto Ave		31	N	Y	
San Jacinto	Regal San Jacinto Metro 12	1599 S San Jacinto Ave		30	N	Y	
San Jacinto	Riverside-San Bernardino Cnty	607 Donna Way		30	N	Y	
San Jacinto	Soboba Indian Health Clinic	607 Donna Way		30	N	Y	

San Jacinto: Commercial (Retail) Destinations



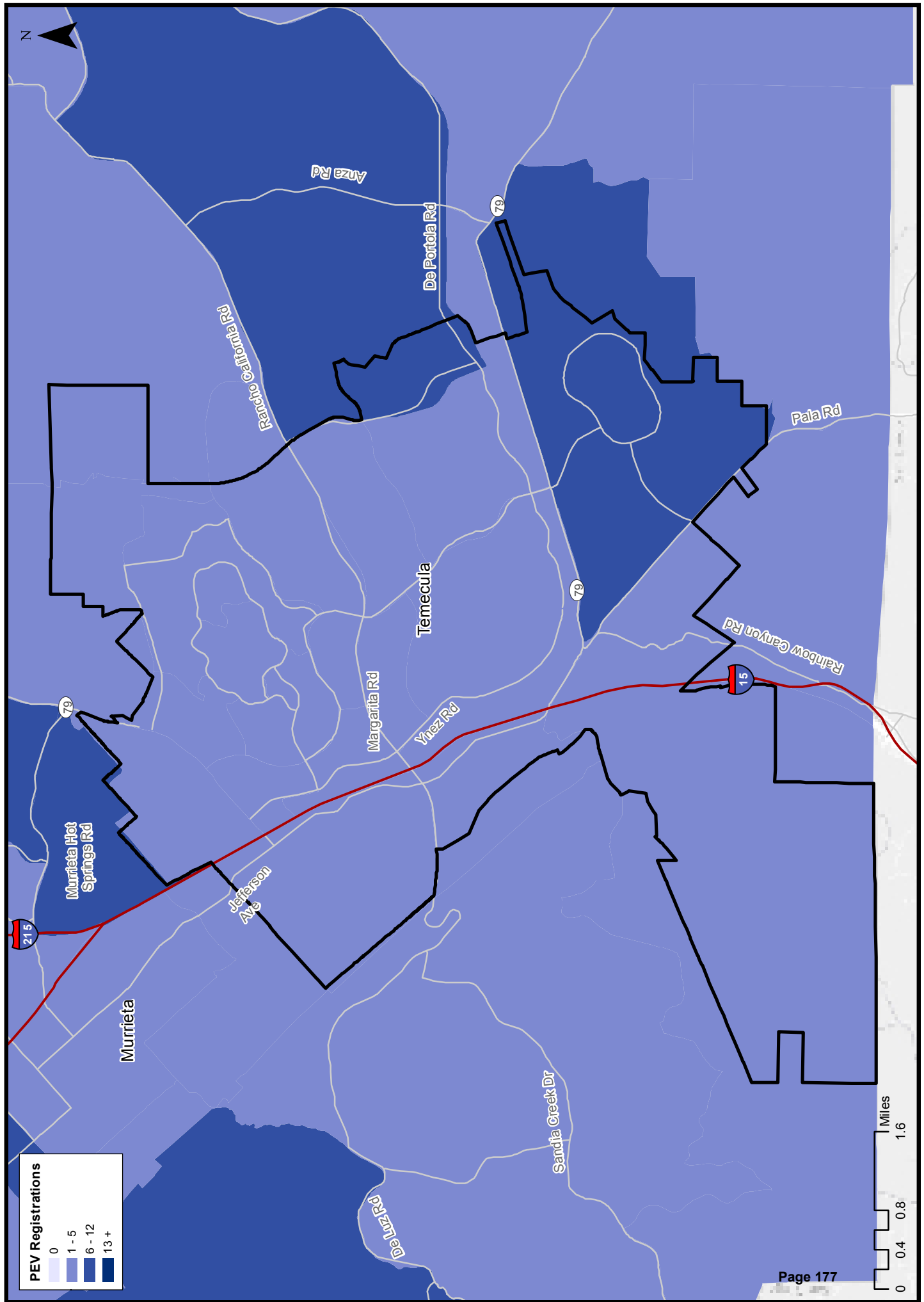
San Jacinto: PEV Mid-Day Destinations and Commercial (Retail) Locations



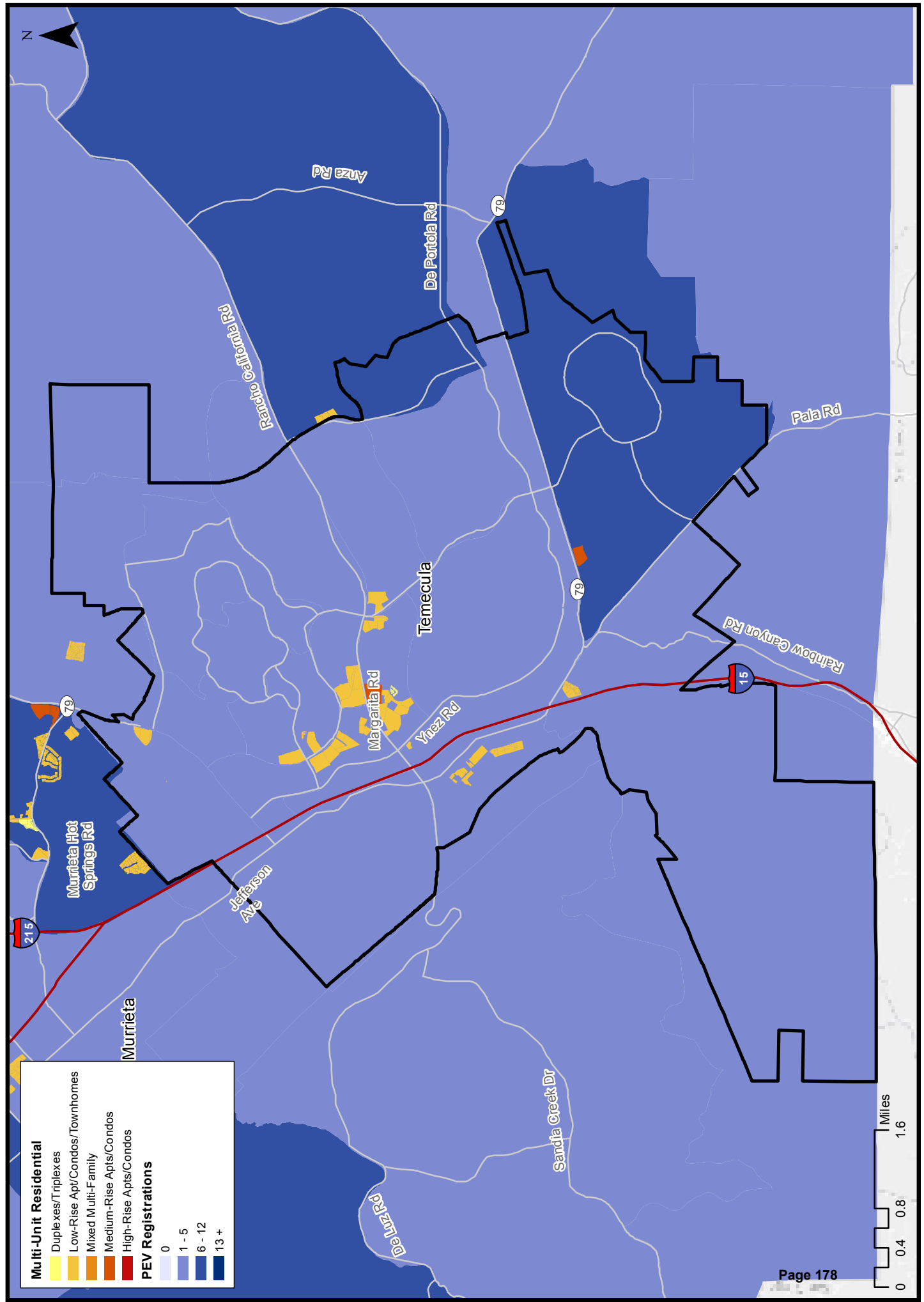
San Jacinto: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Soboba Casino	23333 Soboba Rd	Other Gambling Industries	\$33,216	
Stater Bros Markets	1537 S San Jacinto Ave	Supermarkets & Other Grocery Stores	\$24,700	
Cardenas Market 13	1475 S San Jacinto Ave	Supermarkets & Other Grocery Stores	\$19,760	
Nieto Motors	1122 S State St	Used Car Dealers	\$5,368	
Soboba Springs Golf Course	1020 Soboba Rd	Food Svc Contrs	\$4,620	
Sanderson Mobil	2070 N Sanderson Ave	Other Gasoline Stations	\$4,176	
San Jacinto Market Carniceria	670 S State St	Supermarkets & Other Grocery Stores	\$2,964	
Soboba Springs Royal Vista	1020 Soboba Rd	Fitness & Recreational Sports Centers	\$2,940	
Soarx	2220 Girard St	Other Social Advocacy Organizations	\$2,900	
Triple Time Tire & Auto Exp	2475 S San Jacinto Ave	Tire Dealers	\$2,652	
951 Motorsports	1532 S Santa Fe Ave	Motorcycle Dealers	\$2,420	
Airco Products Inc	1231 S Buena Vista St	All Other Motor Vehicle Dealers	\$2,170	
Jesse's Auto Upholstery	1307 S State St # B	Reupholstery & Furniture Repair	\$2,068	
Rite Aid	1605 S San Jacinto Ave	Food, Health, Supplement Stores	\$2,013	
Acapulco Mexican Restaurant	2599 S San Jacinto Ave	Limited-Service Restaurants	\$2,000	
Ramona Animal Shelter Inc	831 W 7th St	Pet Care, Except Veterinary, Svcs	\$1,932	
Quick Bits	120 S Lyon Ave	Sporting Goods Stores	\$1,924	
H & R Campers & Accessories	450 N Scovell Ave	Recreational Vehicle Dealers	\$1,920	
Palmer Natural Products	831 S State St	Food, Health, Supplement Stores	\$1,812	
7-Eleven	1490 S San Jacinto Ave	Convenience Stores	\$1,792	
Lopez Market	105 E Main St	Supermarkets & Other Grocery Stores	\$1,792	
One Stop Undercar	1231 S Buena Vista St # A	Automotive Parts & Accessories Stores	\$1,755	
Mc Donald's	611 N State St	Limited-Service Restaurants	\$1,680	
Golden Era Golf Course	19871 Gilman Springs Rd	Limited-Service Restaurants	\$1,512	
Jack in the Box	770 W Ramona Expy	Limited-Service Restaurants	\$1,400	
Autozone	1470 S San Jacinto Ave	Automotive Parts & Accessories Stores	\$1,365	
Bowie Motors South	1685 S State St # C	Used Car Dealers	\$1,342	
D A Williams Trucks	1810 S San Jacinto Ave	Used Car Dealers	\$1,342	
Lucky Auto Sales	711 S State St	Used Car Dealers	\$1,342	
Quick Motors	711 S State St	Used Car Dealers	\$1,342	
La Vista Alcohol-Drug Recovery	2220 Girard St	Other Social Advocacy Organizations	\$1,305	
R V Parts Outlet	817 W 9th St	Recreational Vehicle Dealers	\$1,280	
Recreation Pool	180 Idyllwild Dr	Fitness & Recreational Sports Centers	\$1,260	
Los Altos Furniture	680 S State St	Furniture Stores	\$1,224	
San Jacinto Valley Cemetery	2555 S Santa Fe Ave	Cemeteries & Crematories	\$1,170	
Valley Wide Recreation Sport	901 W Esplanade Ave	Fitness & Recreational Sports Centers	\$1,160	
San Jacinto Nursery & Garden	1350 S San Jacinto Ave	Nursery, Garden, & Farm Supply Stores	\$1,092	
Pizza Hut	490 N State St	Limited-Service Restaurants	\$1,080	
Del Taco	1401 S San Jacinto Ave	Limited-Service Restaurants	\$1,040	
Farmer Boys	1385 S State St	Limited-Service Restaurants	\$1,040	

