# Growing Green:

## An Inventory of Public Lands Suitable for Community Gardening in Seattle, Washington



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**"DON [Department of Neighborhoods] is requested to work with Seattle Public Utilities, Seattle City Light and other relevant departments and universities to conduct an inventory of public lands in Seattle appropriate for urban agriculture uses."**

*- Local Food Action Initiative Resolution, passed by the Seattle City Council April 2008*

**""The biggest crisis in our food system is the lack of access to good, healthy, fresh food, for people living in cities, particularly in low-income communities...Urban agriculture work is one of the most powerful solutions, because it brings food directly into the communities."**

*-Anna Lappé, co-founder with Frances Moore Lappé of the Small Planet Institute*

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# Introduction

Planners and policy-makers in the United States and around the world are increasingly recognizing the importance of food systems planning. Effective food systems planning at the local and regional levels offers tools to address some of the major challenges faced by modern cities, including high rates of joblessness, poverty, and hunger along with growing environmental problems related to fossil fuel dependency and resource consumption. Urban agriculture, mainly in the form of community gardens, is one of the many food systems planning strategies that different cities have been using to address these kinds of problems. Urban agriculture offers many economic, social and environmental benefits to cities, including increased food security and equitable access to food, the beautification of previously vacant or under-used sites, opportunities for training and employment of under-skilled residents and youth, and the enhancement of community life.

Seattle is one of many cities across the United States and the world that has established a public community gardening program. The existing 72 gardens, or P-Patches as they are called in Seattle, are popular with residents; many have waiting lists of up to three years. As the city's population continues to increase and particular areas increase in population density, there will likely be a demand for more P-Patches. The city has already expressed its desire to create additional community garden spaces in some of its key policies and plans.

Securing land for garden space is not an easy feat in a city where pressure for land and the cost of purchasing are increasing. Nevertheless, as in most American cities, there is vacant, excess, and under-used public land that is suitable for urban gardening. Recognizing this, the Seattle City Council recently passed a Local Food Action Initiative Resolution. As part of the Resolution, the Department of Neighborhoods is requested to create an inventory of publicly-owned land that has P-Patch potential. The following report responds to that request. It represents the first comprehensive attempt to identify publicly-owned lands that are potentially suitable for community gardens in the city of Seattle.

The methodology used to identify and evaluate sites was developed using two similar predecessor reports, one created for the city of Portland, Oregon and the other for Vancouver, British Columbia. The methodology was adapted to fit preferences expressed by City of Seattle Department of Neighborhood staff and

expanded to be more robust and comprehensive. The different categories of publicly-owned land that were evaluated include: vacant, excess and unused parcels, rights-of-way along multi-use paths, energy transmission lines and water pipes, and public school and public park properties. GIS and aerial photo analysis was used to evaluate the potential for community gardening according to particular criteria, including size, slope, shade and building coverage, impervious surface, access, and local development plans. Other characteristics, such as proximity to an existing P-Patch or a public school and local population characteristics like population density, number of families, average median monthly income, percentage of rental housing, and percentage of minorities, were also identified to assist in future decision-making.

A total of 45 vacant and unused sites comprising over 12 acres of land are identified as being suitable for urban agriculture. In addition, 122 school properties and 139 public parks have under-used space that has the potential to be turned into community gardening space. Furthermore, the rights-of-way along four multi-use paths and one transmission line are shown to contain possibility of being converted into space for gardening. The findings including in this report are intended to provide the City of Seattle, and particularly the Department of Neighborhoods, with information to assist in the establishment of new P-Patches. In addition, the information can serve as a dynamic database to be used to assist in decision-making and future inventories. The following inventory highlights the reality that there are many opportunities for the City of Seattle to establish additional community gardening sites.

# Background:

## Food Systems Planning and Urban Agriculture

> **"Cities and metropolitan regions need to give priority to the availability and accessibility of food."**
>
> (Koc, *For hunger-proof cities: Sustainable urban food systems,* 1999, 6)

Interest in food systems planning is increasing both on the national and global stage. This is occurring at a time when urban population growth has reached unprecedented numbers (United Nations Population Fund, 2007). Many leaders in the field of urban planning now acknowledge a relationship between the global, regional, and local food systems and challenges faced by all modern urban municipalities. The American Planning Association notes that the food system has an impact on issues like public health, access to healthy foods in low-income areas, the vitality of community and regional economies, the consumption of fossil fuel energy used in producing, processing, transporting and disposing of food products, the pollution of ground and surface water caused by the overuse of chemical fertilizers and pesticides in agriculture, and the loss of farmland in metropolitan areas (2007). In light of the growing interest in this area, the American Planning Association adopted a Policy Guide on Community and Regional Food Planning. The guide suggests ways to strengthen the ability of traditional planning to address the issues raised by the emerging field of community and regional food planning. The Policy Guide sets seven guiding policies related to the community and regional planning level, community and regional economies, the health of the region's residents, ecological impacts, social justice and equity, the preservation of diverse food cultures, and the development of state and federal legislation.

In addition to the American Planning Association, many leading researchers and practicing planners are also advocating that planners contribute to the development of a food systems agenda. Brown and Carter (2003) identify specific standard planning practices as ones that can be used to highlight food systems planning issues in discussion and decision-making at the local, state and federal levels. One recommended action for planners is to collect and analyze

data on the local or regional food system, such as through large and small-scale community food assessments. Cities and regions can also establish local food policy councils as a means for creating food policy and for encouraging public participation in food issues. Furthermore, planners can include food systems issues among the various levels and scales of planning. A final recommendation is to promote community gardens and entrepreneurial urban agriculture.

**Ways for Planners to Promote Food Systems Planning:**

- **Collect and analyze data**
- **Establish local food policy councils**
- **Include food systems issues in the planning process**
- **Promote community gardens and entrepreneurial urban agriculture**

The last idea of growing food in cities is not a new one, and has been practiced by various populations in history (Mougeot, 2006). In recent times, growing food has been particularly important to city dwellers in times of crisis and economic downturn. For example, schrebergaerten (allotment gardens) were begun by German city-dwellers to escape hunger during the First World War (Groening, 1995). In Britain, meanwhile, the Ministry of Agriculture launched the Dig for Victory Campaign one month after the beginning of World War II, encouraging residents on the homefront to grow their own vegetables as a way to both provide for the food needs of the people and free up valuable shipping space for war convoys (Bentley, 2001). The campaign was a large success and by 1943, over a million tons of vegetables were being grown in private gardens and allotments. Similar campaigns were launched in the USA and Canada.

In 2008 the cities of the world face a different set of challenges, including an ever-increasing urban population and related urban development, chronically high levels of unemployment and underemployment, threats to community food security, and a host of environmental concerns linked to the modern conventional food production system (van Veenhuizen, 2006). The environmental concerns range from things like groundwater and soil contamination to topsoil loss and global climate change. These are just some of

the reasons that cities worldwide are seeking ways to increase urban food production. Cuba, a world leader in urban agriculture, produces over 50% of the vegetables consumed in the country on local farms and gardens (Lazarus, 2000). Meanwhile, in Harare, the capital of Zimbabwe, crop cultivation within city limits occupies over 16% of the city's land and in the very densely populated city of Cairo, over 16% of the urban population raises small animals for family consumption (Koc, 1999). Urban agriculture is not simply a strategy for cities of the global south. As demonstrated by projects in the United Kingdom, France, Germany and the Netherlands, all modern cities can benefit from the implementation of suitable types of urban agriculture within their boundaries. For this reason, Seattle, along with many other American cities, is looking to expand opportunities for urban agriculture.

Urban agriculture is defined as the growing of plants and the raising of animals within and around cities. The main difference of urban agriculture from rural agriculture is its integration into the urban economic and ecological systems. It involves city residents as laborers and supplies urban consumers with food products.

**"Urban Agriculture is an industry located within (intraurban) or on the fringe (periurban) of a town, a city or a metropolis, which grows or raises, processes and distributes a diversity of food and non-food products, re-using largely human and material resources, products and services found in and around that urban area, and in turn supplying human and material resources, products and services largely to that urban area."**

*(Resource Centers for Urban Agriculture, 2008).*

It depends on the use of urban resources including land, water, and waste, and it impacts the urban environment in a variety of ways. Urban agriculture can take place at home or away from the residence, and on private land, public land or semi-public land. While the common image of urban agriculture is that of a private or community garden, the scale of production plots can vary from small gardens that are used largely for self-consumption to medium-sized and even large scale enterprises that are market-oriented. Products grown include different

crops and animals in addition to non-food items like medicinal herbs and ornamental plants. Commercial urban agricultural operations purportedly yield 13 times more per acre than rural counterparts (Community Food Security Coalition, 2003).

While individual and community gardens represent the most widely recognized type of urban agriculture, there exist diverse methods of growing foods within cities. Some methods utilize well-established techniques, while others are being developed with new ideas and technologies. Some of the newer ideas that may provide strategies for modern cities include rooftop gardens, container gardens, vertical farming, and SPIN farming.

While the former examples are well-known and already being practiced across the United States, the latter two deserve explanation. Vertical farming applies the technology of greenhouses to urban high-rise buildings, which are often covered with double-paned glass. Researchers have estimated that a 30-story farm on one city block could feed 50,000 people annually (Vogel, 2008). Such buildings could be designed to grow a mixture of hydroponics crops, house chickens and fish, be heated by renewable energy, and re-use their own nutrient and plant waste- in short, be models of sustainability. The Seattle-based architecture company Mithun has been recently lauded for its design of a 23-story Center for Urban Agriculture (Figure 1), which in addition to being extremely water and energy-efficient would also produce enough food to feed an estimated 450 people (American Institute of Architects,2008).

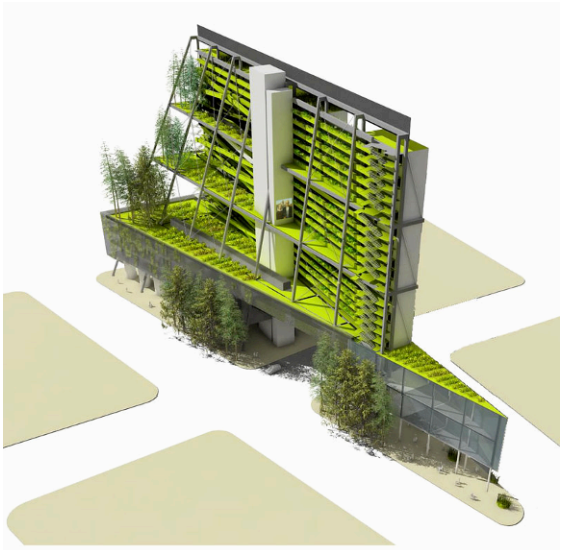


Figure 1: Vision of a Vertical Farm by Mithun, a Seattle-based architecture firm - *American Institute of Architects*

Another recently developed approach is that of SPIN farming, or Small Plot INtensive farming, which promotes intensive crop rotation on small-scale urban or suburban plots. The technique, which does not rely on expensive machinery or purchases of large amounts of land, enhances the potential for farmers to achieve high levels of prod-

uctivity and financial gain quickly (SPIN farming, 2008). Some SPIN farmers are successfully applying this technique in cities like Vancouver.

However it is practiced, urban agriculture can have many economic and non-economic benefits to a city and its residents (See Table 1).

**Table 1: Benefits of Urban Agriculture:**

**Economic Benefits**

- Vegetable production
- Return on investment: the results of a 23-city USDA city show that for every dollar of government investment, six dollars in vegetables were produced (Hynes 1996).
- Low-cost method of public space maintenance

**Non-Economic Benefits**

- Enhanced food security
- Better health, through dietary diversity and fresh produce
- Education and job skills training for youth and under-privileged
- Recreational opportunities
- Community well-being and neighborhood stabilization
- Beautification and greening of the city
- Improved urban environmental management of soils, water, and waste
- Reductions in greenhouse gas emissions currently caused by long transportation routes

*(American Planning Association, 2007; Brown et al, 2002; Cheema et al, 1996; Herbach, 1998, and Mougeot, 2006)*

There are a variety of ways in which planners can promote an environment conducive to urban agriculture. Researchers whom have evaluated urban agriculture in cities throughout the United States have identified strategies and tools that planners can use to increase the potential success of urban agriculture (Brown et al, 2002; Herbach, 1998; and Mougeot, 2006). An important strategy is to make a strong commitment to provide support to community gardens. This could mean improving the organizational and institutional capacity of the appropriate city government department itself or it

may mean developing relationships with appropriate non-profit organizations. Staying up-to-date on current research in urban agriculture, in order to recommend, establish and evaluate policy, is also important.

Another strategy includes the identification of urban agriculture as a distinct urban land use category and as an economic function in the planning process. The inclusion of urban agriculture goals and priorities in long-range planning activities and with a lot of citizen participation is another recommended action. Finally, planners can set aside public space, through permanent siting or by experimenting with land use tenure strategies such as temporary occupancy permits (TOPs), leases, and land trusts for community gardens.

# Background:

## The Need for an Inventory of Potential Community Garden Sites in Seattle

As in many cities across the United States, there is increasing emphasis in the Seattle metropolitan area on planning for food systems at a city and region-wide level. In May 2006, an Acting Food Policy Council of Seattle and King County (AFPC)
was formed. In its beginning years, the Acting Food Policy Council has been active in engaging local decision-makers and the public about the current situation in the local food system and in identifying priority areas for policy and program improvements.

**Mission of the Acting Food Policy Council:**
Seattle King County AFPC partners with community, business, agriculture and government to develop integrated policy and action for a food system that supports healthy people, communities, economies and the environment.

*(AFPC, 2008)*

The city is already recognized across the country for its community gardening, or P-Patch, Program. The program's roots go back to the 1970's when a University of Washington student convinced a local family to lend her land on which to teach urban children about gardening. Several years later, the City bought the land and the first P-Patch, named after the prior owners (the Picardos) was established. During the early years, community gardens were largely community-inspired and managed and under constant threat from development budget cuts.

The P-Patch program is now a formal and established program in the City of Seattle Department of Neighborhoods. The Department's Neighborhood Matching Funds Program has funded the development of every new garden, except one, since the early 1990s. Currently there are seventy-two established

P-Patches (Figure 2). They are owned by a variety of owners and institutions. Six of them are owned by the P-Patch Trust, which operates as a casual land


Washington State Geospatial Data Archive

**Figure 2: Seattle's Existing P-Patches, 2008**

conservancy by acquiring, owning, and preserving urban open spaces to be utilized as public community gardens. Three quarters of them are on land owned by various public agencies, and ten are leased from private landowners. In total, these urban gardens occupy about 23 acres of land (Department of Neighborhoods, 2008a). The gardens do not have a unique land use classification, as none exists in Seattle. The City of Seattle zoning ordinance allows for agriculture on any parcel in the city except along the waterfront.

The P-Patches are popular with city residents; many of them have a wait period of one year or longer to get a plot. The total waiting list consists of over 1,500 people (Langston, 2008). During the recent neighborhood planning efforts, twenty-three different neighborhoods formally asked for community gardens. Within the Seattle Comprehensive Plan of 2007, P-Patches are mentioned as goals within various categories. Meanwhile, the expansion of the P-Patch program aligns with the overall goals of the current administration, which include a major focus on issues related to social justice and the city's greenhouse gas emissions. Local planners and policy-makers acknowledge both the demand and the significance of the program and have included P-Patches as an important component of local planning efforts. For example, extensive community participation in the parks-planning process has enabled the recent establishment of P-Patches during the construction and renovation of public parks. While many planners and policy makers acknowledge the benefit of the community gardens and their popularity among residents, the challenge of allocating more space to community gardens amidst major development pressure remains.

**Seattle's Open Space Goals:**

- **Provide safe and welcoming places for the people of Seattle to play, learn, contemplate, and build community…**
- **Provide healthy spaces for children and their families to play… and for active uses such as community gardening, competitive sports, and running.**

*(Seattle Comprehensive Plan, 2008, UVG38).*

This difficulty was identified in the Sound Food Report, the first to characterize the Seattle area food system and recommend ways the city could enhance its functions (Garret, S. Nass, J., Watterson, C., Henze, T., Keithley, S., & Radke-Sproull, S., 2006). Among its many conclusions was that some of the underused public land in the city could be turned into community gardens. Another conclusion was that there is some discrepancy, although debatable, among the amount of garden plots available in areas according to median income levels. A major recommendation of the report was to conduct a land inventory of publicly-owned land in Seattle to identify land that is available and suitable for urban agriculture- to expand the P-Patch program. Local policy-makers have also shown increasing interest in enhanced planning of the food systems and enlargement of the P-Patch program. In April 2008, a Food System Sustainability and Security Resolution, proposed by Council member Richard Conlin, was passed by the Seattle City Council. In the Resolution, urban agriculture is identified as one way to meet the goals of increased food security and sustainability. However, the resolution notes that there is an absence of data about actual and potential urban agriculture uses. In the Resolution, the Department of Neighborhoods (DON) is specifically "requested to work with relevant departments and universities to conduct an inventory of public lands in Seattle appropriate for urban agriculture uses" (Resolution #31019). This report is an attempt to create such an inventory, as well as first step towards the establishment of a methodology for future inventorying.

**Councilmember Tom Rasmussen on the Passing of the Local Food Action Initiative Resolution**

"Today's action will help focus the City's effort to use surplus city property for local food production. Seattle owns land all around the City that could be used for community and market gardens. We don't want property that could be productive to lie fallow."

