City of Flint – City Park System
Park Mapping and Equity Assessment
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Introduction
In order to encourage youth and adults to live active lives, the Flint Healthy Kids, Healthy Communities (HKHC) initiative is working to improve the parks in Flint, Michigan so that the population has access to safe and attractive places for physical activity and recreation. This assessment was completed as an update of the report that was submitted by University Outreach, University of Michigan-Flint in November 2010 that used data from the 2000 U.S. census, which was the most up-to-date data at the time. Various models have been developed and utilized for park equity analysis, most notably the model which was developed by the Trust for Public Land’s Center for City Park Excellence (http://www.tpl.org/) for a study in Kalamazoo, Michigan. In order to demonstrate how many children might lack opportunities for outdoor recreation, a four-point “vulnerability index” was developed which accounted for population density, youth, poverty, and racial minority population distribution (Kalamazoo Nature Center, 2009). By replicating this model, this assessment will identify areas of need for parks in Flint as a measure of demand by the Flint population.

Flint Demographic Changes
Between the 2000 and 2010 Censuses, Flint experienced some major changes.

### General Characteristics

<table>
<thead>
<tr>
<th>2000</th>
<th>2010</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>124,943</td>
<td>102,438</td>
</tr>
<tr>
<td>Male</td>
<td>47%</td>
<td>47.60%</td>
</tr>
<tr>
<td>Female</td>
<td>53%</td>
<td>52.40%</td>
</tr>
<tr>
<td>Median Age (Years)</td>
<td>30.8</td>
<td>33.9</td>
</tr>
<tr>
<td>Youth (Under 18 Years)</td>
<td>33.60%</td>
<td>28.40%</td>
</tr>
<tr>
<td>One Race</td>
<td>96.90%</td>
<td>96.10%</td>
</tr>
<tr>
<td>White</td>
<td>41.40%</td>
<td>37.40%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>53.30%</td>
<td>56.60%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>3%</td>
<td>3.90%</td>
</tr>
</tbody>
</table>
| Economic Characteristics

| Median Household Income | $28,015 | $28,337 | 1.15% |
| Families Below Poverty Level | 22.90% | 32.10% | 9.20% |
| Individuals Below Poverty Level | 26% | 36.60% | 10.70% |

### Data Sources
- State of Michigan Center for Geographic Information Framework
- University Outreach at the University of Michigan-Flint
- The City of Flint Police Department
- National Historical Geographic Information System (www.nhgis.org)

Methods
- Four variables were created from U.S. Census data:
  - Population Density
  - Percentage youth (18 years and younger)
  - Percentage minority (non-white)
  - Percent of households in poverty ($≤$25,000)
  - Normalized values to scale from 0 to 100
  - Applied equal weighting of 25% to each variable then aggregated variables to produce Park Needs Index
- Performed hot spot analysis to determine spatial patterns of crime within the City of Flint to assess the risk to children from crime.
- Crimes collected for 2010 were:
  - Aggravated/Felonious Assault
  - Violation of Controlled Substance
  - Hit and Run Motor Vehicle Accident
- The resultant park needs index ranged from 0 to 83.25.
- Areas in greatest need for parks are in the north and northwest sections of Flint.

Results
- 60% of Flint’s total population lives within a quarter mile of a park
- The summation of the park need index values within the 0.25 mile buffer indicates that 80% of the demand for parks can be met with the current supply of park space
- This indicates that the existing parks are located in areas where they are needed.
- It is likely that crime is an inhibitor to park utilization throughout areas within the City of Flint.

Conclusion
- Total of 60 recreational areas out of the City of Flint Parks system were used
- The summation of the park need index values within the 0.25 mile buffer indicates that 80% of the demand for parks can be met with the current supply of park space
- This indicates that the existing parks are located in areas where they are needed.
- It is likely that crime is an inhibitor to park utilization throughout areas within the City of Flint.