

# **Where in Haverhill should Dunkin Donuts build?**

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Resolving a Community Debate on  
Development

By Jennifer Smith

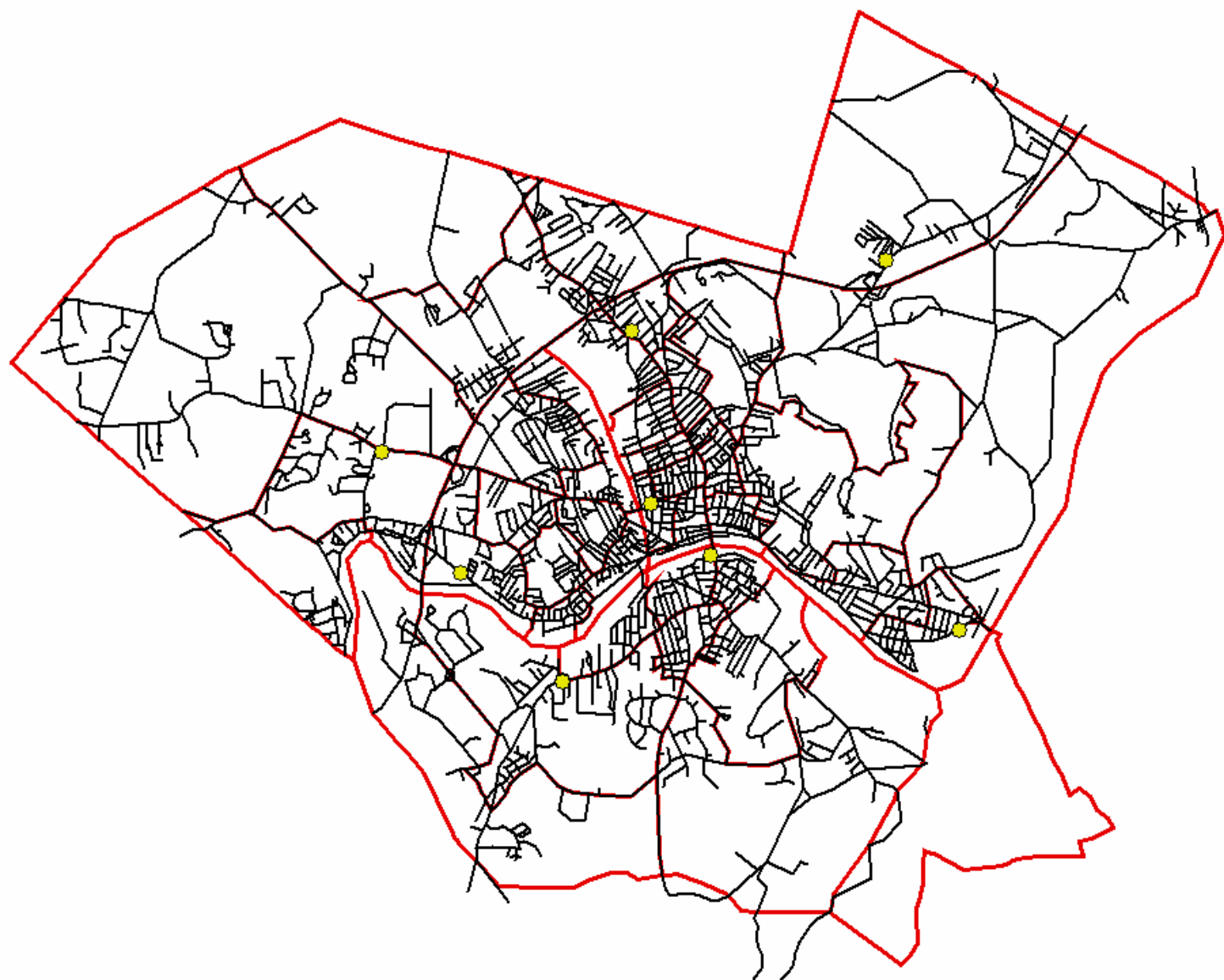
# Existing Dunkin Donuts



There are already 8 existing Dunkin Donuts in Haverhill

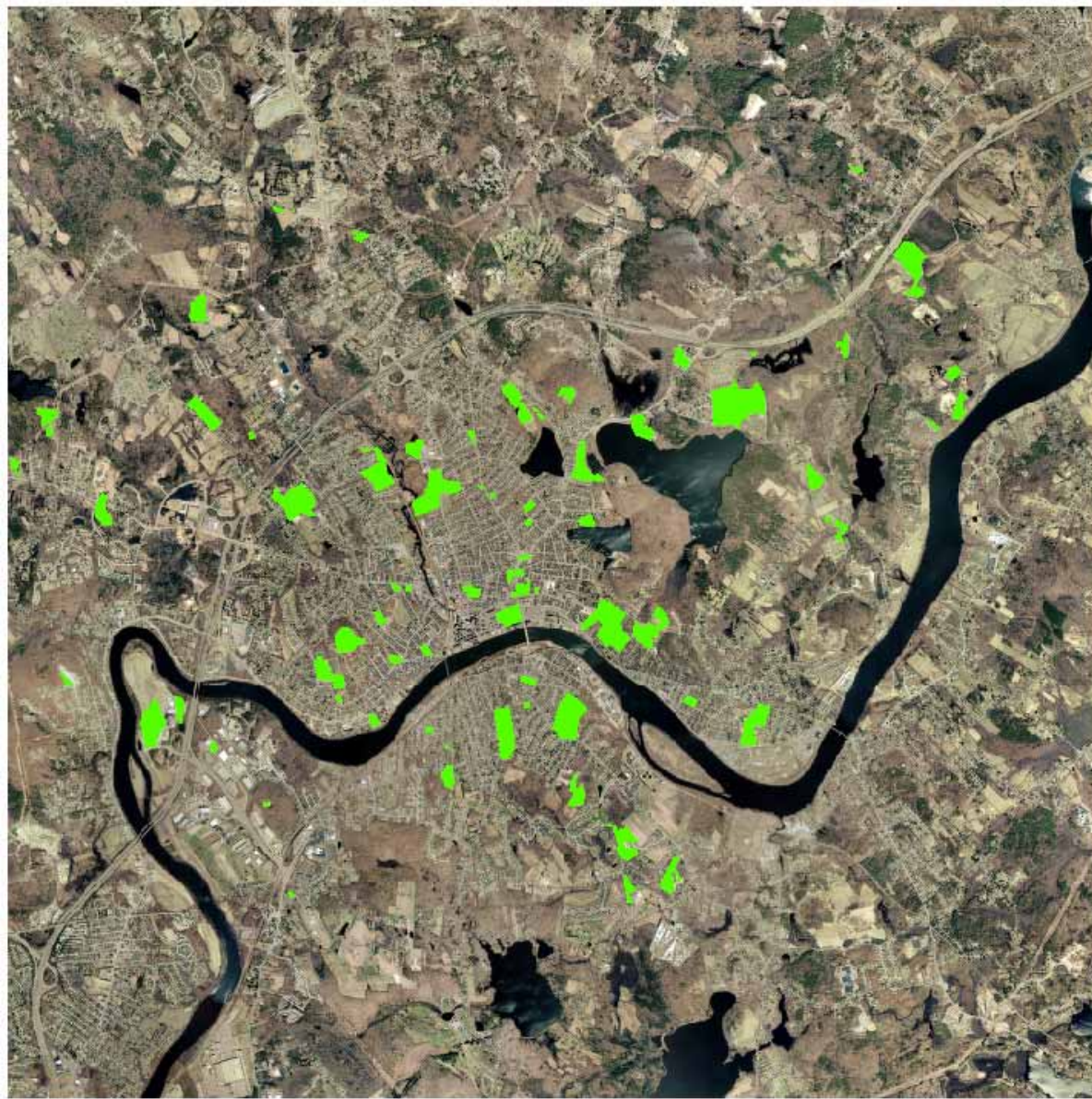
They are spread throughout the city