*(Seattle City Council Press Release, 2007)*

The benefits of completing a land inventory of potential sites for urban agriculture are many. They include the promotion of urban agriculture in response to City policy, the establishment of a record of actual and potential agricultural land uses that can act as a benchmark for monitoring future change, improved knowledge about the suitability of existing public lands for agriculture, and an enhanced information base to make better land use decisions, community plans and bylaw updates (Keathler, 2006). In Seattle, in particular, a land inventory will serve all of these purposes while also providing an opportunity for decision-makers in various departments and among the various levels of local government to cooperate in determining how to expand the P-Patch program.

# Methodology

This inventory applies the same methods, as appropriate, as used in the creation of similar reports for the cities of Portland, Oregon and Vancouver, British Columbia. In Portland, the Portland/Multnomah Food Policy Council and students from Portland State University completed the Diggable Cities Project, which included one of the first such land inventories (Balmer et al, 2005). Meanwhile, in Vancouver, the City Council recently announced a challenge to have 2010 new garden plots in time for the 2010 Olympics. To help achieve that goal, the Social Planning Department and a student from the University of British Columbia completed a land inventory, "Growing Spaces," modeled closely after the Diggable Cities Project (Keathler, 2006). The methodology used in this inventory was adapted to fit preferences expressed by City of Seattle Department of Neighborhood staff and expanded to be more robust and comprehensive, as described in some of the following paragraphs. It represents the first comprehensive attempt to identify publicly-owned lands that are potentially suitable for community gardens in the city of Seattle.

The public lands considered in this suitability analysis included Property Management Areas (PMA's), which are properties currently owned and/or managed by the City of Seattle. There are 1,128 PMA's, including many with current municipal uses including drainage facilities, fire stations, green space/natural areas, libraries, current city-owned P-Patches, parks and playgrounds, community centers, reservoirs, parking facilities, and wastewater facilities. For the purposes of this study, only PMA's with their current primary use classified as vacant, unused or excess right-of-way were considered. Also considered were public school properties, public parks, and publicly-owned rights-of-way along established multi-use paths, along pipelines, and under power lines.

While the reasons for including these categories of lands are generally self-evident, it is important to note a few things about the inventory of land along rights-of-way. Providing space for community gardening along rights-of-way offers the managing departments the opportunity to improve maintenance of the land while simultaneously reducing their own maintenance expenditures. For example, community gardeners can assist the managing agency in controlling the

spread of invasive species and weeds while also maintaining the aesthetics of the space and providing community amenity.

Some rights-of-way are set aside for transmission lines, and there are some health and safety concerns related to locating gardening sites under or very near them. One risk comes from the methods used by the utility company to manage weeds. If herbicides or pesticides are used, this may create a risk of contamination to the vegetables and fruits. According to Seattle City Light, eighty-five percent of the 5,000+ acres of rights of way, including 550 miles of transmission line corridors, maintained by the utility company are managed without pesticides. The use of herbicides is limited to the treatment of tree stumps. The company maintains that when they are used, pesticides are applied in a highly regulated, site-specific manner by trained crews (City of Seattle, 1999). Meanwhile, Seattle Public Utilities has almost completely eliminated its chemical use. Thus, it seems that this concern is already addressed here in Seattle, on property and should not prohibit gardens from being established.

Another risk stems from the proximity to electromagnetic fields. Results of studies completed by the World Health Organization (2008) have been inconclusive, but the EPA acknowledges that there may be risks associated with long-term personal proximity to a power line (2008). The International Agency for Research on Cancer (IARC) concluded that exposure by children to prolonged and relatively high levels of magnetic fields may increase the risk of leukemia (Belson M, Kingsley B, & Holmes A, 2007). However, the World Health Organization reports that "no adverse effects have been found on cattle grazing below power lines" and there are no apparent affects from standard transmission lines on low-lying crop" (2005). The literature to date seems to suggest that a few hours a week spent gardening near power lines would not constitute significant risk, compared to long-term exposure. However, researchers stress that more studies need to be completed. To date, no studies have been done to analyze fruits and vegetables grown under power lines. For the purposes of this inventory, sites near transmission line were included, but it will be important for program managers and policy makers to keep informed about relevant scientific research and findings and to make decisions about locating community gardens using the best available science.

As mentioned earlier, this report was inspired by two previous urban agriculture land inventories, the Diggable Lands Analysis prepared for the City of Portland and the Growing Space report prepared for Vancouver. However, there are differences among the three approaches (See Table 2). In building upon the methodologies established by these studies, every attempt was made to use the successful strategies as well as address their limitations and challenges. The limits of the two previous studies, as acknowledged in their own conclusions, included incomplete data sets and a lack of information about planned uses and future development plans for the properties. This analysis was able to address these limitations, due to a well-established and supportive relationship with the City of Seattle Department of Neighborhoods, as well as easy access to the City's comprehensive, well maintained and up-to-date GIS database. This allowed for a comprehensive review of vacant, excess and surplus lands managed or owned by all of the City's departments, including reasonable current information about their development plans. The City of Seattle updates their data sets regularly. The data set of PMA's used in this inventory was last updated in 2007, so there is a possibility that some new development plans are in place. This highlights the need for prompt action.

In addition to these differences, there were also some differences in the methodology used in this analysis. One major difference is that in addition to vacant and unused city properties, public school and park properties and land adjacent to rights-of way were also included in the inventory. This was done because there are relatively few vacant and suitable public-owned lots in Seattle. In addition, this inventory intends to be more comprehensive. Some of the characteristics used to evaluate the suitability of a parcel or property for urban agriculture were defined and measured differently in this inventory. For example, the report for Portland included only those parcels greater than 5,000 square feet, while the one for Vancouver include all those over 1,000 square feet. This inventory, however, evaluated those properties that were at least 2,000 square feet, based on criteria established by the City of Seattle Department of Neighborhoods.

Other differences in the way suitability characteristics were measured include slope and shade coverage. A less-detailed approach to slope was used in this report. While extremely steep slopes (of more than 40%) make the creation

of terraces necessary and thus raise the costs of construction, less extreme slopes may still be suitable for gardening and the true suitability would have to be evaluated on a more individual basis. As for shade coverage, those sites with full shade coverage were removed from the resulting inventory in this report, but were still included in the Vancouver inventory, as it was noted that such parcels may be used for the cultivation of mushrooms, berries or other shade-loving plants. The exact criterion and the way to evaluate or measure them should be re-evaluated upon initiation of any future suitability inventories, as circumstances associated with the policy environment, market, and economic, social, political end environmental trends may make different definitions of criteria more suitable.

Another major difference of this inventory was its focus only on community gardens. The inventories created for Portland and Vancouver attempted to identify lands suitable for various kinds of urban agriculture, including small-scale and large-scale for-profit agriculture, in addition to more traditional community gardens. Since this inventory was done in large part to assist the Department of Neighborhoods in identifying potential community garden sites, that is the sole focus of the report and no recommendations were made regarding using the land for any other kind of urban agriculture. However, the results may still serve as a guide for decision-makers, city officials and others who seek to identify lands that could work for other kinds of urban agriculture.

## Table 2: Comparison of Methodologies among Three Inventories

| | Seattle | Portland | Vancouver |
|---|---|---|---|
| **Client** | City of Seattle Department of Neighborhoods | City of Portland | Food Policy Team of the Social Planning Department |
| **Prepared by:** | Master's student | Group of master's students | Master's student |
| **Data set** | All city-owned properties, from the Washington State Geospatial Data Archive | Provided by the Bureaus of Environmental Services, Parks and Recreation, Transportation, and Water | Provided by the Municipal Department of Engineering Services and the federal Department of Public Works. Additional sites were identified in consultation with the Working Group and community groups. |
| **Information available regarding future development plans** | Comprehensive | Limited | Limited |
| **Properties considered** | • City-owned properties that are vacant, excess and unused<br>• Rights-of-way<br>• Public schools and parks | Individual parcels under the management of the Bureaus of Environmental Services, Parks and Recreation, Transportation,and Water. | Vacant public land, as identified by the Departments of Engineering Services and Public Works and various community groups. |
| **Minimum size considered** | 2,000 square feet | 5,000 square feet | .015 hectares (653 square feet) |
| **Maximum slope considered** | 40% | 10% | 10% |
| **Categories of urban agriculture considered** | Community gardens (P-Patches) | • Small-scale agriculture<br>• Large-scale agriculture<br>• Community gardens<br>• Impervious surface or poor soil | • Small-scale growing operations<br>• Large-scale growing operations<br>• Community gardens<br>• Impervious surface or poor soil |
| **Analysis** | Spatial, raster, and aerial photo | Spatial and aerial photo | Spatial and aerial photo |
| **Results: Lands identified as having potential** | 45 city-owned parcels with high potential, 122 public school properties, 139 parks, and 5 rights-of-way | 289 sites, 24 identified as greater potential, and 11 with priority | 77 potential parcels |

Author's analysis

# Results:

## Vacant, Excess and Unused Properties

The data set used in this process originates from the City of Seattle Property Management Area Shapefile which includes those properties owned and/or managed by the City of Seattle. In total, there are 1,128 properties totaling over 29,000 acres (Figure 3). These include properties with uses such as drainage facilities, parks and playgrounds, substations, pipelines, parking lots, cultural/entertainment facilities, fire stations, and green space/open areas. For the purposes of this part of the inventory, only those properties classified as vacant, unused or excess right-of-way were considered, as these may offer the city the most viable opportunities to implement urban agriculture quickly. Before any further prioritization, there were 173 such sites (Figure 4).

Other spaces, while not good candidates at this point in time, may be included in future inventories. For example, reservoirs were not included in this inventory, because at this point in time, the city's reservoirs are generally surrounded by chain link fences and berms, making them inaccessible. Security concerns prohibit residents close access to the reservoirs themselves, where most of the open space exists. However, Seattle Public Utilities has plans to replace its open reservoirs with underground structures in the coming years, providing a unique opportunity for the creation of new open space (Seattle Public Utilities, 2008). Cal Anderson in the dense neighborhood of Capitol Hill is a popular public park already completed on top of a reservoir. Meanwhile, construction is already underway on Jefferson Park, where an underground structure is being built to replace Beacon Reservoir (Seattle Parks and Recreation, 2007). The Seattle Parks and Recreation Department just approved the design for a new park on top of Myrtle Reservoir. Current plans are to replace four or more open reservoirs with underground structures by 2012, and these sites should be considered in future inventories as appropriate.

The 173 sites classified as vacant, excess, and unused considered in this inventory were then evaluated for their suitability for conversion into community gardening space. After consulting with Department of Neighborhoods staff, a list of criteria to determine the suitability of each site was established (See Table 3).

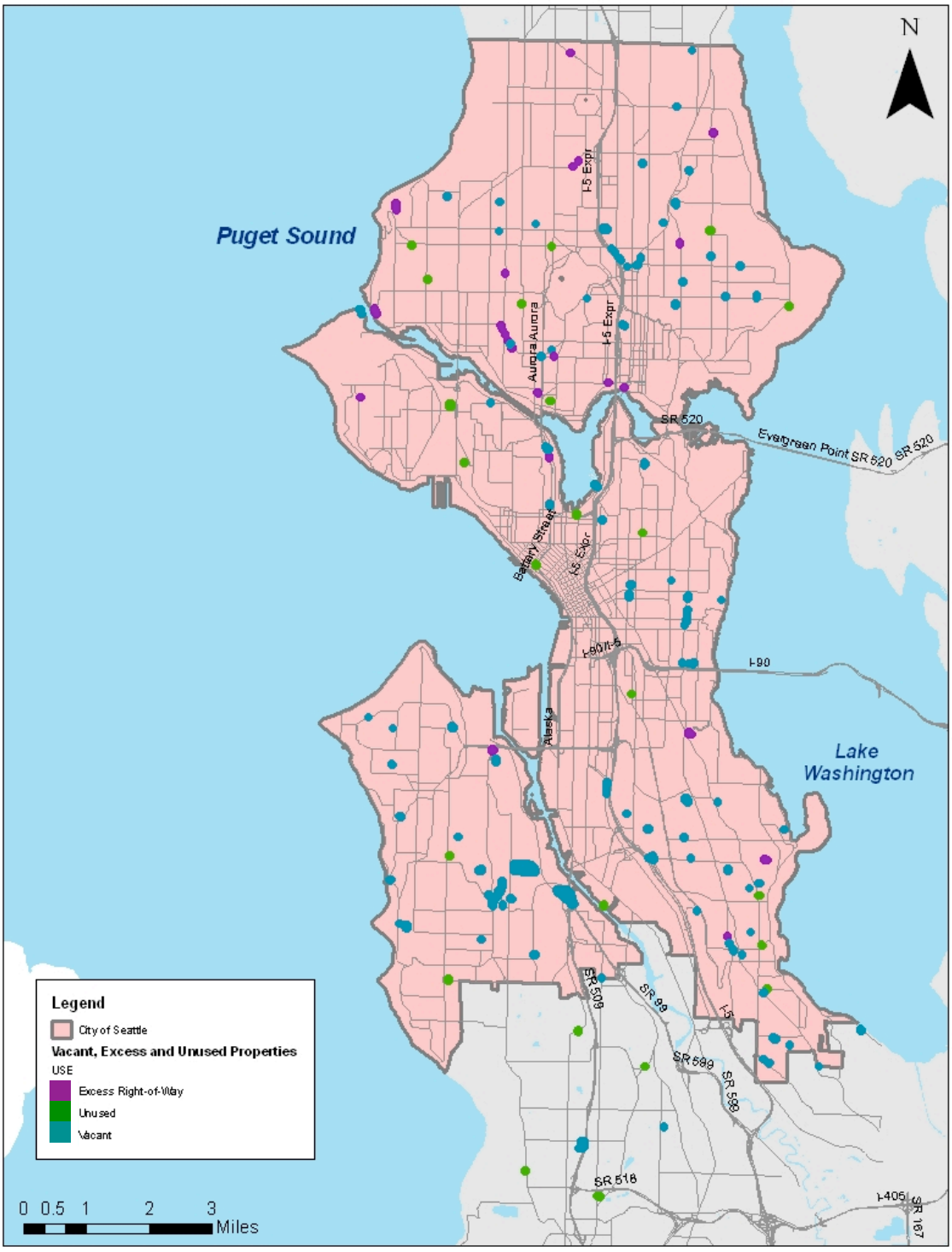
**Table 3: Criteria for Potential Community Garden Sites**

- city ownership with no firm development plans,
- a size of least 2000 square feet
- a slope of less than 40%
- available parking space (at least one on-site or adjacent parking space)
- no streams or wetlands on site
- minimal shade and building coverage

A site needed to meet all of the criteria to be considered for further consideration. Also identified were other informative characteristics. These include the amount of impervious surface, access to/from transit (whether it is within 0.25 miles of a bus stop), access by walking (whether it is within 50 feet of a sidewalk), distance from an existing P-Patch, proximity to a local public school, surrounding population density, presence of minority populations, and median annual household income. While these characteristics were measured and identified for each potential site, they were not used to eliminate sites from consideration. Rather, the information has been included in the


Washington State Geospatial Data Archive

**Figure 3: Properties Owned by the City of Seattle**




Washington State Geospatial Data Archive

**Figure 4: Vacant, Excess and Unused Public Properties**

charts in the Appendix and is meant to be used for future decision-making. Also considered was whether the sites were located in an identified Urban Center, Urban Hub, Urban Hub Village or Residential Hub Village. This last consideration stems from the City of Seattle Comprehensive Plan, which has as goals the concentration of growth and increased densities in those identified categories. Increased population and density would in turn justify greater numbers of community gardening space.

The suitability of the original 173 sites were first assessed, using GIS data analysis, according to their fulfillment of the suitability criteria, including their size, slope, environmental considerations, development plans and shade and building coverage. 102 sites were removed, leaving 71 sites that contained neither wetlands nor streams, were at least 2000 square feet, were relatively flat, and did not have development plans. Next, aerial photo analysis was used to further assess these 71 parcels according to their individual suitability. For each site, the amount of tree canopy and shade from nearby buildings, the presence of buildings, the amount of impervious surface, access by sidewalks, and the availability of parking was determined. In order to be identified as a suitable site, the site had to have less than 75% full shade coverage, less than 75% lot coverage by buildings, reasonable access, and a minimum one parking space. These numbers were established during discussion with Department of Neighborhood staff. Figure 5 illustrates the process of this aerial photo analysis for estimating shade coverage.  A similar process was followed to assess building coverage and amount of impervious surface.

Parcels that did not meet the criteria were eliminated. For example, those in the middle of tree-covered stretches were removed, as access to them would have been difficult. Meanwhile, parcels with full tree canopy coverage were also eliminated, as these sites would not be immediately suitable for typical urban agriculture. These sites may be useful for other kinds of localized resource production, such as mushroom, shade-loving ornamental plants, or harvesting. However, they were not considered in this suitability analysis since the City of Seattle Department of Neighborhoods is better prepared to invest in sites that are more easily transformed into more traditional community gardens. At some future point it may seem reasonable to include these parcels in a complete inventory of land

## Figure 5: Example of how shade coverage was estimated during aerial photo analysis

Ranked 1 for shade coverage,
0-25% coverage
Banner Way Parcels


Google Earth, 2008

Google Earth, 2008

Ranked 2 for shade coverage,
25-50% coverage


Google Earth, 2008

Ranked 3 for shade coverage,
50-75% coverage

* Yellow lines designate parcel boundaries for which aerial photo analysis was completed.

suitable for urban agriculture, and the decision to not include them in this version should be re-visited in future suitability analyses.