Temecula: Plug-in Electric Vehicle Registrations

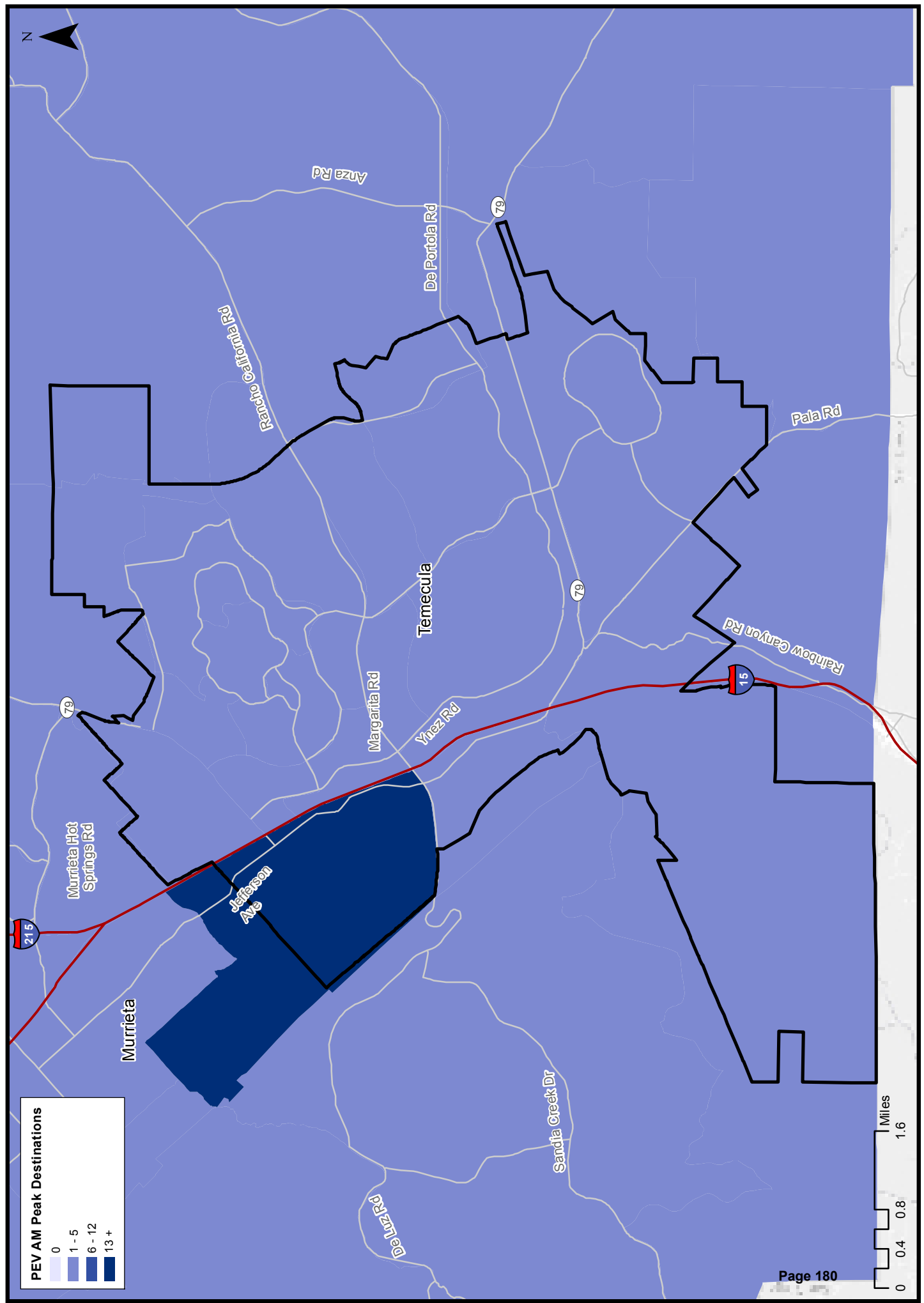


Temecula: Multi-Unit Residential and PEV Registrations

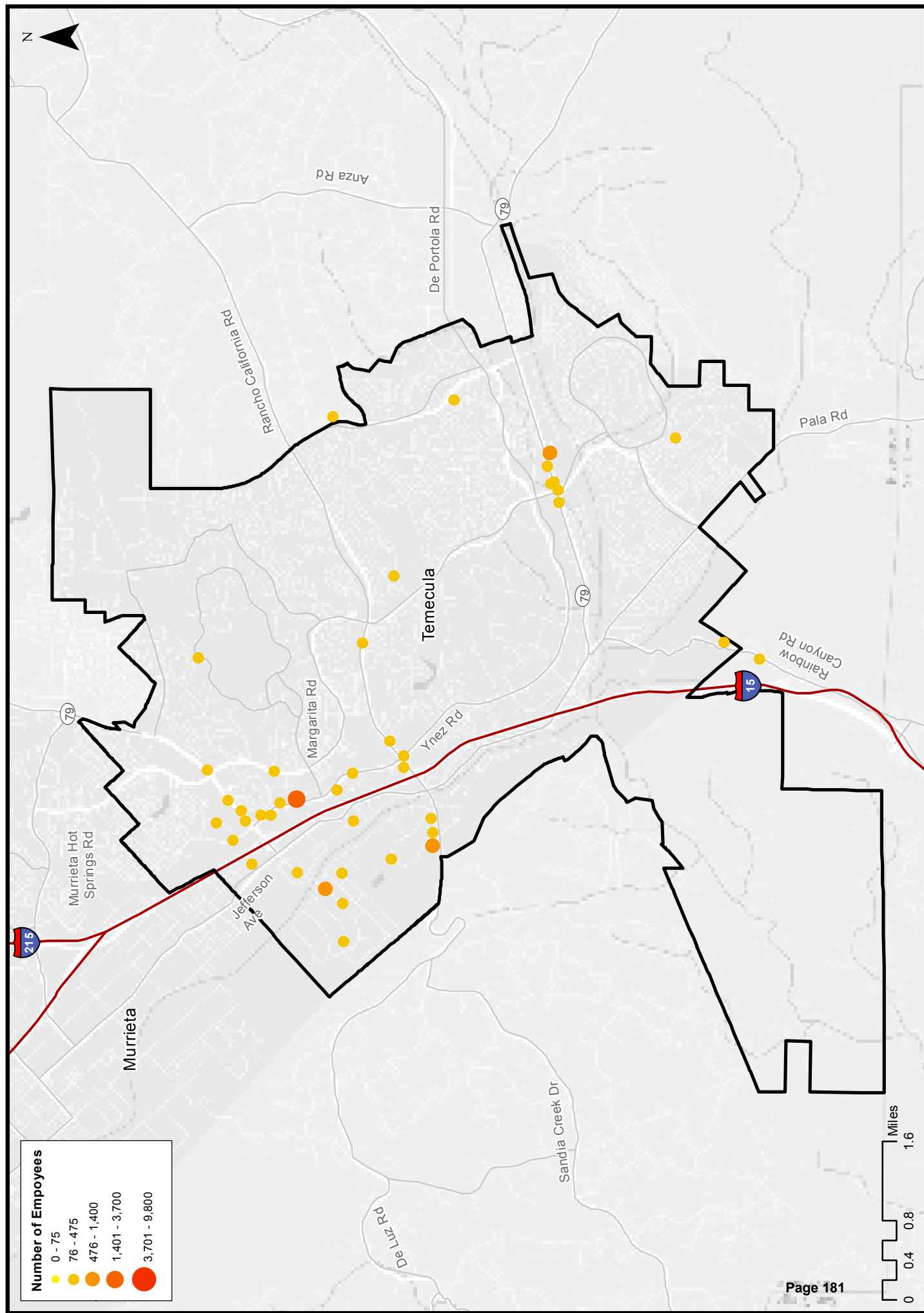


Temecula: Top Multi-Unit Dwellings						
City	Address	Number of units	Condo?	Unit value	Year built	PEV density
Temecula	29405 RANCHO CALIFORNIA RD	400	N	\$50,950		
Temecula	42200 MORAGA RD	344	N	\$114,895	1986	
Temecula	30000 RANCHO CALIF RD	344	N	\$103,407		
Temecula	41754 MARGARITA RD	312	N	\$95,344		
Temecula	40140 VILLAGE RD	300	N	\$175,724		
Temecula	28845 PUJOL ST	274	N	\$182,377		
Temecula	27288 NICOLAS RD	254	N	\$130,135		
Temecula	41770 MARGARITA AVE	224	N	\$69,501		
Temecula	41955 MARGARITA RD	220	N	\$98,839		
Temecula	29500 MIRA LOMA DR	220	N	\$102,120		
Temecula	31237 HIGHWAY 79	180	N	\$221,226		M
Temecula	28680 PUJOL ST	150	N	\$39,906		
Temecula	42200 MARGARITA RD	143	N	\$64,954		
Temecula	30600 MILKY WAY DR	138	N	\$167,215		
Temecula	29489 VIA LAS COLINAS	125	N	\$109,586		
Temecula	42140 LYNDIE LN	79	Y	\$122,038	1993	
Temecula	29919 MIRA LOMA DR	64	N	\$26,019		
Temecula	28464 FELIX VALDEZ AVE	30	N	\$56,528		
Temecula	28465 FELIX VALDEZ AVE	20	N	\$109,242		
Temecula	30660 MILKY WAY DR	20	N	\$165,106		

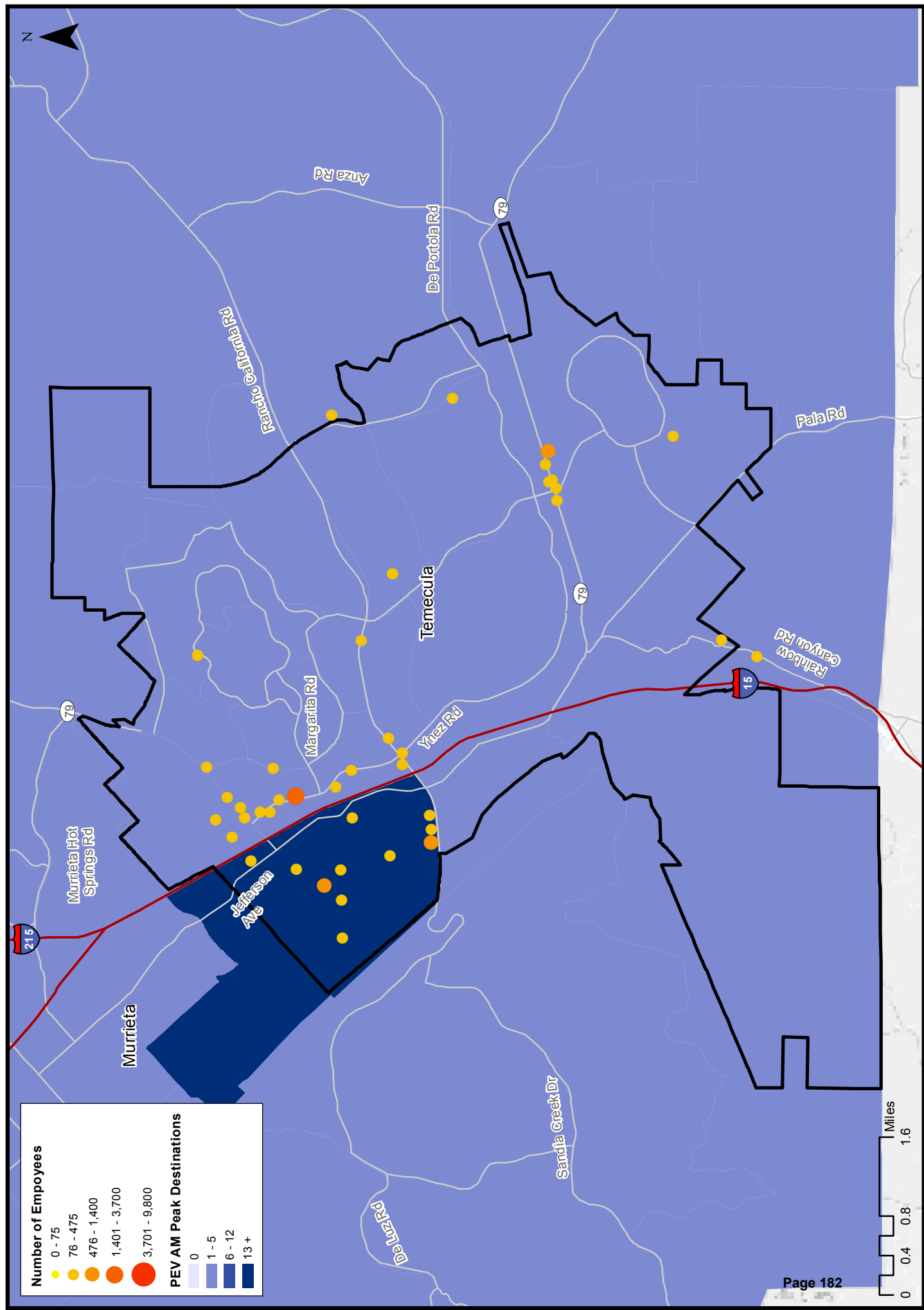
Temecula: Plug-in Electric Vehicle Morning Peak Destinations



