

Summary

Rep. Nika Elugardo introduced a bill that would make it easier for affordable public housing to be built. The bill would allow public housing authorities to borrow against unused state land and make the funding of affordable housing easier. The bill would also enable the state to sell its unused lands to make this land more readily available to developers to either create affordable land or to generate capital for building or renovating affordable housing elsewhere.

Our goal this semester was to build upon work done by previous teams by identifying plots of land that are near hospitals and universities so that they can act as partners in the development of affordable housing or lease the land to generate revenue to build affordable housing. This data will help Rep. Elugardo in convincing her colleagues that the proposed bill would be effective.

Our findings are detailed in the graphs and data below.

What the data are

Most of the data we used was collected by students working on this project in previous semesters. Our main dataset was generated by choosing state owned parcels out of the Metropolitan Area Planning Council(MAPC) Parcel Database. In addition to fields included in the dataset, the previous semesters' analysis gives us other generated fields, most notably, Massachusetts House District. We also generated the same data for a hospital and university owned parcels using a slightly modified version of last semester's program and the same dataset. We have also used a Massachusetts legislative district dataset to make visualizations and add a field to the main dataset to show state senate districts.

What we got from the data

By processing the raw data, we extracted the state owned parcels and generated a list of hospitals and universities from the MAPC parcel list. We also divided these hospitals and universities into 4 groups: charitable/private hospitals, and private/public universities.

We then used data that we analyzed to find the number and acre of parcels in four specific distances (0.5, 1, 5, 25 miles) from the targets, which, in our case, are charitable/private hospitals and private/public universities.

For each target, we assessed both their land value and total value by parcels belonging to them.

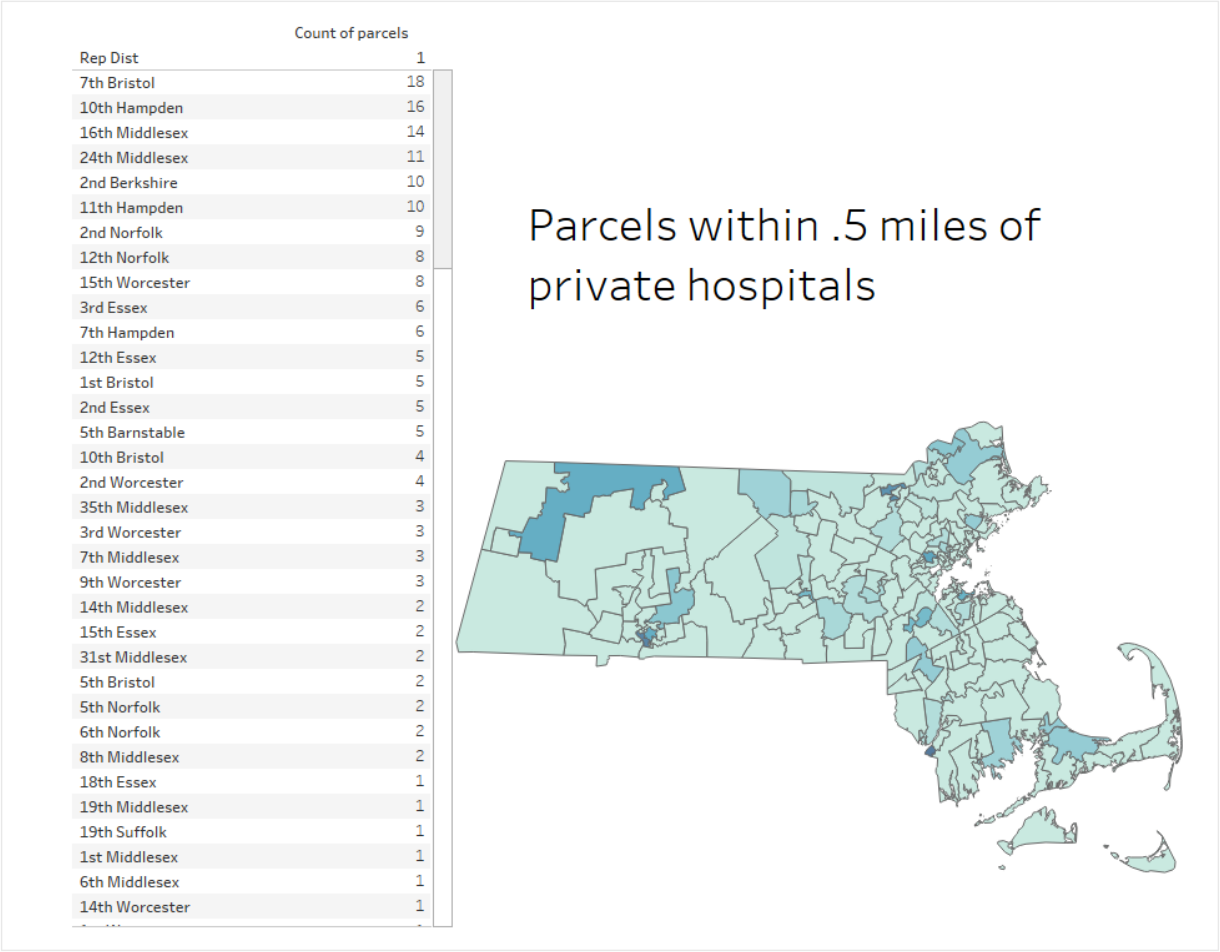
We also found contiguous parcels, if possible, that share the same border with every hospital and university.