Since parcels were evaluated on a case-by-case basis, there at times were individual reasons for eliminating them related to their unsuitability. For example, several sites located directly under freeways or highways were removed from consideration. This is because recent studies have established a link between exposure to traffic-related pollutants, caused by living near busy roads, and a higher prevalence of childhood asthma (University of Southern California, 2006). However, a more thorough analysis of proximity to busy arterials could be included in a future inventory.

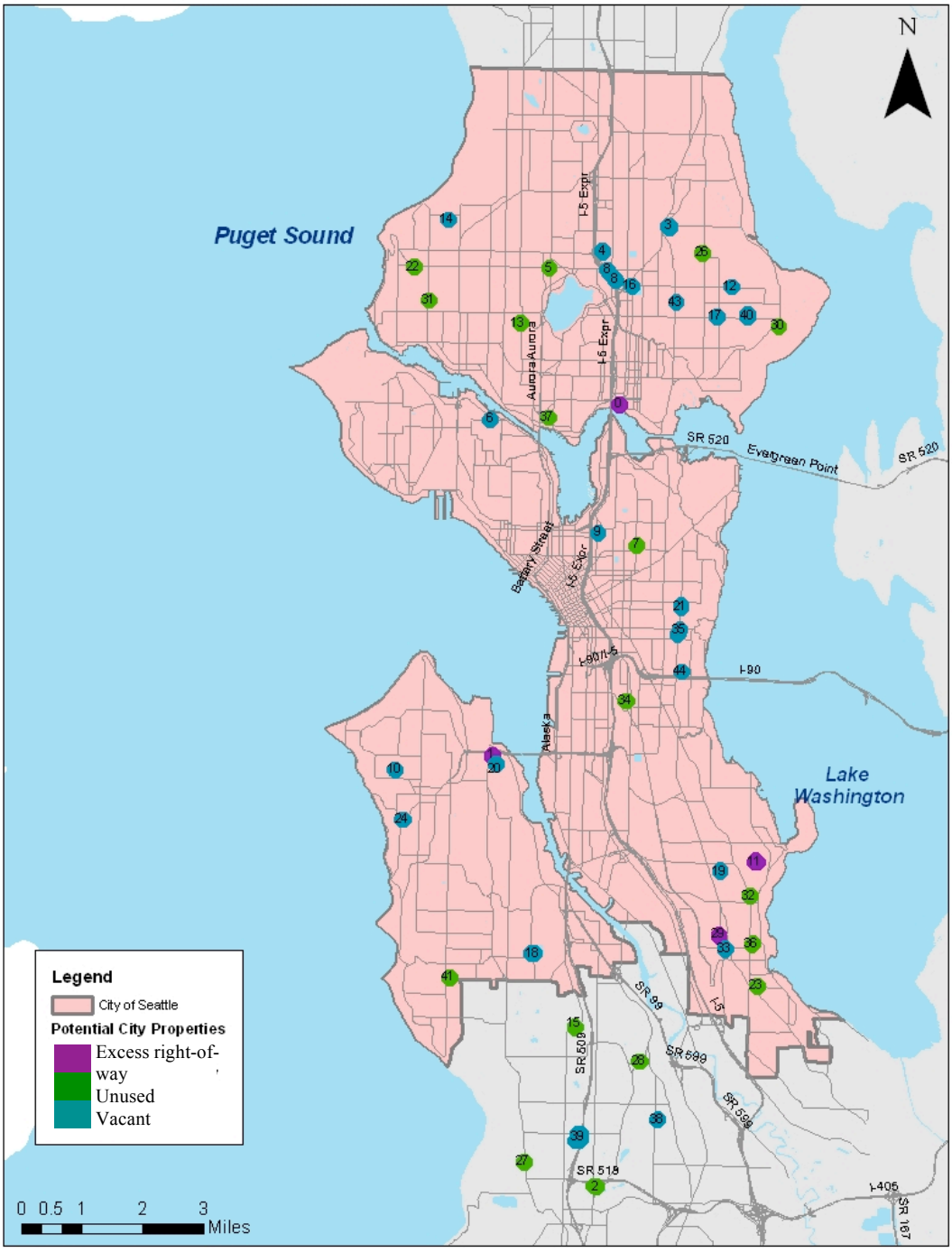
The above analysis left a total of 45 recommended sites (Tables 4-6 and Figures 7-8). Additional information about the sites that may be useful in future decision-making was also collected from aerial photo and GIS analysis, such as whether the site is located on a street with sidewalks, whether it is within .25 miles of a bus stop, whether the site is within one mile of an already existing P-Patch, and whether the site is within 0.25 miles of a public school (See Table A-1 in the Appendix). Also included is information about the Urban Center classification of each site and the population characteristics of the site's surroundings, as determined from census information. These final characteristics were not used to eliminate sites, but rather to provide additional information for future decision-making.

The final identified parcels ranged in size from 2,127 to over 200,000 square feet. In total, they encompass over 12 acres of land- half of the current P-Patch acreage. Their characteristics are summed in Table 4. Six of the recommended parcels, while owned by the City, are actually located outside of municipal boundaries. The decision was made to not remove the sites from the inventory, as the purpose was to identify all city-owned parcels. Furthermore, discussion of city annexation indicates that there is at least some potential that parts of the area to the south may someday belong to the city.

## Table 4: Summary of Characteristics of Potential Sites

| | |
|---|---|
| **Proximity to Existing P-Patch** | 25 are more than 0.5 miles away |
| **Sidewalks** | 40 sites are within 50 feet of a sidewalk |
| **Bus Access** | 44 sites are within 0.25 miles of a bus stop |
| **Building Coverage** | 30 have less than 10% building coverage, 7 have 10-25% coverage, and 8 have building coverage up to 50% |
| **Shade Coverage** | 7 have minimal shade coverage, 23 have between 25 and 50%, and 13 are covered by shade on up to three quarters of the site |
| **Impervious Surface** | 29 sites contain minimal impervious surface, 9 have between 25 and 50% shade coverage, 5 have 50-75%, and 2 contain almost full impervious surface coverage |
| **Urban Center Designation** | 2 are located in Urban Center Villages, 2 in Hub Urban Villages, 6 in Residential Urban Villages, and the remaining 33 are located in areas unclassified |
| **Department with Jurisdiction** | 12 are managed by Fleets and Facilities Divisions, 30 by Seattle City Light, and 3 by Seattle Department of Transportation |

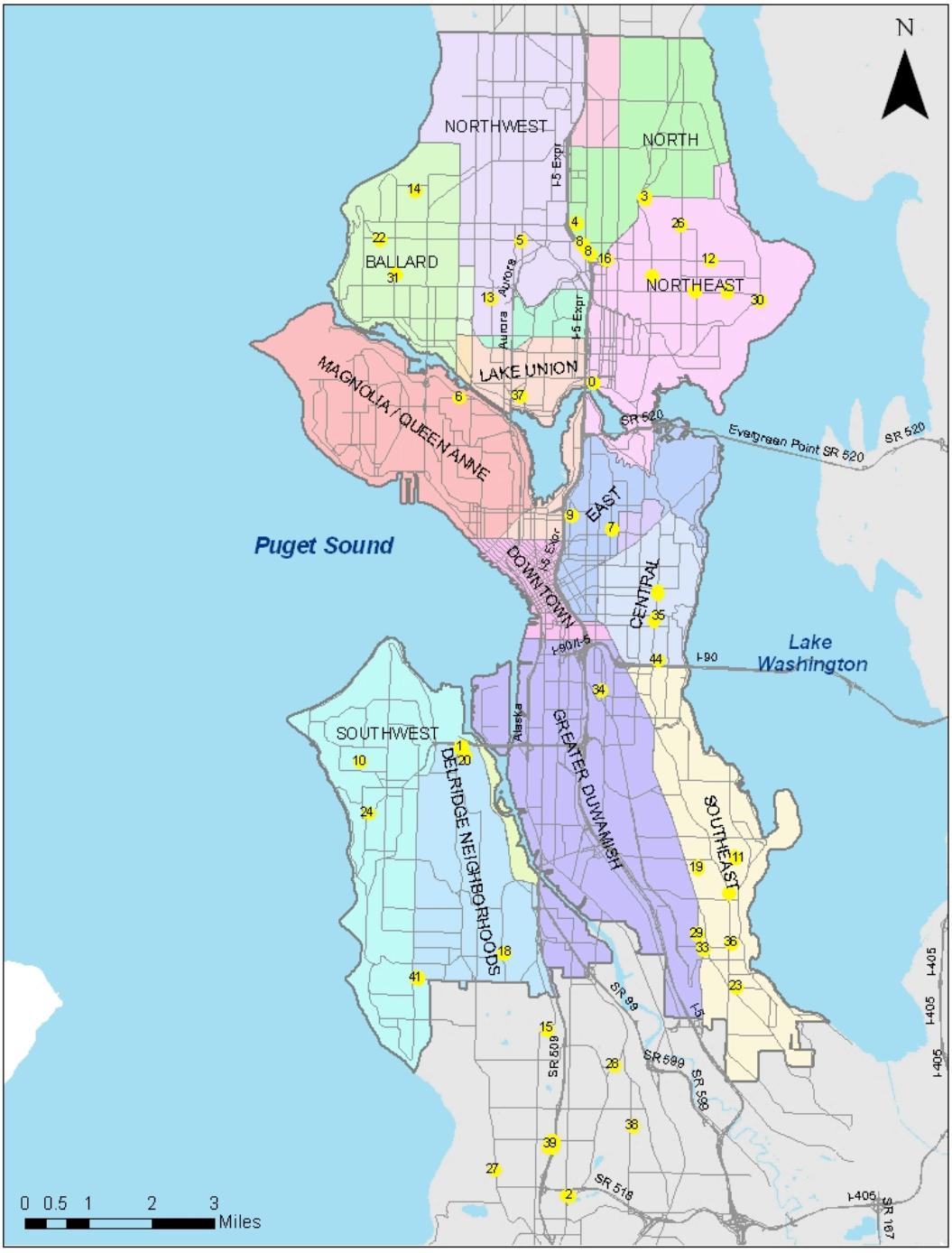
Author's analysis




* Numbers on map reference Map No. in Tables 5-6

Washington State Geospatial Data Archive and author's analysis

**Figure 7: Potential Community Garden Sites by their Current Use**




* Numbers on map reference Map No. in Tables 5-6

Washington State Geospatial Data Archive and author's analysis

**Figure 8: Potential Community Garden Sites by Neighborhood**

## Table 5: Potential City-Owned Parcels, Basic Information

| * Map No. | PMA No. | Name | Dep't with Jurisdiction ** | Current Use | Address | Area in Sq. Ft |
|---|---|---|---|---|---|---|
| 0 | 4077 | EXCESS R/W (W/ BLDNG) AT NE PACIFIC ST | SDOT | Excess ROW | NE 40TH ST & NE PACIFIC ST | 2,874 |
| 1 | 50 | EXCESS R/W AT 3696 DELRIDGE WY SW | SDOT | Excess ROW | 3696 DELRIDGE WY SW | 12,723 |
| 2 | 609 | SUNNYDALE SUBSTATION (FORMER) | SCL | Unused | 15002 8TH AV S | 12,268 |
| 3 | 663 | CHELSEA SUBSTATION (FORMER) | SCL | Vacant | 23RD AV NE & NE 95TH ST | 25,169 |
| 4 | 1573 | VACANT PMA | FFD | Vacant | 298 NE 85TH ST | 3,240 |
| 5 | 544 | GREEN LAKE SUBSTATION (FORMER) | SCL | Unused | 949 N 80TH ST | 5,928 |
| 6 | 4054 | UNKNOWN PMA 6TH W & W BERTONA | FFD | Vacant | 6TH AVE W & W BERTONA ST | 2,832 |
| 7 | 634 | CAPITOL SUBSTATION (FORMER) | SCL | Unused | 324 15TH AV E | 4,955 |
| 8 | 4253 | BANNER WAY REMAINDER PROPERTY | FFD | Vacant | 4TH AVE NE & BANNER WY NE | 9,038 |
| 9 | 639 | MERCER SUBSTATION (FORMER) | SCL | Vacant | 413 E MERCER ST | 2,694 |
| 10 | 576 | DAKOTA SUBSTATION (FORMER) | SCL | Vacant | 4918 SW DAKOTA ST | 9,435 |
| 11 | 1638 | ALLEY AND R/W PMA (NUMBER 1638) | FFD | Excess ROW | 6298 51ST PL S | 12,985 |
| 12 | 3206 | VIEW RIDGE SUBSTATION (FORMER) | SCL | Vacant | 7502 44TH AV NE | 5,998 |
| 13 | 551 | PHINNEY SUBSTATION (FORMER) | SCL | Unused | 6109 PHINNEY AV N | 5,999 |
| 14 | 676 | NORTH BEACH SUBSTATION (FORMER) | SCL | Vacant | 9498 19TH AV NW | 6,585 |
| 15 | 536 | BEVERLY SUBSTATION (FORMER) | SCL | Unused | 10772 MYERS WY S | 6,121 |
| 16 | 4276 | UNKNOWN PMA (NUMBER 4276) | FFD | Vacant | 1199 NE 75TH ST | 4,607 |
| 17 | 3207 | HAWTHORNE SUBSTATION (FORMER) | SCL | Vacant | 3904 NE 65TH ST | 10,853 |
| 18 | 3944 | WHITE CENTER SUBSTATION | SCL | Vacant | 8822 9TH AV SW | 13,558 |
| 19 | 1643 | TEARDROP PARCELS @ S 42ND & MORGAN | FFD | Vacant | S 42nd & Morgan | 2,202 |
| 20 | 572 | ANDOVER SUBSTATION (FORMER) | SCL | Vacant | 2100 SW ANDOVER ST | 7,944 |
| 21 | 4324 | 596 MARTIN LUTHER KING JR WY | FFD | Vacant | 596 MLK JR WY | 2,211 |
| 22 | 519 | LOYAL HEIGHTS SUBSTATION (FORMER) | SCL | Unused | 7750 28TH AV NW | 8,151 |
| 23 | 3945 | ROXBURY SUBSTATION (FORMER) | SCL | Unused | 52 AV S & S ROXBURY ST | 11,350 |
| 24 | 621 | DAWSON SUBSTATION (FORMER) | SCL | Vacant | 5211 47TH AV SW | 5,672 |

| * Map No. | PMA No. | Name | Department with Jurisdiction ** | Current Use | Address | Area in Square Feet |
|---|---|---|---|---|---|---|
| **25** | 1574 | VACANT PMA | FFD | Vacant | 298 NE 85TH ST | 2,670 |
| **26** | 654 | MORNINGSIDE SUBSTATION (FORMER) | SCL | Unused | 35TH AV NE & NE 86TH ST | 13,711 |
| **27** | 598 | AMBAUM SUBSTATION (FORMER) | SCL | Unused | 1006 SW 144TH ST | 6,571 |
| **28** | 555 | BOULEVARD PARK SUBSTATION (FORMER) | SCL | Unused | 11625 DES MOINES MEMORIAL DR | 7,793 |
| **29** | 3659 | EXCESS R/W AT 8398 MLK JR WY S | SDOT | Excess ROW | 8398 MLK JR WY S | 2,553 |
| **30** | 565 | MORNINGSIDE SUBSTATION | SCL | Unused | 5755 NE 63RD ST | 8,101 |
| **31** | 3893 | BALLARD SUBSTATION (FORMER) | SCL | Unused | 6730 24TH AV NW | 5,139 |
| **32** | 627 | BRIGHTON SUBSTATION (FORMER) | SCL | Unused | 7100 RAINIER AV S | 9,687 |
| **33** | 4318 | VACANT PMA @ MLK JR WY S & S CLOVERDALE ST | FFD | Vacant | MLK JR WY S & S CLOVERDALE ST | 10,784 |
| **34** | 554 | HILL SUBSTATION (FORMER) | SCL | Unused | 2107 14TH AV S | 6,004 |
| **35** | 4331 | VACANT PMA @ MLK JR WY S & E YESLER WY | FFD | Vacant | 1XX MARTIN LUTHER KING JR WY S | 2,947 |
| **36** | 675 | WABASH SUBSTATION (FORMER) | SCL | Unused | 5122 S CLOVERDALE ST | 10,032 |
| **37** | 600 | FREMONT SUBSTATION (FORMER) | SCL | Unused | 3622 ALBION PL N | 6,407 |
| **38** | 579 | GLENDALE SUBSTATION (FORMER) | SCL | Vacant | 2423 S 132ND ST | 9,058 |
| **39** | 581 | HIGHLINE SUBSTATION (FORMER) | SCL | Vacant | 399 S 136TH ST | 212,501 |
| **40** | 528 | ALLEY IN BLOCK 48, STATE PLAT 3-25-4 | SCL | Vacant | NE 65TH ST B/W 50TH AV NE & 49TH | 3,843 |
| **41** | 677 | ARBOR SUBSTATION (FORMER) | SCL | Unused | 9450 34TH AV SW | 13,401 |
| **42** | 4335 | VACANT PMA @ MLK JR WY S & S MAIN ST NW CORNER | FFD | Vacant | 299 MLK JR WY S | 2,127 |
| **43** | 3898 | WEDGEWOOD SUBSTATION (FORMER) | SCL | Vacant | 2507 NE 70TH ST | 3,140 |
| **44** | 1600 | VACANT PMA 1600 | FFD | Excess | 1399 29th Ave S | 2,002 |

