



# Mapping Urban Greenspaces Throughout Broward County, FL

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## Introduction

Urban green spaces, also known as parks and other outdoor recreation, help to maintain biodiversity in residential areas. It is also used to keep members of the community active and healthy. However, due to the rapid development that engulfs South Florida, these spaces have become a rare commodity. This study allowed for the understanding of the sizes, the distance, and the number of amenities the parks offer.

## Purpose

The purpose of this research is to obtain statistical evidence on the lack of greenspaces that exist within Broward County, FL. Using five assigned greenspaces, it will be determined if the spaces allow for proper outdoor recreation.

## Methodology

- 1) Map five Broward municipalities using each municipality parks and recreation list.
  - a. In GeoJSON, use street and satellite view to find and outline park perimeters.
  - b. Use Google Maps/ Apple Maps to achieve accurate addresses of the parks.
  - c. Marinas, waterparks, swimming pools, and indoor recreation centers will not be included in the list.
  - d. Save polygon as a .json file and use Microsoft Excel sheet to record the park name and the municipality the park belongs to.
- 2) Create a checklist on Microsoft Excel of human utilities made available at each park.
  - a. Use the Excel sheet to mark which utilities each park offers using the park websites and a satellite view of each park.
  - b. Total the number of utilities each park offers (Figure 1).
  - c. Mark parks that do not meet requirements with an N/A.