Temecula: Top Workplaces by Number of Employees

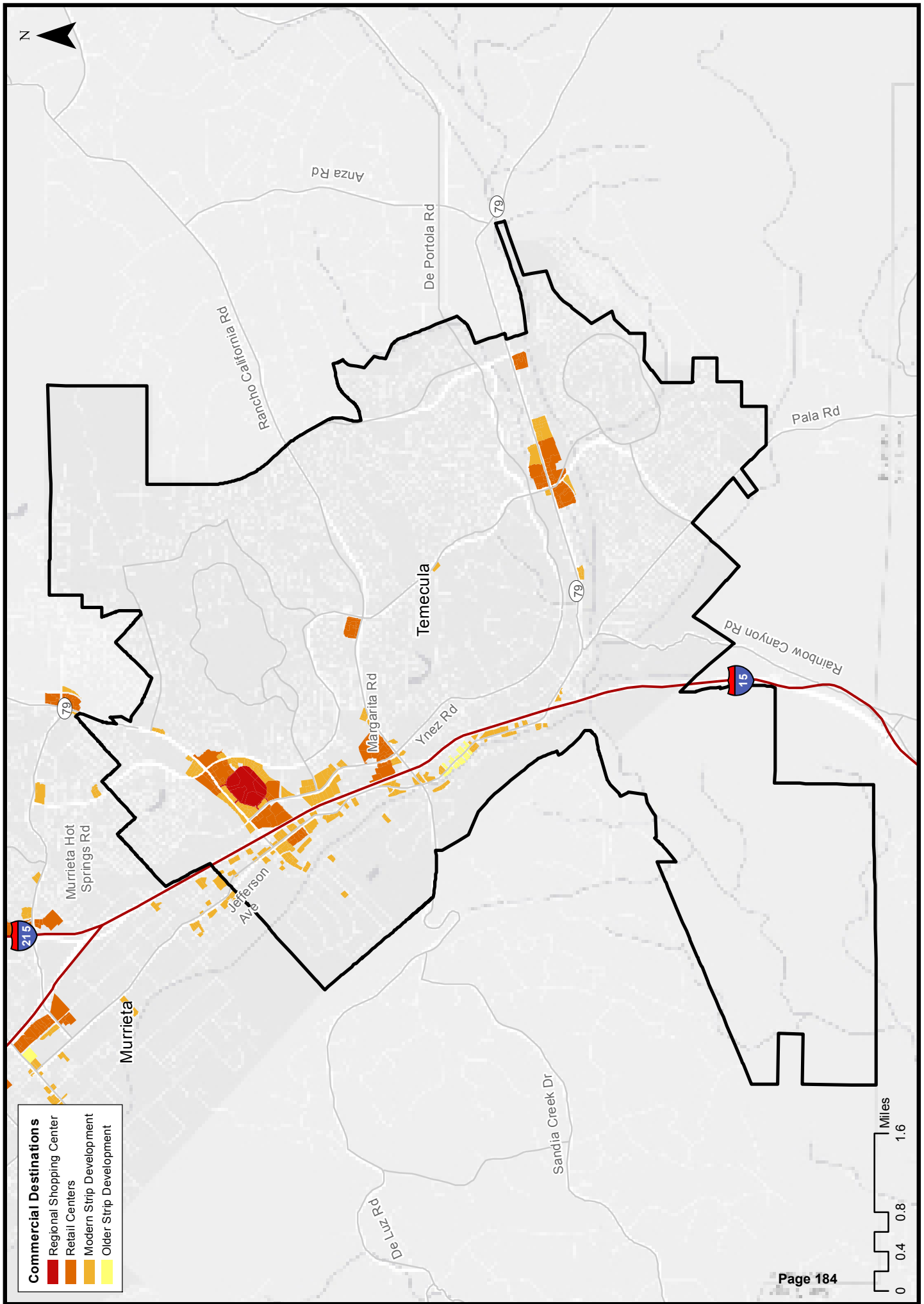


Temecula: PEV Morning Peak Destinations and Top Workplaces

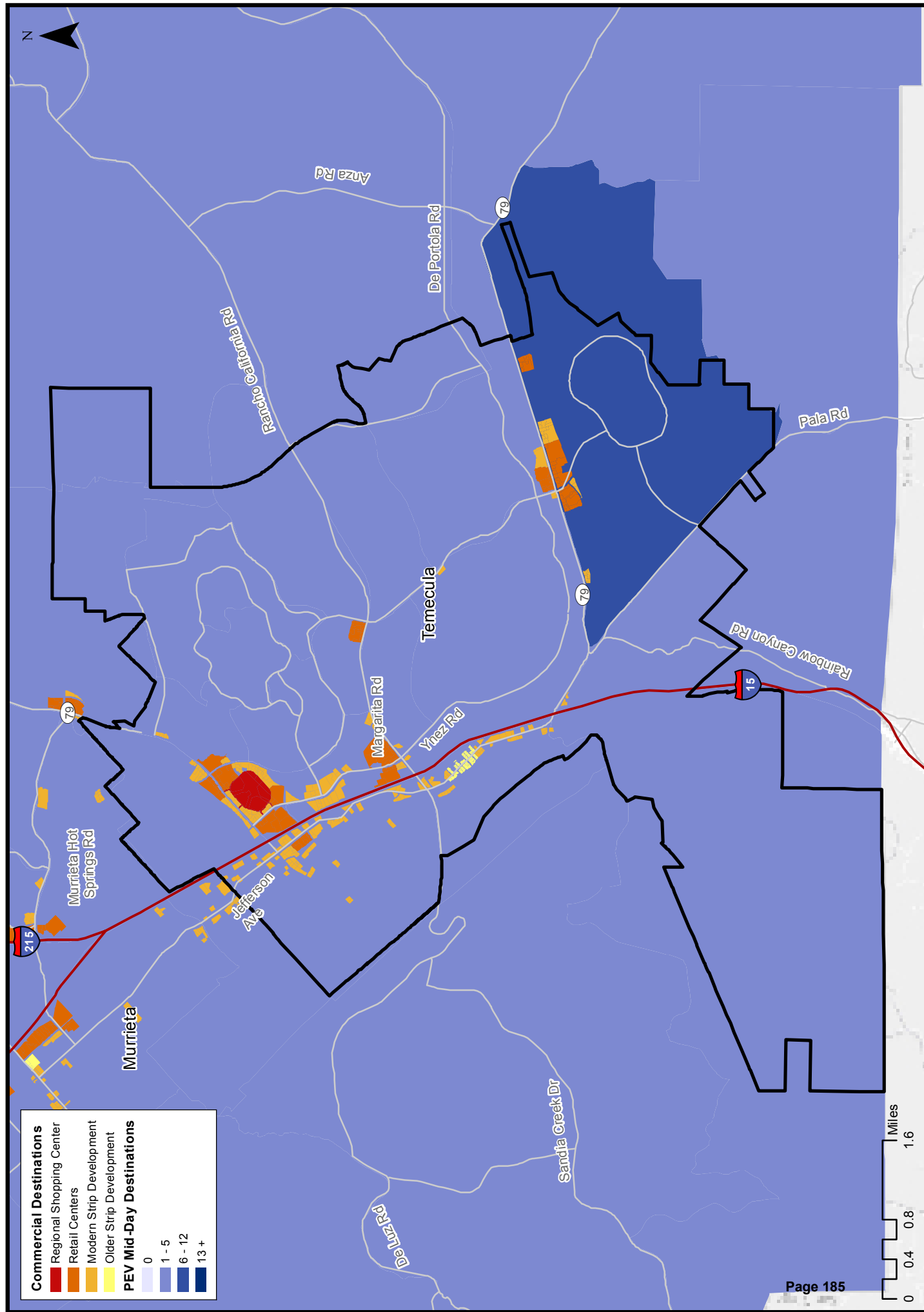


Temecula: Top Workplaces						
City	Employer	Address	Number of employees	High-tech?	White-collar?	PEV AM density
Temecula	PROFESSIONAL HOSPITAL-SUPPLY, INC.	41980 WINCHESTER RD	1100	N	Y	H
Temecula	HEXFET AMERICA	41915 BUSINESS PARK DR	663	Y	Y*	H
Temecula	MILLIPORE CORP	28820 SINGLE OAK DR	270	N	N	H
Temecula	ABBOTT CARDIOVASCULAR SYSTEM	42301 ZEVO DR	256			H
Temecula	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	26531 YNEZ RD	2292	N	Y	
Temecula	Chemicon International Inc	28820 Single Oak Dr	200	N	N	H
Temecula	WAL-MART # 2708	32225 HIGHWAY 79 SOUTH	558	N	N*	
Temecula	MACY'S	40780 WINCHESTER BLVD	326	N	N*	
Temecula	COSTCO WHOLESALE CORPORATION	26610 YNEZ RD	325	N	Y	H
Temecula	Molding International Enginrng	42136 Avenida Alvarado	200	N	N	H
Temecula	Opto 22	43044 Business Park Dr	200	N	Y	H
Temecula	Macy's	40900 Winchester Rd	250	N	N*	
Temecula	Home Depot	32020 US Highway 79 S	230	N	N*	
Temecula	Temecula Valley High School	31555 Rancho Vista Rd	230	N	Y	
Temecula	Wal-Mart Supercenter	32225 US Highway 79 S	220	N	N*	
Temecula	Keller Williams Realty	27290 Madison Ave # 200	198	N	Y	H
Temecula	Oak High School	32555 Deer Hollow Way	200	N	Y	
Temecula	Rancho Lincoln Mercury	26895 Ynez Rd	200	N	Y	
Temecula	Cutting Edge Staffing Inc	41750 Winchester Rd # L	150	N	Y	H
Temecula	Target	29676 Rancho California Rd	190	N	N*	
Temecula	Temecula Creek Inn	44501 Rainbow Canyon Rd	185	N	N	
Temecula	Rancho Ford-Lincoln-Mercury	26895 Ynez Ct	177	N	N	
Temecula	Albertsons	30530 Rancho California Rd	162	N	N*	
Temecula	Red Lobster	41649 Margarita Rd	160	N	N	
Temecula	Plant CML	42505 Rio Nedo	130	Y	Y	H
Temecula	J C Penney Co	40640 Winchester Rd	150	N	N*	
Temecula	Mervyns	26443 Ynez Rd	150	N	N*	
Temecula	Claim Jumper Restaurant	29370 Rancho California Rd	140	N	N	
Temecula	Doubletree Suites Hotel	29345 Rancho California Rd	130	N	N*	
Temecula	Kohl's Department Store	31870 Redhawk Pkwy	130	N	N*	
Temecula	Lowe's	40390 Winchester Rd	130	N	N*	
Temecula	Magnecomp Corp	26201 Ynez Rd	130	N	N	
Temecula	Castaways Thrift Shops	28720 Via Montezuma	120	N	N*	H
Temecula	Paulson Manufacturing Corp	46752 Rainbow Canyon Rd	130	N	N	
Temecula	Tension Envelope Corp	40750 County Center Dr	126	N	N	
Temecula	Sterling Senior Communities	41780 Butterfield Stage Rd	125	N	N	
Temecula	Rancho Calif Water District	42135 Winchester Rd	120	N	Y	H
Temecula	Albertsons	31960 US Highway 79 S	120	N	N*	
Temecula	Iron Wok	26520 Ynez Rd	120	N	N	
Temecula	SFM Constructors Inc	30305 Via Norte	120	N	N	
Temecula	Stater Bros Markets	31813 US Highway 79 S	120	N	N*	
Temecula	Tarbell Realtors	31990 US Highway 79 S	120	N	Y	

