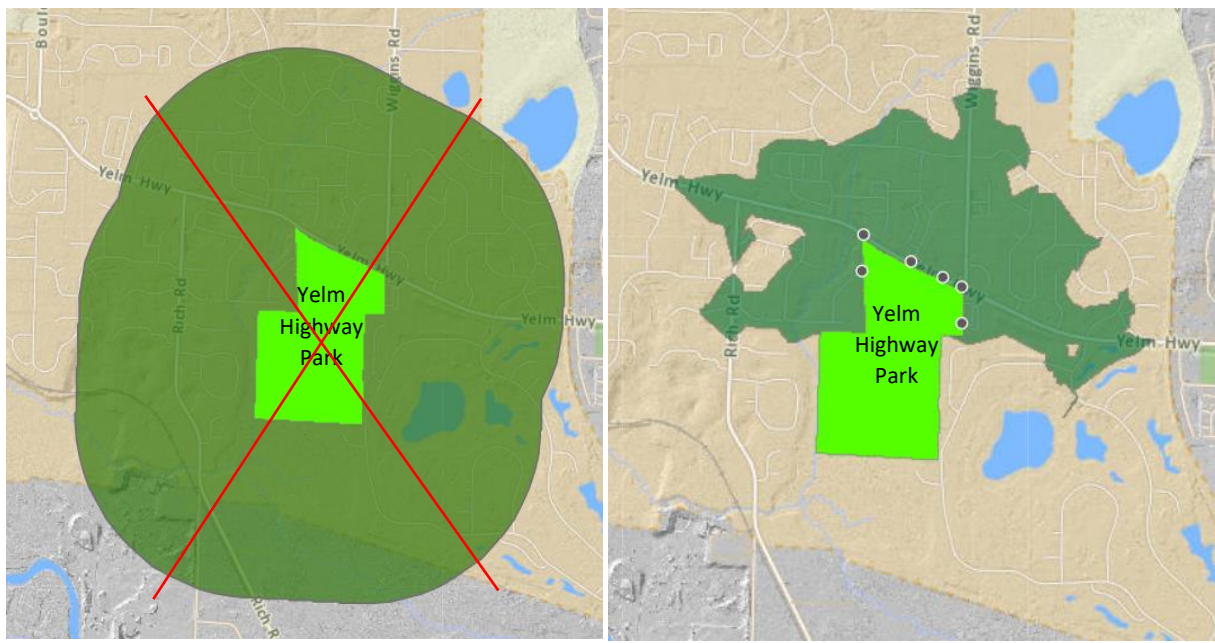


## Equity Analysis for Prioritization of Future Park Development – Methodology

**Goal of Analysis:** Using GIS tools, look at equity-associated demographic parameters in the undeveloped park service areas to help inform the order in which parks are developed in the future. Using this method to assess and score the park service areas is a way to compare the group of park service areas' needs in relation to each other and to give equal weight to each of the four parameters.

**Park Service Areas:** These are defined as the areas within  $\frac{1}{2}$  mile of park entrances. The  $\frac{1}{2}$  mile is roughly equivalent to a 10-minute walk and is common accessibility metric used by park departments nationally. The  $\frac{1}{2}$  mile distance is measured in a Network Analyst dataset that includes streets and trails. It is not an “as the crow flies” buffer around a park because it does not cross private property, water bodies, etc. (Figure 1).

