

# Battle of the Neighborhoods

# Introduction to the problem

A client wants to open a comic book store.

However, they are torn between selecting two different cities (El Segundo, California and Hermosa Beach, California). Another factor in consideration is that the business would be a speciality store and must exist with some distance from its competitor.

## The Question

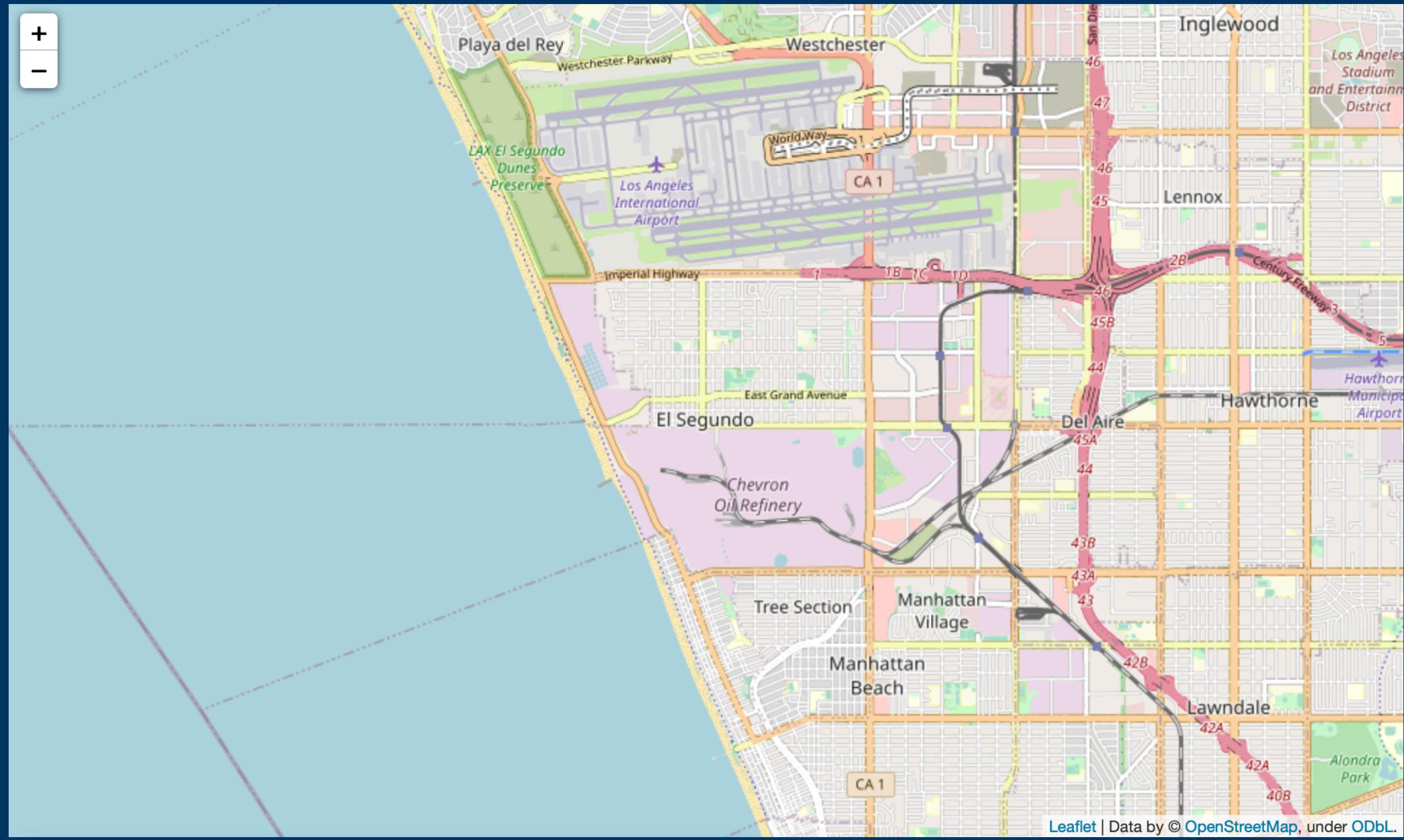
What would be the best city for the client's store with consideration for their competitor.