We also assigned parcels to legislature districts and visualized our results.

Moving forward / difficulties

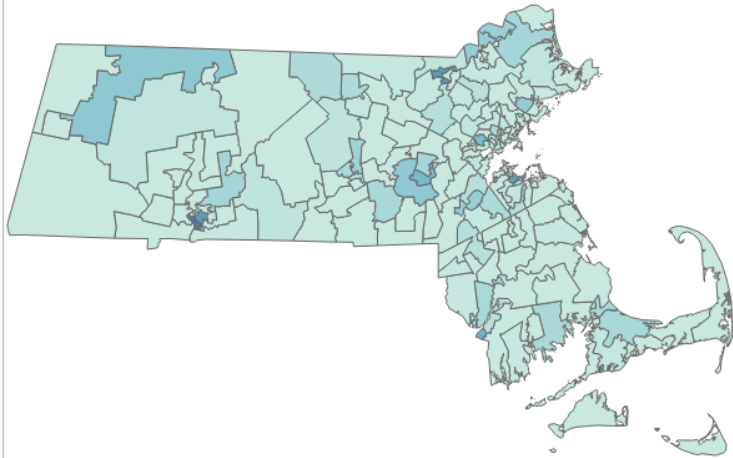
Since representative Elugardo is busy, we have limited time meeting with her thus suffer time lag when figuring out the next step. Also, since the data varies based on district, we may need to use different standards when evaluating the proximity. Diving into the data, we found that even the land codes for state agencies change based on district.

Private Universities



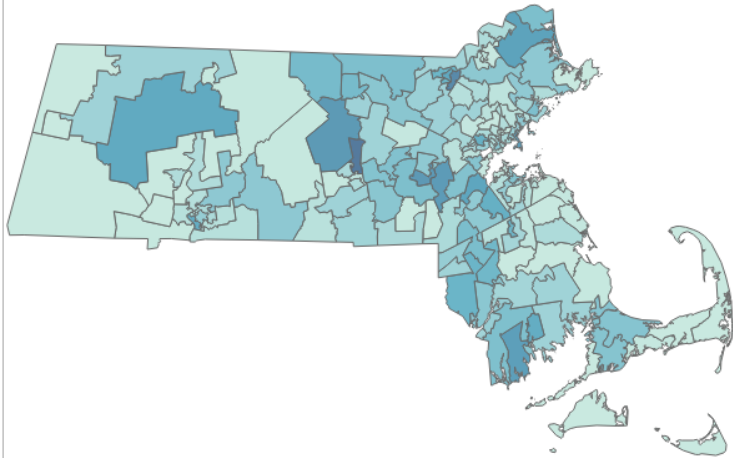
Rep Dist	Count of parcels
10th Hampden	72
16th Middlesex	53
11th Hampden	50
2nd Norfolk	45
7th Bristol	35
7th Middlesex	32
24th Middlesex	30
2nd Berkshire	23
8th Middlesex	22
12th Essex	20
15th Essex	19
12th Norfolk	19
3rd Essex	18
14th Worcester	16
2nd Essex	14
7th Hampden	14
6th Middlesex	13
9th Worcester	12
10th Bristol	12
5th Barnstable	12
13th Worcester	11
5th Bristol	11
6th Norfolk	10
3rd Worcester	10
2nd Worcester	10
35th Middlesex	9
34th Middlesex	8
15th Worcester	8
3rd Norfolk	7
11th Norfolk	7
14th Middlesex	7
1st Bristol	7
6th Bristol	6
19th Middlesex	6

