

Proposed Off Leash Dog Parks in Portland

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Introduction

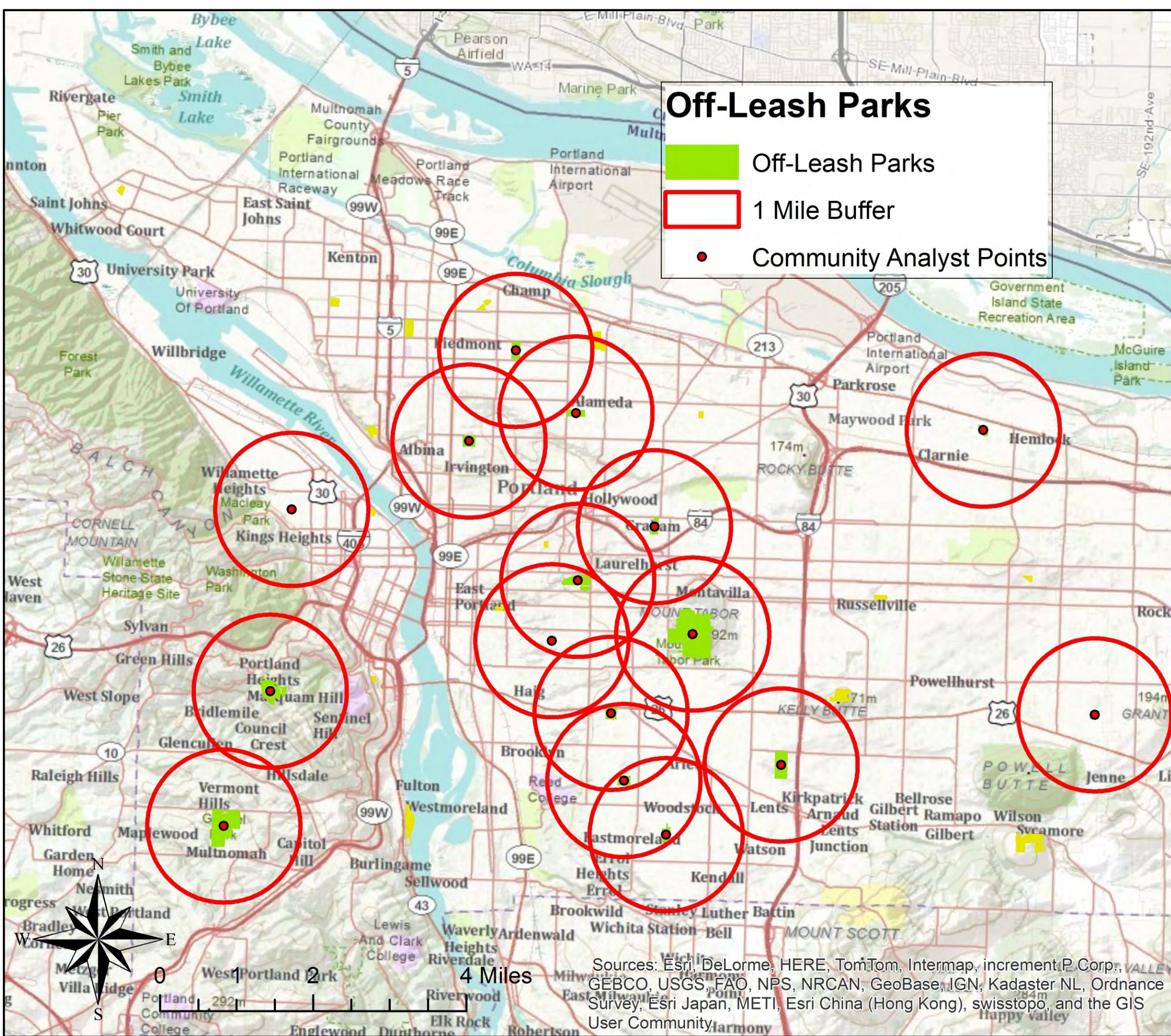
There are over 314 parks in the Portland Area, and of those we identified sixteen that contain designated off-leash areas for dogs. Portland is a city with a high number of dog ownership, and we were interested in seeing if we could identify areas that would benefit from having a nearby park open up new off-leash areas.