All 8 Dunkin Donuts take up a total area of about 3 acres<sup>2</sup>





# Green Space in Haverhill



Green space takes up  
a total area of about  
625 acres<sup>2</sup>

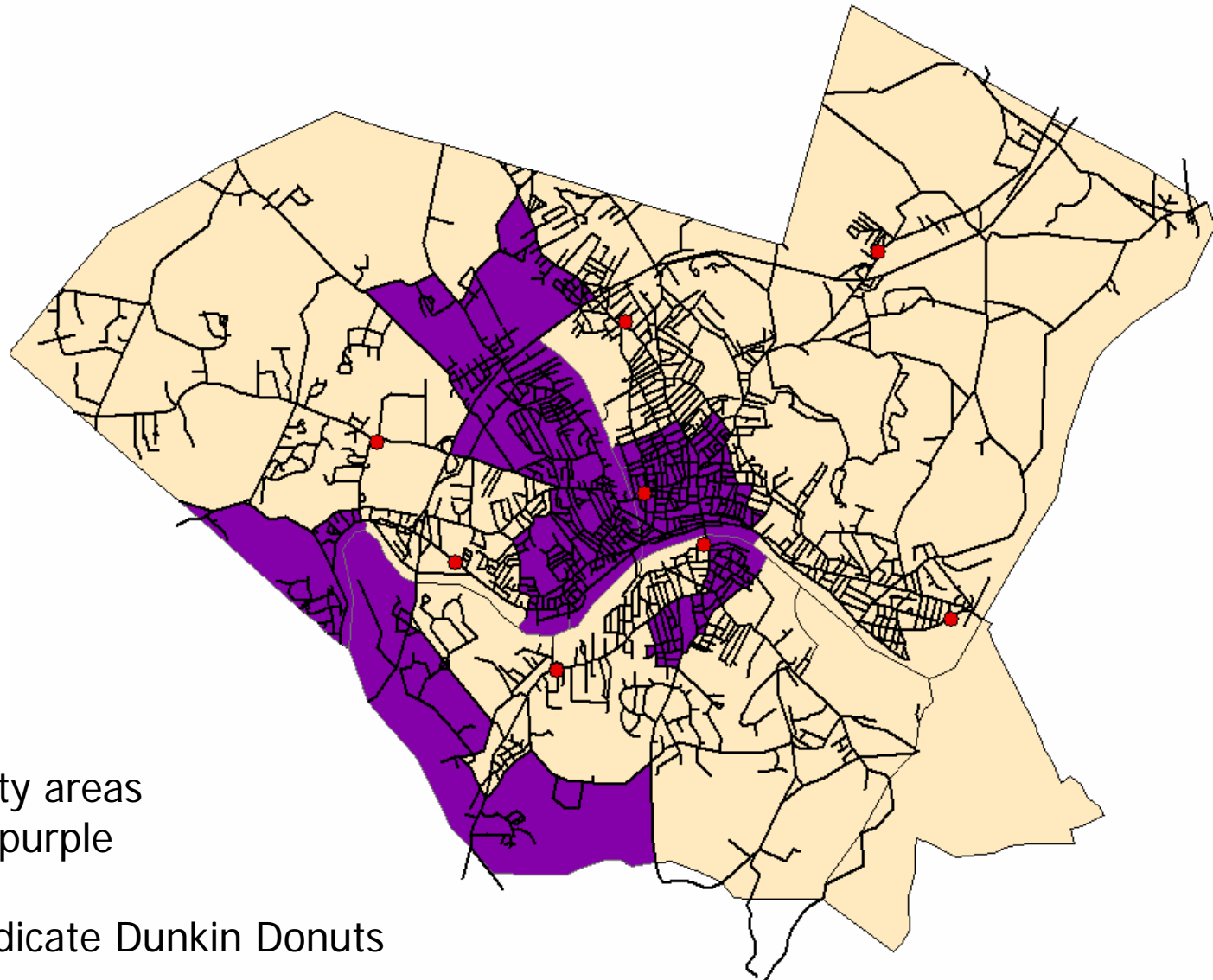
# Green Space in Haverhill

- ▶ What qualifies as “green space” ?
  - For this study, green space is defined according to MassGIS Land Use Layer ([www.mass.gov/mgis](http://www.mass.gov/mgis))
  - It is defined as Urban Open: public and institutional green space; vacant undeveloped land

# Demographics

- Minority Areas are those areas whose population has a high non-white percentage
- For this study, a high non-white population percentage is anything below 90 %
- These areas were found using census blocks of Haverhill from the 2000 U.S. Census