Figure 1: Park Service Area

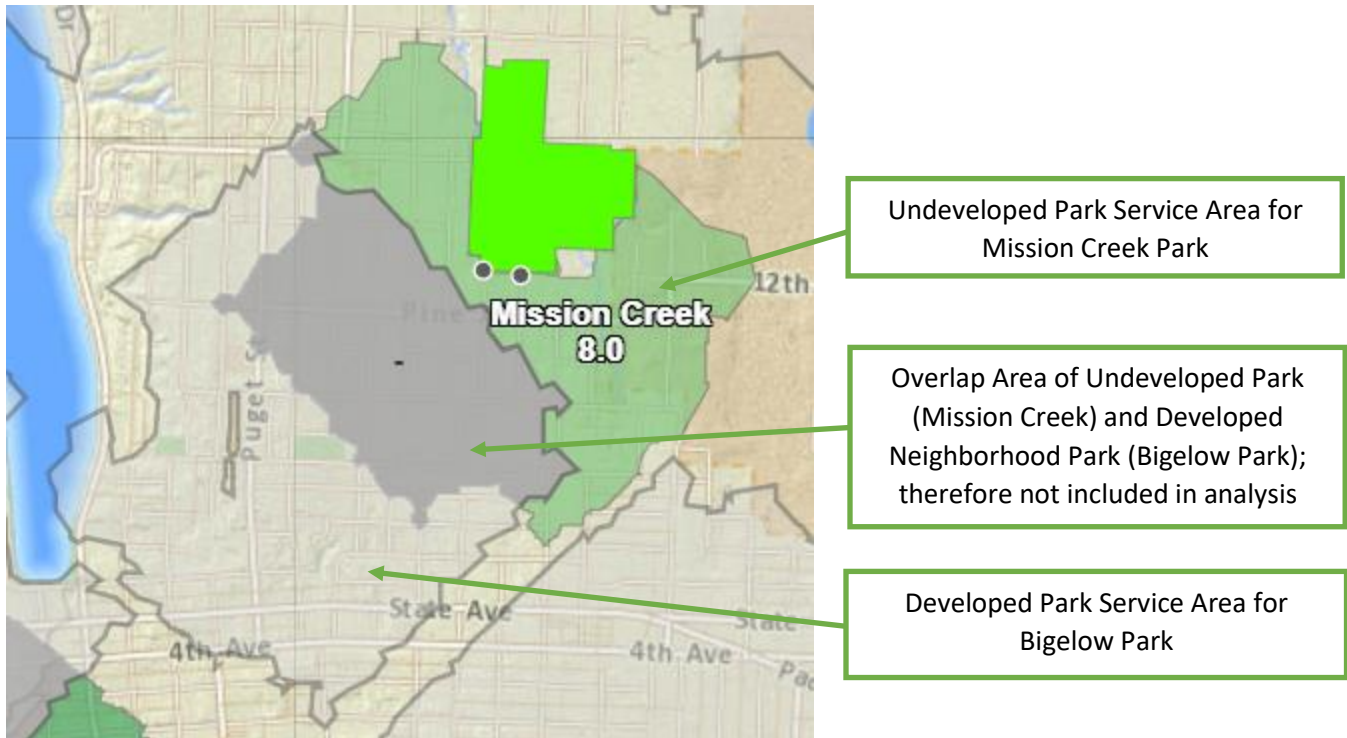


$\frac{1}{2}$  Mile “As the Crow Flies”

$\frac{1}{2}$  Mile Using Street and Trail Network

In the mapping analysis we also included the Service Areas for Olympia’s Developed Parks because in some cases those areas overlap (shown in grey) with the Undeveloped Park Service Areas, so we clipped those overlapped areas out of the analysis and based the analysis only on the new residents that would be served by a future neighborhood or community park development. (Figure 2).