Our approach was to utilize a new tool, Esri's Community Analyst website, to identify the demographic statistics surrounding current off-leash dog parks. We would then utilize this data to compare to newly identified candidate parks that do not have off-leash areas, and see if the neighborhood surrounding the candidate parks closely resemble the demographics of current off-leash park neighborhoods.

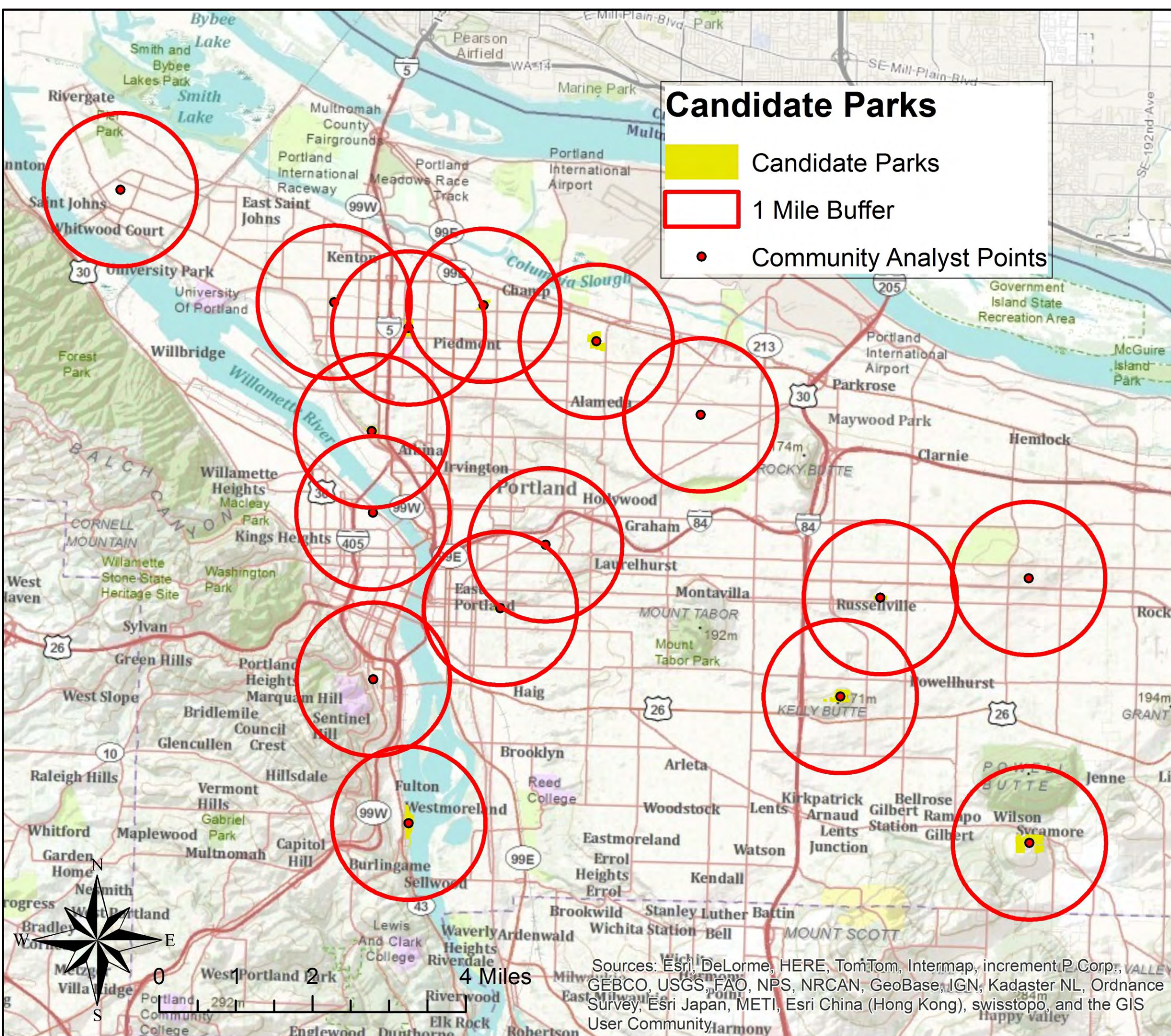
Materials and Methods

After importing the basic map layers into an ArcGIS geodatabase, the parks with off leash dog areas were identified by adding a row to the attribute table and marking "yes" in the cell for each park that had an off leash area. The data was then added to the map by using the "Select by Location" tool with Boolean algebra and exporting the results as a polygon layer. Sixteen more of the Portland Parks were selected at random as proposed areas for off leash dog parks. Demographic information was then pulled from the GIS Community Analyst Extension by creating a point layer on the Community Analyst map for the selected parks, creating a mile buffer around each point, and importing the demographic data from the buffer areas. The data was then imported into an excel spreadsheet and a T-test was performed, comparing the demographics from the control off leash dog park group to each of the proposed groups respectively. The T-test helped identify which demographic statistics were significant in choosing a new site for an off-leash area.

