A Policy Analysis:
Evaluating the Level of Service Standard
for Lynnwood’s Park System

Report prepared for
the City of Lynnwood Parks,
Recreation & Cultural Arts Department

Authored by:
Jeremy Blomberg, Aurora Deng,
Emma Li & Carly Marshall

University of Washington
Evans School of Public Policy & Governance
# TABLE OF CONTENTS

1. **INTRODUCTION**
   - Background
   - Problem

2. **DIAGNOSIS & RESEARCH**
   - Literature Review Summary
   - Full Literature Review

3. **RESEARCH METHODS**
   - Introduction
   - Research Questions
   - Methods

4. **RESULTS & ANALYSIS**
   - Current Lynnwood Park System
   - Policy Analysis
   - Scorecard

5. **RECOMMENDATION & IMPLEMENTATION**
   - Policy Option Trade-Offs
   - Conclusion & Overall Recommendation
   - Limitations & Future Work
   - Acknowledgements
EXECUTIVE SUMMARY

- The Problem
- Our Research questions
- Policy options
- Criteria
- Evaluation
Recommendation

We recommend that the City of Lynnwood adopt the **half-mile walk** to a park or trail LOS into its future comprehensive parks planning, and prepare to use **capital value per person** as its long-term LOS approach.
INTRODUCTION
City of Lynnwood

Parks, Recreation & Cultural Arts Department

“create a healthy community through people, parks, programs and partnerships”
The PRCA Department evaluates its park system using Level of Service (LOS) standards. The status quo LOS methodology is park acreage/1,000 residents.

The main goals of the PARC Plan:

1. To foster a healthy, active community
2. To create great parks & spaces
3. To ensure sound management
4. To prepare for the future
5. To encourage connectedness
Research Questions

What is the prevailing standard methodology of Lynnwood’s LOS policy, and are there current and future needs that should be addressed?

Based on the research of current best practices, which metrics should be integrated into the LOS standards to more accurately represent the values and needs of the Lynnwood community?
DIAGNOSIS et RESEARCH
2.1 Literature Review Summary

Literature Review

Park Access
- **Proximity**: % of residents living within ½ mile walk of a park
- **Barriers**: investment in removing walking network barriers

Park Quality
- **Condition**: measure of deferred maintenance and ADA compliance issues
- **Variety**: mix and location of park amenities

Park Availability: measure of park capacity, use, and demand
**Trail Connectivity**: total linear miles, trail ratio to population, and overall connectedness

**Capital Value Per Person**: ratio of a city’s total value of parks and recreation inventory compared to their equivalent population

Criteria for Developing LOS for Parks
Case Example
Park Access

2.2 Literature Review

**Proximity**

People are more likely to use a park if it is in close proximity to where they live.

**Barriers**

There are many obstacles that can limit one's ability to get to a park.
2.2 Literature Review

**Park Quality**

**Condition**

Deferred maintenance and ADA compliance issues usually lead problems impacting people’s visiting experience in parks.

**Variety**

Park amenities can increase park usage, provide health benefits to the community, and promote satisfaction between different ethnic and socioeconomic groups.
Park Availability

- Capacity, usage, & demand
- Expensive & costly to measure, not commonly used
- LOS option → criterion
Trail Connectivity

Total linear miles of trails
National average: 11 miles
West coast avg: 16 miles

Total linear miles per thousand residents
Current standard:
0.25 miles per 1,000 population

Number of trail connections
Dependent on needs & goals of the community

2.2 Literature Review
1. **LOS Parks**  
**Capital Value per Person**

\[
\text{Value of Parks and Recreation Inventory ÷ Equivalent Population} = \text{Capital Value per Person}
\]

2. **Value Need for Growth**

\[
\text{Capital Value per Person × City’s Population Growth} = \text{Value Needed for Growth}
\]

3. **Investment Needed**

\[
\text{Existing Value of Parks Inventory + Value Needed for Growth} = \text{Value Needed for Next Year}
\]

4. **Investment to be Paid by Growth to Maintain LOS**

\[
\text{Value Needed for Growth - City Revenue Investment} = \text{Investment Needed to Maintain LOS}
\]

2.2 Literature Review
Criteria for Developing LOS for Parks

What are the specific needs of the residents?
Do measurements align?

Is the data logical, clear, easy to collect, and available?

Does the LOS represent economic, health, social and environmental benefits?