# High Minority Blocks in Haverhill



\* High minority areas  
are shown in purple

\* Red dots indicate Dunkin' Donuts





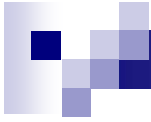
# Demographics of these Areas

- Demographics of Green Space

- A total of 625 acres<sup>2</sup> of green space in Haverhill

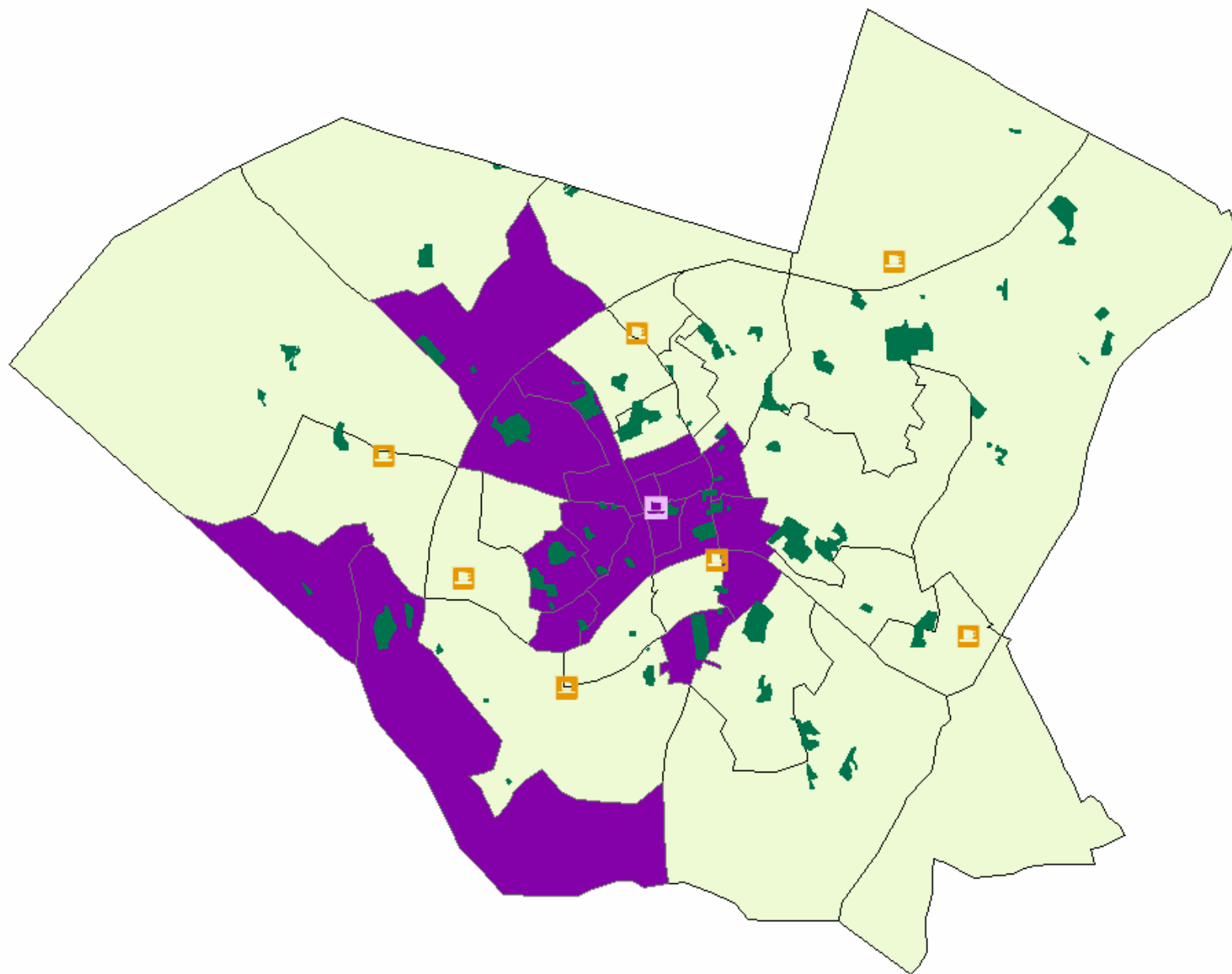
- 202 acres<sup>2</sup> are located in high minority blocks
    - 423 acres<sup>2</sup> are located throughout the rest of the city






- Demographics of Dunkin Donuts Locations
  - Dunkin Donuts takes up a total of 3 acres<sup>2</sup> in Haverhill
    - 0.2 acres<sup>2</sup> are located in high minority areas
    - About 2.98 acres<sup>2</sup> are located throughout Haverhill in non-minority areas

Only one Dunkin Donuts is located in a high minority area:










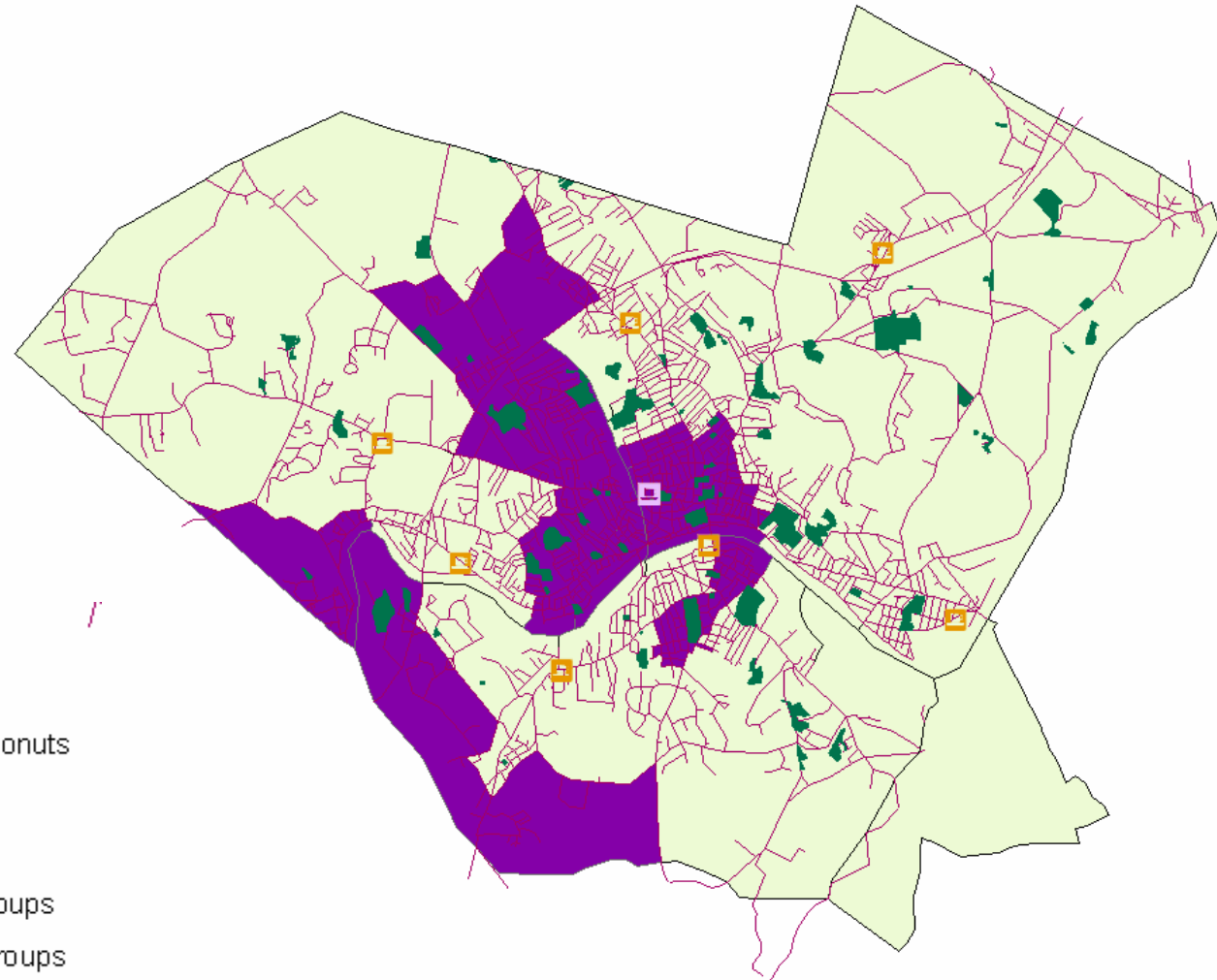
# What is the relationship between Dunkin Donuts and green space in Haverhill?

- For every acre<sup>2</sup> of Dunkin Donuts in Haverhill there are 207 acres<sup>2</sup> of green space
- For every 1 acre<sup>2</sup> of Dunkin Donuts in the minority blocks there is 1009.5 acres<sup>2</sup> of green space
- It appears Dunkin Donuts are avoiding areas of high minority