Parcels within 1 mile of private hospitals

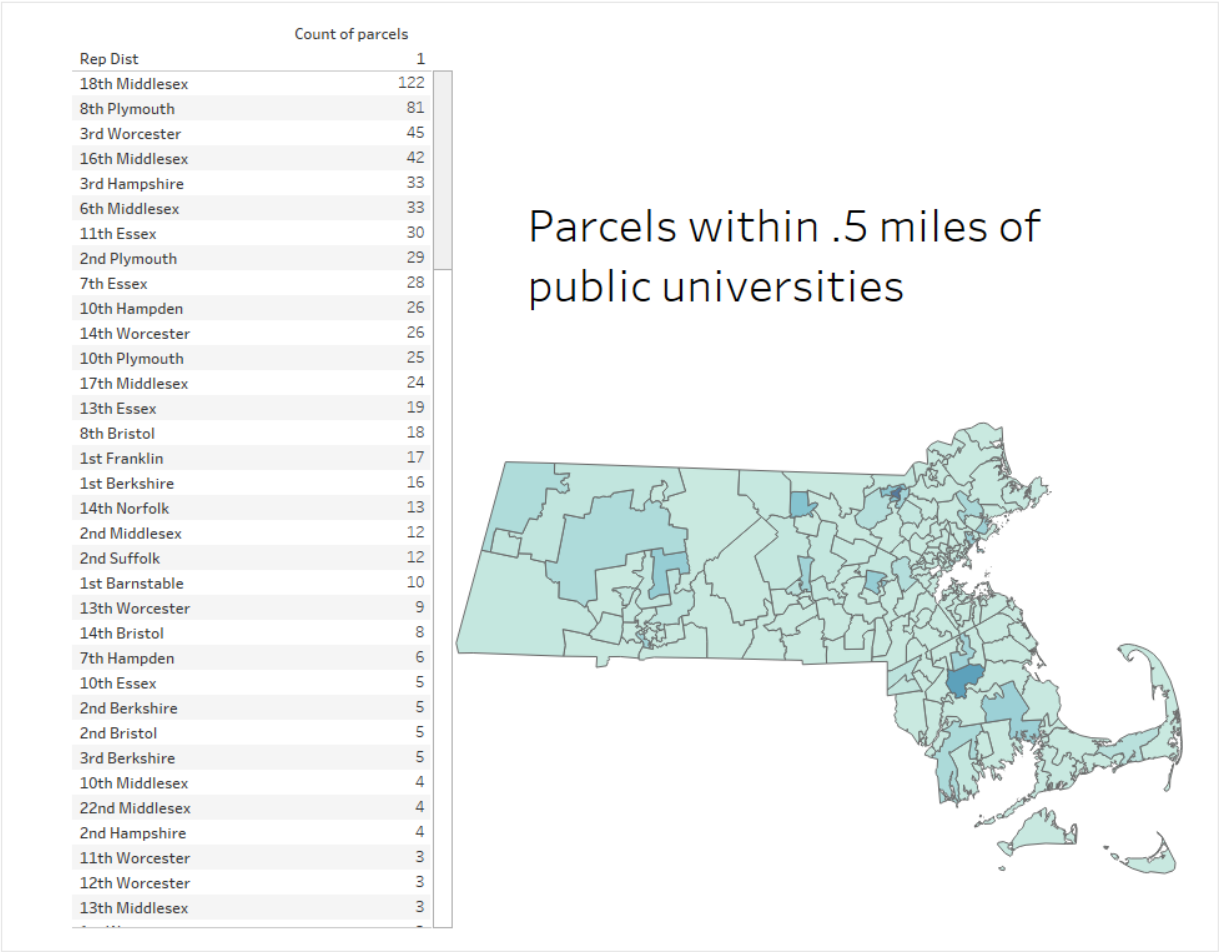


Rep Dist	Count of parcels
14th Worcester	223
17th Middlesex	191
7th Middlesex	163
1st Worcester	162
5th Middlesex	158
19th Suffolk	155
9th Bristol	151
2nd Essex	145
11th Norfolk	138
18th Middlesex	133
1st Franklin	131
11th Bristol	126
10th Hampden	126
6th Norfolk	120
24th Middlesex	118
4th Bristol	110
16th Middlesex	108
9th Plymouth	105
3rd Bristol	104
2nd Worcester	97
3rd Worcester	97
1st Bristol	93
1st Essex	91
8th Middlesex	90
7th Essex	89
1st Middlesex	89
8th Bristol	88
4th Middlesex	86
13th Norfolk	84
11th Worcester	83
2nd Norfolk	83
3rd Barnstable	81
12th Middlesex	81
5th Barnstable	80

Parcels within 5 miles of private hospitals