## Results

Figure 1  
Total amount of park utilities in a municipality

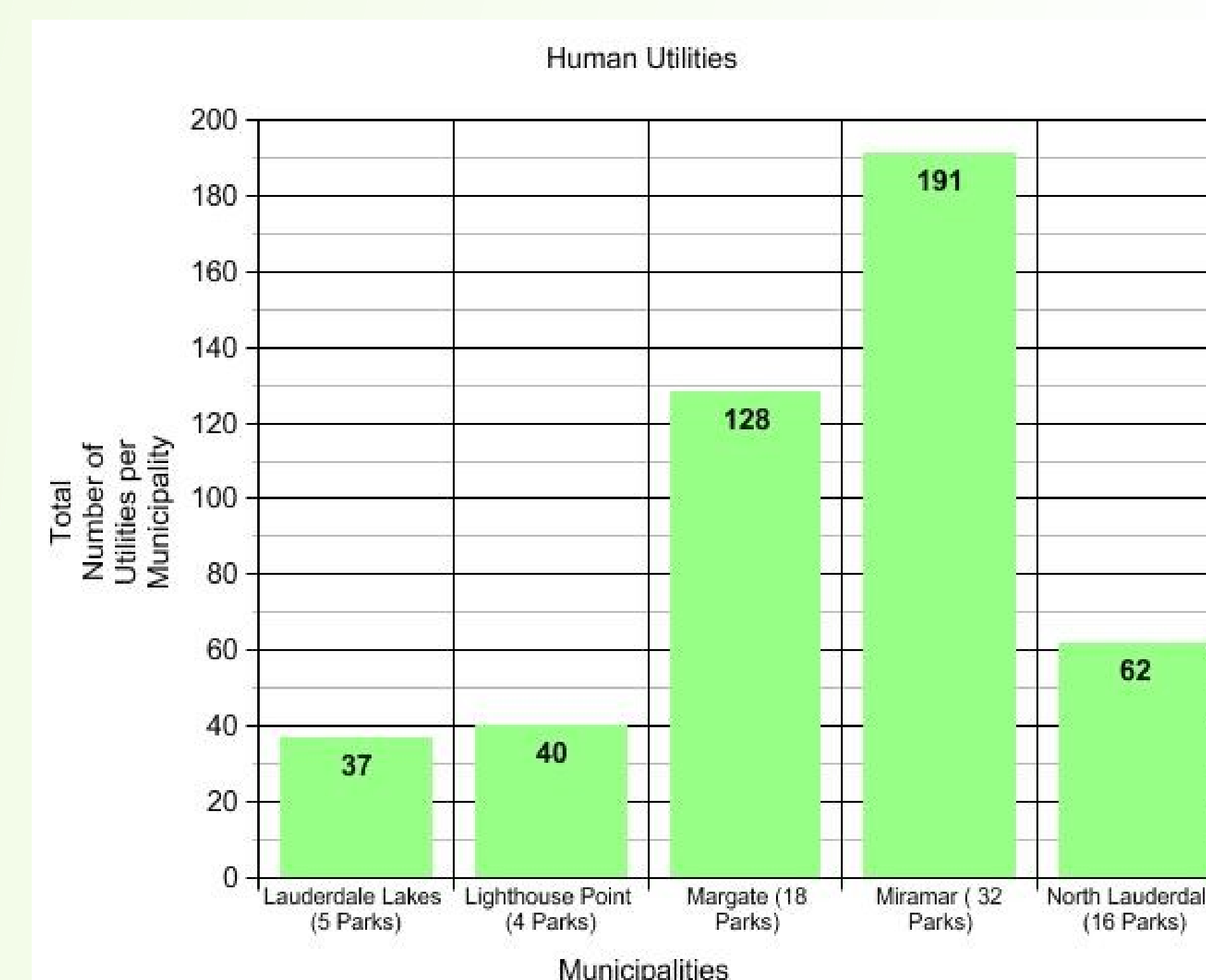
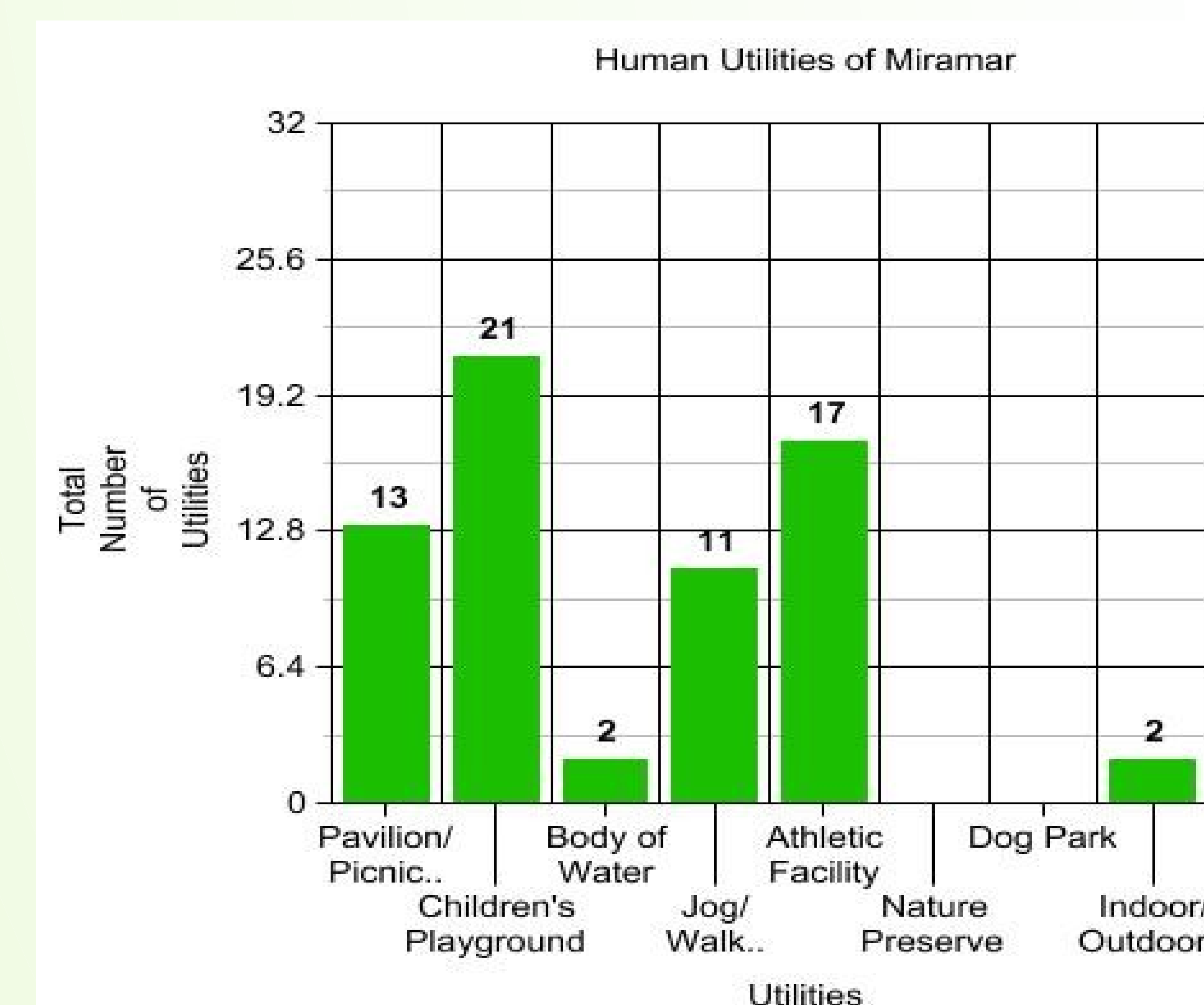