Population by Race	T-Test
Total	0.132887
Population Reporting One Race	0.176819
White	0.050473
Black	0.007388
American Indian	0.110888
Asian	0.012443
Pacific Islander	0.021476
Some Other Race	0.000088
Population Reporting Two or More Races	0.060577
Total Hispanic Population	0.079952
Population by Sex	
Total	0.286559
Male	0.128446
Female	0.158113
Population by Age	
Total	0.192918
Age 0 - 4	0.134519
Age 5 - 9	0.148253
Age 10 - 14	0.092766
Age 15 - 19	0.056689
Age 20 - 24	0.079739
Age 25 - 29	0.037951
Age 30 - 34	0.040249
Age 35 - 39	0.036274
Age 40 - 44	0.012515
Age 45 - 49	0.009975
Age 50 - 54	0.009146
Age 55 - 59	0.007463
Age 60 - 64	0.002443
Age 65 - 69	0.004875
Age 70 - 74	0.002398
Age 75 - 79	0.012847
Age 80 - 84	0.008951
Age 85 +	0.026191
Age 18 +	0.015003
Age 65 +	0.006328
Median Age by Sex and Race/Hispanic Origin	
Total Population	0.024081
Male	0.004848
Female	0.004947
White Alone	0.012712
Black Alone	0.001388
American Indian Alone	0.001714
Asian Alone	0.003532
Pacific Islander Alone	0.000088
Some Other Race Alone	0.000000
Two or More Races	0.000000
Hispanic Population	0.000000
Households by Type	
Total	0.000000
Households with 1 Person	0.000000
Households with 2+ People	0.000000
Family Households	0.000000
Husband-wife Families	0.000000
With Own Children	0.000000
Other Family (No Spouse Present)	0.000000
With Own Children	0.000000
Nonfamily Households	0.000000
All Households with Children	0.000000
Multigenerational Households	0.000000
Unmarried Partner Households	0.000000
Male-female	0.000000
Same-sex	0.000000
Average Household Size	
Total	0.000000
2 People	0.000000
3 People	0.000000
4 People	0.000000
5 People	0.000000
6 People	0.000000
7+ People	0.000000
Family Households by Size	
Total	0.000000
2 People	0.000000
3 People	0.000000
4 People	0.000000
5 People	0.000000
6 People	0.000000
7+ People	0.000000
Nonfamily Households by Size	
Total	0.000000
1 Person	0.000000
2 People	0.000000
3 People	0.000000
4 People	0.000000
5 People	0.000000
6 People	0.000000
7+ People	0.000000
Population by Relationship and Household Type	
Total	0.000000
In Households	0.000000
In Family Households	0.000000
Householder	0.000000
Spouse	0.000000
Child	0.000000
Other relative	0.000000
Nonrelative	0.000000
In Nonfamily Households	0.000000
In Group Quarters	0.000000
Institutionalized Population	0.000000
Noninstitutionalized Population	0.000000
Family Households by Age of Householder	
Total	0.000000
Householder Age 15 - 44	0.000000
Householder Age 45 - 54	0.000000
Householder Age 55 - 64	0.000000
Householder Age 65 - 74	0.000000
Householder Age 75 +	0.000000
Nonfamily Households by Age of Householder	
Total	0.000000
Householder Age 15 - 44	0.000000
Householder Age 45 - 54	0.000000
Householder Age 55 - 64	0.000000
Householder Age 65 - 74	0.000000
Householder Age 75 +	0.000000
Households by Race of Householder	
Total	0.000000
Householder is White Alone	0.000000
Householder is Black Alone	0.000000
Householder is American Indian Alone	0.000000
Householder is Asian Alone	0.000000
Householder is Pacific Islander Alone	0.000000
Householder is Some Other Race Alone	0.000000