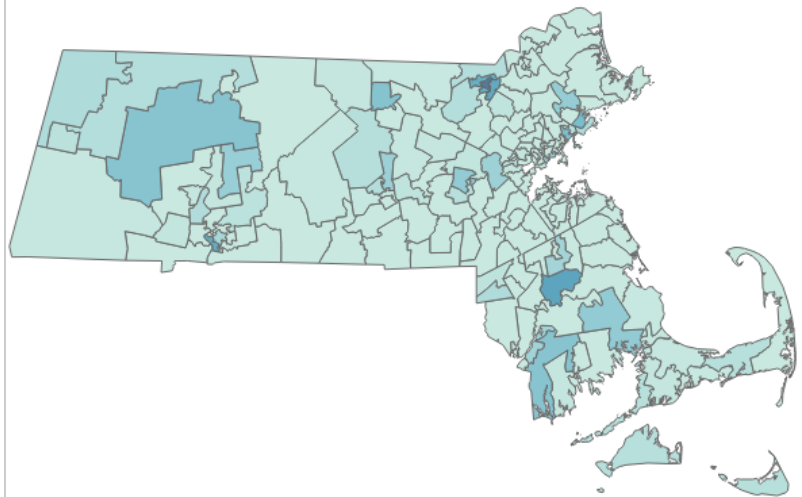


Public Universities



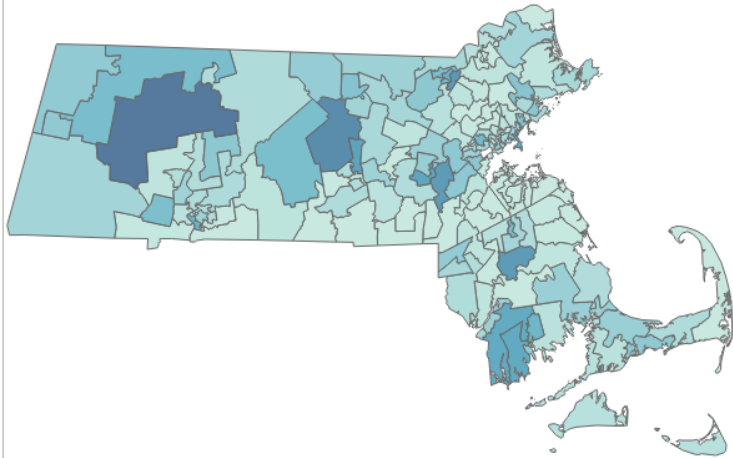
Rep Dist	Count of parcels
18th Middlesex	133
8th Plymouth	84
17th Middlesex	78
10th Hampden	76
16th Middlesex	71
7th Essex	56
11th Essex	54
3rd Worcester	49
1st Franklin	47
8th Bristol	47
2nd Plymouth	39
6th Middlesex	39
2nd Suffolk	38
13th Essex	36
3rd Hampshire	35
14th Worcester	32
14th Norfolk	31
6th Bristol	28
10th Plymouth	26
11th Hampden	23
1st Berkshire	18
2nd Bristol	18
8th Essex	18
5th Hampden	16
13th Worcester	15
2nd Berkshire	14
2nd Middlesex	14
36th Middlesex	14
1st Worcester	13
10th Essex	12
1st Barnstable	12
7th Middlesex	12
Barnstable, Dukes and Na..	12
3rd Berkshire	10