Temecula: Commercial (Retail) Destinations



Temecula: PEV Mid-Day Destinations and Commercial (Retail) Locations

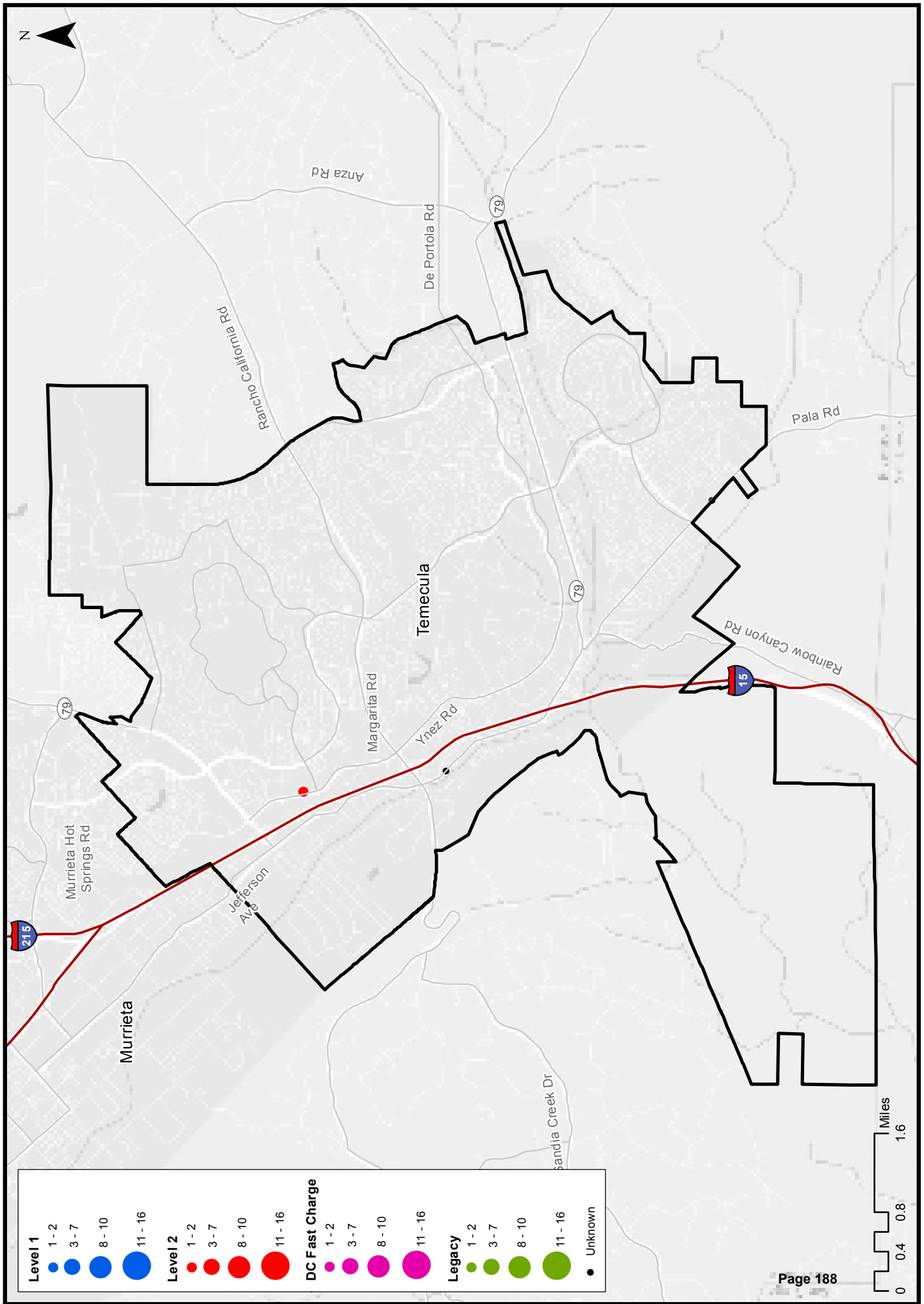


Temecula: Top Retailers

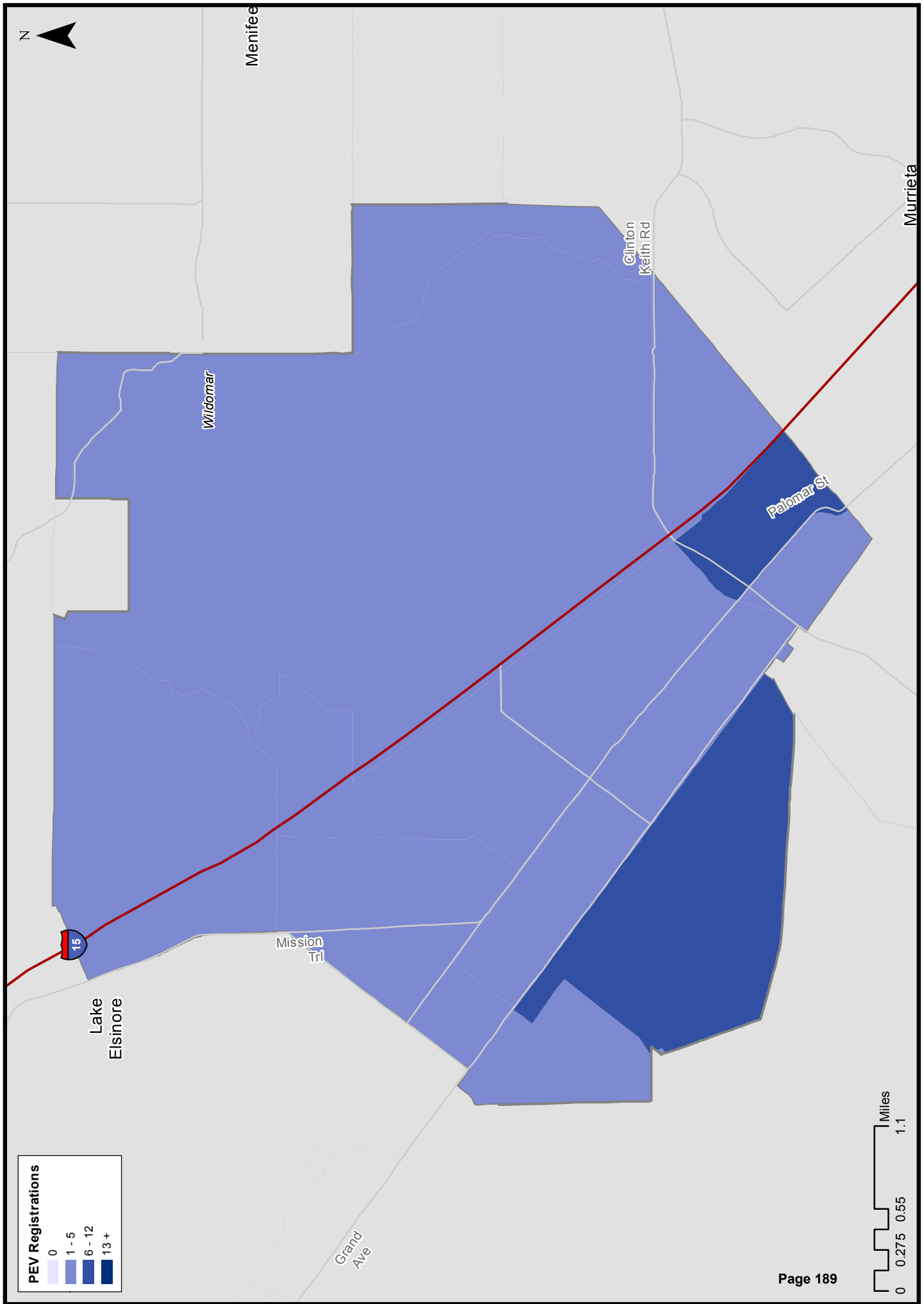
COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Pechanga Development Corp	45000 Pechanga Pkwy	Other Gambling Industries	\$307,200	
Norm Reeves Hyundai Temecula	26799 Ynez Rd	New Car Dealers	\$257,700	
Paradise Chevrolet Cadillac	27360 Ynez Rd	New Car Dealers	\$201,300	
Rancho Lincoln Mercury	26895 Ynez Rd	New Car Dealers	\$171,800	
Toyota of Temecula Valley	26631 Ynez Rd	New Car Dealers	\$94,490	
Quality Nissan-Temecula	41895 Motor Car Pkwy	New Car Dealers	\$85,041	
Dch Honda of Temecula	26755 Ynez Rd	New Car Dealers	\$51,540	
Temecula Creek Inn Golf Resort	44501 Rainbow Canyon Rd	Hotels & Motels, Except Casino Hotels	\$49,000	
Macy's	40900 Winchester Rd	Department Stores, Except Discount	\$40,500	
Albertsons	30530 Rancho California Rd	Supermarkets & Other Grocery Stores	\$40,014	
Wal-Mart Supercenter	32225 US Highway 79 S	Department Stores, Except Discount	\$35,640	M
Target	29676 Rancho California Rd	Department Stores, Except Discount	\$34,770	
Norm Reeves Honda	26705 Ynez Rd	New Car Dealers	\$34,360	
Dch Acura	26705 Ynez Rd	New Car Dealers	\$34,360	
DCH Dodge	26705 Ynez Rd	New Car Dealers	\$32,642	
Albertsons	31960 US Highway 79 S	Supermarkets & Other Grocery Stores	\$29,640	
Stater Bros Markets	31813 US Highway 79 S	Supermarkets & Other Grocery Stores	\$29,640	M
Kia of Temecula Valley	27500 Jefferson Ave	New Car Dealers	\$25,770	
Carriage Motor Co	27420 Ynez Rd	New Car Dealers	\$25,000	
J C Penney Co	40640 Winchester Rd	Department Stores, Except Discount	\$24,300	
Mervyns	26443 Ynez Rd	Department Stores, Except Discount	\$24,300	
Quaid Temecula Harley-Davidson	28964 Old Town Front St	Motorcycle Dealers	\$24,200	
Kohl's Department Store	31870 Redhawk Pkwy	Department Stores, Except Discount	\$21,060	
Henry's Market Place	32413 State Highway 79	Supermarkets & Other Grocery Stores	\$20,995	M
Saturn of Temecula	27430 Ynez Rd	New Car Dealers	\$20,616	
Rancho Ford-Lincoln-Mercury	26895 Ynez Ct	New Car Dealers	\$20,001	
Temecula Creek Inn	44501 Rainbow Canyon Rd	Food Svc Contrs	\$19,795	
Circuit City	40480 Winchester Rd	Radio, TV & Other Electronics Stores	\$19,380	
Vons	29530 Rancho California Rd	Supermarkets & Other Grocery Stores	\$18,525	
Trader Joe's	40665 Winchester Rd # 5	Supermarkets & Other Grocery Stores	\$16,055	
Ralphs	40355 Winchester Rd	Supermarkets & Other Grocery Stores	\$14,820	
Gregory Mountain Products	27969 Jefferson Avenue	Supermarkets & Other Grocery Stores	\$14,800	
Jo-Ann Etc	40462 Winchester Rd	Sewing, Needlework, & Piece Goods Stores	\$14,155	

Vons Pharmacy	29530 Rancho California Rd	Pharmacies & Drug Stores	\$13,725
Hollister Co	40820 Winchester Rd	Family Clothing Stores	\$13,020
Doubletree Suites Hotel	29345 Rancho California Rd	Hotels & Motels, Except Casino Hotels	\$12,740
Abercrombie & Fitch	40820 Winchester Rd	Men's Clothing Stores	\$12,648
Food 4 Less	26419 Ynez Rd	Supermarkets & Other Grocery Stores	\$12,350
Stater Bros Markets	27475 Jefferson Ave	Supermarkets & Other Grocery Stores	\$12,350
Castaways Thrift Shops	28720 Via Montezuma	Used Merchandise Stores	\$12,120

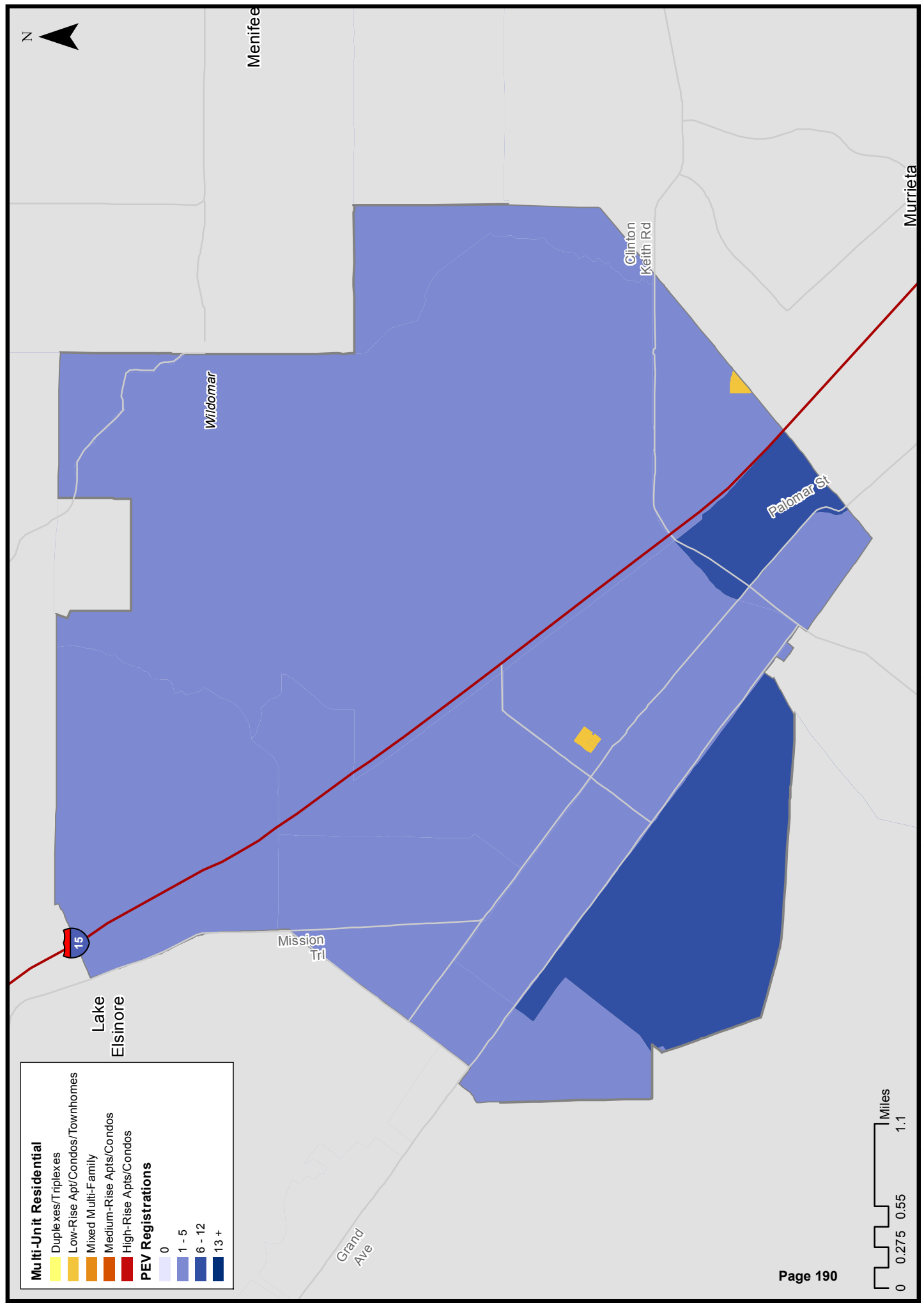
Temecula: Publicly-Accessible Charging Stations (Summer/Fall 2012)



Wildomar: Plug-in Electric Vehicle Registrations



Wildomar: Multi-Unit Residential and PEV Registrations



Multi-Unit Residential

- Duplexes/Triplexes
- Low-Rise Apt/Condos/Townhomes
- Mixed Multi-Family
- Medium-Rise Apts/Condos
- High-Rise Apts/Condos