Washington State Geospatial Data Archive and author's analysis

** *SDOT : Seattle Department of Transportation*
*DON: Department of Neighborhoods*
*FFD: Fleets and Facilities Department*
*SCL: Seattle City Light*

## Table 6: Detailed Suitability Information about Potential City-owned Parcels

| Map No.* | PMA No. | Shade Cover ** | Building Cover *** | Imperv. Surface **** | Steep Slope |
|---|---|---|---|---|---|
| 0 | 4077 | 3 | 1 | 3 | No |
| 1 | 50 | 2 | 1 | 1 | No |
| 2 | 609 | 3 | 2 | 2 | No |
| 3 | 663 | 3 | 1 | 1 | No |
| 4 | 1573 | 2 | 1 | 1 | no |
| 5 | 544 | 2 | 1 | 1 | no |
| 6 | 4054 | 2 | 1 | 1 | no |
| 7 | 634 | 2 | 1 | 1 | no |
| 8 | 4253 | 3 | 1 | 1 | no |
| 9 | 639 | 2 | 3 | 4 | no |
| 10 | 576 | 3 | 3 | 1 | no |
| 11 | 1638 | 2 | 1 | 1 | no |
| 12 | 3206 | 2 | 2 | 1 | no |
| 13 | 551 | 2 | 1 | 1 | no |
| 14 | 676 | 2 | 1 | 1 | no |
| 15 | 536 | 3 | 2 | 3 | no |
| 16 | 4276 | 1 | 1 | 1 | no |
| 17 | 3207 | 1 | 1 | 1 | no |
| 18 | 3944 | 2 | 3 | 2 | no |
| 19 | 1643 | 2 | 1 | 1 | no |
| 20 | 572 | 3 | 2 | 1 | no |
| 21 | 4324 | 3 | 1 | 1 | no |
| 22 | 519 | 2 | 3 | 1 | no |
| 23 | 3945 | 2 | 2 | 2 | no |
| 24 | 621 | 2 | 3 | 1 | no |
| 25 | 1574 | 2 | 1 | 3 | no |
| 26 | 654 | 1 | 1 | 2 | no |

| Map No.* | PMA No. | Shade Cover ** | Building Cover *** | Imperv. Surface **** | Steep Slope |
|---|---|---|---|---|---|
| 27 | 598 | 3 | 1 | 2 | no |
| 28 | 555 | 3 | 1 | 2 | no |
| 29 | 3659 | 2 | 1 | 1 | no |
| 30 | 565 | 2 | 1 | 1 | no |
| 31 | 3893 | 2 | 3 | 3 | no |
| 32 | 627 | 2 | 2 | 3 | no |
| 33 | 4318 | 3 | 1 | 1 | no |
| 34 | 554 | 1 | 2 | 2 | no |
| 35 | 4331 | 3 | 1 | 1 | no |
| 36 | 675 | 3 | 1 | 1 | no |
| 37 | 600 | 2 | 1 | 1 | no |
| 38 | 579 | 3 | 3 | 1 | no |
| 39 | 581 | 3 | 1 | 1 | no |
| 40 | 528 | 1 | 1 | 4 | no |
| 41 | 677 | 2 | 1 | 2 | no |
| 42 | 4335 | 1 | 1 | 1 | no |
| 43 | 3898 | 2 | 1 | 1 | no |
| 44 | 1600 | 1 | 1 | 1 | no |

Washington State Geospatial Data Archive and author's analysis

** Refers to Figures 6 and 7*

*** Shade coverage of sites by vegetation or buildings*

*1: 0-25% shade coverage*
*2: 25-50% shade coverage*
*3: 50-75% shade coverage*

**** Building coverage*

*1: 0-10%  2: 10-25%  3: 25-50%*

***** Impervious Surface*

*1: 0-25%  2: 25-50%*
*3: 50-75%  4: 75-100%*

The potential sites are located throughout the city of Seattle, but are overwhelmingly located in less dense neighborhoods of less than 10 dwelling units per acre (Table A-2 in the Appendix). There are no identified parcels in downtown, and only four are located in areas designated as either Urban Center Villages, Hub Urban Villages or Residential Urban Villages. Several city-owned parcels located outside of the city boundaries were kept in the final analysis, in order to identify all existing publicly-owned properties with potential for community gardening. Whether the city of Seattle chooses to restrict its efforts to expand the program within city limits will be a matter of future policy and decision-making.

Of the identified 45 parcels, 12 are managed by the Fleets and Facilities Divisions, 30 by Seattle City Light, and 3 by the Seattle Department of Transportation. The political will and ability of these particular Departments to establish P-Patch sites is a topic that merits further investigation. Both the Fleets and Facilities Division and Seattle City Light currently have jurisdiction over the land of one and five P-Patches respectively, so the precedence for this kind of collaboration is already established. For all departments, turning the land into community gardens has potential costs, particularly related to construction, security, and training of staff, as well as benefits, including enhanced community exposure and reduced maintenance costs.

Additional population information was gathered to assist in final decision-making. Included in Table A-2 and Figures A-1 and A-2 in the Appendix are some population characteristics of the areas surrounding the recommended sites, determined from census data at the census block level. It should be noted that 12 of the sites are in areas with a minority percentage of 50% or more. 20 of the sites are located in areas where the median annual household income is less than $45,000. These sites may provide ways for the city to address its desire to better serve minority and low-income populations. These sites may help address a discrepancy in the number of P-Patch plots among census tracts with differing income levels, as noted in the Sound Food Report (2006).

Many of the sites are not, at first glance, obviously suitable for gardening. Some contain buildings, some have a fair amount of shade, and others have a lot of impervious surface. However, given increasing development and the demand and cost for land in the city, it may be necessary to consider the gardening

potential on all public-owned land. On some parcels, only part of the land may receive enough sun to be planted with typical garden beds, while the remaining land may be better-suited for other creative uses, such as the cultivation of mushrooms, shade-loving or ornamental plants or native habitat restoration. Meanwhile, technologies like trellises and vertical gardening may make those parcels with high building coverage more productive.

Another important point related to the suitability of the parcels is related to their previous use. 29 of the parcels identified in this inventory are former electric substations owned by Seattle City Light. Their previous use indicates a possibility of soil contamination and a need for a professional soil analysis. If the soil does prove contaminated, this might not automatically preclude the sites from being potential community gardening sites, as clean dirt can be brought in to create raised beds. There is precedent for the re-use of these sites in Seattle, as in the case of the former California Substation, which is in the process of being developed into Dakota Place Park (Seattle Parks and Recreation, 2007). The Pro Parks Levy of 2000 provided funding for the acquisition and development of the substation building and surrounding land, as well as an environmental cleanup. The remaining 29 unused substations provide similar open space opportunities.

# Site Snapshots

Four of the forty-five final identified parcels are described in detail. These snapshots provide an idea of the kind of analysis undertaken as well as the various types of parcels identified as suitable for community gardening. The four parcels were selected due to their location in different areas of Seattle and the strong potential they exhibit for community gardening.

**Parcel 551**
**Phinney Substation (Former)**
6109 Phinney Avenue North

- Department with Jurisdiction: Seattle City Light
- Current Use: Unused
- Size: 5,999 square feet
- Parking: Yes
- Neighborhood: Phinney Ridge, single-family residential and commercial/mixed use
- Proximity to P-Patch: Within 0.5 miles
- Proximity to Public School:
- Access: Sidewalks and Bus

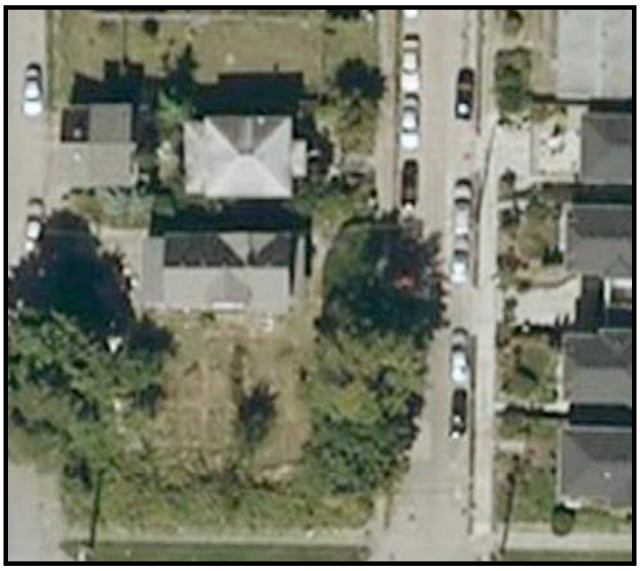
Google Earth, 2008

Google Earth, 2008

**Parcel 554**
**Hill Substation (Former)**
2107 14th Avenue S

- Department with Jurisdiction: Seattle City Light
- Current Use: Unused
- Size: 6004 square feet
- Parking: Yes
- Neighborhood: Duwamish Valley, mostly single-family residential
  Proximity to P-Patch: within 0.5 miles
- Proximity to Public School: within 0.25 miles
- Access: Sidewalks and Bus

**Parcel 1600**
**Vacant PMA (Number 1600)**
1399 29th Avenue S

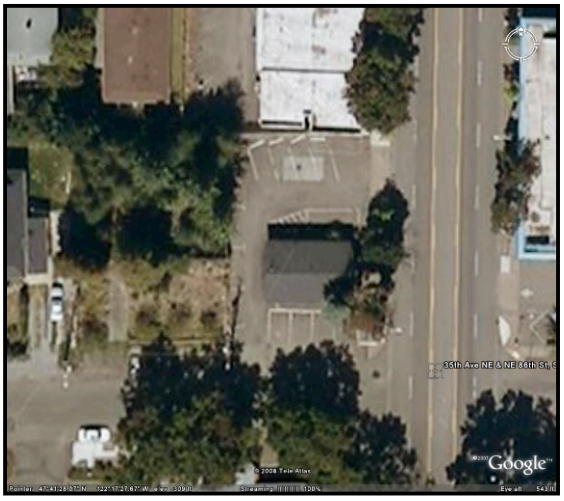


- Department with Jurisdiction: Fleets and Facilities Department
- Current Use: Unused
- Size: 2,002 square feet
- Parking: Yes
- Neighborhood: South Seattle, mostly single-family residential
  Proximity to P-Patch: greater than 0.5 miles
- Proximity to Public School: within 0.25 miles
- Access: Sidewalks and Bus

Google Earth, 2008

**Parcel 654**
**Morningside Substation (Former)**
35th Avenue NE & NE 86th ST

- Department with Jurisdiction: Seattle City Light
- Current Use: Unused
- Size: 13,711 square feet
- Parking: Yes
- Neighborhood: Northeast, mixed commercial and single-family residential
  Proximity to P-Patch: greater than 0.5 miles
- Proximity to Public School: within 0.25 miles
- Access: Sidewalks and Bus




Google Earth, 2008

# Results:

## Rights-of-Way along Multi-Use Paths, Power Lines, and Water Lines

Another opportunity for urban agriculture in Seattle is on land dedicated as right-of-way for multi-use trails, water lines, and power lines. Examples of successful community gardens located in these rights-of-way already exist in Seattle, such as the Snoqualmie, Ferdinand and Thistle P-Patches, all located along the Chief Sealth multi-use path right-of-way.

The different rights-of-way that were assessed are those included in the Washington State Geospatial Data Archive as rights-of-way in the City of Seattle. They include the rights-of-way along the Chief Sealth, Burke Gilman, Elliott Bay, South Canal, Alki, I-90, and Central multi-use paths, the Pacific Northwest Company transmission line (PNT), and the West Seattle and Cedar River pipelines. They were evaluated using aerial and birds-eye view photo analysis. As in the methodology used to evaluate vacant and excess public parcels, characteristics that were considered include size of available land, slope, sun exposure, shade coverage and access. Because the rights-of-way are not site-specific and in some cases cover stretches of property several miles along, the exact same methodology could not be used. Thus, this evaluation was intended to identify those rights-of-way that have at least some stretches of over 2000 square feet that meet the required characteristics of suitability. To determine the ideal locations along these rights-of-way for community gardens would require further analysis. The rights-of-way determined to have potential for gardening include those along the Chief Sealth Trail, the Burke-Gilman Trial, the Duwamish Trail, the Elliott bay Bike Trail and the PNT Transmission Line.

### Chief Sealth Trail

The Chief Sealth right-of-way runs along the Seattle City Light utilities corridor in Southeast Seattle. It is 5.7 miles long and varies from approximately 140 to 180 feet in width in most areas (Gruen, 2007). The paved trail is 14 feet across, and is fragmented by various road crossings. Much of the area of the right-of-way is open grass space. Three community gardens already exist along the trail. The remaining potential amounts to over 50 acres, although some of

this land has a slope of greater than 40% and would only be able to be gardened if terraces were built.

Figure 9: View of open grass space on Chief Sealth trail. (Gruen, 2007)

Figure 10: View of open grass space on Chief Sealth trail. (Gruen, 2007)

**Burke-Gilman Trail**

The Burke-Gilman multi-use trail is an 18 mile trail that runs from Shilshole Bay in Ballard to the City of Bothell. Of the length,12.5 miles of the paved trail are managed by the City of Seattle, including the 7.2 miles of the trail going westward from the University of Washington campus. That section is managed by the Parks Department according to the City of Seattle Vegetation Management Plan, several of the five goals regarding vegetation along the path could be met through urban agriculture. In particular, community gardens could help meet Goal A, "Insure the health and longevity of valuable existing

vegetation" and C, "Maintain trail vegetation while conserving both labor and resources" (City of Seattle, 1999a, 8). Currently, invasive species such as ivy and blackberry dominate much of the understory along the trail. The establishment of garden plots, tended by community members, could provide a cost and labor-effective way to reduce manage some of the invasive species infiltration.

There are some environmentally critical areas along the Burke-Gilman Trail where garden sites would not be able to be established, including where there are slopes of 40% or greater especially in the northern half, potential landslide areas located along the section of the trail north of NE 70th Street to NE 145th Street, with the exception of the stretch from NE 93rd Street to NE 107th Street, and the stream corridors that cross the trail east of NE 40th Street (Yesler Creek), southeast of NE 92nd Street (Maple Creek), and west of Sandpoint Way (Thornton Creek).

However, there still remains significant opportunity for the establishment of P-Patches or other urban garden initiatives. The stretch between the University of Washington Campus and Highway 99 may offer the most potential. It is bordered by relatively flat open grass space, of a width up to 30 feet on each side of the path. The open space has already attracted at least one informal gardener, who established several beds at an attractive spot just west of where Interstate-5 passes above the trail (Figure 8). Other potential spots include along the ship canal inFremont and the less steep stretches north of the University of Washington from NE 93rd Street to NE 107th Street.

**Duwamish Trail**

The Duwamish trail is a five mile path that roughly follows the Duwamish River through south Seattle. There is opportunity for urban agriculture along much of the trail. On the right-of-way along about three miles of the trail, there is flat open grass space. While there are trees planted on most of this stretch, the trees are small and without full canopies. Additionally, much of this path has south and west-facing exposure, meaning there is adequate exposure to sunlight. Much of this space could provide new opportunities for community gardens.

**Elliott Bay Bike Trail**

Currently zoning ordinances prohibit the implementation of agriculture along the waterfront. However, if this ordinance was to be modified, or an exception made in this case, the land alongside the Elliott Bay Bike trail could provide much opportunity for additional city garden space. From downtown Seattle, the trial goes 1.25 miles north along the Eliot Bay waterfront and through Myrtle Edwards park. By the railroad tracks west of Interbay golf course, the trail meets up with the Interbay trail. The majority of the 4.8 acres of Myrtle Edwards park is composed of relatively flat and open grassy space and provides opportunity for conversion to community gardens.

**Pacific Northwest Company Transmission Line**

The PNT transmission line right-of-way is owned by Seattle City light and used as an electrical transmission corridor. The right-of-way extends from around N. 80th Street up to Shoreline, where it is encompassed in the Interurban Bicycle trail. Throughout the right-of-way line in north Seattle, there is some opportunity to include community gardening space. The largest patches of open space exist north of 100th St. In fact, Evanston P-Patch already exists at 101st and Evanston Avenue. Along the two miles from that P-Patch north to Shoreline, there is between twenty and fifty feet of open space, currently consisting only of mowed grass, associated with the right-of-way.

A number of other publicly-owned rights-of-way were also considered in this study. These included the Cedar River pipeline, West Seattle pipeline, I-90 bike trail Alki trail and the Interbay bike trail. Aerial photo analysis of these, however, did not reveal significant amounts of unused vacant land that could be easily converted to community gardening space. For this reason, they are not recommended in this inventory.