Parcels within 1 mile of public universities

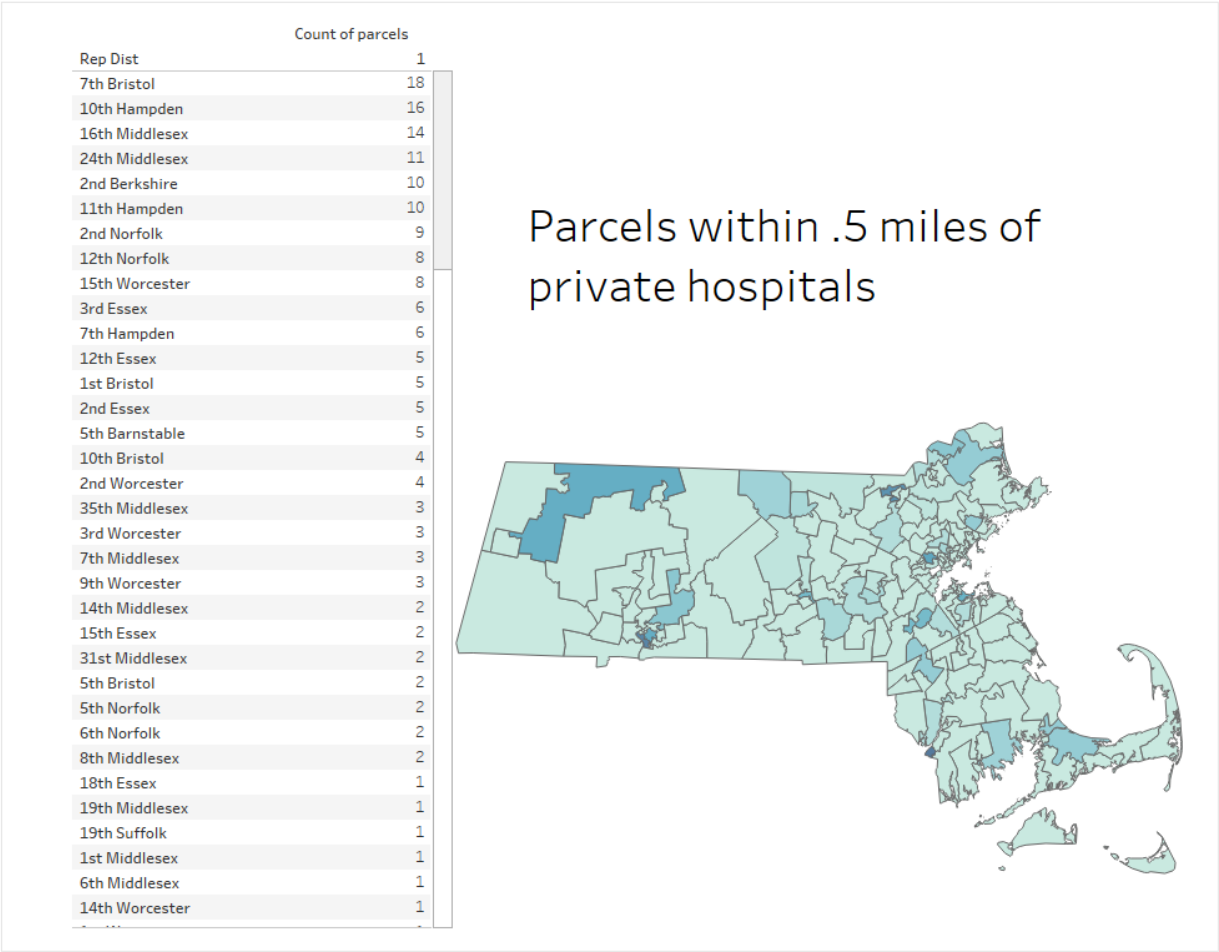


Rep Dist	Count of parcels
1st Franklin	261
1st Worcester	217
17th Middlesex	191
5th Middlesex	186
8th Plymouth	185
14th Worcester	170
7th Middlesex	163
19th Suffolk	155
9th Bristol	154
8th Bristol	150
18th Middlesex	133
10th Hampden	126
11th Bristol	126
24th Middlesex	118
2nd Berkshire	111
5th Worcester	109
16th Middlesex	108
9th Plymouth	105
4th Hampden	104
11th Essex	97
3rd Worcester	97
13th Essex	93
7th Essex	89
12th Middlesex	86
2nd Middlesex	84
3rd Hampshire	84
13th Norfolk	83
14th Norfolk	82
2nd Barnstable	80
3rd Berkshire	80