# The Data

- Load all the necessary libraries to manipulate data
- The creation of folium maps for each of the cities based on the location data
- The Foursquare venue information that will be super-imposed on the maps
- General city infomation for each city from wikipedia
  - \* "[https://en.wikipedia.org/wiki/List\\_of\\_municipalities\\_in\\_California](https://en.wikipedia.org/wiki/List_of_municipalities_in_California)"

# Methodology

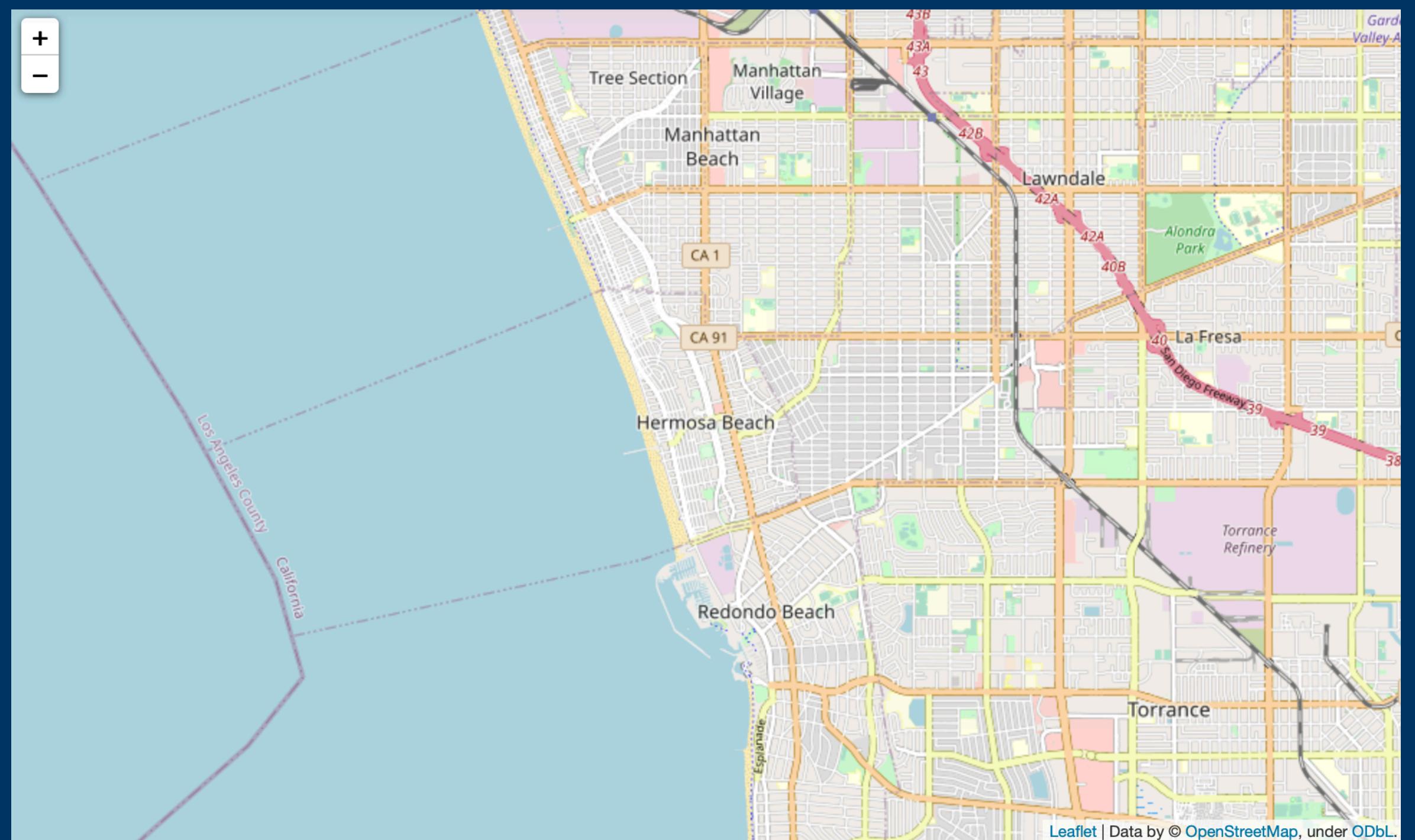
In order to address the client's problem I will first want to create a map of the two cities using the folium libraries. Once the maps are complete, I would then use the foursquare location data for the location of the venues inside of each city. I would compile that information into two Pandas dataframes. Each of the dataframe would allow me to manipulate the information so I would be able to narrow down the type of venues that are not necessarily important to answer the question. When I would be able to see if there is another comic book store within the given areas. Once I able to swift through the information and the categories of venues, I could make recommendations to answer his problem.



