

Analysis of Enrollment in the Lee College Service Area

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Purpose

The purpose of this analysis is to examine student enrollment at Lee College across our service area. We are particularly interested in whether enrollment is equal across the service area and whether it is equal regardless of socioeconomic status. We define “equal” simply to mean that the number of enrolled students for any part of the service area is proportional to the population of that part.

Degree Seeking Students at the Main Campus

This analysis is limited to degree-seeking students at the main campus (which includes the McNair Campus). This analysis does not include dual-credit students and does not include students at the Huntsville Campus.

Area Divisions

The Lee College service area can be divided into separate parts by school district, ZIP code, municipality, or by census tract. This analysis uses census tracts because they provide fine detail, there are forty-seven census tracts, and they are easier to interpret because they are designed to contain comparable numbers of people, so the importance of each census tract is about the same when it comes to student enrollment. The other types of divisions, school districts, ZIP codes, and municipalities, can vary in population from less than 500 to over 50,000, which makes interpretation more difficult.

The Lee College service area is defined in statute by the school districts that it serves. Census tract boundaries do not coincide exactly with school district boundaries, so using census tracts does not exactly cover the service area; however, the advantages of census tracts outweigh the fact that they do not exactly represent the service area. Fig. 1 shows the census tracts in the Lee College Service Area.

Population and the Total Available Market

The US Census provides up-to-date estimates of the population by census tract, but using population as our comparison metric can be misleading. For example, suppose there are two census tracts that both have 3,000 people, but one tract contains a large retirement community and has an average age of 60, while the other has a large high school and community center and has an average age of 30. We do not expect both tracts to enroll the same number of students in college even though they have the same population. We account for differences in age by using the Total Available Market, which is an estimate of how many students would enroll if Lee College were an Ideal Community College in the Real World. Being an Ideal Community College means that there are no barriers to enrollment and student success: Every student who steps on campus feels like they belong here. Every class is taught by skilled faculty with high standards who personalize the learning experience for each student. Every student’s financial and other basic needs are fully met. Being in the Real World means that even with an ideal community college, not all students will enroll. For example, some 18-21 year olds dropped out of school and need a GED/HiSET before they enroll; some need to learn English before they enroll; some will go straight to a

university because it is a better “fit” and their families can afford it; some will join the military because it is a better “fit” for them; some want to enter the labor market and work for a while before deciding what to pursue in college; etc. For each age group there are reasons in the Real World why they would not enroll even if Lee College is an Ideal Community College. Table 1 provides the percentages that are used to estimate the Total Available Market. Percentages are proportional to actual enrollments at Lee College. The size of the Total Available Market using the percentages in Table 1 is 15,950 degree-seeking students in the Lee College Service Area; compared to the current actual number for Fall-Spring-Summer of 2019-2020 of 5,545. In other words, we are enrolling about a third of our ideal population.

Table 1: Percentage of the Total Population That Would Attend an Ideal Community College, i.e., the Total Available Market		
Age Group	Total Available Market	Comments
0-17	0% of the population	This population has not finished high school
18-21	50% of the population	This is the traditional age for attending college
22-24	22% of the population	Many in this population have completed college
25-29	13% of the population	
30-34	9% of the population	
35-49	4% of the population	
50+	0% of the population	This population is past earning a degree

Figure 2 shows the Total Available Market for each census tract. Rural tracts to the north have less than 100 students, and industrial tracts right on the ship-channel also have less than 100 students. Most tracts have a Total Available Market of about 300 students. Tract 7102, which is south of Mont Belvieu, is an exception with 1,200 students. The tracts are based on the 2010 Census, so they were drawn ten years ago. The population of tract 7102 has grown significantly since then, which is why it has such a large Total Available Market. When tracts are redrawn following the 2020 Census, tract 7102 will be probably be divided into multiple tracts.

There are about 650 degree-seeking students at the main campus who do not live in the service area, which is about 10% of the number who do live in the service area. As shown in Fig. 3, the majority of these students are in the SanJac service area, which raises the question of why they aren’t going to SanJac?

Actual Enrollment and the Total Available Market

The Total Available Market is 15,950 students, and our actual enrollment (2019-2020) is 5,545, which means we are enrolling about 35% of the TAM. If our marketing is equally effective across our service area and all of the school districts do an equally effective job of promoting Lee College, then we would expect that the enrollment from each census tract would be 35% of the TAM for that tract. Figure 4 shows the percentage of the TAM in each tract that is enrolled at Lee College, and it is immediately apparent that the college is Baytown-centric. Census tracts immediately around Baytown have enrollments that are 50% to 90% of the TAM, but tracts that are more than fifteen miles away from Baytown have enrollments that are only 10% to 30% of the TAM. The low enrollments are not due to low college enrollment in general. Table 2 shows the enrollment of high school graduates in college in general and at Lee College in particular. School districts that are farther away have significantly lower enrollment at Lee College.