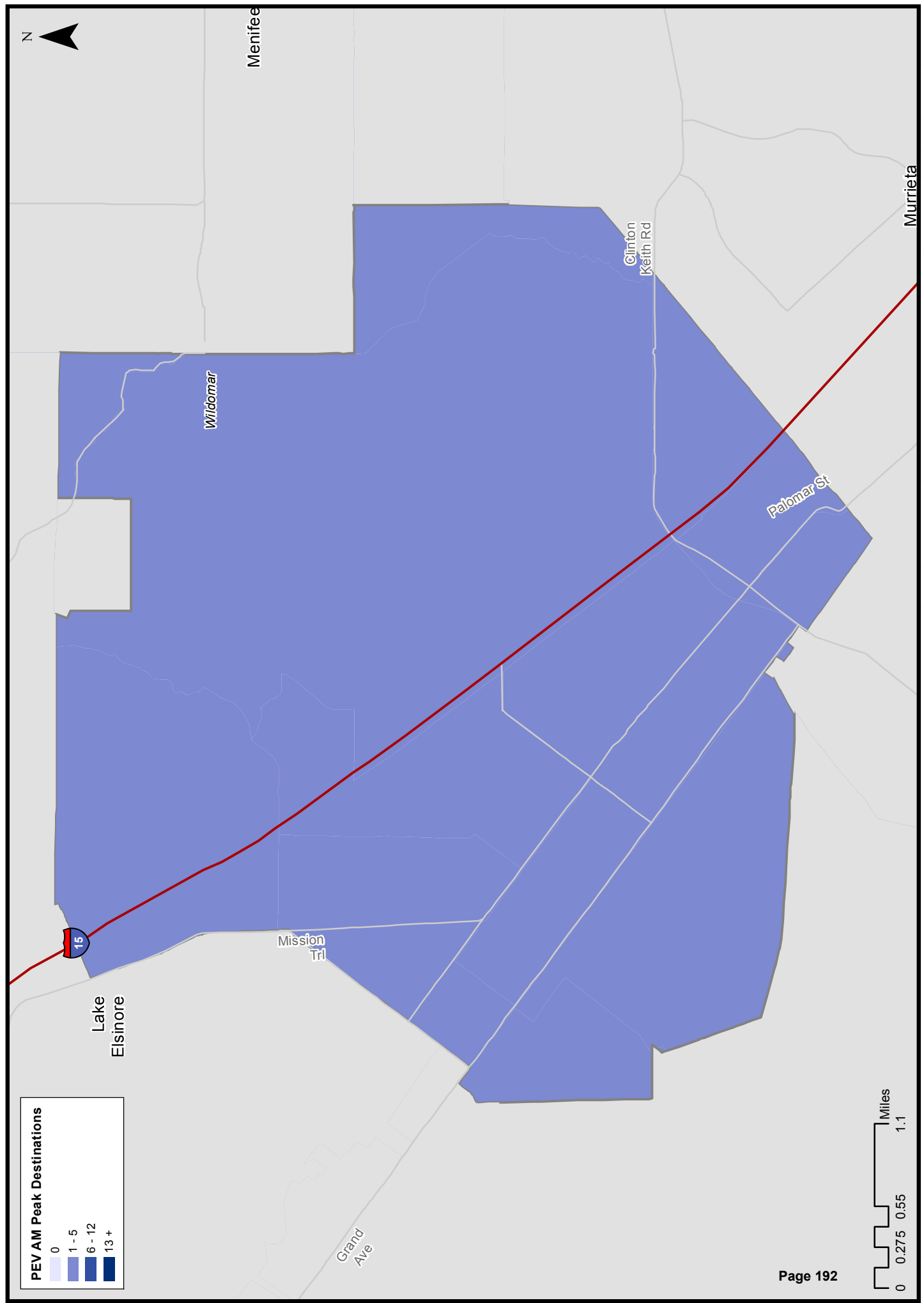
PEV Registrations

- 0
- 1 - 5
- 6 - 12
- 13 +

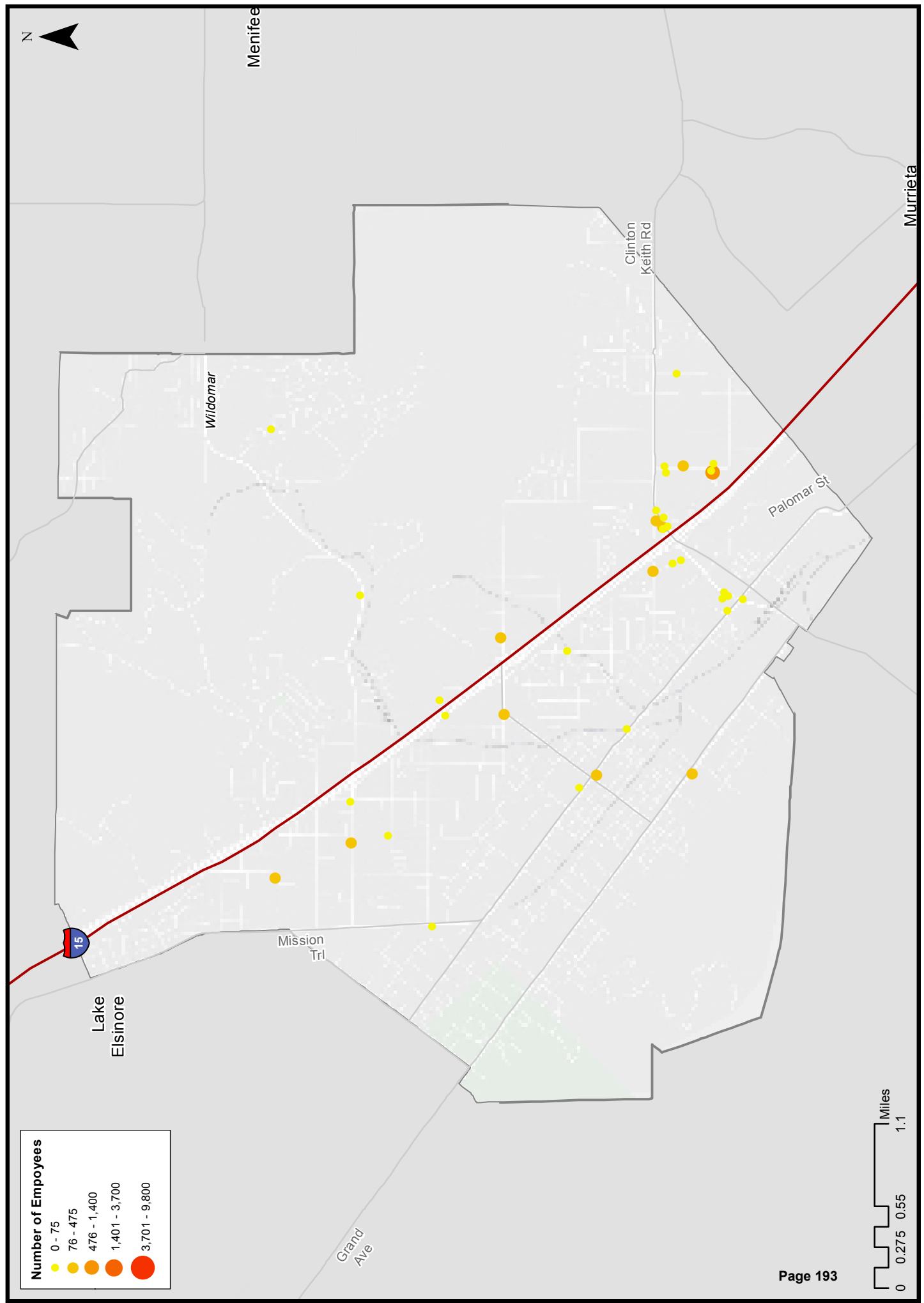


Wildomar: Top Multi-Unit Dwellings									
City	Address		Number of units	Condo?	Unit value	Year built	PEV density		
Wildomar	36491	YAMAS	320	N	\$179,196				
Wildomar	34915	MISSION	11		\$21,641	1982			
Wildomar	33170	MISSION	4	N	\$76,000				
Wildomar	21405	COMO	3	N	\$61,741	1980			
Wildomar	21380	VINE	3	N	\$44,031	1936			

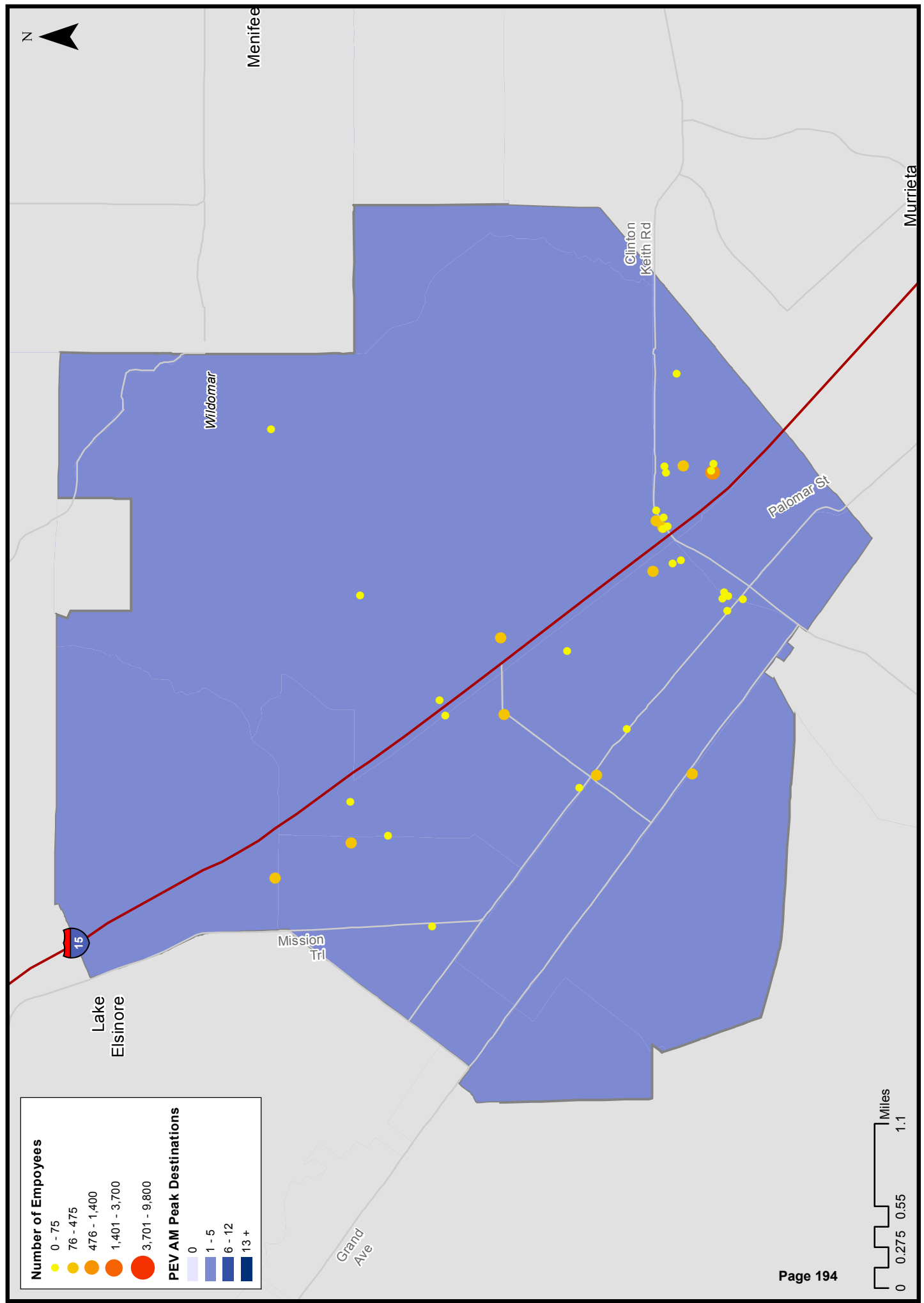
Wildomar: Plug-in Electric Vehicle Morning Peak Destinations