El Segundo (Figure 1)

Both cities are on the beach but have very different surrounding

Hermosa Beach (Figure 2)



El Segundo (Figure 1)

0	Brewery
1	Gastropub
2	Italian Restaurant
3	Mexican Restaurant
4	Mexican Restaurant
5	American Restaurant
6	Cuban Restaurant
7	IT Services
8	Taco Place
9	Sports Bar
10	American Restaurant
11	Coffee Shop
12	Italian Restaurant
13	Pizza Place
14	Coffee Shop
15	Fast Food Restaurant
16	American Restaurant
17	Dance Studio
18	Coffee Shop
19	Ice Cream Shop
20	Bar
21	Mediterranean Restaurant
22	Sandwich Place
23	Discount Store
24	Greek Restaurant
25	BBQ Joint
26	Cocktail Bar
27	Movie Theater
28	Restaurant
29	Japanese Restaurant
30	Diner
31	Japanese Restaurant
32	Diner
33	Thai Restaurant
34	Pizza Place
35	Indian Restaurant
36	Farmers Market
37	Mediterranean Restaurant
38	Rental Car Location
39	Pharmacy
40	Bank
41	Dive Bar
42	Japanese Restaurant
43	Wine Bar
44	Pizza Place
45	Burger Joint
46	Sports Bar
47	Latin American Restaurant
48	Shipping Store
49	Vietnamese Restaurant
50	French Restaurant
51	Sandwich Place
52	Art Museum
53	Spa
54	Sushi Restaurant
55	Antique Shop

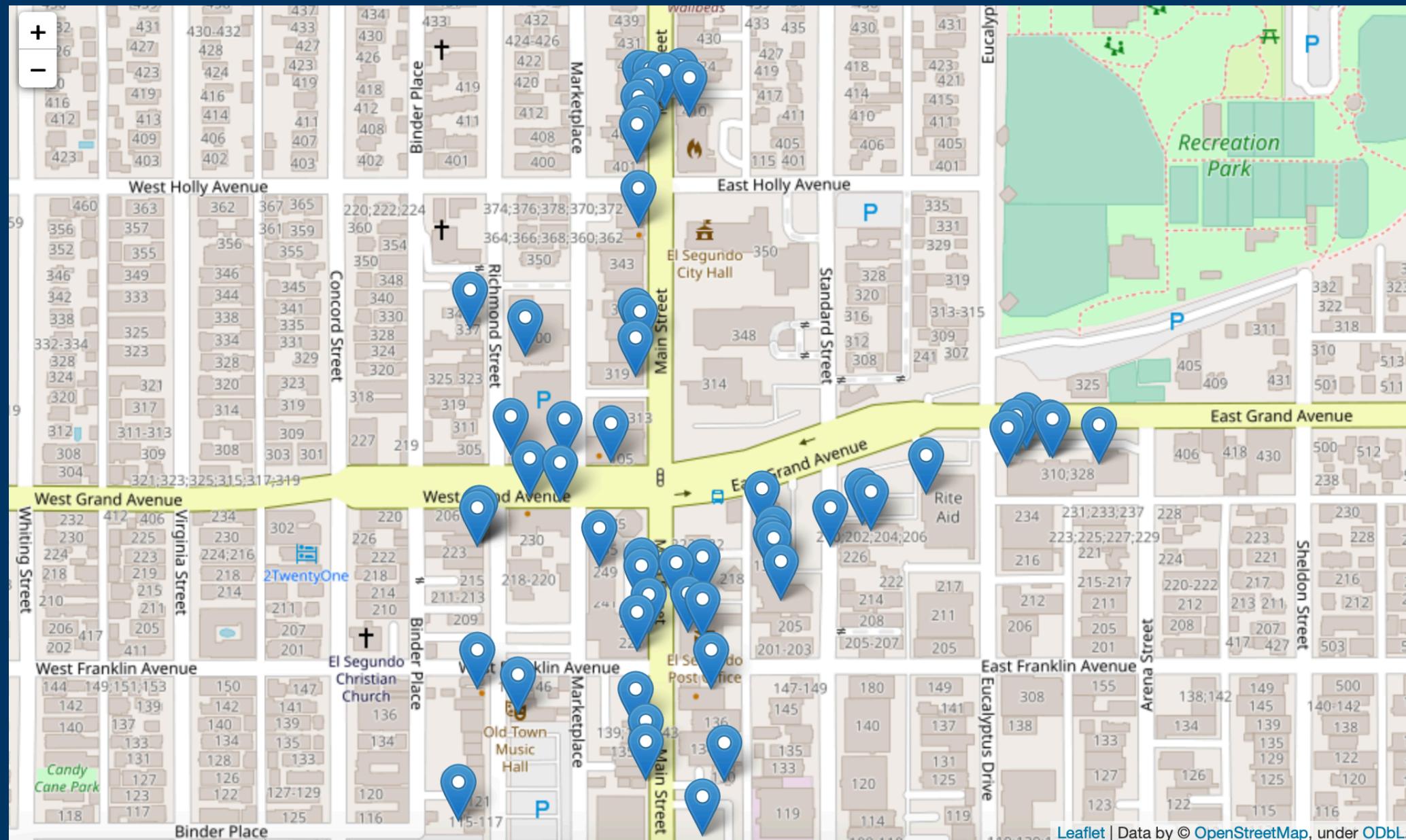
Hermosa Beach (Figure 2)