Table 2: Percentage of Graduates in College and in Lee College in the Fall Immediately After High School. School Districts are Listed by Distance from Lee College				
ISD	Distance from Lee College (miles)	Class of 2019	% in College	% at Lee College
Goose Creek	10	1,531	48%	31%
Barbers Hill	12	355	67%	33%
Crosby	23	391	43%	7%
Huffman	25	239	55%	4%
Dayton	38	323	42%	15%
Liberty	40	133	46%	20%
Anahuac	43	76	62%	20%
Hardin	44	70	46%	13%
Devers	47	<25	**	**
East Chambers	48	99	53%	Less than 4%*
West Hardin	55	37	30%	Less than 10%*
Hull-Daisetta	56	40	35%	Less than 10%*
Hardin-Jefferson	60	128	52%	Less than 3%*
Kountze	75	70	45%	Less than 6%*

Data from the THECB:
<http://www.txhighereddata.org/index.cfm?objectid=DE7B0990-D970-11E8-BB650050560100A9>
 *Four or fewer students went to Lee College from this ISD
 **This ISD had fewer than 25 graduates, so numbers are not reported by the THECB

Median Household Income

Fig. 5 shows the median household income by census tract. It is apparent that residents of Baytown have median household incomes of \$40K to \$60K, while residents to the east of Baytown have incomes of \$80K and above. Residents in the rural north and rural south have the lowest incomes. The rural east has income levels equal to or slightly above Baytown, and the suburban tracts in the northern part of East Harris County have incomes around \$100K. Families with higher incomes are more likely to send their children to college, so we should expect higher percentage enrollments from those tracts. However, the college's mission is to serve all students, so we will want to ensure that our policies, procedures, and our marketing are attractive to low-income students as well as high-income students.

Discussion

The maps in this report provide insight into patterns of enrollment across our service area. Lee College is clearly Baytown-centric, which is probably not suitable for a future where we anticipate strong population growth to our east. These maps provide guidance for our efforts to serve all students.