Figure 2: Example of overlapping park service areas



### Demographic Parameters:

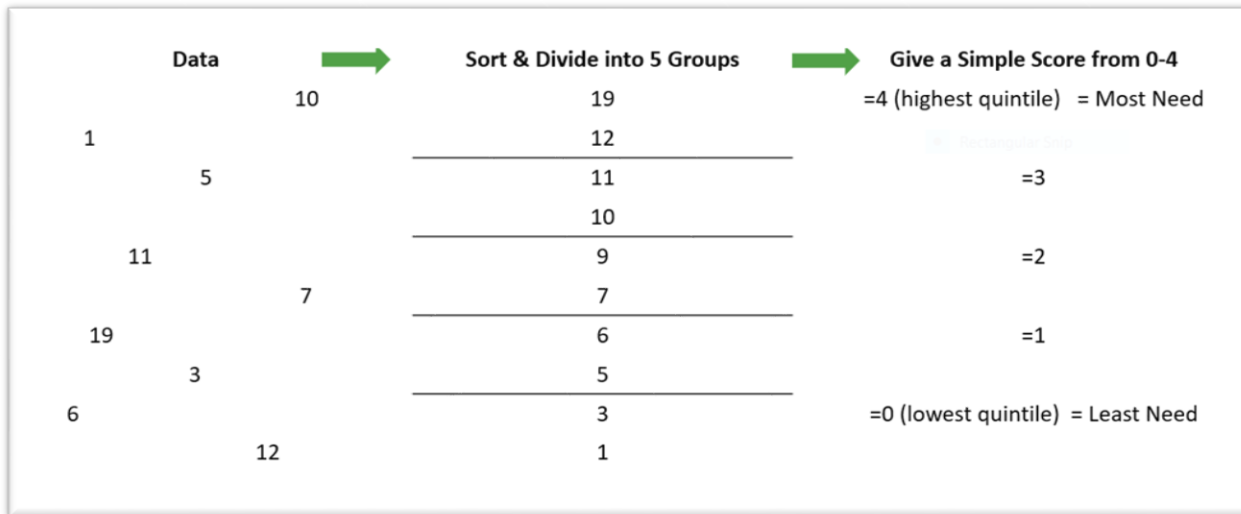
All calculations created using ESRI's Community Analyst software

| Parameter     |          | Exact Variable                                                                               | Quintile Points Range |     |
|---------------|----------|----------------------------------------------------------------------------------------------|-----------------------|-----|
| Poverty       |          | 2018 Households Below the Poverty Level<br><i>(from 2013-2018 American Community Survey)</i> | 0-4                   |     |
| Race/Hispanic |          | 2020 Total Non-White and White Hispanic<br><i>(from ESRI 2020 Updated Demographic Data)</i>  | 0-4                   |     |
| Age           | Children | 2020 Total Population Age <18<br><i>(from ESRI 2020 Demographic Data)</i>                    | 0-2                   | 0-4 |
|               | Seniors  | 2020 Total Population Age 65+<br><i>(from ESRI 2020 Demographic Data)</i>                    | 0-2                   |     |
| Multi-family  |          | 2018 Housing: Multi-family<br><i>(from 2013-2018 American Community Survey)</i>              | 0-4                   |     |

### Quintile Statistical Method:

For each of the above parameters we took the values associated with each undeveloped park service area and sorted them from highest to lowest. We then broke the values into five equal sections and assigned each a quintile score between zero and four (Figure 3), except for the age parameter which is broken into Children and Seniors and therefore each has a maximum score of two so that when added together the Age category has a maximum score of four. The higher the score, the higher the need in that park service area.

Figure 3: Example of Quintile Method



When the score for each parameter is added together a total score is derived for that undeveloped park's service area. The maximum possible score (equating to the area of highest need) is 16.

Using the quintile method to assess and score the park service areas is a way to compare the group of park service areas' needs in relation to each other and to give equal weight to each of the four parameters.

Here is the resulting list of undeveloped parks that ranked the highest in terms of need in their associated service areas:

| Undeveloped Park           | Total Score |
|----------------------------|-------------|
| Lilly Rd Parcel            | 16          |
| Evergreen                  | 15.5        |
| Yelm Highway               | 15          |
| 9 <sup>th</sup> Ave Parcel | 12.5        |
| 8 <sup>th</sup> Ave        | 12          |
| Grass Lake                 | 12          |
| Burri                      | 11.5        |
| McGrath Woods              | 10          |
| Mission Creek              | 8           |

|                             |     |
|-----------------------------|-----|
| Log Cabin                   | 8   |
| West Bay                    | 7.5 |
| Edison Parcel               | 7.5 |
| Kaiser Rd Parcel            | 6   |
| Ward Lake                   | 5.5 |
| Isthmus                     | 0   |
| 28 <sup>th</sup> Ave Parcel | 0   |
| 18 <sup>th</sup> Ave Parcel | 0   |
| Chambers Lake               | 0   |