## Legend

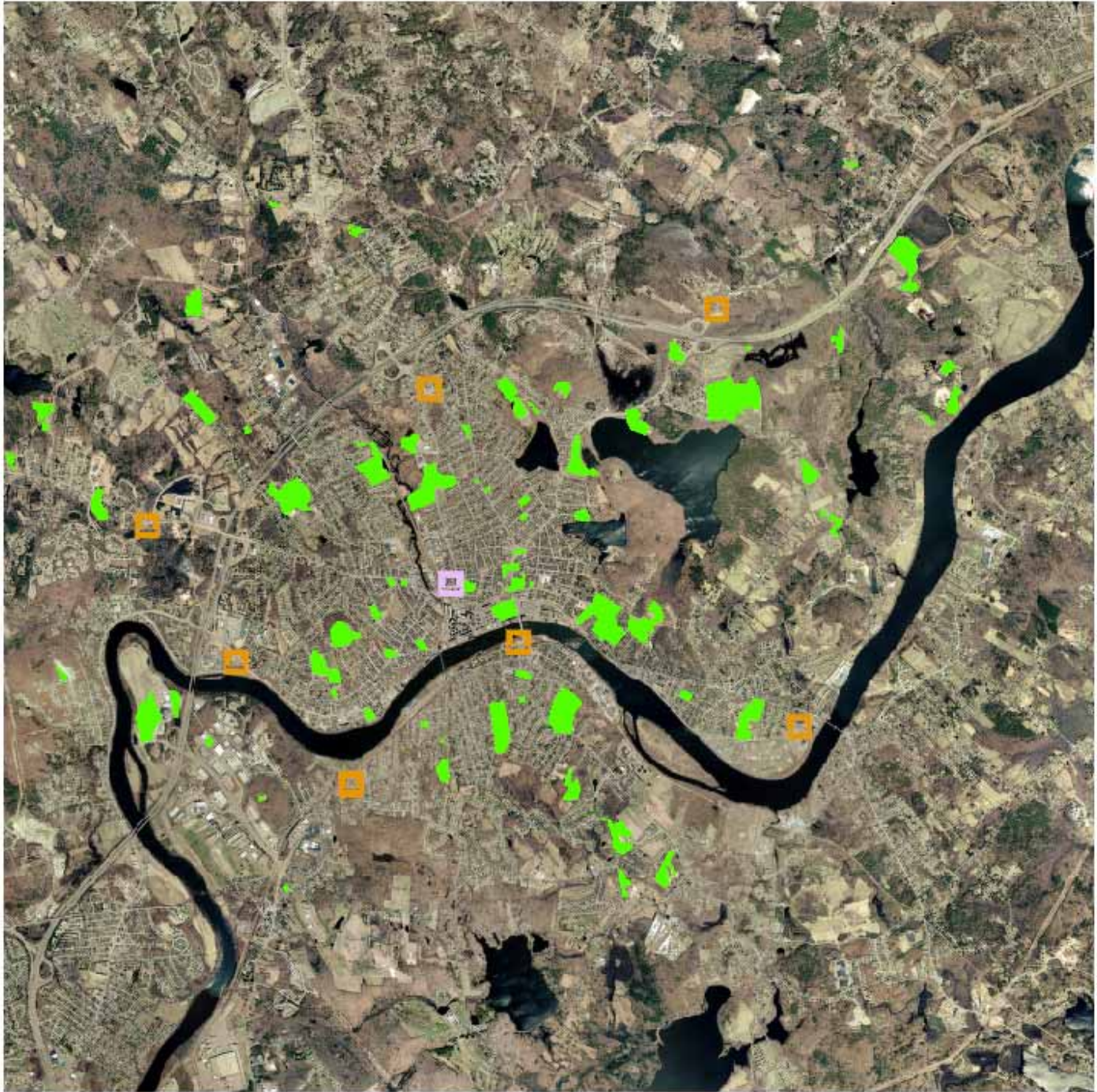
-  Minority Dunkin Donuts
-  Dunkin Donuts
-  Greenspace
-  Minority Block Groups
-  Haverhill Block Groups





# Conclusion

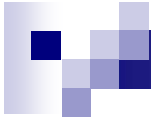
- If Dunkin Donuts was to build in Haverhill again it should be in a high minority area
- I would suggest the green space located to the southwest of Haverhill
  - This would be located in a high minority area
  - This location is also close to a major roadway





# Acquiring Data

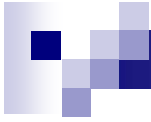
- All demographic information is from the 2000 U.S. Census Block Groups
- Green space layers are from the MassGIS webpage ([www.mass.gov/mgis](http://www.mass.gov/mgis))
- Dunkin Donuts area was found by first collected GPS points at each DD, then digitizing each DD on ARCmap using an orthophoto (found on MassGIS)



This study looks at total area of green space vs. the area of Dunkin Donuts

- Created a new field to calculate where the population was greater than 90% white
- From this found the minority blocks- areas where population is less than 90% white
- Select by location the Dunkin Donuts whose centers were located in minority areas and in majority areas
- Then found the area of each





- Using select by location function, found the total area of green space in minority and majority areas
- Divide the area green space by the area taken up by Dunkin Donuts to find the ratio of green space to Dunkin Donuts