Fig. 1: Census Tracts in the Lee College Service Area

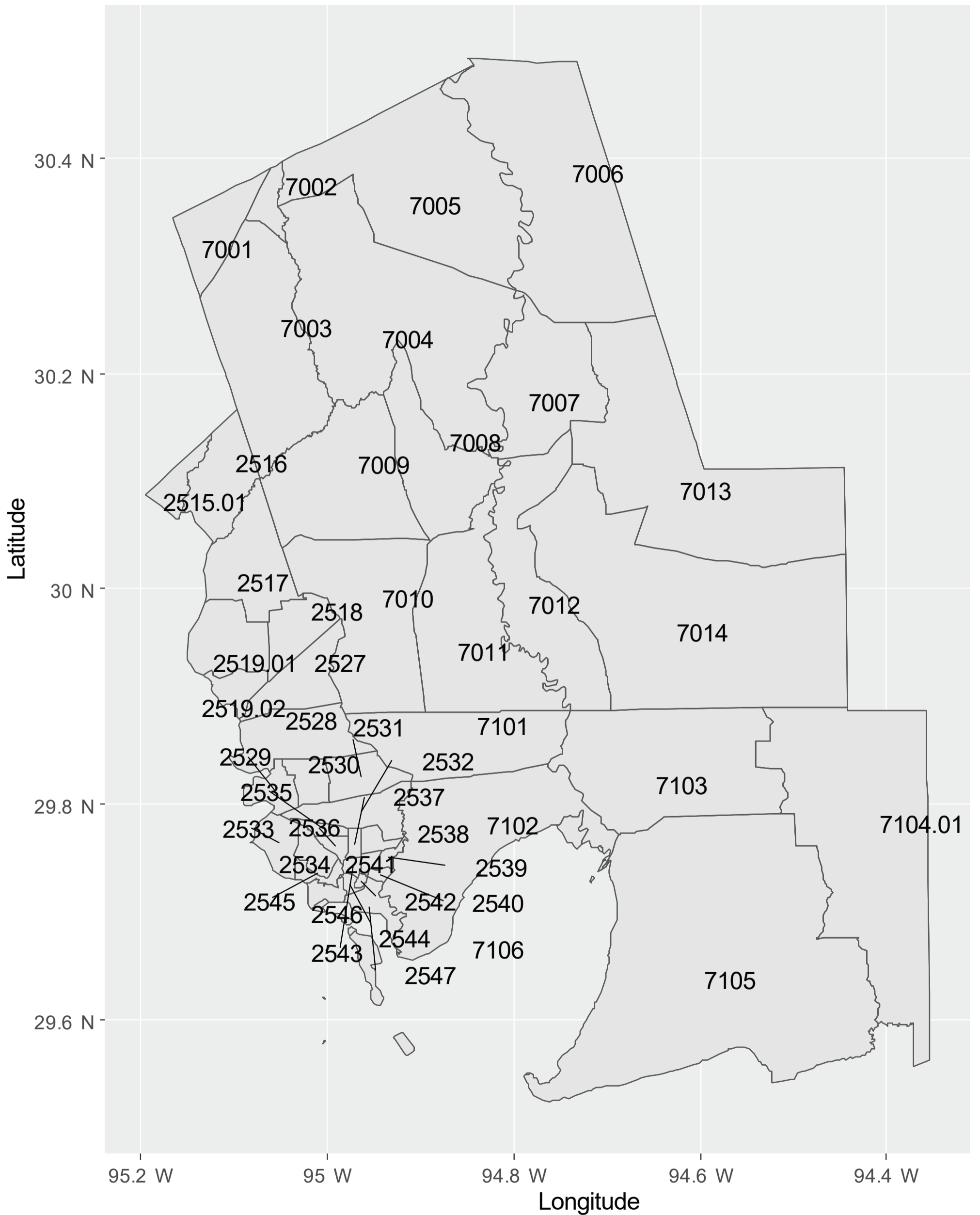


Fig. 2: Total Available Market in the Lee College Service Area
Total for All Census Tracts is 15950 Students