Wildomar: Top Workplaces by Number of Employees

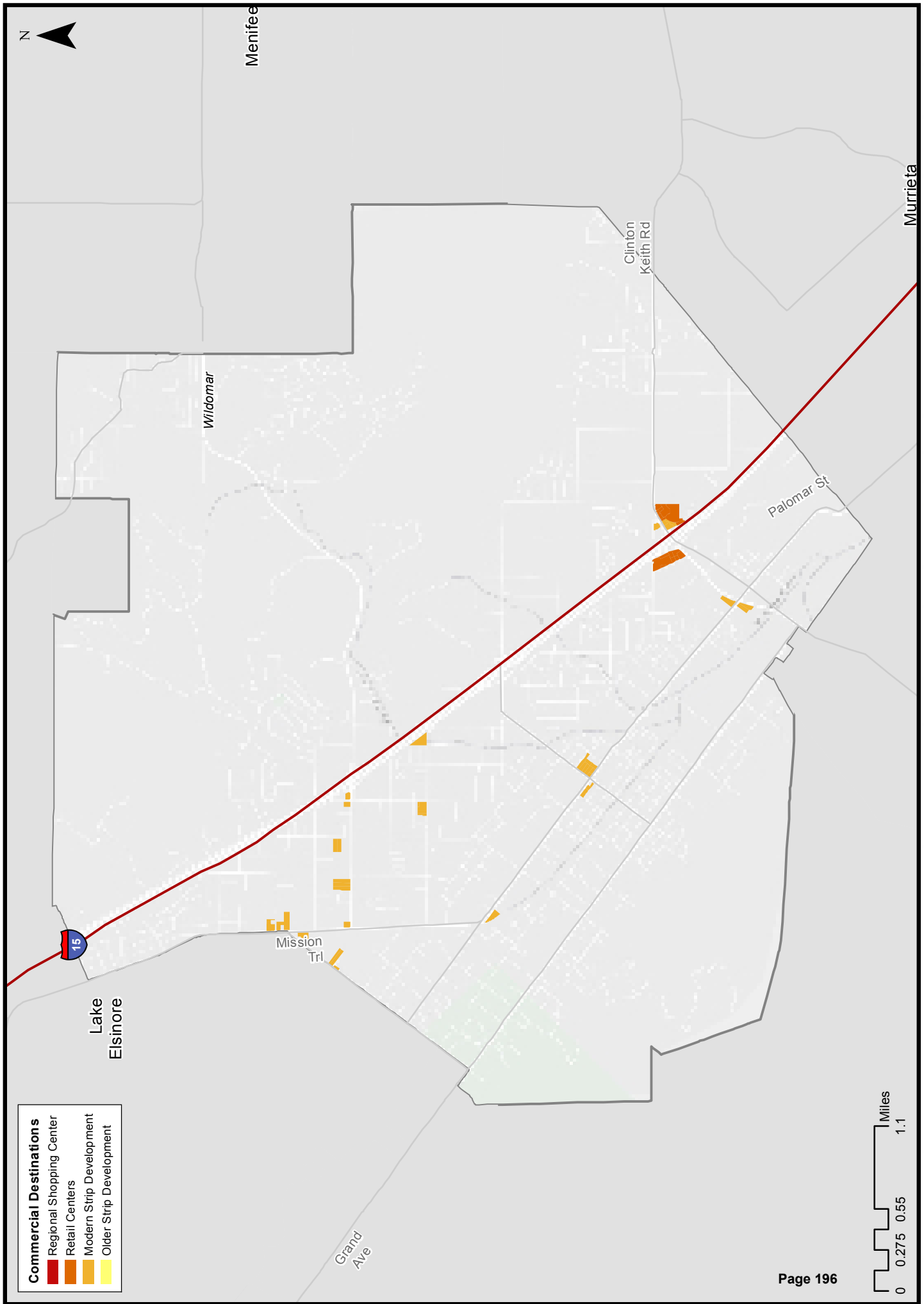


Wildomar: PEV Morning Peak Destinations and Top Workplaces

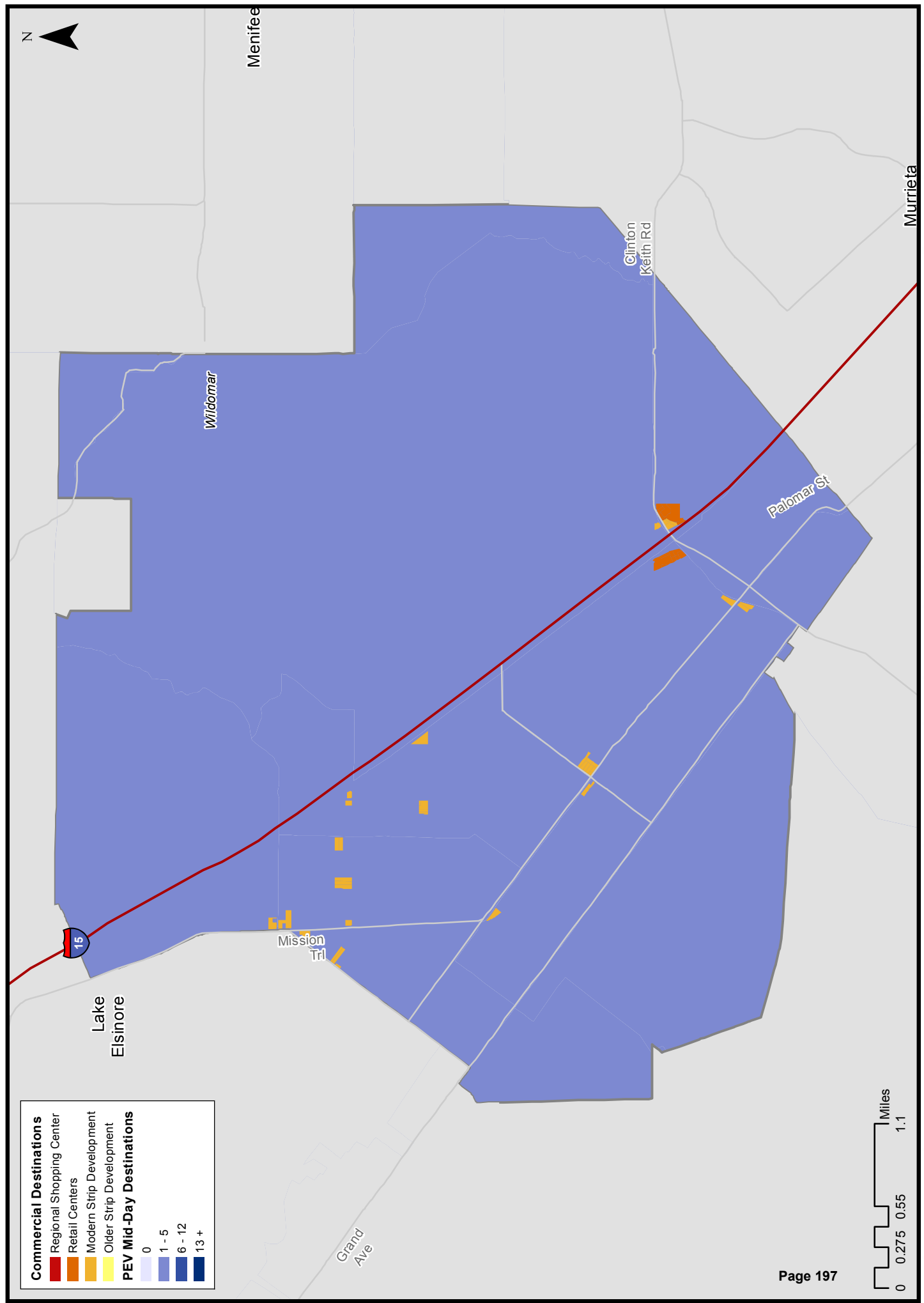


City		Employer		Address		Wildomar: Top Workplaces		Number of employees	High-tech?	White-collar?	PEV AM density
Wildomar	INLAND VALLEY REGIONAL MEDICAL CENTER			36485 INLAND VALLEY DR			926	N	Y		
Wildomar	FCP Inc			23100 Baxter Rd			150	N	N		
Wildomar	Top-Line Concrete & Landscape			21880 Canyon Dr			100	N	N		
Wildomar	Jean Hayman Elementary School			21440 Lemon St			100	N	Y		
Wildomar	Lake Elsinore Unified Sch Dist			21641 Bundy Canyon Rd			100	N	Y		
Wildomar	Wildomar Elementary School			21575 Palomar St			100	N	Y		
Wildomar	Albertsons			23893 Clinton Keith Rd			99	N	N*		
Wildomar	Premier Pipeline Construction			31705 Central St			99	N	N		
Wildomar	P K Mechanical Systems			21335 Pundey Canyon Rd			85	N	N		
Wildomar	Coldwell Banker			23823 Clinton Keith Rd # 102			80	N	Y		
Wildomar	David A Brown Middle School			21861 Grand Ave			80	N	Y		
Wildomar	KB Home			36310 Inland Valley Dr			80	N	N		
Wildomar	Stater Bros Markets			36010 Hidden Springs Rd			78	N	Y		
Wildomar	Donald Graham Elementary Schl			35450 Frederick St			60	N	Y		
Wildomar	Shane Contractors			33340 Misson Trail			50	N	N		
Wildomar	Mc Donald's			23819 Clinton Keith Rd			50	N	N		
Wildomar	Elsinore High School			21800 Canyon Dr			45	N	Y		
Wildomar	Del Taco			36164 Hidden Springs Rd			40	N	N		
Wildomar	Jack in the Box			21960 Bundy Canyon Rd			35	N	N		
Wildomar	Bundy Canyon Christian School			23411 Bundy Canyon Rd			30	N	Y		
Wildomar	Cornerstone Community Church			34570 Monte Vista Dr			30	N	Y		
Wildomar	Extreme Sports Pizza			23905 Clinton Keith Rd # 101			26	N	N		
Wildomar	Cornerstone Christian School			34570 Monte Vista Dr			25	N	Y		
Wildomar	Kemco Engineering			34885 Mission Trail			25	N	N		
Wildomar	Jack in the Box			36196 Hidden Springs Rd			25	N	N		
Wildomar	Wienerschnitzel			23937 Clinton Keith Rd			22	N	N		
Wildomar	Prowest PCM Inc			22710 Palomar St			20	N	Y		
Wildomar	Stadium Pizza			32395 Clinton Keith Rd # 2			20	N	N		
Wildomar	Farm Property Owners Assn			33430 Harvest Way			19	N	Y		
Wildomar	Interstate Fire Protection			36140 Jana Ln			17	N	Y		
Wildomar	Anne Sullivan Nursery School			21776 Palomar St			16	N	Y		
Wildomar	Starbucks			23823 Clinton Keith Rd # 101			16	N	N		
Wildomar	Clinton Keith Dental Group			32395 Clinton Keith Rd # 108			15	N	Y		
Wildomar	Cal Trust Mortgage			32395 Clinton Keith Rd # A204			15	N	Y		
Wildomar	Bear Creek Pharmacy			36243 Inland Valley Dr # 130			15	N	Y		
Wildomar	Crivello Ristorante Italiano			32475 Clinton Keith Rd			15	N	Y		
Wildomar	Eagles Peak Charter School			21465 Palomar St # 7			15	N	Y		
Wildomar	Hematology Oncology Consultant			36450 Inland Valley Dr # 101			15	N	Y		
Wildomar	Inland Urgent Care			36243 Inland Valley Dr			15	N	Y		
Wildomar	Tri Power Engineering			20390 Lorena Ln			15	N	N		
Wildomar	Valley Regional Oncology			36450 Inland Valley Dr # 101			15	N	Y		

Wildomar: Commercial (Retail) Destinations



Wildomar: PEV Mid-Day Destinations and Commercial (Retail) Locations



Commercial Destinations

- Regional Shopping Center
- Retail Centers
- Modern Strip Development
- Older Strip Development

PEV Mid-Day Destinations

- 0
- 1 - 5
- 6 - 12
- 13 +



Wildomar: Top Retailers

COMPANY	ADDRESS	DESCRIPTION	ANNUAL SALES (000s)	Mid-day PEVs
Albertsons	23893 Clinton Keith Rd	Supermarkets & Other Grocery Stores	\$24,453	
Stater Bros Markets	36010 Hidden Springs Rd	Supermarkets & Other Grocery Stores	\$19,266	
Perma-Brace Construction	21690 Vine St	Manufactured, Mobile, Home Dealers	\$3,608	
Sedco Pier Inc	33320 Mission Trl	Manufactured, Mobile, Home Dealers	\$3,608	
USA Petroleum	23905 Catt Rd	Other Gasoline Stations	\$3,248	
Elsinore Building Materials	33600 Mission Trl	Home Centers	\$2,800	
Bear Creek Pharmacy	36243 Inland Valley Dr # 130	Pharmacies & Drug Stores	\$2,745	
Coyote Rentals & Sales Inc	32420 Central St	Home Centers	\$2,450	
V P Racing Fuels	25032 Las Brisas Rd	Automotive Parts & Accessories Stores	\$2,340	
Power Heads	35260 Bayless Rd	Used Car Dealers	\$2,013	
VIP Motoring	32695 Clinton Keith Rd	Used Car Dealers	\$2,013	
Mc Donald's	23819 Clinton Keith Rd	Limited-Service Restaurants	\$2,000	
Bundy Canyon Turf Supply	21400 Bundy Canyon Rd	Nursery, Garden, & Farm Supply Stores	\$1,911	
Del Taco	36164 Hidden Springs Rd	Limited-Service Restaurants	\$1,600	
Sav-On Drugs	23893 Clinton Keith Rd	Pharmacies & Drug Stores	\$1,464	
Jack in the Box	21960 Bundy Canyon Rd	Limited-Service Restaurants	\$1,400	
Peppertree Garden Ctr	22220 Bundy Canyon Rd	Nursery, Garden, & Farm Supply Stores	\$1,365	
Circle K	33982 Mission Trl	Convenience Stores	\$1,344	
C & T Auto	33480 Mission Trl	Used Car Dealers	\$1,342	
L & F Tire & Wheel	21299 Palomar St	Automotive Parts & Accessories Stores	\$1,326	
Melendrez Custom Theatre	23905 Clinton Keith Rd	Radio, TV & Other Electronics Stores	\$1,292	
Fat Jack Reel Hotrods & Parts	34320 Dorof Ct	Mail-Order Houses	\$1,221	
Stadium Pizza	32395 Clinton Keith Rd # 2	Limited-Service Restaurants	\$1,120	
Extreme Sports Pizza	23905 Clinton Keith Rd # 101	Limited-Service Restaurants	\$1,040	
Jack in the Box	36196 Hidden Springs Rd	Limited-Service Restaurants	\$1,000	
Round Up Liquor & Grocery	20651 Palomar St	Beer, Wine, & Liquor Stores	\$969	
J & I Homes & Development	33440 Mission Trl	Manufactured, Mobile, Home Dealers	\$902	
Bear Creek Svc Station	36228 Hidden Springs Rd	Convenience Stores	\$896	
Wienerschnitzel	23937 Clinton Keith Rd	Limited-Service Restaurants	\$880	
Doors & Windows	34860 Western Way	Other Building Material Dealers	\$774	
J & S Market	21465 Palomar St	Supermarkets & Other Grocery Stores	\$741	
Plowboys Market	22055 Palomar St	Supermarkets & Other Grocery Stores	\$741	
Joe's Satellite	35697 Country Park Dr	Radio, TV & Other Electronics Stores	\$646	
Type-Righter	22969 Navut Ave	Radio, TV & Other Electronics Stores	\$644	
Starbucks	23823 Clinton Keith Rd # 101	Snack & Nonalcoholic Beverage Bars	\$640	
Temecula Valley O & P Inc	36243 Inland Valley Dr # 30	Shoe Stores	\$627	
B & B Pump Svc	21427 Como St	Household Appliance Stores	\$612	
WCR	22061 Lemon St	Store Retailers Not Specified Elsewhere	\$603	
Crivello Ristorante Italiano	32475 Clinton Keith Rd	Limited-Service Restaurants	\$600	
A A Audio Waves	33980 Mission Trl # Hf	Automotive Parts & Accessories Stores	\$585	
Bear Valley Ranch Market	32475 Clinton Keith Rd # 111	Caterers	\$585	

Other Significant Retailers, Western Riverside County

Mid-day PEVs (low - less than 6 for all)

NAME	ADDRESS	CITY
Costco #432	480 McKinley St	Corona
Home Depot #601	490 McKinley St	Corona
Home Depot #6665	1355 E Ontario Ave	Corona
Lowes	1285 Magnolia Avenue	Corona
25 hour fitness- Sport gym	275 Teller Street Suite 100	Corona
Home Depot #1084	6140 Hamner Avenue	Eastvale
24 hour fitness- Super Sport gym	12354 Limonite Avenue	Eastvale
Lowes	350 South Sanderson Avenue	Hemet
LA fitness	220 North Sanderson Ave	Hemet
Lowes	6413 Pats Ranch Road	Jurupa Valley
24 hour fitness- Active gym	7960 Limonite Ave	Jurupa Valley
Home Depot #8988	18282 Collier Avenue	Lake Elsinore
Lowes	29335 Central Avenue	Lake Elsinore
LA fitness	18550 Dexter Ave	Lake Elsinore
Target	30340 Haun Rd	Menifee
Lowes	30472 Haun Road	Menifee
O'Reilly Automotive Distributors	24520 San Michele Rd	Moreno Valley
Skechers	29800 Eucalyptus Ave	Moreno Valley
Walgreens	17500 Perris Blvd	Moreno Valley
Home Depot #616	12255 Pigeon Pass Rd	Moreno Valley
Home Depot #1087	15975 Perris Blvd	Moreno Valley
Lowes	12400 Day Street	Moreno Valley
25 hour fitness- Active gym	23750 Alessandro Blvd	Moreno Valley
Lowes	24701 Madison Avenue	Murrieta
24 hour fitness- Active gym	40396 Murrieta Hot Springs Road	Murrieta
LA fitness	40985 California Oaks Road	Murrieta
LA fitness	1377 Hamner Ave.	Norco
Lowes	3984 Indian Ave	Perris
Ross Stores	3404 Indian Ave	Perris
Wal-mart	2560 W Perris Blvd	Perris
Home Depot #6875	3150 Case Road Bldg P	Perris
Fresh & Easy Neighborhood Market	1730 Eastridge Ave	Riverside

Fresh & Easy Neighborhood Market	14800-50 Innovation Dr	Riverside
Fresh & Easy Neighborhood Market	15555 Meridian Parkway	Riverside
Ralphs Grocery	1500 Eastridge Ave	Riverside
Mission Inn	3649 Mission Inn Ave	Riverside
Wal-mart	5200 Van Buren Blvd	Riverside
Home Depot #6619	3323 Madison St	Riverside
Lowes	9851 Magnolia Avenue	Riverside
LA fitness	2600 Canyon Springs Parkway	Riverside
LA fitness	3437 Arlington Ave	Riverside
LA fitness	19531 Mission Village Dr	Riverside
LA fitness	3490 Madison Street	Riverside
Wal-mart	1861 S San Jacinto Ave	San Jacinto
Costco	26610 Ynez Rd	Temecula
Lowes	40390 Winchester Road	Temecula
25 hour fitness- Sport gym	27520 Ynez Road	Temecula

Technical Appendix: City-level PEV Planning Maps and Tables

This appendix describes the methods, assumptions and data sources used to create the city-level maps and tables in this Appendix.

City-level maps

PEV registration maps

The maps show the numbers of PEVs registered in each Western Riverside County city by Tier 1 travel analysis zone (TAZ). TAZs closely follow 2000 Census tract boundaries and are used by the Southern California Association of Governments (SCAG) to estimate travel within and between neighborhoods.

There are 4,109 Tier 1 TAZs in the SCAG region. The map colors move from lighter in areas with no or few PEVs registered to darker in areas with more PEVs registered. PEV registration data supplied at the 2010 Census tract level was harmonized with TAZ boundaries.

The numbers were calculated from disaggregated registration data purchased from R.L. Polk & Co., an automotive data vendor. The counts reflect vehicles newly registered from December 2010, when the Chevrolet Volt and Nissan LEAF were introduced, through September 2012. We define a PEV as any fully electric vehicle (including low-speed neighborhood electric vehicles and electrified trucks) or a plug-in hybrid electric vehicle (PHEV).

Multi-unit dwelling and PEV registration density maps

This data is obtained from SCAG's 2005 Existing Land Use Dataset, which includes information on the concentration of all residential units other than single-family in the SCAG region. The land use data was developed by Aerial Information Systems, Inc. as a Modified Anderson Land Use Classification. The designations were determined by using aerial photography to estimate the land use at the parcel level. Each residential parcel in the dataset is assigned a code that best describes the composition of residential unit types. The factors that contribute to a parcel's residential designation are the height of the buildings, the square footage, and the concentration of multi-unit dwellings per parcel.⁸ The densities of units per acre increase from yellow at the duplex, triplex and townhouse level all the way up to high-rise MUDs in red.

⁸ Southern California Association of Governments. 2002. Southern California 1990 Aerial Land Use Study: Land Use Code Descriptions and Key Signatures, Level III/IV.

CODE	DESCRIPTION	DENSITY
1121	Mixed Multi-Family Residential	NA
1122	Duplexes, Triplexes, and 2- or 2-Unit Condominiums and Townhouses	2 units or less
1123	Low-Rise Apartments, Condominiums, and Townhouses	4+ units. 10 to 18 units per acre
1124	Medium-Rise Apartments and Condominiums	Greater than 18 units per acre
1125	High-Rise Apartments and Condominiums	Greater than 18 units per acre

PEV morning peak destination maps

Using surveys of household travel behavior, SCAG’s travel demand model estimates the number of trips from home to work, school, and other destinations by time of day.⁹ By counting the number of PEVs from each *origin* TAZ that feed into each of the daytime *destination* TAZs, we were able to map the locations and densities of PEVs traveling to work on weekdays from 6:00 a.m. to 9:00 a.m. We used the outputs from SCAG’s 2008 Regional Model.¹⁰ It is important to note that these morning peak destination TAZs receive vehicles from outside the city.

Employment density maps

The maps of employment density were prepared using two data sources: 1) the database of businesses that as of April 2013 were subject to the South Coast Air Quality Management District’s Rule 2202, which mandates that workplaces of at least 250 employees take measures to reduce emissions from employee commutes; and 2) commercially available Infogroup data from 2008 on employer size (i.e., number of employees) and location. Each circle on the map represents one workplace. The circles move from small to large and from yellow to red as the number of employees per workplace increases as described.

PEV morning peak destination and employment density maps

This is an overlay of the previous two maps. The maps show both where PEVs driving to work are likely to be during the daytime hours and where there are many employers and potentially high demand for workplace charging depending upon how charging is priced.

Commercial (retail) destination maps

This map data is obtained from SCAG’s 2005 Existing Land Use Dataset, which includes information on the concentration of retail centers in the SCAG region. The land use data was developed by Aerial Information Systems, Inc. as a Modified Anderson Land Use Classification. The designations were determined by using aerial photography to estimate the land use at the parcel level.