Do they provide a comprehensive and representative assessment of the parks system?

2.2 Literature Review
03

RESEARCH METHODS
I. Literature Review
II. Current Park System
III. Policy Analysis
IV. Final Scorecard
Policy Options

1st
Status Quo
(Park Acreage per Resident)

2nd
Park Access
(Number of Residents living within ½ Mile Walk to Park)

3rd
Capital Value Per Person

4th
Trail Connectivity
(Trail Presence)
The ideal LOS will:

1. Increase Social **Health Equity** within the Community
2. Increase **Economic Equity** within the Community
3. Increase **Environmental Equity** within the Community
4. Increase Ability to **Meet Demand for Future Growth**

Increase Ease of Model Replicability → internal survey

---

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Data used to represent criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>● Obesity %</td>
</tr>
<tr>
<td></td>
<td>● CDC Social Vulnerability Index</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>● Low income rate</td>
</tr>
<tr>
<td></td>
<td>● Percentage of people of color</td>
</tr>
<tr>
<td>Environment</td>
<td>● Urban heat island effect</td>
</tr>
<tr>
<td></td>
<td>● Air quality</td>
</tr>
<tr>
<td>Demand / Growth</td>
<td>● Parks usage from UWT</td>
</tr>
</tbody>
</table>
3.3 Sourcing the Data
Goal of policy analysis: are there any correlations between each LOS and the criteria?

What that tells us: could the LOS represent the needs of the city and help identify gaps in equity and service?
Results & Analysis
Current Lynnwood Park System

City-level summary for overall park system in Lynnwood, based on proposed LOS measurements

Park Acreage per Resident
2016 this overall LOS in Lynnwood is: 3.5 acres per 1000

Park Access (1/2 Mile Walk to a Park)
According to The Trust for Public Land project, 79.4% of Lynnwood’s population is within a 10-minute walk of a park or trail.

Capital Value per Person
In 2018, this LOS for Lynnwood is: $3,783

Trail Connectivity
Overall, the City of Lynnwood has 14 miles of trails, which is approximately 0.37 miles of trail / 1000 residents.
## Policy Analysis

### Data

<table>
<thead>
<tr>
<th>Variables</th>
<th>Criterion</th>
<th>Other Variables from link</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC - Social Vulnerability Index</td>
<td>GIS - CDC Obesity %</td>
<td></td>
</tr>
<tr>
<td>GIS - Enviro data: Air Quality</td>
<td>GIS - Enviro data: Urban Heat</td>
<td></td>
</tr>
<tr>
<td>Low income</td>
<td>Middle income</td>
<td>High income</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sum of average ped usage and average bike usage. I coded them as 4 highest, 3 = 3rd quartile, 2 = second, and 1 = 1st. Higher is more vulnerable, see doc.</td>
</tr>
<tr>
<td>Higher = negative / We coded them as 0,1,2,3,4 for 0-7, 7-9, 9-11, 11-14, 14-33</td>
</tr>
<tr>
<td>Higher # = better quality</td>
</tr>
<tr>
<td>Higher = worse / we coded them as 0,1,2 for zero, moderate, high</td>
</tr>
<tr>
<td>Income variables --- could be used for representing the Social Situation of Lynnwood in future regression analysis</td>
</tr>
</tbody>
</table>

| Lynndale Park | 5942 | 174237 | 4 | 9-11 | 2 | zero | 372 | 435 | 677 |

### 4.2 Policy Analysis
## Policy Analysis

### Data

<table>
<thead>
<tr>
<th>Variables</th>
<th>10 minute walk</th>
<th>minute walk—GIS</th>
<th>acreage</th>
<th>trails</th>
<th>capital value_aurora</th>
<th>capital value_emma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTES</strong></td>
<td>This is also 10 minute walk data, from the GIS website: <a href="https://parkserv">https://parkserv</a> e.tpl.org/mappi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lynndale Park</td>
<td>3,903</td>
<td>3904</td>
<td>40.57</td>
<td>1</td>
<td>$39,570,554.56</td>
<td>39356306.85</td>
</tr>
</tbody>
</table>

Based on Natural Capital Accounts for Public Green Space in London, for details see the word document and Park: Capital Value table in this spreadsheet. Based on the Park Impact Fee Ordinance of Lynnwood. Calculating as adding all facilities in each park together.
Policy Analysis