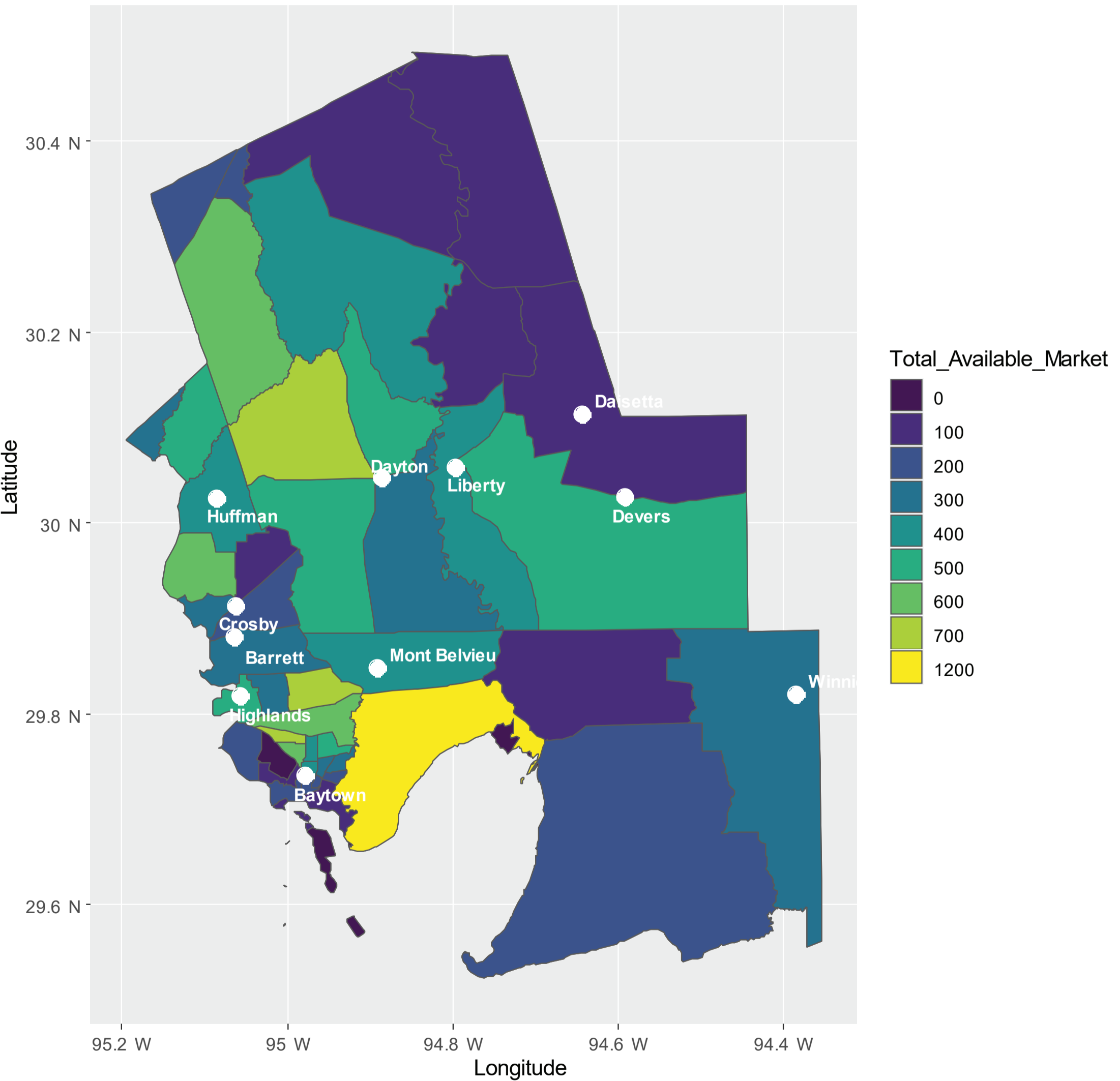


Fig. 3: Lee College Students Living Outside the Service Area

Number of Students: 651

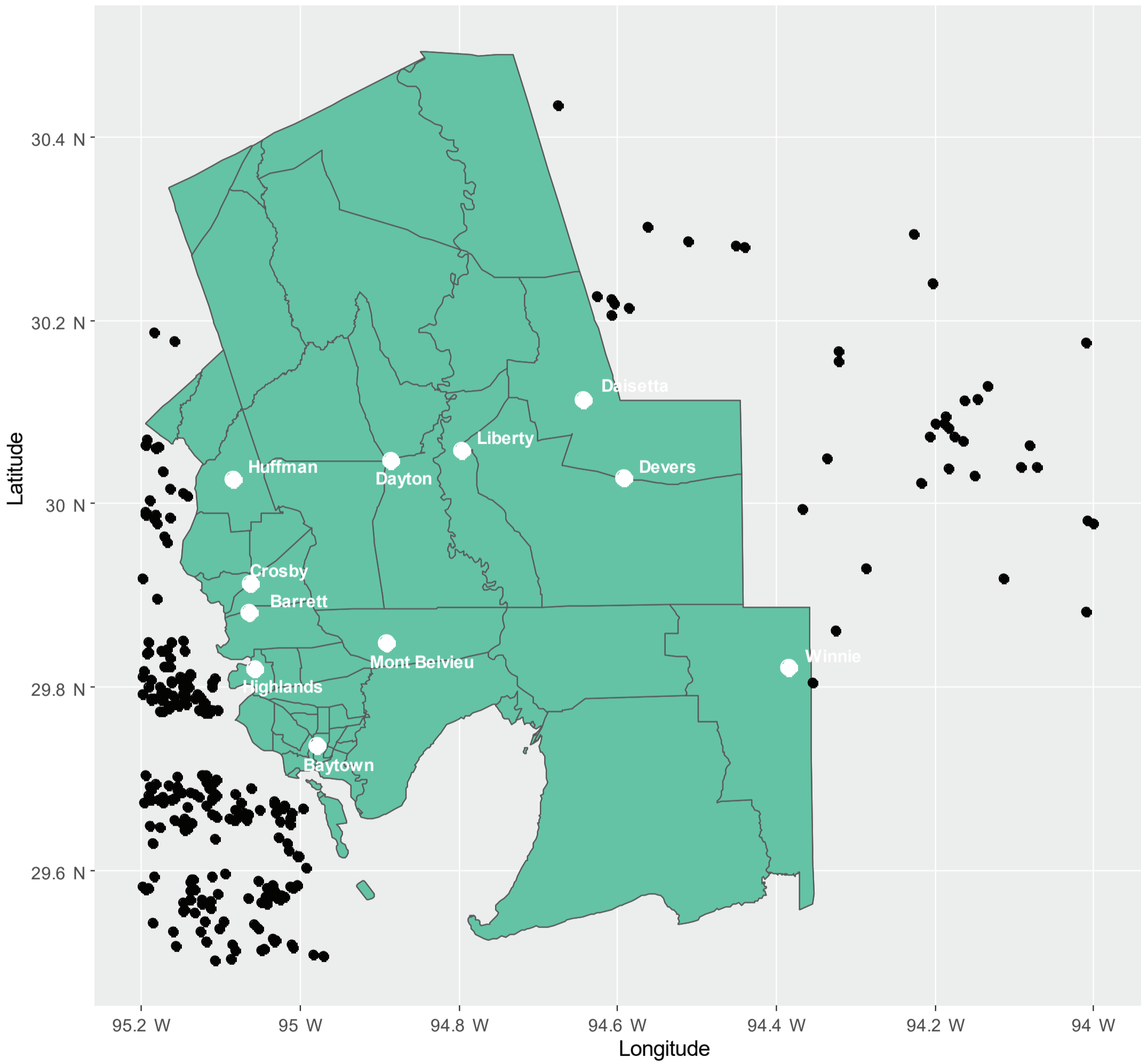