⁹ <http://www.scag.ca.gov/modeling/index.htm>

¹⁰ http://www.scag.ca.gov/modeling/pdf/MVS08/MVS08_Chap05.pdf

The Appendix contains maps of retail and small business destinations (such as beauty salons and small offices) within each city in the subregion. They highlight four types of retail centers that are likely to attract many of the non-work related vehicular trips. These four categories are as follows:

CODE	DESCRIPTION	KEY ATTRIBUTE
1221	Regional Shopping Center	Department store with surrounding parking
1222	Retail Centers (Non-Strip With Contiguous Interconnected Off-Street Parking)	Magnet store with in-front parking
1223	Modern Strip Development	Small businesses with parking on-street and on one side
1224	Older Strip Development	Small businesses with on-street parking

Land use Code 1221, Regional Shopping Center, contains large retail centers with at least one major department store and a range of other smaller retail establishments. These shopping centers are generally enclosed malls with parking surrounding the one to three story building. This also includes factory outlet malls.

Land use Code 1222, Retail Centers, is comprised of at least one large magnet store, a large off-street parking lot, and additional detached commercial stores, including small retail stores, gas stations, and restaurants. All structures are generally one story tall. Retail Centers are often located conveniently off major highways or highly trafficked surface streets.

Land use Code 1223, Modern Strip Malls, designates parcels which contain retail stores, restaurants, service shops, and offices, and are often located along major traffic corridors. Parking is available on-street as well as off-street either in front, on the side, or behind the structures. Included in this category are gas stations, auto repair shops, convenience stores, liquor stores, small bank branch offices, clothing stores, restaurants, furniture stores, discount stores, novelty stores, car dealerships or auto centers, drug stores, small corner markets, auctions, and smaller malls which do not contain a large magnet store.

Finally, land use Code 1224, Older Strip Development, contains parcels of land with little or no off-street parking. This category is commonly found in older city and town business corridors. Units are small retail establishments, restaurants, and offices with storefronts without setback, adjacent to the sidewalk. Units are often attached to the neighboring unit creating an uninterrupted streetscape. Units with commercial space on the first floor and residential units on upper floors can be considered Older Strip Development.¹¹

¹¹ Southern California Association of Governments. 2002. Southern California 1990 Aerial Land Use Study: Land Use Code Descriptions and Key Signatures, Level III/IV.

PEV mid-day destination and commercial (retail) location maps

After mapping retail destinations, the UCLA Luskin Center mapped the locations where currently-registered PEVs travel during weekdays from 9:00 a.m. to 3:00 p.m. The data on PEV registrations comes from automotive data vendor R.L. Polk & Co., which provided the number of PEVs registered as new within each 2010 Census tract from December 2010 through September 2012.

Census tracts closely follow the boundaries of travel analysis zones (TAZs), which are the geographic areas used by SCAG to model vehicle travel. SCAG's travel demand model estimates the number of trips from home to work, school, and other destinations by time of day. By counting the number of PEVs from each *origin* TAZ that feed into each of the mid-day *destination* TAZs, we are able to map the locations and densities of PEVs traveling to neighborhoods from 9:00 a.m. to 3:00 p.m. We used the outputs from SCAG's 2008 Regional Model.¹² It is important to note that these morning peak destination TAZs receive vehicles from outside the city.

Publicly-accessible charging station maps

The Appendix includes maps of publicly-accessible charging stations for each city in the Western Riverside County subregion. "Publicly-accessible" refers to stations that are owned by either the government or private businesses but that are available for use by the general public. The maps identify the number of charging units/cords available at each location along with the level of service (Level 1, Level 2, etc., or "Unknown" where there is charging available but the quantity of connectors and their level of service could not be immediately determined). The maps are based on information collected during the summer and early fall of 2012.

The information was compiled using online databases maintained by the U.S. Department of Energy (DOE) (http://www.afdc.energy.gov/fuels/electricity_locations.html) as well as Recargo (www.recargo.com), PlugShare (www.plugshare.com), and Car Stations (www.carstations.com), which contain information posted by users of the charging stations. The precise number of connectors or charging units that are operational at any given time and location are subject to maintenance and upgrade schedules. Some stations designated as "legacy" in the Appendix may have since been upgraded to current connector standards under the Reconnect CA program.

The DOE database's station location feature allows one to search electric vehicle charging stations by state and then download the data into a spreadsheet. The California state list was filtered to include only those located within the six-county SCAG region, and those were further filtered to include only those located within Western Riverside County cities. The DOE list contains charging stations from a variety of sources, including trade media, Clean Cities coordinators, a form on the AFDC website, and through collaboration with charging equipment providers. The data is updated twice per month and stations that are no longer in service are regularly removed. There are additional stations not captured on the DOE list that were found on the other sites listed above.

¹² http://www.scag.ca.gov/modeling/pdf/MVS08/MVS08_Chap05.pdf

Stand-alone parking facility maps

This map data is obtained from SCAG’s 2005 Existing Land Use Dataset, which includes information on the concentration of stand-alone parking facilities in the SCAG region. The land use data was developed by Aerial Information Systems, Inc. as a Modified Anderson Land Use Classification. The designations were determined by using aerial photography to estimate the land use at the parcel level. Only parking facilities of a size of 2.5 acres or greater (not attached to other land uses) were captured in the dataset.

Three types of stand-alone parking are classified by SCAG:¹³

Description	Key Attribute
Attended Pay Public Parking Facilities	Stand-alone public parking areas and parking structures that have an attendant-cashier present
Non-Attended Public Parking Facilities	Free or metered public parking areas where no attendant-cashier is present
Park and Ride Lots	Cal Trans park and ride lots provided for commuter ridesharing, buspooling, vanpooling, and carpooling purposes

The “Attended Pay Public Parking Facilities” classification does not distinguish between privately-owned commercial parking facilities available for public use and municipal or other parking facilities owned by the public sector that are available for public use.

City-level tables

Top multi-unit dwellings

The top 20 MUDs are listed in each city¹⁴ by number of units. Unlike the American Community Survey estimates used in the land use inventories, this parcel analysis considers MUDs to be developments with shared parking facilities (as opposed to individual attached garages). Efforts were made to exclude developments that are considered MUDs for tax assessment purposes but that otherwise closely resemble single-family homes in their parking arrangements. Data was obtained from the Riverside County Assessor tables extracted in April 2013 by the Riverside County Transportation and Land Management Agency.

Assessor codes indicating a range from one (including condominium) to four or more housing units were sorted by the number of units on the parcel. Properties were then verified as MUDs for the purposes of

¹³ Southern California Association of Governments. 2002. Southern California 1990 Aerial Land Use Study: Land Use Code Descriptions and Key Signatures, Level III/IV.

¹⁴ Some cities will have fewer than 20 developments listed, and some will have more than 20 listed. Not included are MUDs that had less than three units (except for Canyon Lake, where two-unit buildings proliferate). In cases where separate developments in a city had the same number of units, all MUDs of that size were included, resulting in more than 20 listings for some cities.

this analysis using Google Street View. Where multiple assessments were located at the same address, or where parcels with different addresses appeared to be part of the same planned community, the total number of units at the development were assigned to one address. For condos, the given unit value represents one example value from a unit on the property and may not be representative of the other units. Average unit value for non-condos was obtained by totaling assessed land and improvement value for each parcel and dividing by the number of units.

The Riverside County assessor provides property information broken up into several different databases that separately contain information on addresses, year built, unit value, condo/non-condo, etc. We used assessment numbers to join these various attributes into a complete description of each parcel. Where values are missing, it is because they were missing in the assessor's database or because the corresponding assessment numbers could not be found in the database containing the attributes in question. In some cases, we were able to find year-built information on such web sites as ForRent.com, LoopNet.com, and developer web sites.

Where identified by the Assessor, attached and detached garages are indicated with an A (attached) or a D (detached). If the Assessor lists a carport square footage for the parcel, a "Y" for "yes" is indicated in the Carport? column. PEV density is defined as "high" if at least 13 PEVs are registered in the travel analysis zone (TAZ) where the MUD is located. PEV density is defined as "medium" if 6-12 PEVs are registered in the TAZ. A PEV registration density from 0-5 is left blank.

Top workplaces

The top 40 workplaces are listed in each city by number of employees. Data was obtained from 1) the South Coast Air Quality Management District's April 2013 database of employers subject to Rule 2202, which mandates that workplaces of at least 250 employees take measures to reduce emissions from employee commutes; and 2) commercially available Infogroup data from 2008 on employer size (i.e., number of employees), location, and business category according to the North American Industrial Classification System. Where available, Infogroup data indicates whether the employer is in a high-tech sector (yes or no) or if at least 50% of its employees are white-collar (yes or no). In certain cases, the UCLA Luskin Center has reclassified companies along these attributes. PEV density is defined as "high" if at least 13 PEVs are predicted to travel to the travel analysis zone (TAZ) where the workplace is located during weekdays from 6:00 a.m. to 9:00 a.m. PEV density is defined as "medium" if 6-12 PEVs travel to the TAZ during weekday mornings. A PEV density from 0-5 is left blank.

PEV density is predicted according to SCAG's 2008 regional travel model.¹⁵ Using surveys of household travel behavior, SCAG's travel demand model estimates the number of trips from home to work, school, and other destinations by time of day.¹⁶ By counting the number of PEVs from each *origin* TAZ that feed into each of the daytime *destination* TAZs, we were able to map the locations and densities of PEVs

¹⁵ http://www.scag.ca.gov/modeling/pdf/MVS08/MVS08_Chap05.pdf

¹⁶ <http://www.scag.ca.gov/modeling/index.htm>

traveling to work on weekdays from 6:00 a.m. to 9:00 a.m. It is important to note that these morning peak destination TAZs receive vehicles from outside the city.

Top retailers

The top 40 retailers in each city are listed by annual retail sales (in thousands) as reported by Infogroup's 2008 database. Significant retailers not listed in Infogroup's database but found using online searches and retailer web sites are also listed separately. Retailers are defined as businesses classified under the following NAICS descriptions: retail trade; arts, entertainment and recreation; accommodation and food services; and other services (i.e., dry cleaners and beauty salons). PEV density is defined as "high" if at least 13 PEVs are parked in the travel analysis zone (TAZ) where the retailer is located between 9:00 a.m. and 3:00 p.m. PEV density is defined as "medium" if 6-12 PEVs are parked in the TAZ during those hours. A PEV density from 0-5 is left blank.

Impact of Plug-in Electric Vehicles on Greenhouse Gas Emissions in Western Riverside County, 2012-2022

Introduction

This memo projects the adoption of plug-in electric vehicles (PEVs) into the Western Riverside County vehicle fleet and the resulting impact on greenhouse gas (GHG) emissions. The quantity of avoided carbon emissions is presented with a lower bound (based on historic sales of the standard Toyota Prius hybrid), moderate bound (+ 5%), and high bound (+ 10%) for potential emissions. These savings are enumerated for the Western Riverside County subregion within the Southern California Associated Governments (SCAG) jurisdiction. The time span included in the analysis covers the 10 years from 2012 to 2022.

Background

Several regulations (e.g. California's low carbon fuel standard, AB 32, Advanced Clean Cars program) are already in effect that mandate the reduction of greenhouse gases in California. The integration of PEVs is a viable way to help meet these increasingly stringent standards. Targeting the transportation sector will be very effective since it accounts for 27% of GHG emissions in the U.S. and is the second greatest source of GHG emissions.¹ Even though PEVs create fewer tailpipe emissions than conventional vehicles (CVs), an increased load is expected on the electricity grid from charging the vehicles. This electricity load will vary based on time, charging levels, and location of charging, but we will simplify the variability for the purposes of this memo. We will assume one carbon intensity value per utility per year and likewise for the COG jurisdictions. The emissions calculation will be further explained in the Methodology section.

Various models have been developed to calculate emissions reductions. The EDGE-CA model measures greenhouse gas emissions from electricity generation in California. Similarly, the GREET model, produced by Argonne National Laboratory, measures energy and emissions from transportation fuels. Since we are interested in the GHG emission reduction forecasts down to the Western Riverside County level in Southern California, a simulation from neither EDGE-CA

¹ U.S. Environmental Protection Agency. Sources of Greenhouse Gas Emissions: Transportation Sector Emissions. <http://www.epa.gov/climatechange/ghgemissions/sources/transportation.html>.

nor GREET will provide the energy and emission information with the proper breakdown to address this problem. However, these models are still useful in finding assumptions and key figures that also apply to our goal.

Methodology

Carbon intensity

Our first step was to identify the utility carbon intensity numbers for Western Riverside County. Utilities located in the subregion include City of Banning, Moreno Valley Electric Utility, Riverside Public Utilities, and Southern California Edison (SCE). To simplify the analysis, we used numbers from SCE² to represent carbon intensity for the Western Riverside County subregion as a whole. The majority of households in the subregion are SCE accounts³.

Rather than assuming a reduction rate in SCE’s carbon intensity to 2022, the SCE carbon intensity was held constant because it is already very low compared to other utilities in Southern California⁴.

Table 1. Southern California Edison carbon intensity, 2012-2022 (gCO2e/kWh)⁵

Utility/Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Southern California Edison	286	286	286	286	286	286	286	286	286	286	286

ICEV fuel efficiency

In order to compare the relative greenhouse gas savings from PEVs over the traditional internal combustion engine vehicles (ICEVs), the average ICEV efficiency was computed from the

² Climate Change and Greenhouse Gas Emission Technical Report, Appendix D.

<http://www.cityofirvine.org/civica/filebank/blobdload.asp?BlobID=20571>

³ According to the California Energy Commission, the three municipal utilities in the Western Riverside County subregion had a combined total of 123,531 accounts in 2010

(http://www.energy.ca.gov/maps/serviceareas/Electric_Service_Areas_Detail.pdf). There were 525,018 households in Western Riverside County in 2010

(http://www.wrcog.cog.ca.us/downloads/WRCOG_Growth_Forecast_2010_2035.pdf), so it is likely that the majority of utility accounts in the subregion are SCE’s.

⁴ UCLA Luskin Center, *Impact of Plug-in Electric Vehicles on Southern California Greenhouse Gas Emissions, 2012-2022*. December 2012.