# Results:

## Public Schools

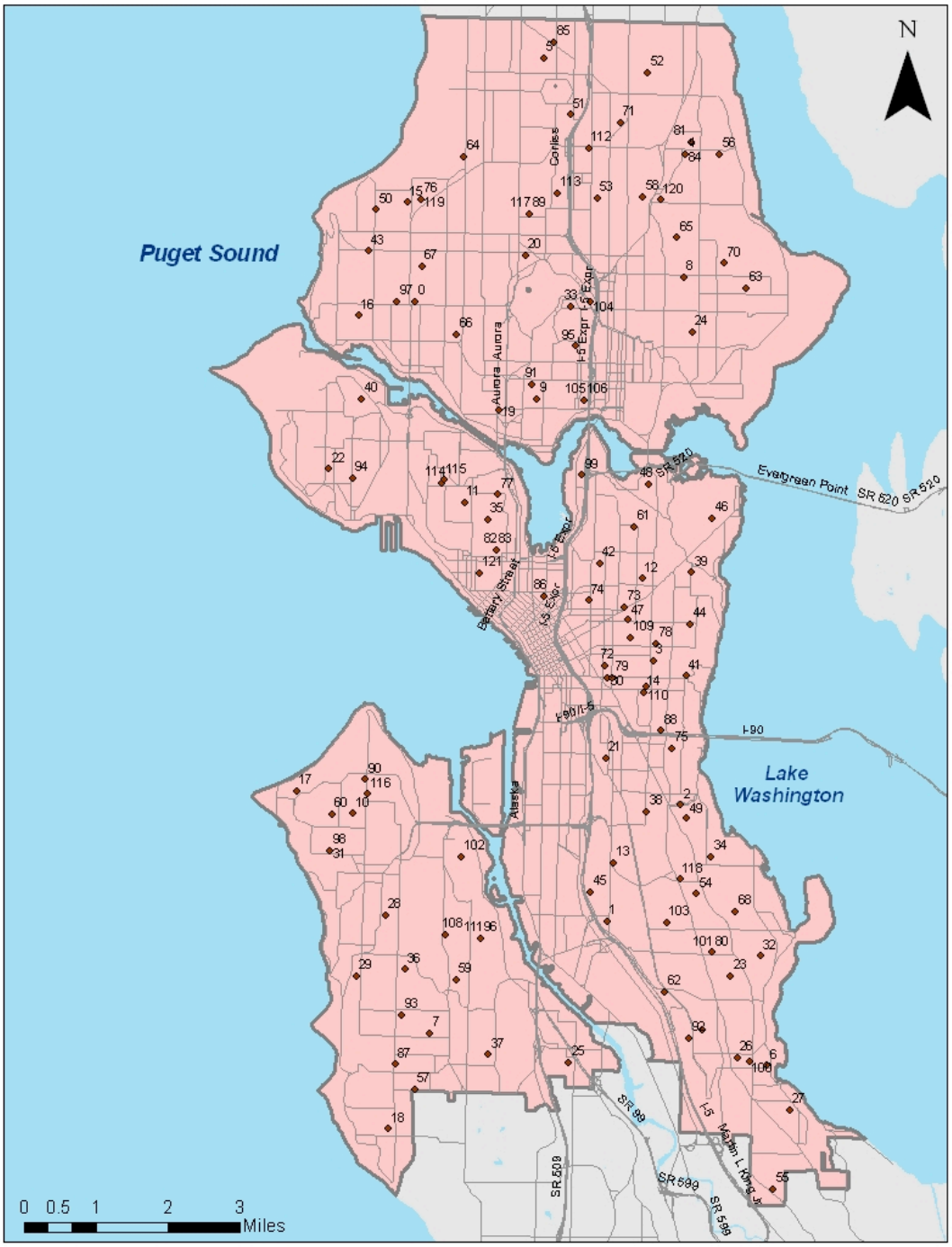
There is currently one P-Patch located on public school property at Orca Elementary. Meanwhile, other schools such as Laurelhurst Elementary School have created their own gardens for educational purposes. Opportunity may exist to develop more P-Patches on school properties, despite the different managing agencies. The successful coexistence of P-Patches on public park property, which is managed by the Department of Parks and Recreation, suggests that a similar partnership between the Department of Neighborhoods and the School District is possible. Considering the relatively untapped potential to connect urban students and their families with the source of their food, as well as the large amount of open space associated with school property, the idea is worth further exploration. Community gardens could bring many benefits to schools, including a source of hands-on education for students, fresh produce to supplement snacks, greater parental and community involvement, beautification, and reduced maintenance costs.

Currently there are 159 Seattle public school properties, although not all of them function as typical schools. Many of these schools are located on properties where there is excess land that could function as space for gardening. In many cases, there is excess open grass space, while on other schools without such excess grass space, there exists the possibility of putting planter beds on top of paved playing surface or parking lot spaces. Also, many of Seattle's public schools have large expanses of flat roofs. Considering the growing activity related to rooftop gardening, these roofs, if modified with safety measures, represent potential for including more gardening space on public school property.

The school properties were analyzed using a similar methodology to the one used to assess vacant and under-utilized public properties. Each property was assessed through an aerial photo analysis. Three distinct components were considered: existing under-used pervious surface, existing impervious surface, and the suitability of the roof surface. It was noted if the school property consisted of some under-used impervious surface, or grass space not currently set aside for ballfields or play areas. In order to be considered, the school had to have at least 2,000 square feet of underused and nonshaded grass or open space, and

it was also noted if there was more than 4,000 square feet. Excess existing impervious surface, meaning paved play surface and parking space, was also noted, as this could provide space for planter beds and boxes. Finally, whether or not the roof of the school building is flat was also recorded, to identify potential for rooftop gardening.

The original dataset consisted of 159 schools. Those schools with no evidently usable pervious or impervious surface were eliminated, leaving a total of 122 public school properties that at least 2,000 square feet of some kind of open surface that could conceivably turned into garden sites (Figure 8 and Table 4). It is also noted if these school buildings have flat roofs. These properties with potential gardening space are dispersed throughout Seattle with the exception of downtown, where only one school was noted, and the Duwamish valley, where no school was noted. These school properties may provide a way to create community gardens, and particularly gardens geared towards education, in neighborhoods that do not have other vacant public land. Meanwhile, the schoolchildren and their families may be interested in being the primary gardeners.



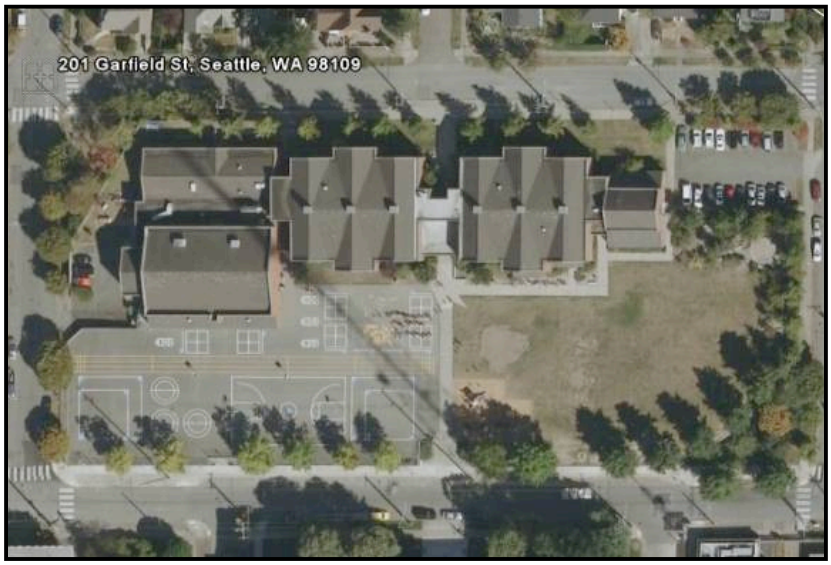

* Numbers on map reference Map Numbers in Table A-3

Washington State Geospatial Data Archive and author's analysis

Figure 11: Public Schools with Potential Community Garden Space

# Public School Snapshots

Two of the identified 122 public schools are shown below. These snapshots provide an idea of the kind of analysis undertaken as well as the various criteria that was considered in identifying a public school property as being suitable for community gardening. These two public schools were selected due to their location in different areas of Seattle and the strong potential they exhibit for community gardening.




**Hay Elementary**

201 Garfield St

- Available pervious (open grass) and impervious surface (play surface)
- No flat roof
- Parking lot

Google Earth, 2008

**Gatzert Elementary**

1301 E. Yesler Way

- Available pervious (open grass) and impervious surface (play surface)
- No flat roof
- Parking lot

Google Earth, 2008

# Results:

## Public Parks

Currently, twenty P-Patches already co-exist on Seattle park property. Many of these P-Patches became fixtures of these parks as a result of an intensive parks planning process that has occurred in part as a result of the Pro-Parks Levy of 2000. The Pro Parks Levy of $198.2 million was used to fund more than 100 projects all over the city, including the implementation of park and open space priorities from neighborhood plans. These priorities, developed with extensive public and community participation, included the creation of a number of P-Patches. The successful co-existence of community garden plots on public park land suggests that there is opportunity for the creation of additional garden space. Parks seem like an ideal place to locate community gardens. Community gardens serve a different resident population than does more typical park space. Meanwhile, the volunteer work of the gardeners may even serve as a low-cost maintenance strategy for the city. Finally, community gardens provide a way for the Seattle Parks and Recreation Department to meet some of its goals related to smart growth and conservation (Seattle Parks and Recreation, 2008).

In the original Property Management Area dataset, there were 312 identified parks, playgrounds, and viewpoints. Each of these were assessed, again, by aerial photo analysis, according to a methodology similar to that used in the previous categories. For each park, it was noted if there was some unused, nonshaded open space. Space considered as "unused" was that which did not appear developed for a particular use such as for baseball fields, play areas or manicured landscaping. For this category, nonshaded space is space that has no shading from nearby buildings or tree coverage. Parks that did not have at least 2,000 square feet of such space were eliminated from further consideration. Meanwhile, parks that already house an established P-Patch were not considered in this inventory, nor were parks that were known to be under major construction, such as Lake Union Park in South Lake Union. The results include 99 parks with at least 2,000 square feet of space and another 40 parks that have more than one acre of underused and nonshaded land (Figure 9 and Table 5). These parks are located throughout Seattle. As in the case of public schools, two

areas of the city with relatively fewer opportunities for gardening in parks are downtown and the Duwamish Valley.

# Public Park Snapshots

Three of the identified 139 public parks are shown below. These snapshots provide an idea of the kind of analysis undertaken as well as the various criteria that was considered in identifying a public park property as being suitable for community gardening. These three public parks were selected due to their location in different areas of Seattle, their physical diversity, and the strong potential they exhibit for community gardening.


Google Earth, 2008

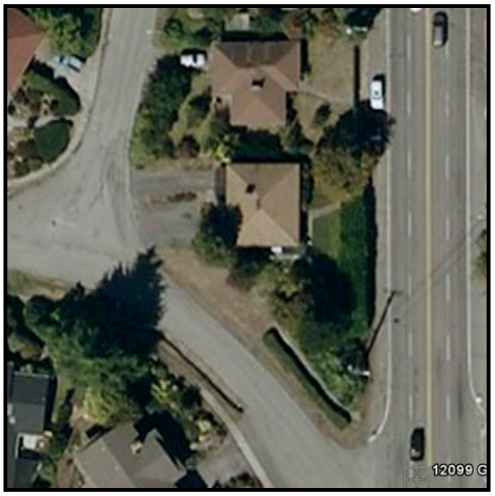
**Martha Washington Park**

Greater than 1 acre of open and unused space

**Sam Smith Park**

Greater than 1 acre of open and unused space

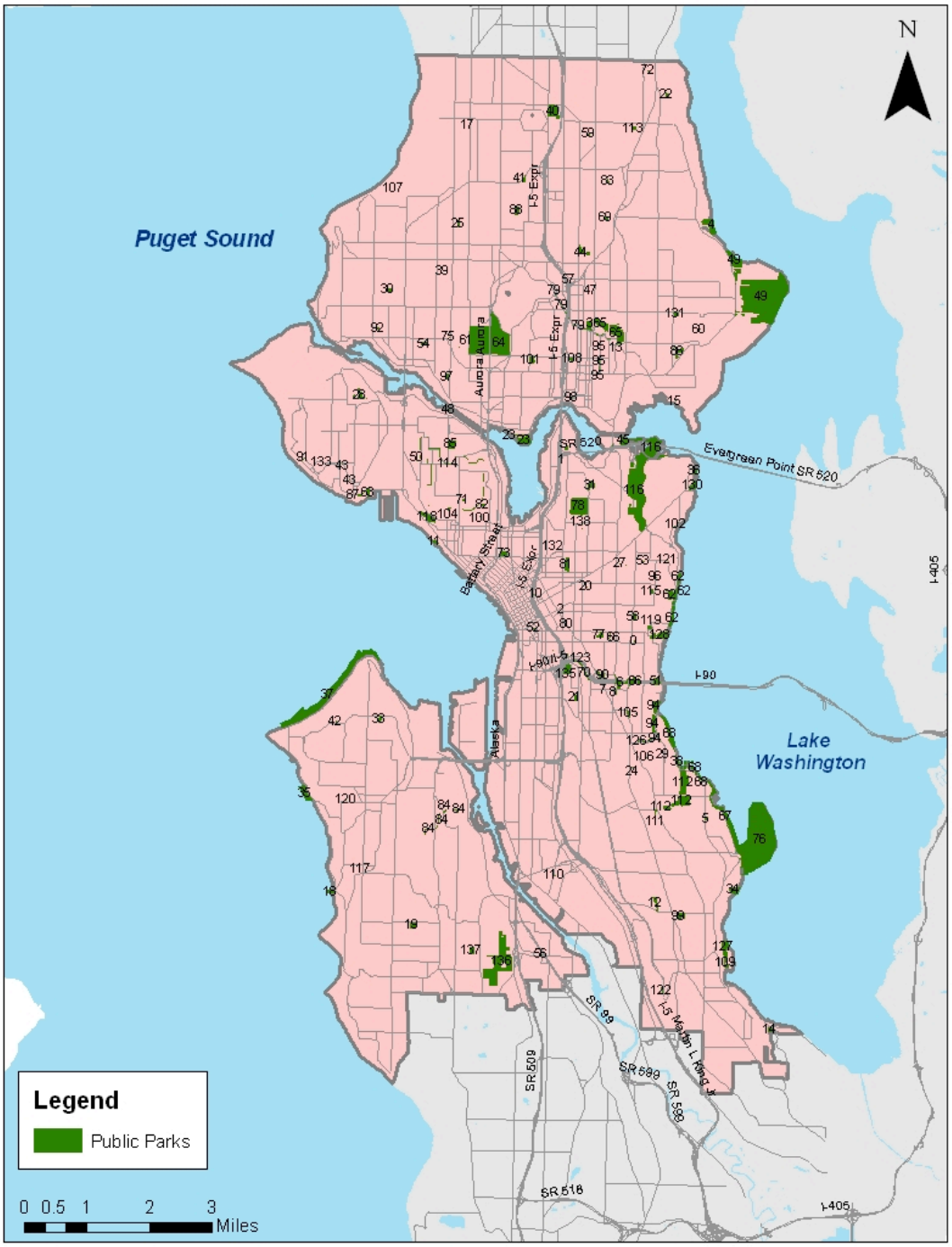

Google Earth, 2008




Google Earth, 2008

**Broadview Mini-Park**

- 4,323 sq feet total
- ,some tree coverage




Washington State Geospatial Data Archive and author's analysis

* Numbers on map reference Map Numbers in Table A-4

**Figure 12: Public Parks with Potential Community Garden Space**

# Discussion and Conclusions

This report addresses the request in the Food Systems Sustainability and Security Resolution passed by City Council in April 2008 for the Department of Neighborhoods to conduct an inventory of public lands suitable for community gardening. It represents the first comprehensive attempt to identify publicly-owned lands that are potentially suitable for community gardens in the city of Seattle. As the first of its kind, the report may serve as a scoping document to assist the Department of Neighborhoods, in cooperation with Seattle Department of Transportation, Parks and Recreation, Seattle City Light, Seattle Public Utilities, Fleets and Facilities, the Seattle Public School District, and other public agencies, in the scoping of the feasibility of expanding the P-Patch program.

In addition, the report improves upon the methodology established during the process of creating similar inventories in Portland and Vancouver. Including lands such as rights-of-way, public parks and public schools in addition to city-owned parcels contributes to the improved comprehensiveness and robustness of this inventory. Meanwhile, reasonably current information on development plans makes this report very timely. The baseline data set and approach established in this report will be useful in initiating future land inventories. The results indicate that there is a large amount of publicly owned land within the city of Seattle that could be suitable for community gardens (Figure 10). In total, 45 vacant, excess and under used city-owned parcels were identified as meeting the requirements for P-Patches. These parcels comprise over twelve acres- about half as much as the existing P-Patch acreage. Meanwhile, their locations are dispersed throughout Seattle. In addition, 122 school properties and 139 public parks have under-used open surface that has the potential to be turned into community gardening space. Furthermore, the rights-of-way along four multi-use paths and one transmission line are shown to contain possibility of being converted into space for gardening. Clearly, opportunity exists for the City of Seattle to establish more community garden sites.