Householder is Two or More Races	0.000000
Households with Hispanic Householder	0.000000
Husband-wife Families by Race of Householder	
Total	0.000000
Householder is White Alone	0.000000
Householder is Black Alone	0.000000
Householder is American Indian Alone	0.000000
Householder is Asian Alone	0.000000
Householder is Pacific Islander Alone	0.000000
Householder is Some Other Race Alone	0.000000
Householder is Two or More Races	0.000000
Husband-wife Families with Hispanic Householder	0.000000
Other Families (No Spouse) by Race of Householder	
Total	0.000000
Householder is White Alone	0.000000
Householder is Black Alone	0.000000
Householder is American Indian Alone	0.000000
Householder is Asian Alone	0.000000
Householder is Pacific Islander Alone	0.000000
Householder is Some Other Race Alone	0.000000
Householder is Two or More Races	0.000000
Other Families with Hispanic Householder	0.000000
Nonfamily Households by Race of Householder	
Total	0.000000
Householder is White Alone	0.000000
Householder is Black Alone	0.000000
Householder is American Indian Alone	0.000000
Householder is Asian Alone	0.000000
Householder is Pacific Islander Alone	0.000000
Householder is Some Other Race Alone	0.000000
Householder is Two or More Races	0.000000
Nonfamily Households with Hispanic Householder	0.000000
Total Housing Units by Occupancy	
Total	0.000000
Occupied Housing Units	0.000000
Vacant Housing Units	0.000000
For Rent	0.000000
Rented, not Occupied	0.000000
For Sale Only	0.000000
Sold, not Occupied	0.000000
For Seasonal/Recreational/Occasional Use	0.000000
For Migrant Workers	0.000000
Other Vacant	0.000000
Total Vacancy Rate	0.000000
Households by Tenure and Mortgage Status	
Total	0.000000
Owner Occupied	0.000000
Owned with a Mortgage/Loan	0.000000
Owned Free and Clear	0.000000
Average Household Size	0.000000
Renter Occupied	0.000000
Average Household Size	0.000000
Owner-occupied Housing Units by Race of Householder	
Total	0.000000
Householder is White Alone	0.000000
Householder is Black Alone	0.000000
Householder is American Indian Alone	0.000000
Householder is Asian Alone	0.000000
Householder is Pacific Islander Alone	0.000000
Householder is Some Other Race Alone	0.000000
Householder is Two or More Races	0.000000
Owner-occupied Housing Units with Hispanic Householder	0.000000
Renter-occupied Housing by Race of Householder	
Total	0.000000
Householder is White Alone	0.000000
Householder is Black Alone	0.000000
Householder is American Indian Alone	0.000000
Householder is Asian Alone	0.000000
Householder is Pacific Islander Alone	0.000000
Householder is Some Other Race Alone	0.000000
Householder is Two or More Races	0.000000
Renter-occupied Housing Units with Hispanic Householder	0.000000
Average Household Size by Race of Householder	
Total	0.000000
Householder is White Alone	0.000000
Householder is Black Alone	0.000000
Householder is American Indian Alone	0.000000
Householder is Asian Alone	0.000000
Householder is Pacific Islander Alone	0.000000
Householder is Some Other Race Alone	0.000000
Householder is Two or More Races	0.000000
Householder is Hispanic	0.000000



