

## ***LotArea Analysis***

**Goal:** To assess the impact of replacing the lot area with the ESRI shape area, especially for irregular lots miscategorized as regular. Provide summaries of the numbers by borough and land use code.

**Result:** Comprehensive summaries are available in the linked [Jupyter notebook](#). For lots with miscategorized regularity, replacing the lot area with the shape area reduces the overall numbers.

### **Regular Lots**

There are 722,042 regular lots, of which 63,747 don't have lot areas equal to the front times depth. Of the 63,747 lots, 1,591 have lot areas already equal to the ESRI shape area.

The Jupyter notebook provides a breakdown of the overall lot area, front times depth, and shape area for each borough, as well as each land use code. For the land use code, there is also a bar chart displaying the differences between the three numbers.

### **Irregular Lots**

There are 134,918 irregular lots, of which 133,343 have lot areas that aren't equal to the shape area. As with regular lots, I have provided breakouts by borough and land use code, as well as a bar chart illustrating the differences between the areas by land use code. The land use code most affected by this update would be outdoor space and recreation.

For both regular and irregular lots, I have included tabs on the attached spreadsheet with a list of lots where there are discrepancies between the lot area and the shape area, as well as a tabs with counts of records where the lot areas are within a certain percentage of each other. Unsurprisingly, the lot areas and the shape areas are often over 95% of each other, but there are some records with very large discrepancies that might be investigated.

### **Irregular Lots Miscategorized as Regular**

This part addresses lots with an IrrLotCode indicator of 'N', where the lot front does not equal the lot depth. The process I wrote identified 1,096 lots. Replacing the lot area with the shape area for these lots would reduce their square footage by approximately 4.73 million.

There is a breakout by borough with Staten Island showing the largest impact. There is also a breakout by land use code, showing that Vacant Land loses the most square footage, and Outdoor Space and Recreation gains the most.

The attached spreadsheet contains tabs for overall total areas of lots that would change, as well as break outs by borough and shape area.

## **Supporting Documents**

[Jupyter Notebook](#)

[Lots Miscategorized as Regular – Identification Process](#)

Thursday, April 2, 2020

[Lots Miscategorized as Regular – Excel Spreadsheet](#)

[Lots Miscategorized as Regular - Shapefiles](#)