Many characteristics were taken into account during the evaluation of the public lands considered in this research including size, slope, shade, building, and impervious surface coverage, access, location, and proximity to other P-Patches and schools. Due to the constraints of the research, however, this list of characteristics is not exhaustive of all of those that may need to be considered

during actual decision-making. Likewise, the characteristics themselves were not able to be explored and examined in great detail. Particular characteristics that should be studied in greater detail include shade coverage, soil suitability, location, and community support. In terms of shade coverage, this study was limited to ranking sites by their shade according to an aerial photo analysis, which is representative only of a snapshot in time. To be able to more accurately quantify the shade coverage, and thus the amount of sunlight gained by each site, site visits would be necessary. Ideally, each potential site would be visited several times a day to evaluate the shade coverage and sunlight during the morning, afternoon and early evening hours. In addition, both the current height and maximum buildable height of neighboring buildings would be taken into consideration. Such an in-depth analysis could be a project for teams of students. Another way to determine shade coverage would be through digital analysis of shade cast by vegetation and neighboring buildings, such as possible using the computer program Sketch-up. An example of the how such a methodology can be used to achieve detailed information at a small scale is seen in a master's degree project, "Achieving LEED for Neighborhood Development in the Center of the City: South Lake Union as a Case Study," completed by Vivian Chang of the University of Washington in 2008.

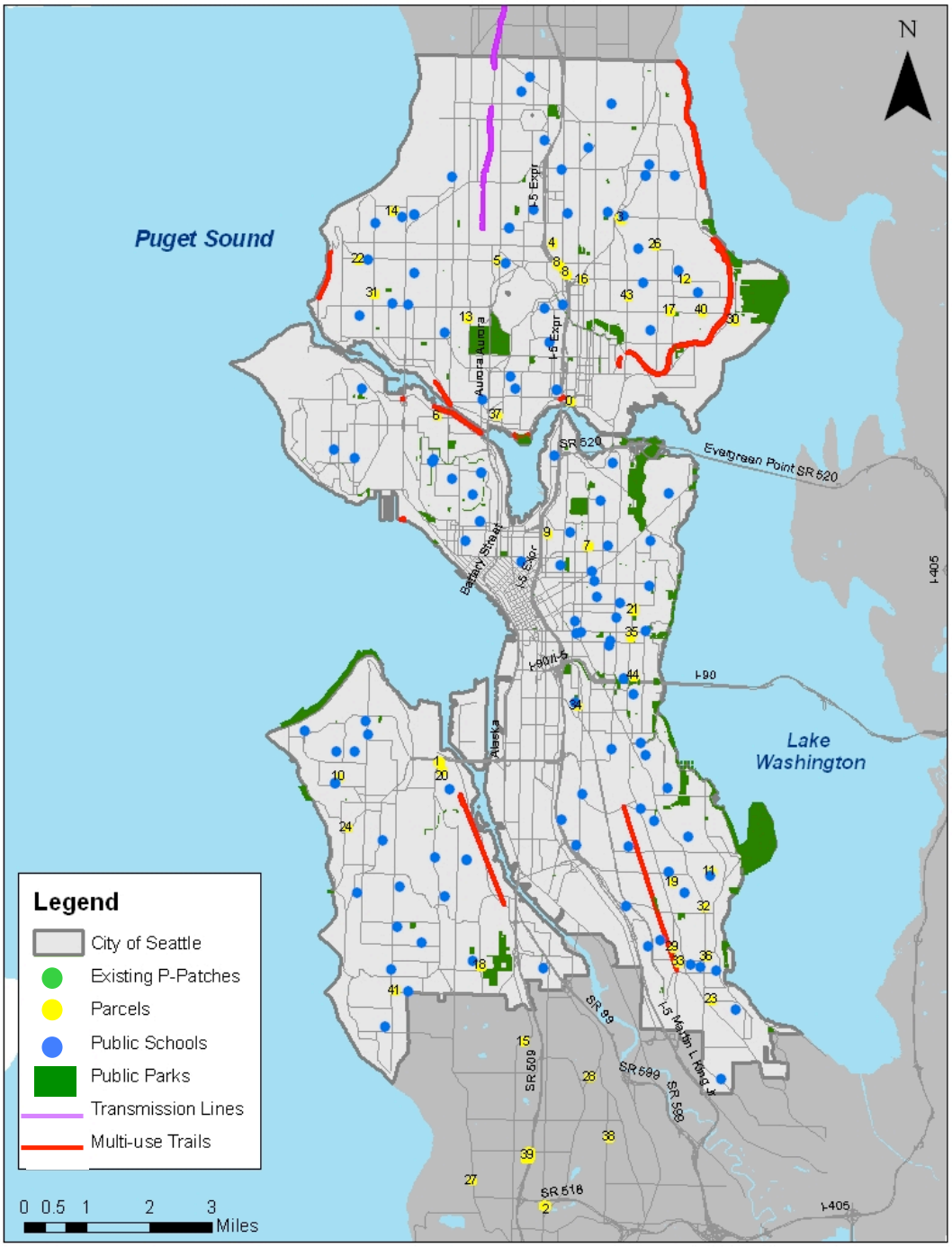
Another characteristic that merits close attention in any future suitability analysis is that of the soil suitability. This is particularly important when considering the suitability of vacated susbtations. In this limited study, soil was not evaluated. However, before making decisions about creating community gardening space, it would be important to know more information about the kind of soil, its contamination status and level, compaction, permeability, and so on. Future studies that investigate the specific soil characteristics at each site would be valuable to a thorough suitability analysis. Sites that do not have a desirable type of soil or have contaminants would not have to be dismissed, however, as raised beds could be installed.

A third component merit of further research is proximity to freeways and highways. As discussed earlier, some parcels that were close to highways or freeways were removed from consideration. However, this consideration was not included systematically in the analysis, so some parcels that are close to busy arterials remain in the inventory. Further research to establish specific criteria

for proximity to freeways, highways and arterials would improve the results of further inventories.

A final component that warrants further research and inquiry is that of community characteristics. In terms of characteristics, there is a desire by the Department of Neighborhoods to improve community gardening opportunities for low-income and immigrant populations. A recent evaluation of the P-Patch program in the Sound Food Report indicates that some neighborhoods that are home to high numbers of low-income and immigrant residents may be underserved by P-Patch space. Included in this report is a brief look at some of the demographic characteristics, including percentage of minorities, population density, and median annual household income. The results suggest that there is publicly-owned space in the neighborhoods with high numbers of renters and immigrants and/or high population density that could be converted into community gardens. Further analysis of these factors could help the Department of Neighborhoods focus on providing more gardening space to targeted populations.

In addition to deeper research into neighborhood characteristics, it could also be valuable to attempt to measure community support. The most successful community gardens, and the ones that will require the least management by the city and the Department of Neighborhoods, will be ones that are wanted, planted, maintained, protected, and cherished by surrounding neighbors. This base study evaluated several quantifiable characteristics related to community, including those related to local population, surrounding land use, proximity to a public school, and access, but this is by no means a complete evaluation of the community support and demand. Future qualitative and informational research could be implemented to identify and explore local leaders, resources, demand, and values, which may then be used to determine priority placements of community gardens.




* Numbers on map reference Map Numbers in Tables 5 and 6

Washington State Geospatial Data Archive and author's analysis

**Figure 13: Public Properties with Potential for Urban Agriculture**

All of the characteristics used to measure suitability for urban agriculture should be open for continuous discussion and revisiting in future inventories. The characteristics used in this inventory were developed according to previous similar inventories and recommendations from the Department of Neighborhoods that were based on the feasibility of implementation. However, it may be logical to revise some characteristics in future inventories. For example, in this inventory sites with slopes greater than 40% on any part of the property were eliminated. This is because of the costs associated with terracing land for gardening. However, it may be pertinent to include steep sites in future inventories, as such sites may be the only publicly-owned parcels in certain neighborhoods, and because certain residents, for example recent immigrants from rural mountainous areas, may be accustomed to gardening on terraced land. Another characteristic that could be revisited is the minimum size requirement. While 2,000 square feet is the general guidelines used by the Department of Neighborhoods, smaller plots may prove suitable for techniques like SPIN farming or in neighborhoods where no larger sites are available.

**Additional Urban Agriculture Opportunities**

While this report identifies certain potential city properties, including vacant, excess and under-used parcels, public school and public park space, and right-of-way along multi-use paths, there are additional public lands that may have potential for community gardens. The constraints of this research project did not allow for a thorough examination of spaces such as traffic circles, unused street ends, other flat rooftops, or the properties of libraries and community centers. Considering that very few of the sites and spaces identified by this study are located in some of the city's denser neighborhoods, with none in its identified Urban Centers and very few in Urban Center Villages, Hub Urban Villages, and Residential Urban Villages, these options will need to be explored to ensure the location and creation of community gardening sites in the areas where there likely is and will be the most need and demand. All of these ideas are subjects of interest for additional research.

It also may be important to include other public spaces that are not good candidates at this point in time, but will be in the future. As mentioned earlier, reservoirs were not included in this inventory. However, Seattle Public Utilities

has plans to replace its open reservoirs with underground structures in the coming years, providing a unique opportunity for the creation of new open space (Seattle Public Utilities, 2008). Current plans are to replace four or more open reservoirs with underground structures by 2012, and these sites should be considered in future inventories as appropriate.

Other publicly-owned sites that could be included in future inventories, depending on political cooperation, are those lands owned by other levels of government, such as King County, Sound Transit, or the state of Washington. The availability of these lands for gardening use will depend much upon the political will of the involved parties. The existence of three P-patches on Metro and King County land suggests that these kinds of partnerships are feasible.

Meanwhile, there exists opportunity to establish community gardens on land that is privately owned. There already are a number of P-Patches that operate on private property. The City could promote the establishment of additional community gardens on private property by providing incentives such as tax breaks, additional height or density allowances, or a sped-up application process. Going further, the possibility exists to make community gardens a requirement of developments in certain neighborhoods or of particular densities. For example, a high-density apartment building or condominium complex in a dense neighborhood such as Capitol Hill may be required to provide a space for garden plots, as part of its meeting its open space or landscaping requirements, for its residences. Garden spaces could consist of rooftop gardens. Chang (2008) identifies a methodology for determining potential growing spaces for urban neighborhoods, particularly focusing on rooftop gardens. The methodology could be adapted to be used as a planning tool to incorporate gardening space into neighborhoods undergoing infill and/or growth.

In addition to establishing and promoting additional community gardens, there are other ways that the City of Seattle can promote beneficial urban agriculture activities. One such way is to promote home food production, such as through a “Lawns to Lettuce” campaign as described in the Sound Food Report (2006). The same principle could be applied to promoting food production on other large, under-used lots, such as those on the grounds of institutions such as private schools, colleges and universities as well as churches and associations. Additionally, the City could establish programs to train city residents in the

various aspects of urban food production, including soil preparation, planting, care, harvesting, canning, drying, selling, etc. Alongside these skills, ones related to marketing and businesses could also be taught.

**Building Upon this Inventory**

As the first attempt at a comprehensive inventory of city-owned lands suitable for community gardening in Seattle, this report has established both a base set of data as well as a methodology by which to initiate additional inventories. As described previously, there are many ways in which the inventory could be approached and/or improved, depending on the goals, the potential lands being considered, the definition of suitability, and so on. It is also worth mentioning that since much of this report is the result of personal aerial photo analysis, there is room for different interpretations of criteria such as shade and building coverage, among others. While the methodology is certainly repeatable, there remains room for personal assessment and interpretation, and this must be taken into consideration to improve future inventories.

**Final Note**

There is opportunity for the City of Seattle to establish additional community garden plots on publicly-owned land. Much of this opportunity depends on cooperation among various departments and agencies, including the Department of Neighborhoods, City Light, Parks and Recreation, Seattle Public School District, Fleets and Facilities, and the Department of Transportation. Such cooperation to expand the P-Patch program will bring many benefits to city residents. Further, the city will establish itself as a national leader in urban agriculture initiatives and achieve its own goal, as stated in the recently passed Local Food Action Initiative, of improving the local food system.

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# Appendix

## Table A-1: Additional Information about Potential City-Owned Parcels

| MAP NO. | PMA NO. | NAME | PROXIMITY TO P-PATCH | PROXIMITY TO BUS STOP | SIDE-WALK | PROXIMITY TO SCHOOL | URBAN VILLAGE* |
|---|---|---|---|---|---|---|---|
| 0 | 4077 | EXCESS R/W AT NE PACIFIC ST | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | UCV |
| 1 | 50 | EXCESS R/W AT 3696 DELRIDGE WY SW | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 2 | 609 | SUNNYDALE SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 3 | 663 | CHELSEA SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | within 0.25 miles | RUV |
| 4 | 1573 | VACANT PMA (NUMBER 1573) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 5 | 544 | GREEN LAKE SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 6 | 4054 | UNKNOWN PMA/ 6TH W & W BERTONA/ESD | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 7 | 634 | CAPITOL SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | UCV |
| 8 | 4253 | BANNER WAY REMAINDER PROPERTY | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 9 | 639 | MERCER SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 10 | 576 | DAKOTA SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | no | within 0.25 miles | - |
| 11 | 1638 | ALLEY AND R/W PMA (NUMBER 1638) | within 0.5 miles | within 0.25 miles | no | within 0.25 miles | - |
| 12 | 3206 | VIEW RIDGE SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 13 | 551 | PHINNEY SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 14 | 676 | NORTH BEACH SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 15 | 536 | BEVERLY SUBSTATION (FORMER) | > 0.5 miles | > 0.25 miles | yes | > 0.25 miles | - |
| 16 | 4276 | UNKNOWN PMA (NUMBER 4276) | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | RUV |
| 17 | 3207 | HAWTHORNE SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 18 | 3944 | WHITE CENTER SUBSTATION | > 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 19 | 1643 | TEARDROP PARCELS @ S 42ND & MORGAN | within 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 20 | 572 | ANDOVER SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | no | > 0.25 miles | - |
| 21 | 4324 | 596 MARTIN LUTHER KING JR WY | within 0.5 miles | within 0.25 miles | yes | within 0.25 miles | RUV |
| 22 | 519 | LOYAL HEIGHTS SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 23 | 3945 | ROXBURY SUBSTATION (FORMER) | > 0.5 miles | within 0.25 | yes | > 0.25 | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | miles | | miles | |
| 24 | 621 | DAWSON SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 25 | 1574 | VACANT PMA (NUMBER 1574) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 26 | 654 | MORNINGSIDE SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | no | > 0.25 miles | - |
| 27 | 598 | AMBAUM SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 28 | 555 | BOULEVARD PARK SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 29 | 3659 | EXCESS R/W AT 8398 MLK JR WY S | within 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 30 | 565 | MORNINGSIDE SUBSTATION | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 31 | 3893 | BALLARD SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 32 | 627 | BRIGHTON SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | HUV |
| 33 | 4318 | VACANT PMA @ MLK JR WY S & S CLOVERDALE ST | within 0.5 miles | within 0.25 miles | yes | within 0.25 miles | RUV |
| 34 | 554 | HILL SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | yes | within 0.25 miles | RUV |
| 35 | 4331 | VACANT PMA @ MLK JR WY S & E YESLER WY SE CORNER | within 0.5 miles | within 0.25 miles | yes | within 0.25 miles | - |
| 36 | 675 | WABASH SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | no | within 0.25 miles | - |
| 37 | 600 | FREMONT SUBSTATION (FORMER) | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 38 | 579 | GLENDALE SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 39 | 581 | HIGHLINE SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 40 | 528 | ALLEY IN BLOCK 48, STATE PLAT 3-25-4 | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 41 | 677 | ARBOR SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | RUV |
| 42 | 4335 | VACANT PMA @ MLK JR WY S & S MAIN ST NW CORNER | within 0.5 miles | within 0.25 miles | yes | > 0.25 miles | HUV |
| 43 | 3898 | WEDGEWOOD SUBSTATION (FORMER) | > 0.5 miles | within 0.25 miles | yes | > 0.25 miles | - |
| 44 | 1600 | VACANT PMA 1600 | Within 0.5 miles | Within 0.25 miles | yes | Within 0.25 miles | - |