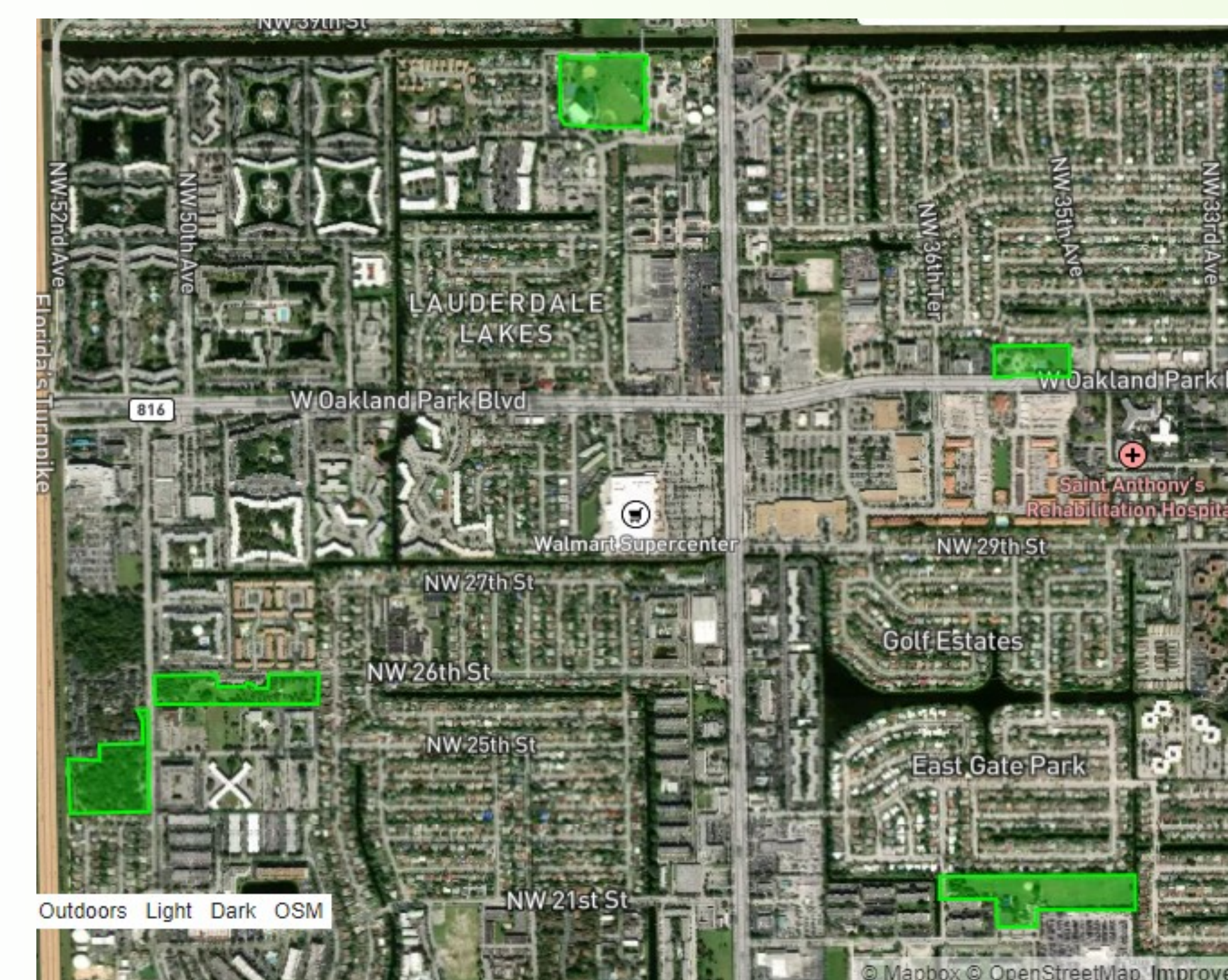
Figure 2  
Total number of parks with each utility.



1. Of the five municipalities mapped, there was an average of 91.6 amenities and 15 parks per municipality, about 6.9 amenities per park.

## Results cont..

Figure 3  
Map of Lauderdale Lakes parks



Average distance of each park: 1.8 miles

Figure 4  
Map of Lighthouse Point parks



Average distance of each park: 2.4 miles

2. The average distance between each park is about 2 miles. Outliers, such as parks within less of a mile of each other, were not included in this calculation.

## Discussion

From this analysis, it was able to be determined that the greenspaces acknowledged as parks by the municipalities are not amenable. The average distance between the parks makes it increasingly more difficult for families with no transportation and smaller children to access these spaces. This becomes extremely important for families who move into residential neighborhoods only to find limited outdoor space for recreational activity.

## Conclusion

After completing the analysis, it can be concluded that the size and distance of the green spaces does not foster enough recreation for the people living in the municipalities. Additionally, the amenities offered at 92% of the green spaces mapped around Broward County, FL do not allow for multiple residents to utilize the equipment provided.

## References

<sup>1</sup> Callaghan, C., Qiu, J., Hochmair, H., Breyer, E., Zhang, B. (2022). Big data fusion to uncover equitable and multifunctional urban greenspace planning in coupled human-natural systems

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