Current Off-Leash Dog Parks	Lents Park	Brentwood Park	Woodstock Park	Gabriel Park	Creston Park	Council Crest Park	Mt. Tabor Park	Sewallcrest Park	Laurelhurst Park	Normandale Park	Irving Park	Wilshire Park	Alberta Park	Argay Park	Lynchwood Park	Wallace Park
Female Median Age	34.9	35.7	35.9	40.7	35.8	45.5	39.5	33.6	34.6	39.3	35.9	39.4	34.9	43.3	36.5	34.0
Husband-Wife Families	3,127	3,610	3,647	2,761	4,183	2,239	3,841	4,429	4,159	4,088	3,765	4,790	3,516	2,063	3,083	2,559
Householder is White Alone	5,736	7,665	8,580	6,158	10,578	3,785	8,680	14,051	12,925	9,701	9,190	8,440	7,141	3,333	5,657	11,075
Owned Free and Clear	715	1,080	1,244	895	1,380	918	1,352	1,394	1,245	1,229	1,063	1,424	963	993	970	837



Normalized Values	Oregon Park	Woodlawn Park	Peninsula Park	Arbor Lodge Park	Overlook Park	Pearl Park	St Johns Park	Ventura Park	Wellington Park	Williamette Park	Clatop Park	Colonel Summers Park	Fernhill Park	Glenfair Park	Kelly Butte Park	Lair Hill Park
Female Median Age	0.0627	0.0622	0.0622	0.0634	0.0601	0.0601	0.0606	0.0670	0.0676	0.0702	0.0626	0.0581	0.0638	0.0601	0.0629	0.0565
Husband-Wife Families	0.0909	0.0563	0.0757	0.0646	0.0305	0.0516	0.0503	0.0765	0.0761	0.0365	0.0641	0.0652	0.0597	0.0795	0.0738	0.0487
Householder is White Alone	0.1135	0.0447	0.0677	0.0553	0.0320	0.1250	0.0426	0.0603	0.0586	0.0321	0.0522	0.1044	0.0439	0.0510	0.0473	0.0693
Owned Free and Clear	0.0891	0.0488	0.0684	0.0640	0.0306	0.0459	0.0401	0.0807	0.0942	0.0425	0.0693	0.0628	0.0596	0.0758	0.0656	0.0627
Totals	0.3562	0.2120	0.2740	0.2474	0.1532	0.2825	0.1935	0.2846	0.2965	0.1814	0.2481	0.2906	0.2270	0.2663	0.2496	0.2371

Conclusions

Our T-test Analysis showed that common demographics in the buffer areas around existing off leash dog parks were older, white, two person households who owned their homes. Using the normalized candidate park demographics, we were able to identify which of the sixteen candidate parks most closely match the profiles of the current off-leash parks.

Oregon Park, on SE 30th and Oregon St was the best candidate location for a new off leash dog park. The total value for the normalized data indicate that the one mile neighborhood surrounding this park contains the highest number of households that are fully owned, have a white household owner, have the most Husband-Wife families, and have a significantly higher median age for females.

Sources

Metro RLIS data
ArcGIS Community Analyst Extension
Portland Parks and Recreation
U.S. Census 2010
Geoffrey Duh