0	French Restaurant
1	Seafood Restaurant
2	Italian Restaurant
3	Vegetarian / Vegan Restaurant
4	Trail
5	Yoga Studio
6	Burger Joint
7	Wine Shop
8	Mexican Restaurant
9	Australian Restaurant
10	American Restaurant
11	Peruvian Restaurant
12	Massage Studio
13	Mexican Restaurant
14	Men's Store
15	Café
16	New American Restaurant
17	Burger Joint
18	Sushi Restaurant
19	Ice Cream Shop
20	Juice Bar
21	Pizza Place
22	Government Building
23	Antique Shop
24	Coffee Shop
25	Pharmacy
26	Italian Restaurant
27	Coffee Shop
28	Hawaiian Restaurant
29	American Restaurant
30	Coffee Shop
31	Juice Bar
32	Restaurant
33	Boutique
34	Board Shop
35	Grocery Store
36	Lounge
37	Shoe Store
38	Board Shop
39	Spa
40	Pizza Place
41	Steakhouse
42	Yoga Studio
43	Bank
44	Bar
45	Sports Bar
46	Poke Place
47	Restaurant
48	Grocery Store
49	Sushi Restaurant
50	Shipping Store
51	Hotel
52	Pub
53	Gym / Fitness Center
54	Chinese Restaurant
55	Gas Station
56	Farmers Market
57	Fast Food Restaurant
58	Hotel
59	Hotel
60	Italian Restaurant
61	Food Truck
62	Trail
63	Road
64	Shopping Mall
65	Indian Restaurant
66	Athletics & Sports
67	Park
68	Flea Market
69	Park