1st Berkshire	79
14th Bristol	77
26th Middlesex	76
13th Bristol	74

Parcels within 5 miles of public universities

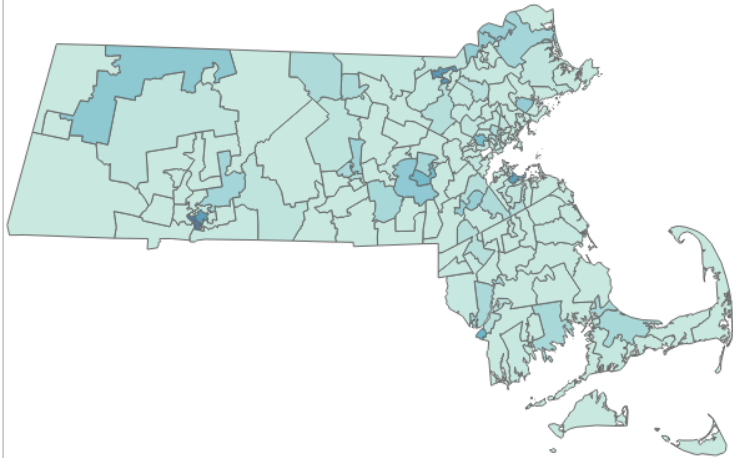


Private Hospitals



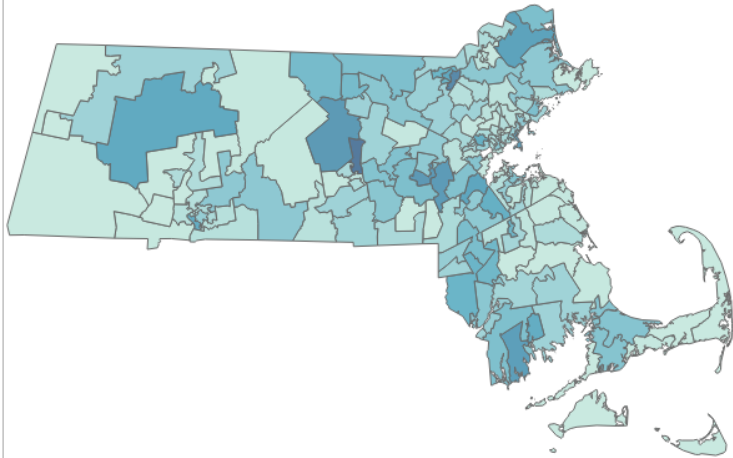
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14th Worcester	16
2nd Essex	14
7th Hampden	14
6th Middlesex	13
9th Worcester	12
10th Bristol	12
5th Barnstable	12
13th Worcester	11
5th Bristol	11
6th Norfolk	10
3rd Worcester	10
2nd Worcester	10
35th Middlesex	9
34th Middlesex	8
15th Worcester	8
3rd Norfolk	7
11th Norfolk	7
14th Middlesex	7
1st Bristol	7
6th Bristol	6
19th Middlesex	6