Washington State Geospatial Data Archive and author's analysis

* Urban Village Classification, according to the City of Seattle

UCV: Urban Center Village

HUV: Hub Urban Village

RUV: Residential Urban Village

## Table A-2: Demographic Characteristics of the Neighborhoods (Census Blocks) of the Potential Parcel

| Parcel No. | Population | Acres | Dwelling Units | Density-Dwelling Units/Acres | % Minority Residents | Median Household Annual Income |
|---|---|---|---|---|---|---|
| 0 | 1089 | 37 | 581 | 16 | 68% | 25,594 |
| 1 | 772 | 579 | 371 | 1 | 76% | 48,438 |
| 3 | 828 | 88 | 390 | 4 | 77% | 41,765 |
| 4 | 974 | 102 | 411 | 4 | 83% | 66,111 |
| 5 | 848 | 48 | 394 | 8 | 12% | 53,750 |
| 6 | 1420 | 124 | 789 | 6 | 87% | 40,761 |
| 7 | 849 | 39 | 490 | 13 | 87% | 49,063 |
| 8 | 839 | 98 | 349 | 4 | 88% | 62,500 |
| 9 | 1898 | 33 | 1338 | 41 | 85% | 40,780 |
| 10 | 956 | 94 | 410 | 4 | 95% | 77,480 |
| 11 | 876 | 108 | 325 | 3 | 59% | 66,389 |
| 12 | 871 | 44 | 387 | 9 | 77% | 49,875 |
| 13 | 668 | 36 | 326 | 9 | 88% | 49,500 |
| 14 | 609 | 89 | 274 | 3 | 96% | 63,295 |
| 16 | 827 | 73 | 338 | 5 | 86% | 60,000 |
| 17 | 502 | 43 | 212 | 5 | 86% | 60,179 |
| 18 | 2210 | 509 | 805 | 2 | 48% | 48,173 |
| 19 | 786 | 65 | 230 | 4 | 10% | 43,417 |
| 20 | 1339 | 261 | 574 | 2 | 64% | 41,120 |
| 21 | 760 | 52 | 308 | 6 | 38% | 34,643 |
| 22 | 941 | 66 | 433 | 7 | 89% | 46,815 |
| 23 | 1093 | 84 | 350 | 4 | 23% | 45,956 |
| 24 | 621 | 56 | 295 | 5 | 91% | 61,964 |
| 25 | 974 | 102 | 411 | 4 | 83% | 66,111 |
| 26 | 565 | 50 | 253 | 5 | 87% | 73,036 |
| 29 | 1503 | 135 | 449 | 3 | 9% | 44,539 |
| 30 | 1073 | 57 | 470 | 8 | 69% | 40,250 |
| 31 | 667 | 45 | 296 | 7 | 82% | 43,194 |
| 32 | 766 | 46 | 258 | 6 | 33% | 44,286 |
| 33 | 1503 | 135 | 449 | 3 | 9% | 44,539 |
| 34 | 700 | 34 | 264 | 8 | 22% | 41,250 |
| 35 | 823 | 48 | 356 | 7 | 28% | 31,607 |
| 36 | 1705 | 133 | 564 | 4 | 13% | 35,521 |
| 37 | 893 | 51 | 528 | 10 | 86% | 36,765 |
| 40 | 509 | 40 | 193 | 5 | 85% | 38,326 |
| 41 | 1338 | 107 | 635 | 6 | 63% | 35,179 |
| 42 | 823 | 48 | 356 | 7 | 72% | 31,607 |
| 43 | 759 | 55 | 315 | 6 | 81% | 56,667 |
| 44 | 1243 | 176 | 569 | 3 | 65% | 31,650 |

Census Bureau 2000

- Properties 2, 15, 27, 28, 38, and 39 are located outside of Seattle and were not assessed for these characteristics

## Table A-3: Public School Properties with Potential Space for Community Gardening

| No. * | School | Address | Pervious Surface** | Flat Roof | Paved Surface *** |
|---|---|---|---|---|---|
| 0 | BALLARD HS | 1418 NW 65TH ST | 1 | yes | yes |
| 1 | CLEVELAND HS | 5511 15TH AVE S | 1 | yes | yes |
| 2 | FRANKLIN HS | 3013 S MOUNT BAKER BV | 2 | yes | yes |
| 3 | GARFIELD HS | 400 23RD AVE | 2 | yes | yes |
| 4 | NATHAN HALE HS | 10750 30TH AVE NE | 2 | yes | yes |
| 5 | INGRAHAM HS | 1819 N 135TH ST | 2 | yes | yes |
| 6 | RAINIER BEACH HS | 8815 SEWARD PARK AV | 2 | yes | yes |
| 7 | SEALTH HS | 2600 SW THISTLE ST | 1 | yes | yes |
| 8 | ECKSTEIN MS | 3003 NE 75TH ST | 2 | yes | yes |
| 9 | HAMILTON MS | 1610 N 41ST ST | 2 | yes | yes |
| 10 | MADISON MS | 3429 45TH AV SW | 2 | yes | yes |
| 11 | MCCLURE MS | 1915 1ST AV W | 2 | yes | yes |
| 12 | MEANY MS | 301 21ST AVE E | 2 | yes | yes |
| 13 | MERCER MS | 1600 S COLUMBIAN WAY | 2 | yes | yes |
| 14 | WASHINGTON MS | 2101 S JACKSON ST | 2 | yes | yes |
| 15 | WHITMAN MS | 9201 15TH AVE NW | 2 | yes | yes |
| 16 | ADAMS EL | 6110 28TH AV NW | 2 | yes | yes |
| 17 | ALKI EL | 3010 59TH AVE SW | 2 | yes | yes |
| 18 | ARBOR HEIGHTS EL | 3701 SW 104TH ST | 0 | yes | yes |
| 19 | B.F. DAY EL | 3921 LINDEN AV N | 0 | no | yes |
| 20 | BAGLEY EL | 7821 STONE AVE N | 2 | yes | yes |
| 21 | BEACON HILL EL | 2025 14TH AVE S | 1 | yes | yes |
| 22 | BLAINE EL | 2550 34TH AVE W | 2 | no | yes |
| 23 | BRIGHTON EL | 4425 S HOLLY ST | 1 | yes | yes |
| 24 | BRYANT EL | 3311 NE 60TH ST | 2 | yes | yes |
| 25 | CONCORD EL | 723 S CONCORD ST | 2 | no | yes |
| 26 | DUNLAP EL | 4525 S CLOVERDALE ST | 1 | no | yes |
| 27 | EMERSON EL | 9709 60TH AVE S | 2 | yes | yes |
| 28 | FAIRMOUNT PARK EL | 3800 SW FINDLAY | 2 | yes | yes |
| 29 | GATEWOOD EL | 4320 SW MYRTLE ST | 2 | no | yes |
| 30 | GATZERT EL | 1301 E YESLER WAY | 1 | no | yes |
| 31 | PATHFINDER K-8 | 5012 SW GENESEE ST | 2 | yes | yes |
| 32 | GRAHAM HILL EL | 5149 S GRAHAM ST | 1 | yes | yes |
| 33 | GREEN LAKE EL | 2400 N 65TH ST | 2 | no | yes |
| 34 | HAWTHORNE EL | 4100 39TH AVE S | 1 | no | yes |
| 35 | HAY EL | 201 GARFIELD ST | 2 | no | Yes |
| 36 | HIGH POINT EL | 6760 34TH AVE SW | 2 | no | Yes |
| 37 | HIGHLAND PARK EL | 1012 SW TRENTON ST | 2 | no | Yes |
| 38 | KIMBALL EL | 3200 23RD AVE S | 0 | yes | Yes |
| 39 | MLK EL | 3201 E REPUBLICAN ST | 0 | yes | Yes |
| 40 | LAWTON EL | 4000 27TH AV W | 0 | no | Yes |
| 41 | LESCHI EL | 135 32ND AVE | 2 | no | Yes |
| 42 | LOWELL EL | 1058 E MERCER ST | 2 | yes | Yes |

| No.* | School | Address | Pervious Surface | Flat Roof** | Paved Surface*** |
|---|---|---|---|---|---|
| 43 | LOYAL HEIGHTS EL | 2511 NW 80TH ST | 1 | yes | Yes |
| 46 | MCGILVRA EL | 1617 38TH AVE E | 1 | no | Yes |
| 47 | MINOR EL | 1700 E UNION ST | 2 | yes | Yes |
| 48 | MONTLAKE EL | 2409 22ND AVE E | 1 | yes | Yes |
| 49 | MUIR EL | 3301 S HORTON ST | 2 | no | Yes |
| 50 | NORTH BEACH EL | 9018 24TH AVE NW | 2 | yes | Yes |
| 51 | NORTHGATE EL | 11725 1ST AV NE | 2 | no | Yes |
| 52 | OLYMPIC HILLS EL | 13018 20TH AV NE | 2 | yes | Yes |
| 53 | OLYMPIC VIEW EL | 504 NE 95TH ST | 2 | no | Yes |
| 54 | ORCA/COLUMBIA EL | 3528 S FERDINAND ST | 0 | yes | Yes |
| 55 | RAINIER VIEW EL | 11650 BEACON AVE S | 2 | no | Yes |
| 56 | ROGERS EL | 4030 NE 109TH ST | 2 | yes | Yes |
| 57 | ROXHILL EL | 9430 30TH AVE SW | 2 | no | Yes |
| 58 | SACAJAWEA EL | 9501 20TH AVE NE | 2 | yes | Yes |
| 59 | SANISLO EL | 1812 SW MYRTLE ST | 2 | yes | Yes |
| 60 | SCHMITZ PARK EL | 5000 SW SPOKANE ST | 2 | yes | Yes |
| 61 | STEVENS EL | 1242 18TH AVE E | 0 | no | Yes |
| 62 | VAN ASSELT EL | 7201 BEACON AVE S | 2 | yes | Yes |
| 63 | VIEW RIDGE EL | 7047 50TH AVE NE | 2 | yes | Yes |
| 64 | VIEWLANDS EL | 10525 3RD AV NW | 2 | yes | Yes |
| 65 | WEDGWOOD EL | 2720 NE 85TH ST | 0 | yes | Yes |
| 66 | WEST WOODLAND EL | 5601 4TH AV NW | 2 | no | Yes |
| 67 | WHITTIER EL | 1320 NW 75TH ST | 0 | no | Yes |
| 68 | WHITWORTH EL | 5215 46TH AVE S | 2 | no | Yes |
| 69 | WING LUKE EL | 3701 S KENYON ST | 2 | no | Yes |
| 70 | ALT EL II/DECATUR EL | 7711 43RD AVE NE | 2 | yes (part) | Yes |
| 71 | ALT PINEHURST EL | 11530 12TH AVE NE | 2 | yes | Yes |
| 72 | DYS ALT SCH | 1211 E ALDER ST | 2 | yes (part) | Yes |
| 73 | MADISON YOUTH DEV | 1624 E MADISON ST | 1 | no | yes(3rd level) |
| 74 | MIDDLE COLLEGE ALT HS | 1701 BROADWAY | 0 | yes | Yes |
| 75 | MT BAKER/SRVS BUREAU | 1730 BRADNER PLACE S | 1 | yes | Yes |
| 76 | N SEA YOUTH SRVS | 9250 14TH AV NW | 2 | yes | Yes |
| 77 | SECONDARY BILINGUAL OC | 411 BOSTON ST | 1 | yes | Yes |
| 78 | NOVA ALT HS/MANN | 2410 E CHERRY | 2 | yes | Yes |
| 79 | SEA URB LEARN CTR | 105 14TH AV | 2 | no | Yes |
| 80 | SHARPLES ALT SCH | 3928 S GRAHAM ST | 2 | yes | Yes |
| 81 | SUMMIT K-12/ADDAMS ALT | 11051 34TH AVE NE | 2 | yes | Yes |
| 82 | A & S CENTER | 815 4TH AVE N | 1 | yes | Yes |
| 83 | COMPUTER CENTER | 816 4TH AV N | 1 | yes | Yes |
| 84 | HALE VOC AN GRH | 10752 30TH AV NE | 2 | yes | Yes |
| 86 | ORION YOUTH CENTER | 1020 VIRGINIA ST | 0 | yes | No |
| 87 | SW YTH SRVS BUREAU | 9001 35TH AV SW | 0 | yes | No |

| No.* | School | Address | Pervious Surface** | Flat Roof | Paved Surface*** |
|---|---|---|---|---|---|
| 88 | THURGOOD MARSHALL EL | 2401 S IRVING ST | 2 | no | Yes |
| 89 | WILSON ADMIN CNTR | 1330 N 90TH ST | 2 | yes | Yes |
| 90 | LAFAYETTE EL | 2645 CALIFORNIA AVE SW | 0 | yes - some | Yes |
| 91 | LINCOLN HS | 4400 INTERLAKE AVE N | 0 | yes | Yes |
| 92 | AFRICAN AMERICAN ACAD | 8311 BEACON AV S | 2 | no | Yes |
| 93 | HUGHES EL | 7740 34TH AV SW | 2 | yes | No |
| 94 | MAGNOLIA EL | 2418 28TH AV W | 2 | yes | Yes |
| 95 | MCDONALD EL | 144 NE 54TH ST | 1 | no | Yes |
| 96 | MIDDLE COL ALT HS (S) | 6000 16TH AVE SW | 2 | yes | Yes |
| 97 | MONROE EL | 1810 NW 65TH ST | 0 | yes | Yes |
| 98 | PATHFINDER | 5012 SW GENESEE ST | 1 | yes | Yes |
| 99 | SEWARD EL | 2500 FRANKLIN AVE E | 0 | no | Yes |
| 100 | SOUTH LAKE ALT HS | 8825 RAINIER AVE S | 2 | yes | Yes |
| 101 | AKI KUROSE | 3928 S GRAHAM ST | 2 | yes | Yes |
| 102 | COOPER EL | 1901 SW GENESEE ST | 2 | no | Yes |
| 103 | DEARBORN PARK EL | 2820 S ORCAS ST | 1 | yes | No |
| 104 | EVENING SCHOOL | 520 NE RAVENNA BLVD | 0 | yes | Yes |
| 105 | ALT EL III/LATONA EL | 401 NE 42ND | 1 | no | Yes |
| 106 | JOHN STANFORD INTERNAT | 4057 5TH AV NE | 1 | no | Yes |
| 107 | HAY EL (OLD) | 411 BOSTON ST | 1 | yes | Yes |
| 108 | BOREN BUILDING | 5950 DELRIDGE WAY SW | 2 | yes | Yes |
| 109 | SEAHAWKS ACADEMY | 810 18TH AV | 1 | yes | No |
| 110 | BRIGHT FUTURES PROGRAM | 2120 S JACKSON ST | 2 | yes | Yes |
| 111 | AM INDIAN HRTG ALT SCH | 6000 16TH AVE SW | 2 | yes | Yes |
| 112 | MALL ACADEMY/ERC | 401 NE NORTHGATE WAY | 0 | yes | Yes |
| 113 | AM INDIAN HRTG ALT SCH | 9600 COLLEGE WAY N | 2 | yes | Yes |
| 114 | COE EL | 2424 7TH AVE W | 0 | no | Yes |
| 115 | COE EL | 2433 6TH AV W | 1 | no | Yes |
| 116 | WEST SEATTLE HS | 3000 CALIFORNIA AVE SW | 2 | yes (part) | Yes |
| 117 | DAY TREATMENT PROGRAM | 1330 N 90TH ST | 2 | yes | Yes |
| 118 | INTERAGENCY ADMIN 6-12 | 3100 S ALASKA ST | 2 | yes | Yes |
| 119 | HOME SCH RESOURCE CTR | 9250 14TH AV NW | 0 | yes -some | Yes |
| 120 | RYTHER CHILD CENTER | 2400 NE 95TH ST | 2 | Yes-some | Yes |
| 121 | THE CENTER SCH | 305 HARRISON ST | 0 | no | No |

Washington State Geospatial Data Archive and Author's analysis

** Number refers to Figure 8.*

*** Amount of unused and non-shaded pervious surface, i.e. open grass space*
*0:less than 2000 square feet 1:between 2000 and 4000 2:more than 4000 square feet*

**** Whether there is at least 1,000 square feet of paved playing surface or parking lot space that could potentially be used for planter boxes and/or container gardens*

# Table A-4: Public Parks with Potential Space for Community Gardening

| PARK NO.* | PARK NAME | ADDRESS | AREA in SQ FT | OPEN LAND** | > 1 ACRE OPEN LAND | COMMENTS |
|---|---|---|---|---|---|---|
| 0 | FLO WARE PARK | 2800 S JACKSON ST | 21522 | 1 | no | some open grass space |
| 1 | HARVARD-MILLER PARK | 2301 BROADWAY AV E | 6399 | 1 | no | street end parcel open grassy space |
| 2 | BOREN PLACE | BROADWAY & TERRACE STS | 1158 | 2 | no | vacant triangle street end |
| 3 | COWEN PARK | 5849 15TH AV NE | 367583 | 1 | yes | lots of current uses in tennis cts, ball fields and ravine but still land |
| 4 | MATTHEWS BEACH PARK | 9300 51ST AV NE | 956042 | 1 | no | lots of open space adjacent to beach |
| 5 | LAKEWOOD PLAYGROUND | 50TH AV S & S ANGELINE ST | 85908 | 1 | no | mostly used as ball fields but some extra space |
| 6 | SAM SMITH PARK: MGMT AGMT | 1400 MARTIN LUTHER KING JR WAY S | 940546 | 1 | yes | lots of open grassy field and amenities |
| 7 | ATLANTIC STREET PARK | 1599 RAINIER AV S | 32102 | 1 | no | mostly landscaping with paths |
| 8 | COLMAN PLAYGROUND | 1470 23RD AV S | 121975 | 1 | no | mostly used as ball field but some open space could be used |
| 9 | BEACON PLACE | 11TH AV S & S DEARBORN ST | 10895 | 1 | no | parcel in middle of undeveloped land some shrubs and tree cover |
| 10 | FREEWAY PARK | 1227 9TH AV | 13787 | 1 | no | mostly developed but some open grassy space in downtown |
| 11 | ELLIOTTT BAY PARK: FFD PORTION | 399 ALASKAN WY W | 148040 | 1 | no | much is train tracks and truck space but some open grass along bike trail |
| 12 | JOHN C. LITTLE, SR. PARK | 6961 37TH AVE S | 245863 | 1 | no | open grassy space, already plans for P-Patch |
| 13 | RAVENNA PARK TRIANGLE | 2298 NE 54TH ST | 2636 | 1 | no | small triangle, open grassy space |
| 14 | LAKERIDGE PLAYGROUND | 10145 RAINIER AV S | 187410 | 1 | no | most ball fields, some forested patches, but space for garden |
| 15 | BELVOIR PLACE | 3659 42ND AV NE | 18182 | 1 | no | mostly open grass space provides access to water |
| 16 | PLUM TREE PARK | 1717 26TH AV | 14402 | 1 | no | mostly tree-covered with a play area with some grass space for garden |
| 17 | BROADVIEW MINI PARK | 12099 GREENWOOD AV N | 4323 | 1 | no | strip at end of street, partially tree-covered |
| 18 | LOWMAN BEACH PARK | 8603 FAUNTLEROY WY SW | 177023 | 1 | no | mostly beach and water but some open grassy space |
| 19 | E.C. HUGHES PLAYGROUND | 2805 SW HOLDEN ST | 276560 | 1 | no | mostly ball fields but some grass space could be garden |
| 20 | SPRING STREET MINI PARK | 15TH AV E & E SPRING ST | 14297 | 1 | no | small but some open grassy space |
| 21 | BEACON HILL PLAYGROUND | 1902 13TH AV S | 128755 | 1 | no | available open green space |