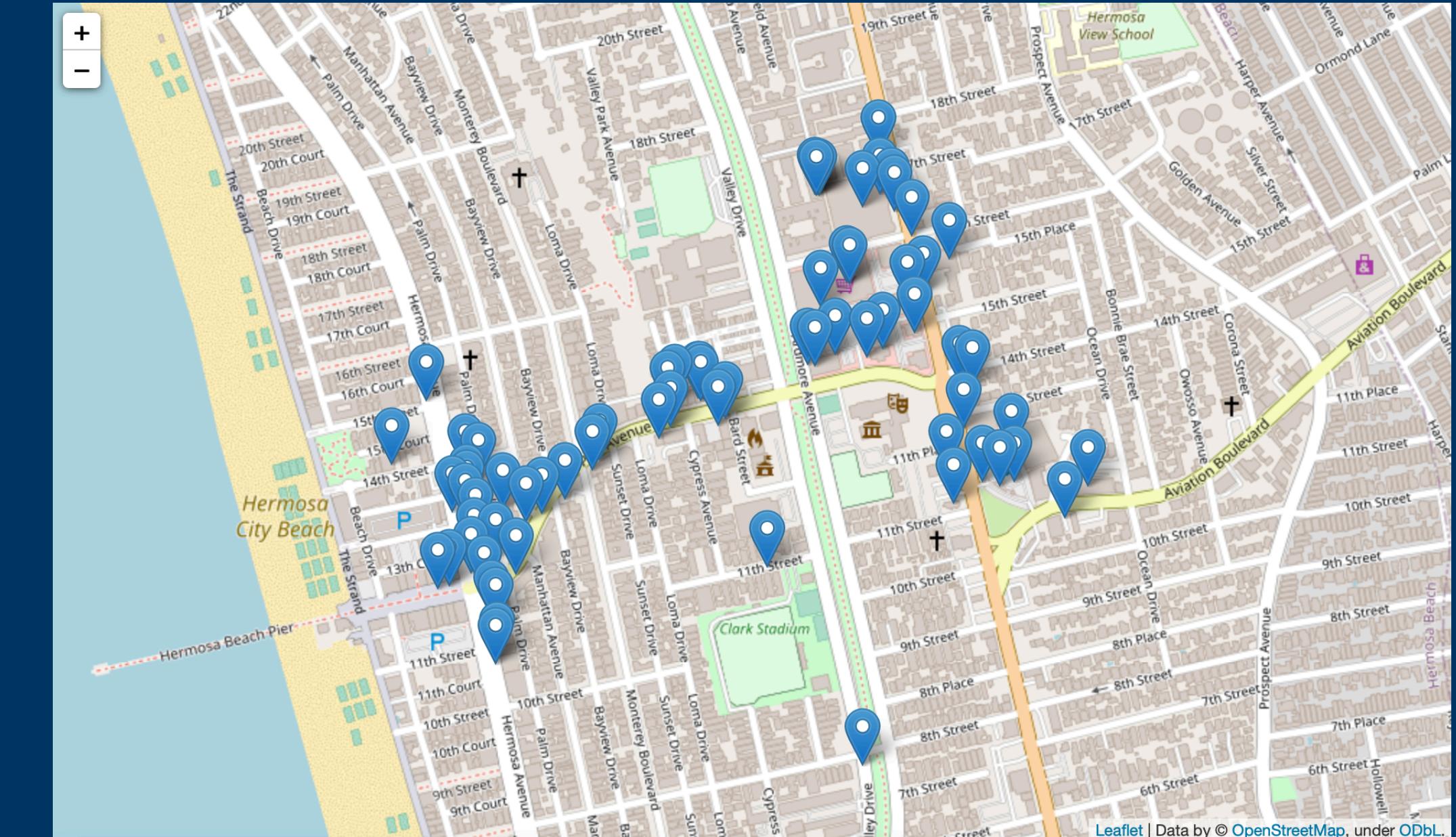
# List of Venue Categories

- Both the cities have diverse businesses
- Neither of the cities a listed comic book store
- Hermosa Beach has a larger number of businesses

# The venues on the their receptive maps



El Segundo (Figure 1)



Hermosa Beach (Figure 2)

# Information about each city

Name	Type	County	Population (2010)[1][8][9]	Land area[1]	Incorporated[7]		
Name	Type	County	Population (2010)[1][8][9]	sq mi	km2	Incorporated[7]	
126	El Segundo	City	Los Angeles	16654	5.46	14.1	January 18, 1917
175	Hermosa Beach	City	Los Angeles	19506	1.43	3.7	January 14, 1907

Figure 1

# Results

By pulling the information of Foursquare of the venues in both Hermosa Beach and El Segundo we could see all the type of business within those specific coordinates. The results from the above work are as follows.

- 1) Both El Segundo and Hermosa Beach, California have a similar amount of businesses.
- 2) Each city are very diverse in terms of venue categories.
- 3) Neither city has a comic book store which is good because that means both locations met one of the requirements posed by the client.
- 4) The search of population size for each city yielded that Hermosa Beach had a higher population by nearly 3,000 people.

# Discussion

While the two cities are very similar in terms of population and business venue categories, there are some difference that make them exceeding different. According to the city information pulled from wikipedia ([Slide 8 Fig. 1](#)), El Segundo is roughly 4x times larger than Hermosa Beach. Under normal situations for beach cities a larger city contain more people and a larger amount of the business to serve those people. However, El Segundo has 2 anomalies that make it larger without providing some of the benefits. The first folium map ([Slide 5 fig. 1](#)) reveal that a large portion of the city is taken up by the Chevron Refinery and the Los Angeles Airport. While these places undoubtedly bring something to El Segundo, there are many unknowns that may impact these businesses. For example, noise pollution along side an increase of regular pollution only to name a few. Hermosa Beach while smaller it has not only a higher population but also more businesses within the city center. ([Slide 8 fig. 1](#), [Slide 7 fig. 2](#)) Having a diverse amount of the businesses in a single area can be conducive to not only grow but continue success.

# Conclusion

This project was formed to answer the clients question on what city would be best to open a comic book store. Through the use of the Foursquare information along with population and size data from wikipedia, I would recommend that the client stat his business in Hermosa Beach California. I came to this conclusion because Hermosa Beach not only has a higher population but they also have a much larger business center within the city. This larger business center would normally be a problem because of the increase amount of business in the area. However, due to the fact that the business the client wants to start is a speciality store and there is no other store in the area like it, the increase in people traffic could potentially help their business thrive. The client's business venture could symbiotical work with the other type of the businesses in the area.