Parcels within 1 mile of private hospitals

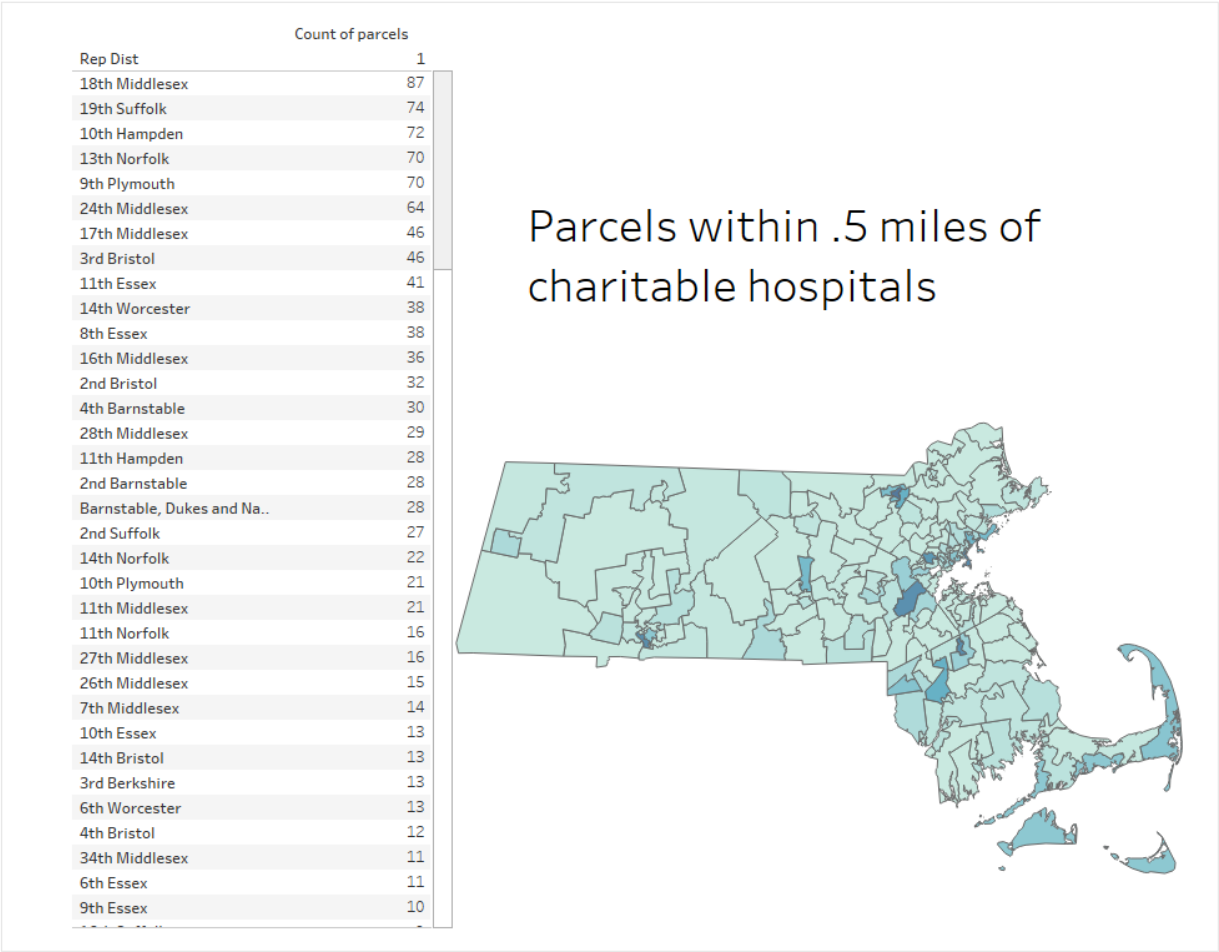


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19th Suffolk	155
9th Bristol	151
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16th Middlesex	108
9th Plymouth	105
3rd Bristol	104
2nd Worcester	97
3rd Worcester	97
1st Bristol	93
1st Essex	91
8th Middlesex	90
7th Essex	89
1st Middlesex	89
8th Bristol	88
4th Middlesex	86
13th Norfolk	84
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3rd Barnstable	81
12th Middlesex	81
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Parcels within 5 miles of private hospitals