Y variable - Low income rate

Capital Value Per Person and Low Income Rate

X variable - Capital value per person

4.2 Policy Analysis
## Policy Analysis

- **LOW**: no correlation and no statistical significance
- **MEDIUM**: weak statistically significant correlation with the criterion
- **HIGH**: strong statistically significant correlation with the criterion

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Increase Social Health Equity</th>
<th>Increase Economic Equity</th>
<th>Increase Environmental Equity</th>
<th>Increase Ability to Meet Demand for Future Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS Policy Option</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Status Quo (Park Acreage)</td>
<td>LOW</td>
<td>MEDIUM</td>
<td>LOW-MEDIUM</td>
<td>HIGH</td>
</tr>
<tr>
<td>2. Park Access (1/2 Mile Walk)</td>
<td>MEDIUM</td>
<td>LOW</td>
<td>LOW</td>
<td>LOW</td>
</tr>
<tr>
<td>3. Capital Value Per Person</td>
<td>MEDIUM</td>
<td>HIGH</td>
<td>LOW-MEDIUM</td>
<td>HIGH</td>
</tr>
<tr>
<td>4. Trail Connectivity (Trail Presence)</td>
<td>LOW</td>
<td>LOW</td>
<td>MEDIUM</td>
<td>LOW</td>
</tr>
</tbody>
</table>

4.2 Policy Analysis
## Final Scorecard

Example scorecard for community parks:

<table>
<thead>
<tr>
<th>Community Parks</th>
<th>Park Access</th>
<th>Capital Value Per Person</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value (# residents within 1/2 mile)</td>
<td>Score</td>
<td>Value</td>
</tr>
<tr>
<td>Lynndale Park</td>
<td>3,904</td>
<td>1</td>
<td>$10,081.02</td>
</tr>
<tr>
<td>Meadowdale Playfields</td>
<td>1,650</td>
<td>-1</td>
<td>$15,170.00</td>
</tr>
<tr>
<td>Scriber Lake Park</td>
<td>4,025</td>
<td>1</td>
<td>$5,275.50</td>
</tr>
<tr>
<td>Wilcox Park</td>
<td>2,251</td>
<td>-1</td>
<td>$3,793.37</td>
</tr>
</tbody>
</table>
Recommendation & Implementation
5.1 Policy Option Trade-offs

**Status Quo**
- Strong connection: city’s future population growth.
- Slight correlation: environmental benefits, economic equity.
- Unable to represent: social health equity.

**Capital Value Per Person**
- Appropriately represent most of our criteria.
- Strong correlation: community’s economic, and growth data.
- Slight correlation: environmental and health equity.

**Park Access**
- Relatively ineffective measure.
- Slight correlation: social vulnerability index.
- Unable to represent: community’s economic, environmental, and growth data.

**Trail Connectivity**
- Relatively weak in representing the criteria.
- Slight correlation: environmental measures.
- Unable to represent: community’s economic, health, and growth data.
A two-tiered approach:

1. In the short-term, we recommend using the number of residents served within a half-mile walk to a park or trail LOS.

2. In the long-term, Lynnwood should transition to a capital value per person LOS.
Additional consideration for Trails:

Lynnwood has approximately 0.37 miles of trail / 1,000 residents, which is higher than the current national standard of 0.25.

Proposed new trails LOS benchmark: between 0.3 and 0.4 miles / 1,000 residents.
<table>
<thead>
<tr>
<th>Limitation</th>
<th>Future Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature review</td>
<td>Improve local participation and engagement in the process of establishing LOS</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>Add individual-level data instead of only using park-level data</td>
</tr>
<tr>
<td>Project scope</td>
<td>Help the city to prioritize future budget planning</td>
</tr>
<tr>
<td>Assessment of potential annexation in urban growth area</td>
<td>Analyze more on annexed areas</td>
</tr>
<tr>
<td>Force majeure impact</td>
<td>Study on risk analysis, corresponding prevention and solutions to better respond the public emergencies</td>
</tr>
</tbody>
</table>
Thank you...

- Our client, Deputy Director Sarah Olson
- The UW Tacoma research team
- Our capstone advisor Steve Kosack and our Evans peers

Our team worked across multiple time zones and through a pandemic, and we are proud of our contribution in evaluating Lynnwood’s parks level of service standard.
Thank You!

Any Question?