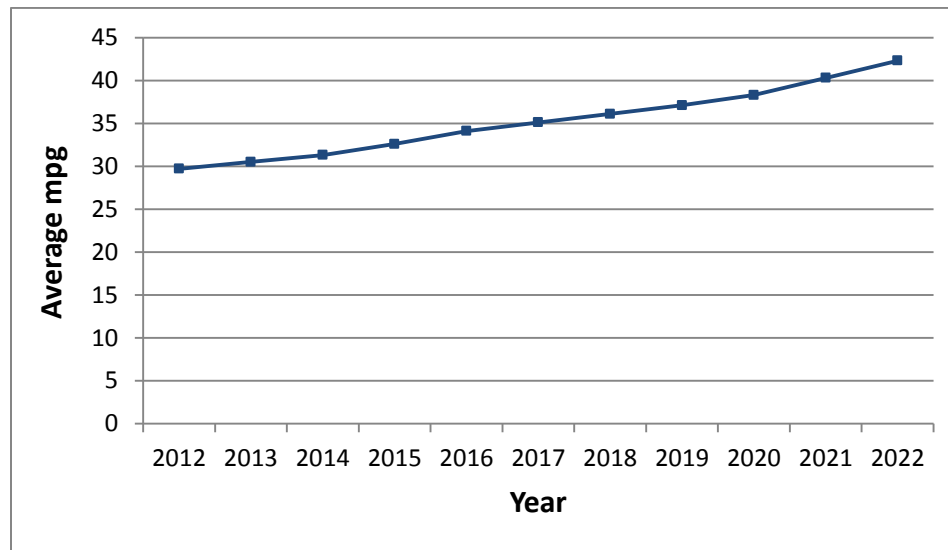
⁵ Grams of carbon dioxide equivalent per kilowatt-hour

Corporate Average Fuel Economy (CAFE) standards of 2012-2016⁶ and 2017-2025⁷. We included the variable for ICEVs' miles per gallon (mpg) since the average fuel efficiency, with or without PEVs, is mandated to increase over the next 10 years pending compliance with the CAFE standards. The ICEV energy efficiency (in megajoules per gallon, or MJ/gal) divided by the predicted mpg rating equals the average ICEV efficiency (MJ/mi). The increase in ICEV efficiency is presented in Table 2 and Figure 1.

Table 2. Required average MPG for light-duty passenger vehicles, 2012-2022

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Average miles per gallon for ICEVs (mpg)	29.70	30.50	31.30	32.60	34.10	35.10	36.10	37.10	38.30	40.30	42.30

Figure 1. Required average MPG for light-duty passenger vehicles, 2012-2022



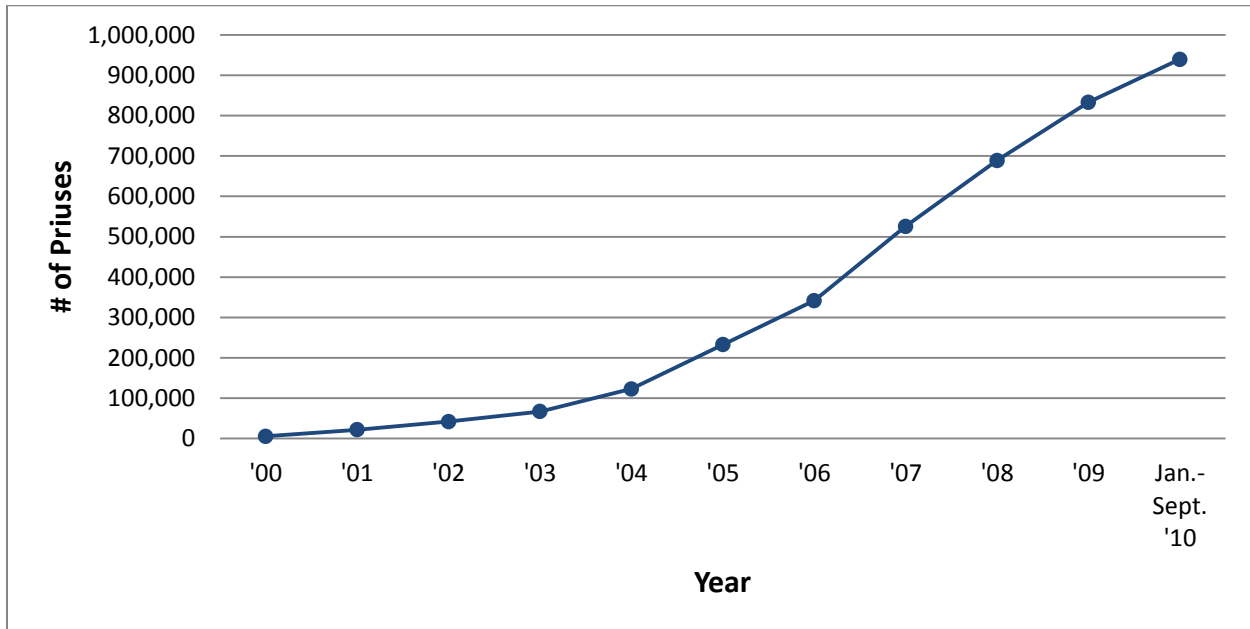
⁶ http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/CAFE-GHG_Fact_Sheet.pdf

⁷ <http://www.gpo.gov/fdsys/pkg/FR-2012-10-15/pdf/2012-21972.pdf>

Plug-in electric vehicle growth rates

To estimate the PEV growth rate, we extrapolated the annual percentage growth rates of standard Toyota Prius hybrid sales in North America from 2000 to 2010 (Figure 2).

Figure 2. Cumulative North America Toyota Prius Hybrid Sales, 2000-2010⁸



We then directly applied the annual standard Toyota Prius growth rates to our predicted PEV growth rates for each year from 2013 to 2022, starting from a known number of registered PEVs in Western Riverside County in 2012⁹. This calculation constituted the lower bound of our PEV growth estimate. A moderate bound was projected by scaling up each annual percentage growth rate by 5%, not to exceed 100%, in any one year and repeating the same calculation on each year's lower-bound estimate. The high bound was calculated identically to the moderate bound but with a 10% scaling factor over the low bound. See Table 3 for the breakdown of percentage growth rates.

⁸ Toyota press release. <http://www2.toyota.co.jp/en/news/10/10/1007.html>

⁹ The counts are based on data from R.L. Polk & Co. on PEVs newly registered in Western Riverside County from December 2010 to December 2012. This memo defines a PEV as any fully electric vehicle (including low-speed neighborhood electric vehicles and electrified trucks) or a plug-in hybrid electric vehicle (PHEV). The PHEV models counted in this analysis are the Chevrolet Volt, Toyota Plug-in Prius, Ford C-Max Energi and Fisker Karma.

Table 3. Current and projected PEVs in Western Riverside County

Year	Cumulative PEV registrations		
	Lower Bound	+ 5%	+ 10%
2012	575	575	575
2013	1,150	1,150	1,150
2014	2,221	2,278	2,300
2015	3,534	3,740	3,890
2016	6,483	7,047	7,525
2017	12,281	13,701	15,007
2018	18,031	20,801	23,534
2019	27,727	33,027	38,543
2020	36,341	44,939	54,372
2021	43,953	56,600	71,198
2022	49,540	66,623	87,367

Table 4. Predicted PEV growth rates

Year	PEV Annual Percentage Growth		
	Lower Bound	+ 5%	+ 10%
2012			
2013	100%	100%	100%
2014	93%	98%	100%
2015	59%	64%	69%
2016	83%	88%	93%
2017	89%	94%	99%
2018	47%	52%	57%
2019	54%	59%	64%
2020	31%	36%	41%
2021	21%	26%	31%
2022	13%	18%	23%

Carbon avoidance

To calculate the total carbon avoided, we first needed to predict the number of electric miles (e-miles) driven. The product of the number of PEVs and the estimated average number of daily e-miles driven per PEV (20 mi/PEV) resulted in the predicted daily e-miles driven. The average number of e-miles per PEV was assumed to only include people's commutes to and from work and home with few errands. By multiplying the carbon intensity of electricity, the PEV efficiency (average electricity usage per mile), and the total number of e-miles, we computed the PEV emissions. Assuming a 1:1 displacement with ICEVs and PEVs, the total number of e-miles driven was considered equivalent to the number of ICEV miles saved. By multiplying the gasoline carbon intensity, the ICEV efficiency (MJ/mi), and total ICEV miles saved, we solved for the potential ICEV emissions. The carbon avoidance, or GHG reduction, is the difference between the PEV emissions and the ICEV emissions.

The figure and table below project carbon avoidance in pounds of carbon dioxide for the Western Riverside County subregion.

Figure 3. Western Riverside Cty.: estimated avoided carbon emissions from PEV integration, 2012-2022

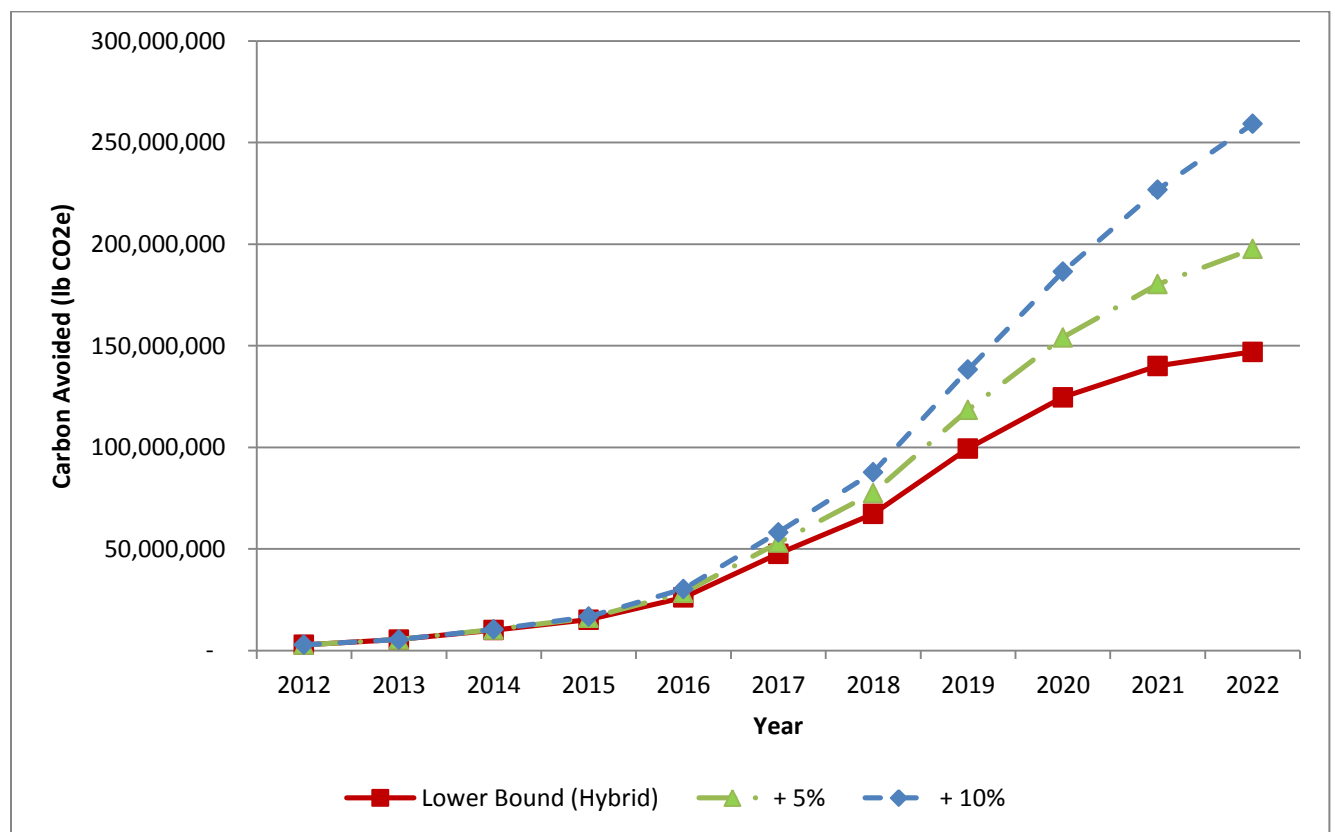


Table 5. Western Riverside County: estimated avoided carbon emissions from PEV integration, 2012-2022

Year	Total # of e-miles driven (mi)			PEV CO2e emitted (gCO2e)			ICEV Carbon Equivalent (gCO2e) *assume 1:1 displacement with PEV			Carbon Avoidance (lb CO2e)		
	Lower Bound	+ 5%	+ 10%	Lower Bound	+ 5%	+ 10%	Lower Bound	+ 5%	+ 10%	Lower Bound	+ 5%	+ 10%
2012	4,197,500	4,197,500	4,197,500	380,187,967	380,187,967	380,187,967	1,643,359,126	1,643,359,126	1,643,359,126	2,784,818	2,784,818	2,784,818
2013	8,395,000	8,395,000	8,395,000	760,375,935	760,375,935	760,375,935	3,200,509,250	3,200,509,250	3,200,509,250	5,379,577	5,379,577	5,379,577
2014	16,212,362	16,632,112	16,790,000	1,468,432,425	1,506,451,221	1,520,751,870	6,022,824,255	6,178,759,609	6,237,414,192	10,040,723	10,300,685	10,398,469
2015	25,801,147	27,300,763	28,399,428	2,336,935,213	2,472,762,747	2,572,274,124	9,202,792,609	9,737,678,054	10,129,551,377	15,136,637	16,016,410	16,660,958
2016	47,327,775	51,443,602	54,933,818	4,286,706,532	4,659,496,967	4,975,622,784	16,138,379,962	17,541,842,890	18,731,977,672	26,128,489	28,400,734	30,327,596
2017	89,649,358	100,017,832	109,550,280	8,119,977,873	9,059,100,918	9,922,501,124	29,698,758,299	33,133,593,810	36,291,473,599	47,573,106	53,075,215	58,133,681
2018	131,624,358	151,848,378	171,798,180	11,921,857,547	13,753,645,312	15,560,595,834	42,396,234,816	48,910,396,213	55,336,231,982	67,184,556	77,507,432	87,690,339
2019	202,404,220	241,095,952	281,360,987	18,332,733,548	21,837,231,639	25,484,231,528	63,437,181,529	75,563,877,256	88,183,675,246	99,438,367	118,447,075	138,228,725
2020	265,289,702	328,057,463	396,913,846	24,028,577,133	29,713,758,226	35,950,415,351	80,541,524,026	99,597,714,789	120,502,401,193	124,589,823	154,067,877	186,405,373
2021	320,858,440	413,176,684	519,744,537	29,061,707,747	37,423,419,591	47,075,787,755	92,577,755,542	119,214,473,579	149,962,652,181	140,029,030	180,318,555	226,826,894
2022	361,639,656	486,350,414	637,778,696	32,755,460,568	44,051,119,777	57,766,714,974	99,410,877,095	133,692,531,811	175,318,548,505	146,950,159	197,625,646	259,157,643