| | | | | | | |
|---|---|---|---|---|---|---|
| 22 | CEDAR PARK: LEASE | 13298 37TH AV NE | 92181 | 1 | no | available open green space |
| 23 | GASWORKS PARK | 1899 N NORTHLAKE WY | 864826 | 1 | yes | available open green space |
| 24 | YORK PARK | 3650 RENTON AV S | 11033 | 1 | no | most is tree-covered but some open green space |
| 25 | SANDEL PLAYGROUND | 113 NW 92ND ST | 161891 | 1 | no | lots of available green open space |
| 26 | TRUDY'S TRIANGLE | 2521 LAKE PARK DR S | 10996 | 1 | no | triangle in between streets, open grass space |
| 27 | HOMER HARRIS PARK | 2401 E HOWELL ST | 21621 | 1 | no | available open green space, includes artwork |
| 28 | LAWTON PARK | 400 WILLIAMS AV W | 414340 | 1 | yes | big, lots of open green space |
| 29 | HUNTER BOULEVARD | 3499 HUNTER BL S | 50924 | 1 | no | tree-lined boulevard with lots of open grassy space |
| 30 | SALMON BAY PARK | 2001 NW CANOE PL | 122884 | 1 | yes | lots of open grassy space |
| 31 | BOREN PARK | INTERLAKEN BL | 315079 | 1 | yes | lots of open green space |
| 32 | NE 60TH STREET PARK | 599 NE 60TH ST | 14468 | 1 | no | grass with scattered trees, near I-5 |
| 33 | FAIRMOUNT PARK | 2699 FAIRMOUNT AV SW | 143969 | 1 | no | much is developed but still lots of green open space |
| 34 | MARTHA WASHINGTON PARK | 6612 57TH AV S | 417182 | 1 | yes | lots of open green space |
| 35 | EMMA SCHMITZ MEMORIAL OVERLOOK | 4503 BEACH DR SW | 758106 | 1 | yes | lots of green open space with great views of water |
| 36 | MADISON PARK NORTH BEACH | 2330 43RD AVE E | 195519 | 1 | yes | mostly water but a lot of grassy space with beach access |
| 37 | ALKI BEACH PARK | 2701 ALKI AV SW | 5928159 | 1 | yes | lots of open space along beachfront, monitoring a question |
| 38 | STAN SAYRES PARK AND PITS | 3800 LAKE WASHINGTON BL S | 826663 | 1 | no | mostly for boat launching but there is green space |
| 39 | 6TH AVENUE NW POCKET PARK | 7605 6TH AV NW | 9007 | 1 | no | being constructed, to be lawn space |
| 40 | NORTHACRES PARK | 12530 3RD AV NE | 900427 | 1 | no | lots of development and amenities but plenty of green open space |
| 41 | MINERAL SPRINGS PARK | 1500 N 105th St | 173128 | 1 | no | mostly tree-covered and developed, some small open patches |
| 42 | NANTES PARK | 5062 SW ADMIRAL WY | 14116 | 1 | no | some tree cover |
| 43 | CONDON WAY CENTER STRIP | CONDON WY | 28952 | 1 | no | boulevard strip would work well |
| 44 | MAPLE LEAF RESERVOIR AND PLAYGROUND: DPR | 14TH AV NE & NE 82ND ST | 441828 | 1 | yes | lots of open grass space |
| 45 | EAST MONTLAKE PARK | 2802 E Park Dr E | 316318 | 1 | yes | lots of open green space |
| 46 | INTERNATIONAL CHILDRENS PARK | 700 S LANE | 9987 | 1 | no | mostly built up but some green grass space |
| 47 | FROULA PLAYGROUND: DPR PORTION | 7200 12TH AV NE | 3315 | 1 | no | reservoir sides may be steep and unusable but some land |

| | | | | | | |
|---|---|---|---|---|---|---|
| 48 | WEST EWING MINI PARK | 3RD AV W & W EWING ST | 18334 | 1 | no | a little grassy spot |
| 49 | WARREN G. MAGNUSON PARK | 6500 SAND POINT WY NE | 13349022 | 1 | yes | lots of open space |
| 50 | SOUNDVIEW TERRACE PARK | 2500 11TH AV W | 25244 | 1 | no | mostly used as ball fields but some grass space |
| 51 | EAST PORTAL VIEWPOINT | 1400 LAKE WASHINGTON BLVD S | 303179 | 1 | yes | much developed but much green space, next to bridges |
| 52 | CITY HALL PARK | 3RD AV & JEFFERSON ST | 56880 | 1 | no | could be neat in front of City Hall |
| 53 | WILLIAM GROSE PARK | 1814 30TH AV E | 18038 | 1 | no | lots of open space |
| 54 | GILMAN PLAYGROUND | 923 NW 54TH ST | 170352 | 1 | no | mostly developed but some open grass space |
| 55 | JIMI HENDRIX PARK: LEASE | 2400 S MASSACHUSSETTS ST | 100665 | 1 | yes | |
| 56 | CESAR CHAVEZ PARK: SPECIAL USE PERMIT | 700 S CLOVERDALE ST | 7605 | 1 | no | small, history of Chavez important |
| 57 | RAINBOW POINT | NE BANNER PL & NE 75TH ST | 34618 | 1 | no | some parts tree-covered but some open grassy space |
| 58 | POWELL BARNETT PARK | 2760 E ALDER ST | 189779 | 1 | yes | lots of open grassy space |
| 59 | PINEHURST PLAYGROUND | 12029 14TH AV NE | 54831 | 1 | no | mostly used for ball fields but some open unused space |
| 60 | UNIVERSITY CIRCLE | UNIVERSITY CIRCLE NE | 8211 | 1 | no | traffic circle, could work great |
| 61 | WOODLAND PARK ZOO | 5500 PHINNEY AV N | 3958970 | 1 | yes | a lot is used as zoo but could be a neat site |
| 62 | MADRONA PARK | 853 LAKE WASHINGTON BL | 1375724 | 1 | yes | mostly beachfront with some wooded patches and hills- there is space |
| 63 | SMITH COVE | 26TH AV W & W GARFIELD ST | 214638 | 1 | no | lots of unused space |
| 64 | LOWER WOODLAND PARK | 4428 PHINNEY AV N | 4153945 | 1 | yes | lots of open grassy space |
| 65 | RAVENNA PARK | RAVENNA AV NE | 2134686 | 1 | yes | lots of open grassy space |
| 66 | DR. BLANCHE LAVIZZO PARK | 2200 S JACKSON ST | 96023 | 1 | no | some open grassy space |
| 67 | LAKE WASHINGTON BOULEVARD SOUTH | LAKE WA BLVD S OF ANDOVER ST | 1914084 | 1 | yes | open grassy space |
| 68 | LAKE WASHINGTON BOULEVARD NORTH | 2521 LAKE PARK DR S | 1405362 | 1 | yes | open grassy space |
| 69 | SACAJAWEA PLAYGROUND | 1726 NE 94TH ST | 112336 | 1 | yes | open grassy space |
| 70 | TAEJON PARK | STURGUS AV S | 160059 | 1 | no | lots of open grassy space |
| 71 | OBSERVATORY COURTS PARK / FIRE STATION NO. 8 | 110 LEE ST | 36855 | 1 | no | mostly paved, but paved surface could be used |
| 72 | LITTLE BROOK | 14043 32nd Ave | 38607 | 1 | no | small but some open grass space |

| | | | | | | |
|---|---|---|---|---|---|---|
| | PARK | NE | | | | |
| 73 | DENNY PARK | 100 DEXTER AV N | 201528 | 1 | no | some open grassy space |
| 74 | GREG DAVIS PARK | 26th Ave SW/ SW Brandon St | 61142 | 1 | no | open grassy space |
| 75 | GREENWOOD TRIANGLE | 3RD AV NW & NW 55TH ST | 4503 | 1 | no | small but appears mostly unused |
| 76 | SEWARD PARK | 5900 LAKE WASHINGTON BLVD S | 12907136 | 1 | yes | lots of open grassy space |
| 77 | PRATT PARK | 1800 S MAIN ST | 237925 | 1 | yes | lots of open grass space |
| 78 | VOLUNTEER PARK | 1400 E PROSPECT ST | 2104396 | 1 | yes | lots of open grass space |
| 79 | RAVENNA BOULEVARD | NE Rav Blvd, Grnlk Wy/20th NE | 276553 | 1 | no | lots of open space |
| 80 | HORIUCHI PARK | 156 BOREN AV | 12503 | 1 | no | some open space |
| 81 | CAL ANDERSON PARK | 1635 11TH AVE | 480829 | 1 | yes | lots of open space |
| 82 | BHY KRACKE PARK | 1200 BLOCK OF 5TH AV N | 66608 | 1 | no | much of it steep but some open flat space |
| 83 | VICTORY HEIGHTS PLAYGROUND | 1747 NE 106TH ST | 67577 | 1 | no | large grassy fields |
| 84 | PUGET BOULEVARD | 4898 23RD AV SW | 379429 | 1 | yes | some parts tree-covered and steep, but southwest stretch has lots of grass open space |
| 85 | DAVID RODGERS PARK | 2625 1ST AV W | 409420 | 1 | no | open grassy space in between wooded areas |
| 86 | BURKE-GILMAN PARK | 5201 SAND POINT WY NE | 310402 | 1 | no | much is tree-covered but some open grassy areas |
| 87 | URSULA JUDKINS VIEWPOINT | W GALER ST | 106229 | 1 | no | some parts are steep but some flat open areas |
| 88 | LICTON SPRINGS PARK | 9536 Ashworth Ave N | 328829 | 1 | no | open grassy areas |
| 89 | COLLEGE STREET MINI-PARK | 2307 30TH AVE S | 18208 | 1 | no | small but grassy open space- may be used as ball field |
| 90 | JUDGE CHARLES M STOKES OVERLOOK | 1199 HIAWATHA PL S | 220137 | 1 | no | lots of open grassy space |
| 91 | PARKMONT PLACE | 4399 W PARKMONT PL | 9097 | 1 | no | open grassy space, triangles between streets |
| 92 | BALLARD COMMONS PARK | 5701 22ND AV NW | 59954 | 1 | no | open grassy space on part |
| 93 | TT MINOR PARK: LEASE | 1698 E UNION ST | 7206 | 1 | no | grassy area next to school, used for play |
| 94 | MT BAKER PARK | 2521 LAKE PARK DR S | 958227 | 1 | no | much is tree-covered, parts are steep but there are some flat grassy areas |
| 95 | 17TH AVE NE CENTERSTRIP | 5099 17TH AV NE | 104877 | 1 | no | much is tree-covered, some parts in between |
| 96 | ALVIN LARKINS PARK | 1501 35TH AV | 28510 | 1 | no | open grassy space |
| 97 | ROSS PLAYGROUND | 325 NW 44TH ST | 102326 | 1 | no | used for ball fields, may be some space |
| 98 | PEACE PARK | 3999 9TH AV NE | 10595 | 1 | no | small, only one statue but room for gardens |
| 99 | OTHELLO PLAYGROUND | 4351 S OTHELLO | 277607 | 1 | yes | lots of open grassy space |
| 100 | WARD SPRINGS PARK | 925 4TH AV N | 14046 | 1 | no | open grassy space |

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| 101 | MERIDIAN PLAYGROUND | BAGLEY AV N & N 47TH ST | 317261 | 1 | yes | most open grassy space for playfields but some extra |
| 102 | MCGILVRA BOULEVARD | 998 MCGILVRA BL E | 21462 | 1 | no | some parts tree-covered but could make for good plantings |
| 103 | HORTON HILL CORRIDOR | 3298 36TH AV S | 12966 | 1 | no | open grassy space |
| 104 | KERRY PARK AND VIEWPOINT | 2ND AV W & W HIGHLAND DR | 68666 | 1 | no | some open grassy space, popular spot for cameras |
| 105 | MARTIN LUTHER KING MEMORIAL PARK | 2200 MARTIN LUTHER KING JR WY S | 191266 | 1 | yes | lots of open grassy space |
| 106 | YORK PLAYGROUND | 3327 34TH AV S | 29877 | 1 | no | some open grassy space and some paved space |
| 107 | BLUE RIDGE PLACE | 1999 NW MILFORD WY | 8442 | 1 | no | small end lots, with open space |
| 108 | UNIVERSITY PLAYGROUND | 9TH AV NE & NE 50TH ST | 119714 | 1 | no | much open space used for ball fields but some excess |
| 109 | ATLANTIC CITY NURSERY | 5513 S CLOVERDALE ST | 310202 | 1 | no | could be used to start P-Patch plants |
| 110 | OXBOW PARK | 6430 Corson Ave S | 35415 | 1 | no | newly developed although plenty of green space |
| 111 | COLUMBIA PARK | 4721 RAINIER AV S | 101737 | 1 | no | lots of open space |
| 112 | GENESEE PARK | 4420 S GENESEE ST | 2494867 | 1 | no | lots of open grassy space |
| 113 | LAKE CITY PLAYGROUND | 12301 26TH AV NE | 120903 | 1 | no | lots of open grassy space |
| 114 | QUEEN ANNE BOULEVARD | 999 W ARMOUR ST | 1260648 | 1 | no | plenty of open space, in design and planning phase |
| 115 | MADRONA PLAYGROUND | 3315 E SPRING ST | 77013 | 1 | no | open grass space |
| 116 | WASHINGTON PARK ARBORETUM | LAKE WASHINGTON BL | 8486531 | 1 | yes | lots of open space |
| 117 | CALIFORNIA AVE SW & SW EDDY ST PARK | 6413 CALIFORNIA AVE SW | 8170 | 1 | no | planning for park development begun in 2007 |
| 118 | KINNEAR PARK | 981 W PROSPECT | 614688 | 1 | no | steep and mostly tree-filled, there is one grassy space |
| 119 | PEPPIS PLAYGROUND | 3233 E SPRUCE | 99715 | 2 | no | lots of open grass space |
| 120 | 48TH AVE SW & SW ALASKA ST | 4542 48TH AVE SW | 23499 | 1 | no | some open grassy space |
| 121 | DENNY BLAINE LAKE PARK | 1898 MADRONA DR | 8160 | 1 | no | some open space |
| 122 | BENEFIT PLAYGROUND | 9320 38TH AV S | 96006 | 1 | no | lots open grass |
| 123 | STURGUS PARK | 999 STURGUS AV S | 91808 | 1 | no | some open grass space |
| 124 | MONTLAKE BOULEVARD CENTER STRIP | 2899 MONTLAKE BL E | 11667 | 1 | no | tree-lined |
| 125 | ROANOKE PARK | 10TH AV E & E ROANOKE ST | 94016 | 1 | no | open grass space and fruit trees |
| 126 | MT BAKER BOULEVARD | 11753 68TH AV S | 156930 | 1 | yes | tree-lined |
| 127 | PRITCH ISL BCH | 8400 55TH AV S | 584033 | 1 | yes | lots of open grassy space |
| 128 | LESCHI PARK | 100 LAKESIDE AV S | 674505 | 1 | yes | much is wooded but also lots of open grass space |

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| 129 | HORACE MCCURDY PARK | 2498 E LAKE WASHINGTON BL | 58814 | 1 | no | very little open space, but MOHI is leaving... |
| 130 | MADISON PARK | 1898 43RD AV E | 360581 | 1 | yes | lots of open grass space |
| 131 | BRYANT PLAYGROUND | 40TH AV NE & NE 65TH ST | 134780 | 1 | no | lots of open grass |
| 132 | THOMAS STREET MINI PARK | BELLEVUE AV E & E THOMAS ST | 10782 | 1 | no | small but some open space |
| 133 | CARLETON CENTER STRIP | 2399 ROSEMONT PL W | 3813 | 1 | no | small triangle |
| 134 | SUNSET PLACE | 1ST AV NW & NW 52ND ST | 4762 | 1 | no | small triangle |
| 135 | DR. JOSE RIZAL PARK | 1111 12TH AV S | 416913 | 1 | yes | lots of open space |
| 136 | WESTCREST PARK | 399 SW KENYON ST | 4733709 | 1 | yes | lots of open space |
| 137 | HIGHLAND PARK PLAYGROUND | 1100 SW CLOVERDALE | 276587 | 1 | yes | open grassy space |
| 138 | VOLUNTEER PARKWAY | 899 14TH AV E | 111218 | 1 | yes | lots of open space |

Author's analysis

** Number refers to Figure 9*

*** Land is considered "open land" if it is not wooded or already developed for a particular purpose, such as for landscaping, a ballfield or a playground*