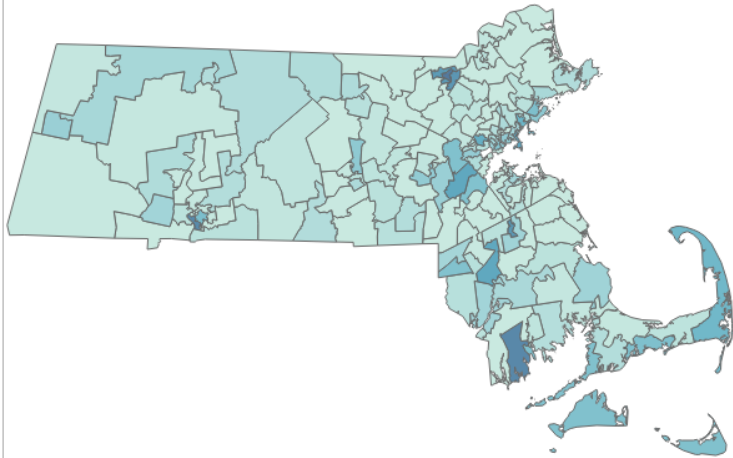


Charitable hospitals



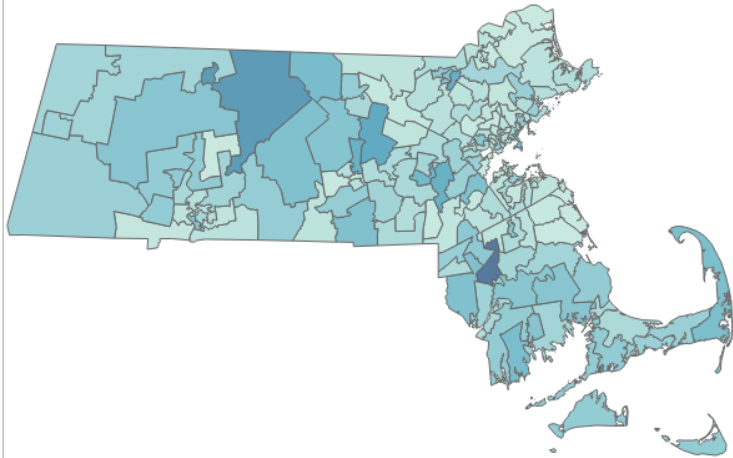
Rep Dist	Count of parcels
18th Middlesex	126
9th Bristol	110
10th Hampden	108
17th Middlesex	95
9th Plymouth	92
16th Middlesex	90
19th Suffolk	79
13th Norfolk	76
3rd Bristol	76
24th Middlesex	68
11th Essex	62
4th Barnstable	59
11th Hampden	52
7th Essex	51
13th Bristol	50
2nd Barnstable	50
14th Norfolk	49
Barnstable, Dukes and Na..	49
11th Norfolk	48
2nd Bristol	48
26th Middlesex	46
8th Essex	41
14th Worcester	39
28th Middlesex	37
2nd Suffolk	37
7th Middlesex	37
11th Middlesex	35
3rd Berkshire	32
5th Middlesex	32
25th Middlesex	31
10th Plymouth	27
1st Plymouth	27
4th Hampden	26
5th Bristol	26

Parcels within 1 mile of charitable hospitals



Rep Dist	Count of parcels
3rd Bristol	354
2nd Franklin	254
12th Worcester	208
17th Middlesex	191
5th Middlesex	186
14th Worcester	186
7th Middlesex	163
19th Suffolk	155
2nd Worcester	152
9th Bristol	149
4th Barnstable	143
5th Worcester	138
18th Worcester	138
4th Bristol	138
11th Norfolk	137
18th Middlesex	133
1st Worcester	127
10th Hampden	126
11th Bristol	126
1st Franklin	124
2nd Plymouth	123
12th Bristol	121
24th Middlesex	118
1st Bristol	112
16th Middlesex	108
2nd Hampshire	105
9th Plymouth	105
3rd Barnstable	103
1st Hampshire	102
4th Hampden	102
8th Bristol	101
Barnstable, Dukes and Na..	100
1st Plymouth	99
7th Worcester	97

Parcels within 5 miles of charitable hospitals



Map of all parcels contiguous to any type of institution