Fig. 4: Percentage of the Total Available Market that is Enrolled

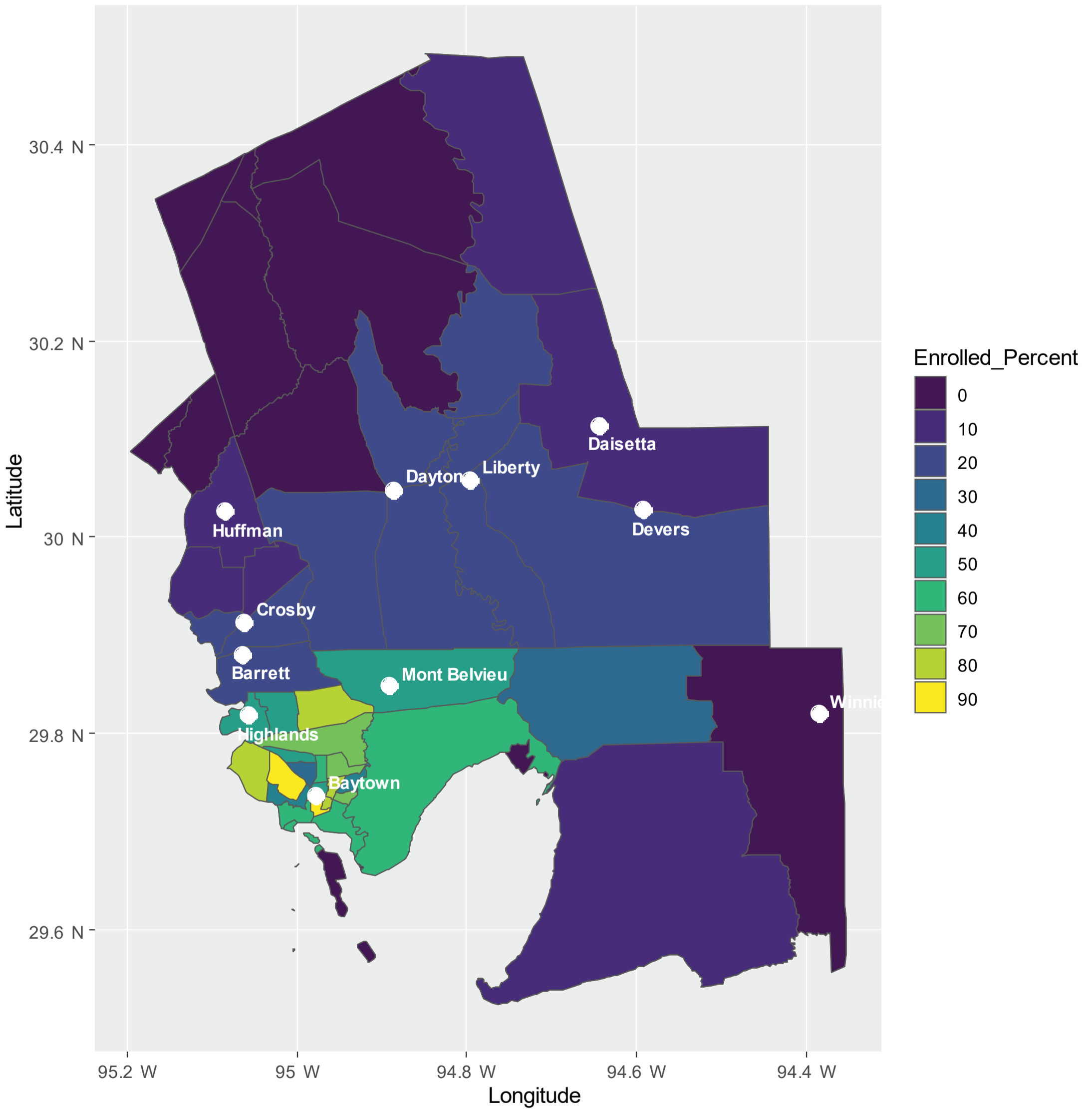


Fig. 5: Median Household Income

